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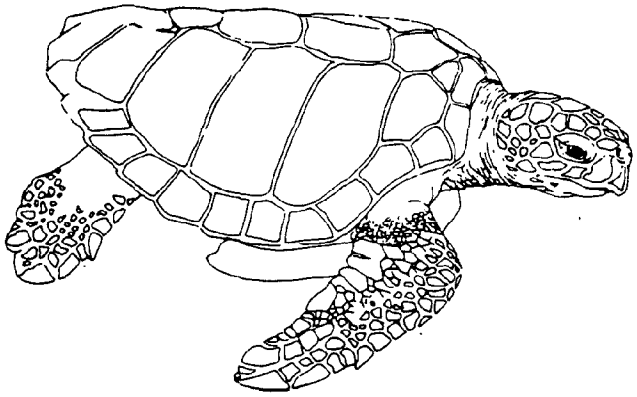
ST. ANDREWS STATE PARK

AQUATIC PRESERVE MANAGEMENT PLAN



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DEPARTMENT OF NATURAL RESOURCES

ST. ANDREWS STATE PARK

AQUATIC PRESERVE MANAGEMENT PLAN

(DRAFT)

SEPTEMBER 1990

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Executive Director

Department of Natural Resources

This plan was prepared by
the Bureau of Submerged Lands and Preserves
Division of State Lands

QH90.75 .F6 C68 1990

Funds for this management plan were provided by the Department of Environmental Regulation, Office of Coastal Management using funds made available through the National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended.

TABLE OF CONTENTS

CHAPTER I — INTRODUCTION 1

CHAPTER II — MANAGEMENT AUTHORITY
- A. Statutory Authority 9
- B. Administrative Rules 11
- C. Relationship to Other Applicable Plans & Programs 13

CHAPTER III — DESCRIPTION OF AQUATIC PRESERVE
- A. Location/Boundary 15
- B. Physiography 15
- C. Geology 15
- D. Hydrology 16
- E. Water Quality 17
- F. Vegetation 17
- G. Fish and Wildlife 22
  - 1. Fish/Shellfish 22
  - 2. Reptiles/Amphibians 24
  - 3. Birds 25
  - 4. Mammals 26
- H. Endangered, Threatened and Species of Special Concern 26
- I. Cultural Resources 29
- J. Regional Land Use, Development and Associated Impacts 29
  - 1. Adjacent Upland Uses 29
  - 2. Uses of the Preserve 29
  - 3. Planned Use 30

CHAPTER IV — MANAGEMENT AREAS
- A. Introduction 33
- B. Management Area Classifications 34
- C. Minimum Criteria for Allowable Uses ... 37
- D. Management Areas 41

CHAPTER V — SITE SPECIFIC MANAGEMENT ISSUES AND NEEDS
- A. Management Issues and Special Needs ... 47
- B. Policy Guidelines 48

CHAPTER VI — MANAGEMENT ACTION PLAN
- A. Resource Management 50
- B. Resource Protection 51
- C. Research 53
- D. Environmental Education 54

CHAPTER VII — MANAGEMENT COORDINATION NETWORK
A. Federal Agencies 57
B. State Agencies 58
C. Regional Agencies 62
D. Local Governments/Interest Groups 63

CHAPTER VIII — STAFFING AND FISCAL NEEDS 67

CHAPTER IX — RESOURCE AND ACTIVITY MONITORING PROGRAM
A. Resource Monitoring 71
B. Activity Monitoring 72
C. Accomplishments and Progress Monitoring 72

BIBLIOGRAPHY 73

LIST OF FIGURES AND TABLES

Figure 1. Florida Aquatic Preserve System 5

Figure 2. Boundary Map 7

Figure 3. Vegetation Map 19

Figure 4. Adjacent Land Use Map 31

Figure 5. Management Areas 45

Table 1. Endangered, Threatened, and Species of Special Concern 27-28

Table 2. Management Coordination Network 64-65

Table 3. Estimated Budget 69

LIST OF APPENDICES

Appendix A. Relevant Legislation 75

Copies of the legal description of the St. Andrews Aquatic Preserve, as well as copies ofo Chapters 253 and 258, F.S., and Chapter 18-21, F.A.C., may be obtained from:

Bureau of Submerged Lands and Preserves
Department of Natural Resources
3917 Commonwealth Blvd.
Mail Station 140
Tallahassee, Florida 32399

CHAPTER I

INTRODUCTION

The St. Andrews State Park Aquatic Preserve is located in southern Bay County and represents one of the 42 aquatic preserves in Florida (Figure 1). This preserve was designated by the Florida Legislature in 1972 for the purpose of maintaining the preserve area in an essentially natural condition. The preserve is approximately 25,000 acres in size and includes only the sovereignty submerged lands located below the mean high waterline. The preserve covers the entrance to St. Andrews Bay and extends some 3 miles offshore into the Gulf of Mexico (Figure 2).

The St. Andrews Bay system has long been recognized as an exceptional water resource of the State. This area consists largely of high energy zone areas, e.g. gulf sandy beaches, a strong tidal inlet with jetties and sandy bay bottoms. A moderate amount of shallow grassbed communities occur along the bayside of Shell Island. Marine fishes, shorebirds and various invertebrate marine life are predominant. The preserve lies adjacent to St. Andrews Bay State Recreation Area which receives heavy use. Portions of the preserve adjoin exclusive residential developments and military facilities. Water quality in and around the St. Andrews Bay area has deteriorated in recent years from sewage discharge and stormwater runoff. The inlet area, the Gulf, and the inner bay area support some of the heaviest boating traffic in northern Florida. Such intense use confirms the need for an integrated management program by state, regional, and local governments to accomplish a goal of long term resource protection for the preserve.

This management plan developed for St. Andrews State Park Aquatic Preserve is only one of many steps that will be necessary to accomplish this goal. It is intended primarily to serve as a useful guide to the manager and others in maintaining the natural integrity of the preserve. As more information is learned about this preserve and ambient conditions analyzed, management strategies outlined in this plan may need to be adjusted.

The process of developing this management plan involved collecting an inventory of resource information, coordinating with other plans that have been developed for the area, and identifying resource problems and management issues relating to the present and future uses of the preserve and adjacent uplands. Supporting policies were developed to be consistent with statutory authority and the overall intent of the Aquatic

Preserve Program for helping ensure that the submerged land resources of the bay remain for future generations to enjoy.

Fourteen management plans, covering 21 of the 42 designated aquatic preserves in the state, have been adopted by reference into the existing aquatic preserve rule (Chapter 18-20, Florida Administrative Code). This management plan will be subsequently incorporated into rule following its approval by the Board of Trustees of the Internal Improvement Trust Fund. As such, the special criteria in this plan pertaining to use of submerged lands will carry the same authority as current rule criteria.

Specifically, this plan is divided into chapters according to their management application:

Chapter II cites the statutory authorities upon which this resource management program and plan are built.

Chapter III provides a description of the St. Andrews State Park Aquatic Preserve and details the physical and biological components of the preserve as well as any cultural resources. Additional information includes the current and future uses of this preserve and use of the adjacent uplands.

Chapter IV delineates various management areas within the preserve. These areas area defined by taking into account the biological resources, the physical parameters, and the aesthetic values, in conjunction with the use of the adjacent uplands.

Chapter V discusses specific needs and issues particular to the St. Andrews State Park Aquatic Preserve. Policy directives have been developed in addressing each need and/or issue.

Chapter VI outlines site-specific goals, objectives, and tasks required to meet the management needs of the preserve for resource management, resource protection, research, and environmental education.

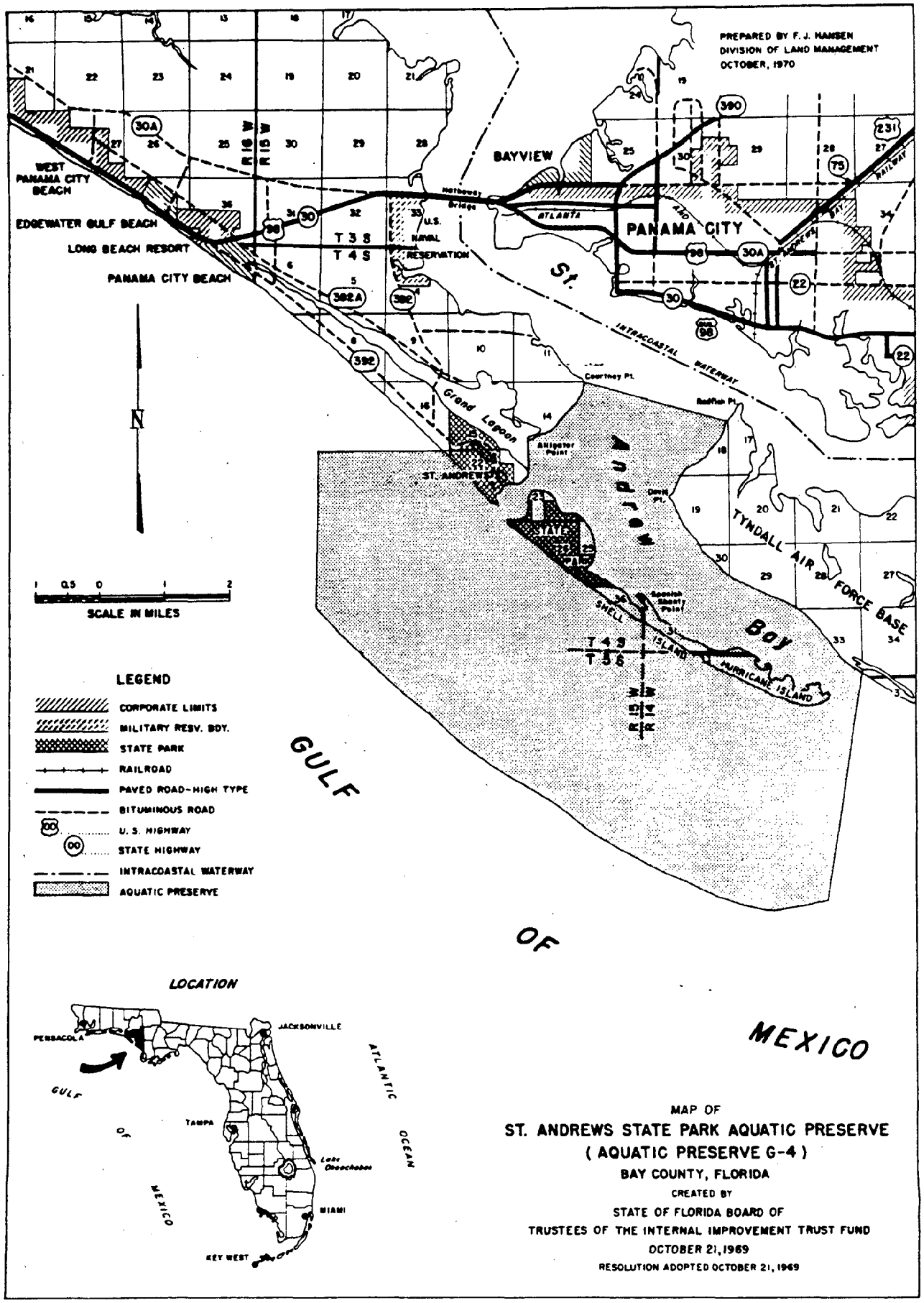
Chapter VII identifies local, regional, state, and federal agencies, their authorities and programs, and how they relate and assist in protection and management of this preserve. It also identifies non-governmental organizations, interest groups,and individuals that can assist in management.

Chapter VIII projects future staffing and fiscal needs necessary for providing effective management and protection of the preserve, as well as supporting research and environmental education.

Chapter IX outlines a monitoring program for recording and reporting resource charges, and establishes a tracking system for detailing the progress and accomplishments in resource management.

FIGURE 1. Florida Aquatic Preserve System

FIGURE 2. Boundary Map



CHAPTER II

MANAGEMENT AUTHORITY

A. STATUTORY AUTHORITY

The fundamental laws providing management authority for the St. Andrews State Park Aquatic Preserve are contained in Chapters 258 and 253, Florida Statutes (F.S.). These statutes establish the proprietary role of the Governor and Cabinet, sitting as the Board of Trustees of the Internal Improvement Trust Fund, as Trustees over all sovereignty submerged lands. In addition, these statutes empower the Trustees to adopt and enforce rules and regulations for managing all sovereignty submerged lands, including aquatic preserves.

In particular, Sections 258.35-258.42, F.S., enacted in 1975 by the Florida Legislature represent the **Florida Aquatic Preserves Act.** These statutes set forth a standardized set of management criteria for all designated aquatic preserves, and represent the primary laws governing use of sovereignty submerged lands within aquatic preserves.

The Legislative intent for establishing aquatic preserves is stated in Section 258.36, F.S.: **"It is the intent of the Legislature that the state-owned submerged lands in areas which have exceptional biological, aesthetic, and scientific value, as hereinafter described, be set aside forever as aquatic preserves or sanctuaries for the benefit of future generations."** This statement along with the other applicable laws clearly mark the direction for management of aquatic preserves. Management will emphasize the maintenance of essentially natural conditions, and will include only sovereignty submerged lands, lands leased by the State, and land specifically authorized for inclusion as part of a preserve.

Management responsibilities for aquatic preserves may be fulfilled directly by the Trustees or by staff of the Division of State Lands of the Department of Natural Resources through delegation of authority. Other governmental bodies may also participate in the management of aquatic preserves under appropriate instruments of authority issued by the Trustees. The Division staff, however, serve as the primary managers who]implement provisions of the management plans and rules applicable to the aquatic preserves. Staff evaluate proposed used or activities in the preserve, and assess the possible impacts on the natural resources. Project reviews are primarily evaluated in accordance with the criteria in Sections 258.35-42 F.S., (Florida Aquatic Preserve Act), and

18-20, Florida Administrative Code (F.A.C., Rules of Florida Aquatic Preserves), and in accordance with the policies set forth in this plan.

Staff comments on proposed uses are submitted for consideration in developing recommendations to be presented to the Board of Trustees. This mechanism provides a basis for the Trustees to evaluate public interest and project merits within the context of potential environmental impacts upon the aquatic preserves. Any activity located on sovereignty submerged lands will require a consent of use, a lease or easement, or other approval from the Board of Trustees. Consent of use may be granted on small projects from the Division of State Lands in accordance with the authority delegated by the Board.

BACKGROUND

The laws supporting aquatic preserve management are the direct result of the public's awareness and interest in protecting Florida's coastal aquatic environment. The rampant dredge and fill activities that occurred in the late 1960's had a stimulating effect on this widespread concern.

In 1967 the Florida Legislature passed the Randall Act (Chapter 67-393, Laws of Florida), which established procedures regulating previously unrestricted dredge and fill activities on state-owned submerged lands. That same year the legislature provided the statutory authority (Section 253.03, F.S.) for the Board of Trustees to exercise proprietary control over state-owned lands. Also, in 1967, government focus on protecting Florida's productive waterbodies from development led to the Board of Trustee's establishment of a moratorium on the sale of submerged lands to private interests. In the same year, an interagency advisory committee on submerged lands was created to develop strategies for protection and management of state submerged lands.

In 1968, the Florida Constitution was revised, declaring in Article II, Section 7, the State's policy of conserving and protecting the natural resources and scenic beauty. That constitutional provision also established the authority for the legislature to enact measures for the abatement of air and water pollution. Then, late in 1968, the committee issued a report recommending the establishment of twenty-six aquatic preserves.

On October 21, 1969 the Governor and Cabinet acted upon the recommendations of the Interagency Advisory Committee and adopted by resolution eighteen of the water bodies as aquatic preserves. Other preserves were individually adopted at various times through 1989, including St. Andrews Bay in 1972.

B. ADMINISTRATIVE RULES GOVERNING AQUATIC PRESERVES

Chapters 18-20 and 18-21, Florida Administrative Code (F.A.C.), are the two administrative rules directly applicable to the uses of aquatic preserves specifically, and submerged lands in general.

1. CHAPTER 18-20, F.A.C.

Chapter 18-20, F.A.C.,(see Appendix A) specifically addresses aquatic preserves and derives its authority from Sections 28.35, 258.36, 258.37, and 258.38, F.S. The intent of this rule is contained in Section 18-20.01, F.A.C., which states:

"(1) All sovereignty lands within a preserve shall be managed primarily for the maintenance of essentially natural conditions, the propagation of fish and wildlife, and public recreation including hunting and fishing where deemed appropriate by the board and the managing agency.

(2) The aquatic preserves which are described in 73-534,Laws of Florida, sections 258.39, 258.391, 258.392,and 258.393, Florida Statutes, future aquatic preserves established pursuant to general or special acts of the legislature, and in Rule 18-20.002,Florida Administrative Code, were established for the purpose of being preserved in essentially natural or existing condition so that their aesthetic, biological and scientific values may endure for the enjoyment of future generations.

(3) The preserves shall be administered and managed in accordance with the following goals:

(a) to preserve, protect, and enhance these exceptional areas of sovereignty submerged lands by reasonable regulation of human activity within the preserves through the development and implementation of a comprehensive management program;

(b) to protect and enhance the waters of the preserves so that the public may continue to enjoy the traditional recreational uses of those waters such as swimming, boating, and fishing;

(c) to coordinate with federal, state, and local agencies to aid in carrying out the intent of the Legislature in creating the preserves;

(d) to use applicable federal, state, and local management programs, which are compatible with intent and provisions of the act and these rules, and to assist in managing the preserves;

(e) to encourage the protection, enhancement, or restoration of the biological, aesthetic, or scientific values of the preserves, including but not limited to the modification of existing man-made conditions towards their natural condition, and discourage activities which would degrade the aesthetic, biological, or scientific values, or the quality, or utility of a preserve, when reviewing applications, or when developing and implementing management plans for the preserve;

(f) to preserve, promote, and utilize indigenous life forms and habitats, including but not limited to: sponges, soft coral, hard corals,submerged grasses, mangroves,, saltwater marshes, freshwater marshes, mudflats, estuarine, aquatic and marine reptiles, game and non-game fish species, estuarine aquatic,and marine invertebrates, estuarine, aquatic,and marine mammals, birds, shellfish and mollusks;

(g) to acquire additional title interests in lands wherever such acquisitions would serve to protect or enhance the biological, aesthetic,or scientific values of the preserve;

(h) to maintain those beneficial hydrologic and biologic functions, the benefits of which accrue to the public at large."

2. CHAPTERS 18-21, F.A.C.

Chapters 18-21, F.A.C., controls activities conducted on sovereignty submerged lands in general and is predicated upon the provisions of Sections 253.03 and 253.12, F.S. The general rules in Chapter 18-20, F.A.C., are supplemental to the rules in Chapter 18-21, F.A.C., in the regulation of activities in aquatic preserves. The stated intent of this administrative rule is:

"(1) to aid in fulfilling the trust and fiduciary responsibilities of the Board of Trustees of the Internal Improvement Trust Fund for the Administration, management, and disposition of sovereignty lands;

(2) to insure maximum benefit and use of sovereignty lands for all citizens of Florida;

(3) to manage, protect, and enhance sovereignty lands so that the public may continue to enjoy traditional uses including, but not limited to, navigation,fishing and swimming;

(4) to manage and provide maximum protection for all sovereignty lands, especially those important to public drinking water supply, shellfish harvesting,public recreation, and fish and wildlife propagation and management;

(5) to insure that all public and private activities on sovereignty lands which generate revenues or exclude traditional public uses provide just compensation for such privileges;

(6) to aid in the implementation of the State Lands Management Plan."

C. RELATIONSHIP TO OTHER APPLICABLE PLANS AND PROGRAMS

The State Comprehensive Plan, established by Chapter 187, F.S., provides long-range policy guidance for the orderly social, economic and physical growth of the State. As such, the State Comprehensive Plan provides direction for the management of the physical resources within the state.

The goals, objectives and policies set forth in this aquatic preserve management plan are designed to be consistent with the goals and policies of the State Comprehensive Plan pertaining to the water resources, coastal and marine resources and natural systems.

The Conceptual State Lands Management Plan, adopted on March 17, 1981, and amended by the Trustees on July 7, 1981 and March 15, 1983, contains specific policies concerning spoil islands, submerged land leases, "Outstanding Native Florida Landscapes", unique natural features, seagrass beds, archaeological and historical resources, and endangered species. These policies provide some of the fundamental direction for formulating management plans and policies of the Aquatic Preserve Program.

The Local Government Comprehensive Plan (LGCP) for Bay County is required by the Local Government Comprehensive Planning and Land Development Regulation Act to have a comprehensive management plan with elements relating to different governmental functions (i.e., housing, physical facilities, conservation, land use, coastal zone protection, etc.). These plans, in effect, are intended to guide the future development of the county. Recent statutory amendments require these plans to be updated and for cities and counties to adopt land

development regulations and to conform to the criteria, policies, and practices of their comprehensive plan.

The intent of the Aquatic Preserve Program, and this plan, is to guide county governments during their planning process, towards developing local plan criteria and standards that will be consistent with the objectives of the program. Therefore, if coordinated properly the management plan for an aquatic preserve can serve as the waterward extension of the City's and County's Local Government Comprehensive Plan. Bay County's plan underwent state review in early 1990.

CHAPTER III

DESCRIPTION OF ST. ANDREWS STATE PARK AQUATIC PRESERVE

A. LOCATION/BOUNDARY

The St. Andrews State Park Aquatic Preserve is located in northwest Florida, just south of Panama City and just east of Panama City Beach. The 25,000 acre preserve covers the entire inlet to St. Andrews Bay. The northern boundary is an east-west oriented line that runs from Courtney Point to just south of Redfish Point. The southern boundary runs west from the southwest point of the St. Andrews Recreation Area for approximately two miles and extends approximately 3 miles out into the Gulf of Mexico. The eastern boundary is located approximately one-half mile east of Shell Island and extends from Tyndall Air Force Base to three miles offshore.

Boundaries of the St. Andrews State Park Aquatic Preserve include only state-owned (sovereignty) submerged lands that occur below the mean high water line (MHWL). Uplands and artificial canals are excluded from the preserve.

B. PHYSIOGRAPHY

The St. Andrews State Park Aquatic Preserve is located in the Coastal Plain province. The coastal region occupies a physiographic division known as the Coastal Lowlands, which are low in elevation and poorly drained.

White (1970), describes the general topography of this area which was formed during the Pleistocene epoch, as being composed of ancient marine terraces that run parallel to the Gulf of Mexico shoreline. There are eight marine terraces in Florida, each formed at different sea levels. These terraces were formed long ago by waves, currents and varying sea levels. When the sea level remained stationary for long periods, the waves and currents would erode the sea floor to form a fairly level surface. When the sea level dropped, the sea floor became a level plain or terrace. The Silver Bluff terrace is present within the preserve boundaries at an altitude between sea level and ten feet above sea level, the Pamlico terrace rises from five to twenty five feet above sea level.

C. GEOLOGY

The St. Andrews State Park Aquatic Preserve lies wholly within the geographical division known as the West Florida Coast Strip, which extends from the mouth of the Ochlockonee River

west to the Mississippi River. This strip consists primarily of coastal islands and narrow peninsulas along the coast. The preserve is typical of the West Coast Strip. Much of the area is occupied by beach sands and active dunes, with definite indications that scrub areas are being or have been invaded by these wandering dunes.

The general soil type within the aquatic preserve is made up of the Kureb-Resota-Mandarin series. These soils are nearly level to gently sloping, with areas that are excessively, moderately, and somewhat poorly drained. They are sandy, with a depth of 80 inches or more. Some have organic stained layers.

The soil is not suitable for cultivated field crops, improved pasture, or trees. Permeability is rapid with the water table below 80 inches throughout the year. Equipment limitations and mortality are the main concerns.

In the upland communities surrounding the St. Andrews State Park Aquatic Preserve there are eleven distinct natural communities that are present: Beach dune, Maritime hammock, Mesic flatwoods, scrub, scrubby flatwoods, basin marsh and marsh lake, wet flatwoods, coastal dune lake, estuarine tidal marsh, and marine unconsolidated substrate. More information regarding the soil types in the preserve and surrounding uplands, can be found in the USDA publication, Soil Survey of Bay County Florida (1984).

D. HYDROLOGY

St. Andrews Bay is the receiving waterbody for the largest drainage basin in Bay County. The area drained is from the Apalachicola River west to the Choctawhatchee River. There are nine major streams that flow into St. Andrews Bay. The streams draining the largest area are the Econfina and Bear Creek. The flow into St. Andrews Bay is approximately 620 cubic feet per second (cfs), (Bay County Comprehensive Plan, 1989).

St. Andrews Bay is central in the St. Andrews Bay system. The bay opens directly to the Gulf of Mexico through East and West Passes. Connecting embayments include North, West, and East Bays, as well as Grand Lagoon and St. Andrews Sound. Though the bay system may be classified as a positive estuary, the preserve waters, owing to its proximity to the sea, rarely drop below 30 parts per thousand (ppt) in salinity (Saloman and Naughton, 1982).

E. WATER QUALITY

St. Andrews State Park Aquatic Preserve was designated as an "Outstanding Florida Water" (OFW), on March 1, 1979. Because of their natural attributes, these waterbodies are assigned additional protection through the Department of Environmental Regulation. Chapter 17-3, F.A.C., addresses the water quality standards by which OFW are managed. Permit applications for activities that lower ambient water quality standards within designated OFW are normally denied.

Although limited data exists on the quality of water in the aquatic preserve, the Department of Environmental Regulations, 1986 Florida Water Quality Assessment, classifies the water quality in St. Andrews Bay as "good". Water quality in the adjoining bay waters are classified as "good" except for Watson Bayou which is classified as "fair".

Relatively clear water is one of the characteristic features of St. Andrews State Park Aquatic Preserve. Several factors contribute to the bay's clarity. First, incoming tidal water is clear and major tributaries are spring fed. Second, the surrounding upland is mostly forested, and local soils consist of porous sand that contain little of the silt-clay that often are responsible for turbidity in coastal waters. Third, tidal marshes and seagrasses act as natural filters within the bay that collect and stabilize suspended sediments and particulate detritus (Schmidt and Clark, 1980).

F. VEGETATION

The predominate habitat type of the St. Andrews State Park Aquatic Preserve is of subtidal and intertidal vegetation communities, (Figure 3). The subtidal communities consists primarily of seagrasses, although in some small areas and at certain seasons algae is of importance. The intertidal communities are salt marshes which are one of the most valuable natural resources of the northeast gulf coast.

The subtidal vegetation in St. Andrews State Park Aquatic Preserve is composed mostly of Turtle-grass (*Thalassia testudinum*), Shoal-grass (*Halodule wrightii*), and Manatee-grass (*Syringodium filiforme*). These are flowering plants that produce oxygen, stabilize sediments, produce organic carbon, provide nursery habitat, and provide foraging and resting habitat for marine animals and sea birds. In the shallowest areas (often in the intertidal zone) the dominate species is shoal grass. Below the low-tide mark, down to maximum depths of approximately ten feet, beds of turtle grass dominate. Mixed in with the turtle grass (or sometimes growing alone in pure stands) is the manatee grass. Although

not as abundant as the turtle grass, manatee grass is very important to the bay system.

Since seagrasses rely on clear water for photosynthesis, they are very susceptible to disturbances and impacts by man. Man induced increases in turbidity associated with dredging and erosion of adjacent uplands can decrease the photic zone of these plants or physically smother them with silts. Increased nutrient levels can cause a proliferation of epiphytic algaes to grow on seagrass leaves, causing reduction in photosynthetic capabilities and unnatural rates of defoliation. Industrial pollution and discharge which causes changes of seagrass productivity and distribution can seriously impair macroinvertebrate and fish populations in the affected areas (Livingston, 1975). Detailed studies of submerged aquatic vegetation indicate that selective removal of dominant vegetation types by changes in water quality and light transmission characteristics is associated with alteration of the entire trophic organization of a particular system. Implications are that, although generalized food web relationships are generally stable in a given seagrass bed from year to year, relatively minor changes in water quality can lead to sharp reductions in productivity and broad habitat alteration (Livingston, 1984).

Studies conducted in St. Andrews Bay and other communities world-wide underscore the importance of seagrasses and their role in a healthy ecosystem. Saloman and Naughton, (1982), summarized certain conclusions in the following statements regarding benthic fauna of sand and seagrass habitats.

1. Species diversity is generally greater in seagrass habitats than in adjacent, unvegetated habitats.

2. Individual abundance and biomass are generally greater in seagrass habitats than in adjacent, unvegetated habitats.

3. Inter-regional sand and seagrass habitats are generally composed of statistically distinct faunal assemblages.

4. Lower species diversity and abundance in unvegetated, nearshore habitats are largely due to habitat instability caused by water movements and periodic exposure. Conversely, greater species diversity and abundance in seagrass habitats are related to more favorable hydrological conditions, sediment stability, more feeding opportunities, and protection from predation.

5. Among various seagrass habitats, infaunal diversity and abundance may be influenced by factors that include degree of seagrass development, type or types of seagrass present, water depth and movements, salinity, season and latitude, turbidity,

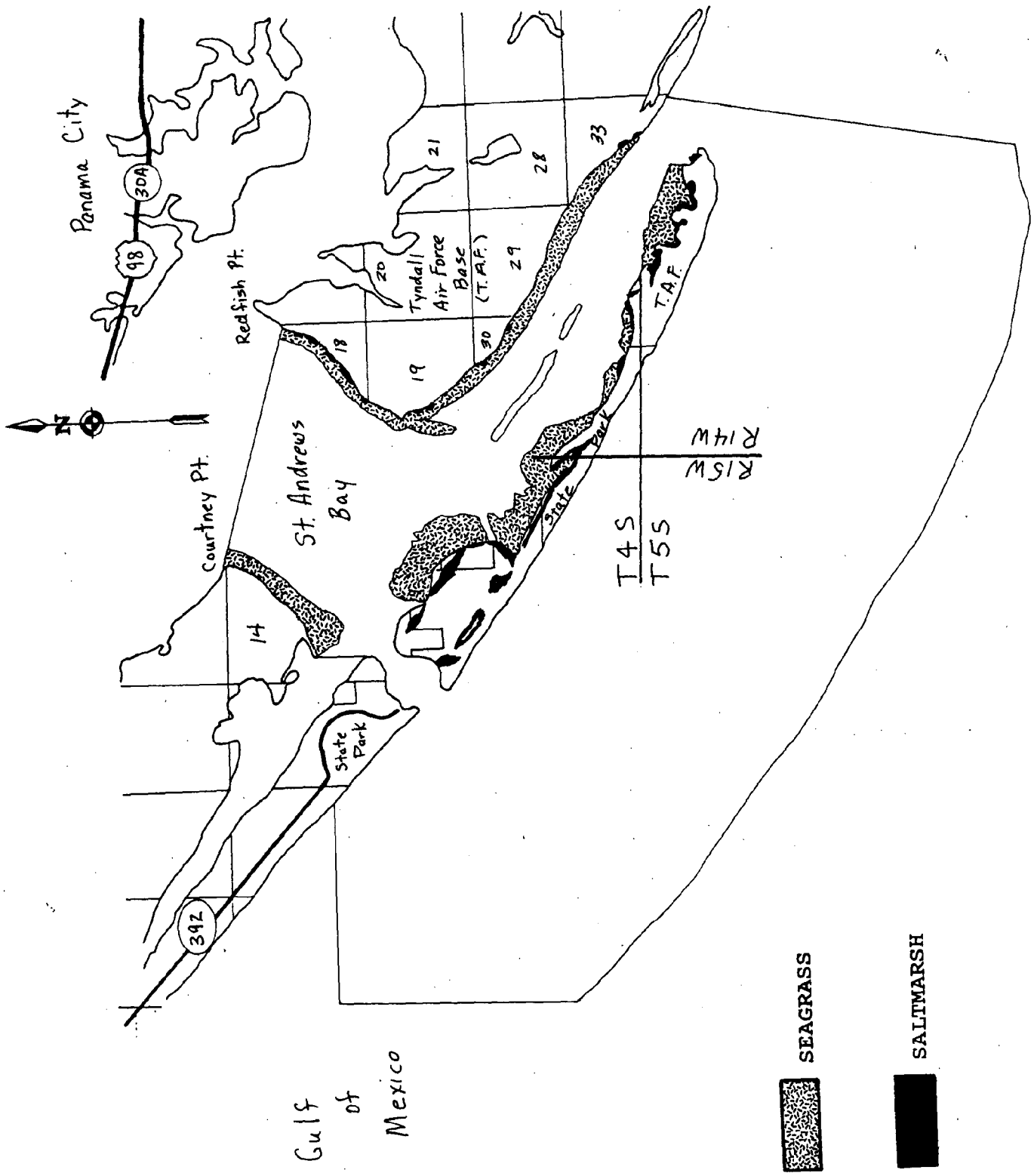


FIGURE 3. Vegetation Map

sediment properties, and activities of man that may influence water quality and sediment composition.

6. As communities, seagrasses are of great biological importance, because, in addition to infauna, diverse, abundant, and highly productive groups of both lower and higher organisms are also nurtured by this unique and cosmopolitan biotope.

Although algaes make up only a small portion of the subtidal vegetation, they are often important where they occur. Most algal growth will be found where hard-bottom, either natural or man-made, exists. Man-made sites such as the dockage area in St Andrew Sound, and the piers on Shell Island provide hard materials upon which algaes can attach. While alive, the algae beds provide oxygen to the water column. As the algae beds die back each summer, they make a contribution to the organic carbon load that gets recycled through the bay system in the form of detritus. In addition to the attached algal species, there are several free-swimming species that drift over the shallows, particularly in the early spring. This is the time of year when the rooted seagrasses have reduced above-seafloor growth and the algae provides cover for the juvenile fishes utilizing the bay shallows.

Tidal marshes are a major component of St. Andrews State Park Aquatic Preserve. At least five functions of salt marshes in estuarine ecosystems have been proposed:

1. Detrital export
2. Nutrient export
3. Sediment trapping
4. Pollutant removal
5. Critical habitat for juvenile fish and shellfish

Marshes usually have distinct vegetation zonations. Smooth cordgrass (Spartina alterniflora) forms a border along the open water within the intertidal zone. This fringe may extend above mean high water (MHW). Landward of the cordgrass is the black needle rush (Juncus roemerianus), usually comprising the largest vegetated zone and the bulk of the standing plant.

Tidal fluctuation is the most important ecological factor in salt marsh communities. The frequency and physical action of tidal flooding attributes to the fragmentation of vegetation and the rate of decomposition. The additional nutrients, sediments and detritus from the adjacent uplands filter into the marsh contributing to this highly productive environment. Tidal exchanges allow for the cycling of these nutrients and gives marine and estuarine fauna access to the marsh. This exchange or flushing action helps to make salt marshes one of the most biologically productive natural communities in the

world, even to the degree of surpassing most intensive agricultural practices.

G. FISH AND WILDLIFE

The wildlife value associated with highly productive salt marsh communities is extremely important. The linking of estuarine with freshwater environments forms a necessary habitat for the feeding and breeding of many species. Ranging from protozoa to mammals, the animal populations are of considerable variety. Some species are restricted to this semiaquatic semiterrestrial habitat, while others can be found in the upland communities surrounding the preserve.

Marsh animals exhibit zonation patterns similar to vegetation, due to habitat preferences. Environmental parameters affecting their distribution and zonation include salinity, inudation, substrate character, pH, oxygen level, light, humidity, and temperature as well as fire and wind.

The frequency of tidal flooding or proximity to tidally affected waters, as well as the availability of detritus, are two of the principal factors influencing the species diversity and density of aquatic and intertidal salt marsh organisms. In addition to providing an area of abundant food, the protective qualities of salt marshes provide reproduction and juvenile development habitat for many fish and animal species.

Primary and secondary consumers such as amphipods, shrimp, crabs, clams, oysters, snails, worms and fish feed on the abundant supply of detritus, plankton, and animal protein that is generated from salt marshes. Various rodents such as the marsh rice rat and cotton mouse, and birds like rails, willets, seaside sparrows, and marsh wrens, all utilize salt marshes for denning or nesting habitat. Other mammals such as the raccoon, opossum, marsh rabbit, and wading birds like herons, and egrets frequent the marsh edges primarily to feed.

Partial destruction of habitat often breaks up productive ecological communities into smaller isolated subunits by destroying the vegetation which produces habitat continuity. These linkages or corridors allow for the necessary movement of wildlife that may be vital for specific breeding or foraging activities. Habitat disturbance and destruction are the major causes for decline and loss of species.

Fish/shellfish

Over 80 species of fish have been reported from creeks, ponds, and open waters of Juncus marshes of the northeastern gulf, dominated by physiologically euryhaline and holeuryhaline fish. The fish species include permanent residents which spend

their entire lives in the marsh, juveniles of nonresident species, adult migrants, individuals foraging from outside the marsh, and rare sporadic visitors (Stout, 1984). Residents are dominated by cyprinodontidae (killifish) species. Most resident species have protracted or continuous spawning seasons as evidenced by the year-round presence of juveniles. Marsh resident species are typically opportunistic omnivores, capable of utilizing different food depending on availability. A relatively small number of species dominate the marsh fish community on an annual basis. The marsh fish community structure may be markedly influenced by the nursery role played by these habitats. Nursery utilizers may be represented by only juveniles on both tides or by adults as well at high tides. Along with the resident cyprinodontidae species, juveniles of four other species contribute significantly to fish community structure. These species are silversides, spot, mojarra, and anchovy. Two other are seasonally abundant: striped mullet and pinfish (Stout, 1984).

Though many marsh fish species have little commercial importance, their diverse feeding habits and intense utilization of marsh creeks make them especially important in transferring energy from the marsh to the estuary and coastal waters and thus to commercially valuable species. Nursery species and marsh foraging species consume detritus, larva organisms, and plankton at the base of the food web in the marsh and then introduce this energy to the estuarine and nearshore food webs when they leave the marsh. Foraging carnivores also provide a trophic link between the marsh and adjacent ecosystems (Stout, 1984; Durako, et al., 1985).

The fish species found within the estuarine and coastal waters of St. Andrews State Park Aquatic Preserve are represented by more marine forms than would normally be found in other northern Gulf of Mexico estuaries. These waters are characterized by high salinity and low turbidity, similar to the coastal waters of the Gulf of Mexico (Ogren and Brusher, 1977).

The ichthyofauna in St. Andrews State Park Aquatic Preserve waters, as in most estuaries, can be considered as transient or resident species. Transient species are ocean-spawned species that utilize estuaries temporarily as a nursery ground before migrating back to the sea as adults; species that move regularly from one habitat to another within an estuary; and stenohaline species that forage and/or spawn occasionally in the lower reaches of estuaries. Residents include those species that spend their entire life cycle within the confines of the estuary.

True resident species are usually restricted to one type of habitat. The number of resident species is not as great as the number of transient forms (Comp and Seaman, 1985).

Fish species found in St. Andrews State Park Aquatic Preserve inhabit a variety of habitats. Pompano, blue runner, and whiting and other forage and juvenile species can be found in the sandy surf-zone. Unvegetated, sand bottom habitats are inhabited by burrowing types such as flounder, stingrays, jawfishes and inshore lizard-fishes. Non-burrowing types consist of the sand perch, pigfish, and spot. Mud bottom habitats are preferred by mullet, croaker, silver perch, and catfish. Anchovies and silversides are important forage species and can be seen in the bay's shallowest waters or at the surface where they feed. The seagrass beds have a diverse assemblage of fish populations including mullet, pinfish, needlefish, mojarra, seahorses, pipefish, blennies and gobies. "Hard" habitats such as piers, docks, seawalls, and rock jetties contain many of the "pretty" tropical species such as cocoa damsels, angelfishes, parrotfishes, spadefishes, and butterfly fishes. Wrasses, groupers, and snappers are also found along these hard substrates (Shipp, 1986).

In Florida, the number of species actually harvested either entirely or principally in the estuary is surprisingly limited. But the estuary also plays a significant role in production of many shellfishes and finfishes that ultimately are harvested mainly at sea. In fact, about 50 commercial and 30-65 recreational species caught in the Gulf of Mexico spend at least some portion of their life cycle in estuarine waters such as St. Andrews State Park Aquatic Preserve. Many popular estuarine-dependent species may be taken either offshore or in both the estuary and the gulf (seabass, jacks, snappers, sheepshead, spot, mackerel, and flounders are examples) (Comp and Seaman, 1985). Gulf menhaden, penaeid shrimp, blue crabs, and mullet comprise about 86 percent of the estuarine dependent commercial landings, while spotted seatrout, red drum, sand seatrout, tarpon and black drum make up approximately 80 percent of the recreational landings (Durako, et al., 1985).

Reptiles/Amphibians

Only a few reptile species are adapted to the conditions of a tidal Juncus marsh. Marsh reptile species have very limited geographic distributions, except for the American alligator. The American alligator inhabits river systems, bayous and coastal marshes. The alligator's tolerance for salinity varies with age; tolerance is high for adults but salinities much greater than five parts per thousand may be harmful for the newly hatched young (U.S. Fish and Wildlife Service, 1987). The alligator would be a rare or occasional visitor to

the tidal marshes of St. Andrews State Park Aquatic Preserve, preferring to stay in the freshwater habitats.

Another reptile that may be a rare sight in the salt marsh is the diamond-back terrapin. This turtle inhabits the marshes and adjacent estuaries, nesting along sandy edges of the marsh. A host of various snake and frog species occur in the inland wetlands bordering the preserve.

Sea turtles (Atlantic loggerhead, green, leatherback, hawksbill, ridley) may be found in and around St. Andrews State Park Aquatic Preserve. Loggerhead turtles are listed by the U.S. Fish and Wildlife Service as threatened, all other sea turtles are listed as endangered.

Birds

In and around St. Andrews State Park Aquatic Preserve a large number of bird species occur throughout a wide variety of habitats. Many of these species are area transients, using this area as a resting place on their way to summer or wintering grounds. Others are accidental visitors, far from their natural home ranges. The majority of the species found within the aquatic preserve are summer, winter, and/or annual residents. Approximately one-fifth of these species are dependant on the marine/estuarine environment. These includes the least tern, snowy plover, American oystercatcher, and several species of herons, egrets, gulls and terns. Species such as the American white pelican, brown pelican, and black skimmer depend on the gulf for food, and its environs for shelter. Numerous other species depend on marine and estuarine wetlands to fulfill life history requirements. Predators such as the peregrine falcon, the bald eagle and the osprey depend on large tracks of upland and wetland areas for food and shelter.

Within the marsh community system, birds comprise one of the large herbivore groups and they also play a significant role in both the immediate marsh and estuarine food web. The Juncus marsh supports year round residents (e.g., clapper rail and great blue heron), summer-nesting species (e.g., least bittern), migrants (e.g., short-billed marsh wren, sedge wren and American widgeon), casual feeders (e.g., great egrets) and summer visitors (e.g., white ibis). No species of bird is endemic to the marshes of the northeastern gulf area. However, five subspecies of marsh birds are restricted to marshes of the Gulf of Mexico: the seaside sparrow, Ammodranus martimun juncicola, is found from Taylor County to St. Andrews Bay, Florida and one marsh wren Cistothorus palustris mariane, from Charlotte Harbor, Florida to Mobile, Alabama (Stout, 1984).

Many coastal birds nest in freshwater deltas and use the Juncus marsh habitats as secondary breeding and dispersal areas. The marsh provides an ideal environment for breeding birds. The dense vegetation and the isolated nature of many marsh tracts restrict access by predators, especially the raccoon. Small fish, as well as an abundant invertebrate population, provide food for both adults and young fledglings (Stout, 1984).

Mammals

Mammals of the Juncus tidal marsh may be categorized into three groups: (1) marsh residents, (2) inhabitants of the marsh/upland interface, and (3) upland mammals entering the marsh to feed (Stout, 1984).

Resident mammals are few; nutria, round-tailed muskrat and marsh rabbits make up this group. The marsh rabbit is the largest mammal to be commonly found and though quite nocturnal, tide level variation may make them move to some extent during the day (Stout, 1984).

The marsh rice rat is the most abundant of all coastal marsh mammals. This rat is a good swimmer and may be observed feeding in the lower marsh. The Hispid cotton rat is more terrestrial and prefers the higher, less frequently flooded marsh/upland interface (Stout, 1984).

Predator species include the raccoon, mink, long-tailed weasel, and river otter who only visit the marsh for feeding. All of the predators have mixed diets of small mammals, such as the rats, birds, benthic invertebrates, and fish found in the tidal creeks (Stout, 1984).

Marine mammals such as the bottle-nosed dolphin and West Indian manatee travel the waters of St. Andrews State Park Aquatic Preserve. Bottle-nosed dolphins are regular visitors to the preserve, often feeding on the smaller fish inhabiting the preserve waters. Manatees have been seen within the aquatic preserve by personnel from St. Andrews State Recreation Area.

H. ENDANGERED, THREATENED AND SPECIES OF SPECIAL CONCERN

Found in Table 1 is a list of animal species assumed to be found at or in the vicinity of St. Andrews State Park Aquatic Preserve. These species have been given legal protection pursuant to the U.S. Fish and Wildlife Service (USFWS) Endangered Species Act of 1973, and/or the Florida Game and Fresh Water Fish Commission (FGFWFC) regulations.

Listed species may be classified as endangered (E), threatened (T), of special concern (SSC), or under review for such listing. Endangered species are those threatened with extinction if the deleterious factors affecting their populations continue. These are species whose numbers have already declined to such a critically low level, or whose habitats have been so seriously reduced or degraded that without active assistance, survival is questionable. Threatened species populations, although not as critically stressed as endangered species, are also jeopardized. Species of special concern are those that warrant special attention even though they do not fit the other categories. These species may be especially vulnerable to certain types of exploitation or environmental changes, and may have experienced long term population declines. Species of this category may also have potential impact on endangered or threatened populations of other species.

TABLE 1

Endangered, Threatened and Species of Special Concern Likely to Occur in St. Andrews State Park Aquatic Preserve

COMMON NAME/SCIENTIFIC NAME	FGFWFC	USFWS
BIRDS:		
American oystercatcher *Haematopus palliatus*	SSC	
Artic peregrine falcon *Falco peregrinus tundrius*	E	T
Bald eagle *Haliaeetus leucocephalus*	T	E
Brown pelican *Pelecanus occidentalis*	SSC	
Least tern *Sterna antillarum*	T	
Piping plover *Charadrius melodus*	T	T
Southeastern snowy plover *Charadrius alexandrinus tenuirostris*	T	UR2

MAMMALS:

Choctawhatchee beach mouse *Peromyscus polionotus allophrys*	E	E
West Indian manatee *Trichechus manatus latirostris*	E	E

REPTILES:

American alligator *Alligator mississippiensis*	SSC	T(S/A)
Atlantic green turtle *Chelonia mydas mydas*	E	E
Atlantic loggerhead turtle *Caretta caretta caretta*	T	T
Atlantic ridley turtle *Lepidochelys kempi*	E	E
Gulf of Mexico sturgeon *Acipenser oxyrhynchus*	SSC	UR2
Saltmarsh topminnow *Fundulus jenkinsi*	SSC	

FGFWFC = Florida Game & Fresh Water Fish Commission
USFWS = United States Fish & Wildlife Service
E = Endangered
T = Threatened
T(S/A) = Threatened Due to Similarity of Appearance
SSC = Species of Special Concern
UR2 = Under review for federal listing, but substantial evidence of biological vulnerability and/or threat is lacking.

I. CULTURAL RESOURCES

The presently known cultural resources of St. Andrews State Park Aquatic Preserve occur at three sites identified as having some cultural significance. These sites are recorded in the Florida Master Site File (F.M.S.F.) as 8By86, 8By87 and 8By170. All three sites have identified midden components.

8By86 and 8By87 are located directly on the shoreline of Spanish Shanty Cove, and are subject to natural forces acting at those locations. 8By86 has experienced erosion due to wave action. 8By170 is apparently completely inundated.

Artifacts (shards) recovered from 8By86 and 8By170 have been identified as relating to the Fort Walton period of aboriginal culture. 8By86 has been recognized as a village site. 8By87 has both prehistoric and historic components, the former being a midden deposit and the latter being a refuse dump.

The three recorded sites containing cultural resources in St. Andrews State Park Aquatic Preserve are in good to fair condition. Each site retains a considerable degree of integrity, and none is known to have been looted.

J. REGIONAL LAND USE, DEVELOPMENT AND ASSOCIATED IMPACTS

1. ADJACENT UPLAND USES

The upland properties immediately adjacent to the St. Andrews State Park Aquatic Preserve are presently zoned for Residential, allowing single and multi-family use; Recreation, owned by the State of Florida, Division of Parks and Recreation; Conservation, owned by several individuals; and Public/Semi-Public, which are part of Tyndall Air Force Base (Figure 4). The largest tracts are in Public/Semi-Public and Recreation.

It should be noted that the Residential area is already developed into single family and some multi-family use with no vacant areas left. The conservation areas are owned by private individuals but it is highly doubtful that these areas will be developed.

2. USES OF THE PRESERVE

The uses of the St. Andrews State Park Aquatic Preserve can be divided into two general categories:

Public/recreation - St. Andrews State Park Aquatic Preserve is located adjacent to St. Andrews State Recreation Area which provides easy access to the preserve through a boat ramp and

public swimming areas. Popular recreational activities include fishing, swimming, snorkeling, scuba diving, water-skiing, sunbathing, and beachcombing. Boat tours to Shell Island are also a popular activity and are provided by private businesses on the mainland.

Private - private uses are reflected in the presence of several small, private docks associated with adjacent upland single-family residences.

3. PLANNED USE

Because the residential zoned areas are already developed, no further development pressures are expected adjacent to the preserve. Passive recreation in the Recreation, Public/Semi-Public and Conservation areas are expected with only access docks planned for ingress-egress.

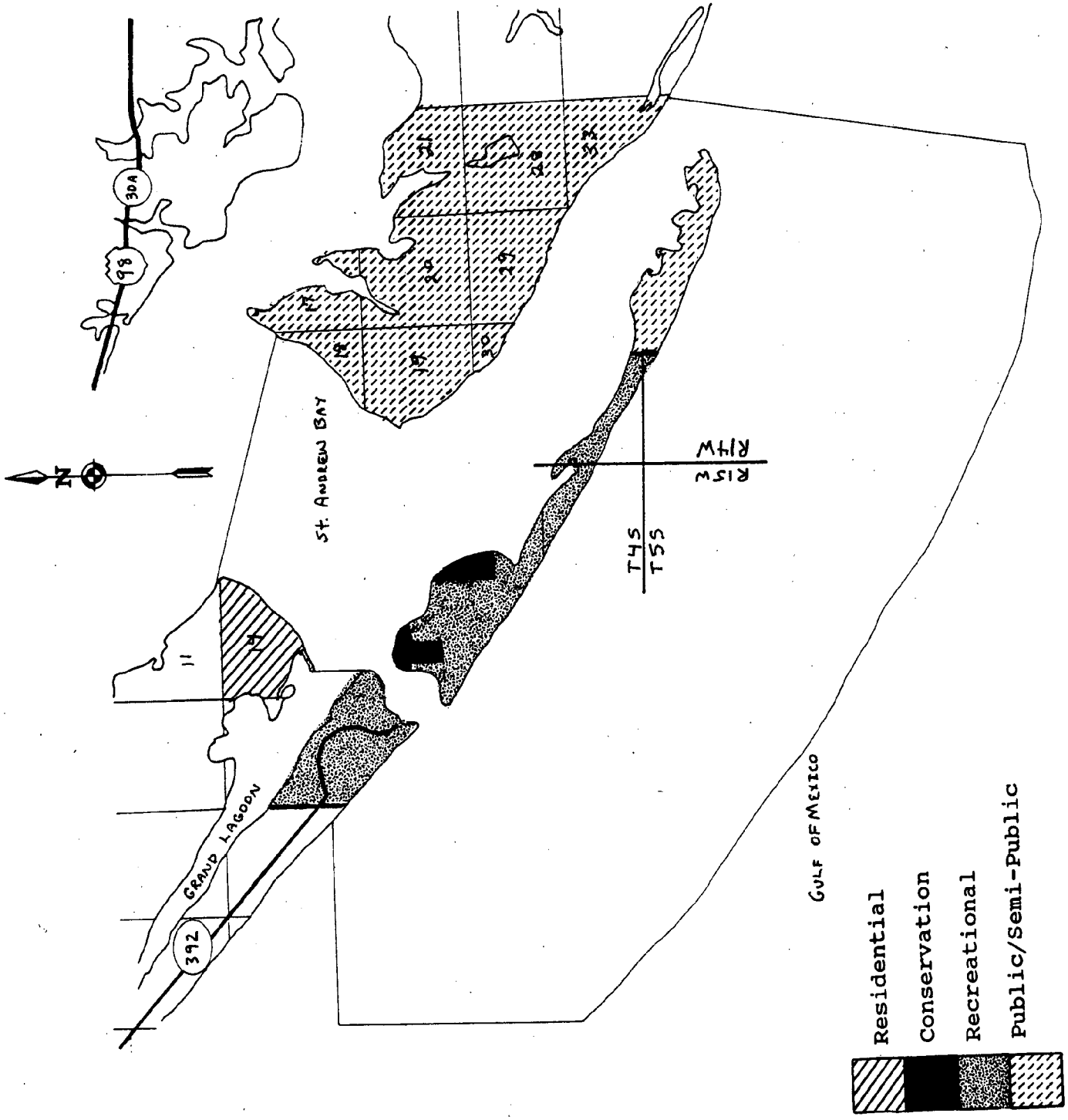


FIGURE 4. Adjacent Land Use Map

CHAPTER IV

MANAGEMENT AREAS

A. INTRODUCTION

This chapter divides the St. Andrews State Park Aquatic Preserve into separate management areas where general or special rule criteria and allowable uses are defined for each area. The management areas are classified and delineated based on the types and locations of existing and planned uses of the adjacent uplands, as well as on the types, occurrence and characteristics of the natural and cultural resources on submerged lands. The various management areas delineated may be classified similarly or differently as these factors vary in the preserve.

The purpose of this chapter is four-fold: 1) to provide a better understanding of the general and special rule criteria designed to preserve and protect resources and habitat, 2) to identify the types of allowable uses on state-owned submerged lands within the aquatic preserve, 3) to provide local planners with a guide for land use decisions, and 4) to provide the staff of the Bureau of Submerged Lands and Preserves and other agencies with a continuity of direction in regards to the management of aquatic preserves. As such, this intent will afford habitat protection while sending some measure of predictability for allowable public and private uses in the aquatic preserve.

Prior to providing the criteria for specific resource management areas, it is important that the intent, jurisdiction, and limitations of Florida's Aquatic Preserve Program be reiterated. Section 258.36, F.S., states that "it is the intent of the Legislature that state-owned submerged lands in areas which have exceptional biological, aesthetic, and scientific value... be set aside forever as aquatic preserves or sanctuaries for the benefit of future generations." The program has jurisdiction over the use of state-owned submerged lands within the boundaries of a given preserve. Activities which are not within the boundaries of the aquatic preserve (i.e., adjacent upland land uses) or which do not directly affect the state-owned submerged land (i.e., regulation of commercial fishing or water quality) are not within the jurisdiction of the Aquatic Preserve Program.

There are a number of differences between the rules governing uses of state-owned submerged lands within an aquatic preserve relative to those not within an aquatic preserve. The principle difference is that submerged lands within an aquatic preserve must be managed with the intent of protecting them for future generations. Consequently, any proposed use must

be shown to be in the public interest before it can be authorized, and an applicant must demonstrate that no other alternative exists which would allow the proposed activity to be constructed or undertaken outside the boundaries of the aquatic preserve.

B. MANAGEMENT AREA CLASSIFICATIONS

A key component of the management program for an aquatic preserve is the division of the preserve into management areas. The classification of management areas in an aquatic preserve is based upon both resource value of submerged lands within the preserve, and the existing or anticipated future land use on the adjacent uplands as designated in the local government comprehensive plan(s). As in the delineation of upland land uses through zoning, the intention of delineating a preserve into management areas is to guide development activities on the state-owned submerged lands to areas where it is more appropriate, and to provide standards by which proposed uses and activities must comply with. The intent of these management area classifications is to make potential development activities compatible with resource protection goals.

Designated land uses are incorporated into the classification of management areas because use of the adjacent uplands has a direct bearing on the intensity of demand for uses of state-owned submerged lands. The Aquatic Preserve Program has no jurisdiction over the designated use of the adjacent uplands. The incorporation of the designated land use into the management area classification is primarily an acknowledgement of how local government has chosen to have a certain area developed; however, this upland designation also serves as a tool in designating compatible uses of the submerged lands in accordance with upland uses. Specific land use categories to be incorporated in the classification of management areas include:

Agriculture (AG): This category represents state-owned submerged lands adjacent to land designated on an approved Future Land Use Map for a county and/or municipality as agriculture. It is intended to accommodate private areas with sparse populations used primarily for agricultural and/or forestry purposes.

Single-Family (SF): This category represents state-owned submerged lands adjacent to land designated on an approved Future Land Use Map for a county and/or municipality as single-family residential. It is intended to include areas

using the adjacent portion of the aquatic preserve solely for private recreational activities.

Multi-Family (MF): This category represents state-owned submerged lands adjacent to land designated on an approved Future Land Use Map for a county and/or municipality as multi-family residential. It is intended to include areas where more than one private residence are using the adjacent portion of the aquatic preserve solely for private, recreational activities. The associated residences include townhouses, trailer parks, condominiums, apartments, and any other group of multi-family dwellings. They may also include a group of single-family property owners, as in the case of a homeowners association, that desires to construct any of the above-mentioned structures for the mutual benefit of the group.

Commercial-Industrial (CI): This category represents state-owned submerged lands adjacent to land designated on an approved Future Land Use Map for a county and/or municipality as commercial or industrial. The category is also intended to incorporate uses associated with structures that charge fees or generate revenue. Examples of commercial uses includes marinas that charge fees; yacht clubs that charge membership fees; private businesses such as fish houses; and, establishments such as restaurants.

Public Recreation (PR): This category represents state-owned submerged lands adjacent to land designated on an approved Future Land Use Map of a county and/or municipality as public usage or preservation and which is utilized for the purposes of public recreation. It is intended to include both areas where structures are used by the general public at no charge and federal, state, county, or municipal parks that charge a nominal fee. Military structures, while not always open to the public, are considered in this category since the military serves the public.

Preservation (P): This category represents state-owned submerged lands adjacent to land designated on an approved Future Land Use Map of a county and/or municipality as preservation. Upland ownership can be either public or private.

Open-water (OW): This category represents state-owned submerged lands within an aquatic preserve which are of a distance of greater than 500 feet from land.

Classifications of management areas are also derived from the resource value of the state-owned submerged lands adjacent to the upland property. Each of the land use classifications noted above is assigned a second code letter to define the resource value of its submerged bottoms. The methodology used

for determining the resource value shall be consistent with the latest procedure approved by the Bureau of Submerged Lands and Preserves.

If an area within the preserve is designated as a **Primary Resource Protection Area (PRPA)**, then it will be assigned a resource value of **"1"**. A PRPA essentially combines Resource Protection Areas 1 and 2, as defined in Section 18-20.003(31), and 18-20.003(32), F.A.C. Resource attributes which would warrant the assignment of PRPA include the presence of:

1. Non-exotic and non-evasive aquatic/wetland vegetation (e.g., marine and freshwater grasses, attached algae, mangroves, marsh vegetation, cypress, and mixed hardwoods) that covers more than 1% of the surveyed area;

2. Harvested bivalves (hard clams and oysters) with a clam frequency greater than 20% within the surveyed area or with oyster bars with a total surface area density greater than 5 square meters;

3. Unvegetated soft-bottom communities (e.g., infaunal invertebrates) with a Shannon-Weaver Diversity Index greater than 1.00;

4. Hard-bottom communities (e.g., corals, worm reefs, rock outcrops) that have a frequency greater than 5% within the survey area;

5. Species designated as endangered, threatened, or of special concern (as contained in the latest update of the Florida Game and Fresh Water Fish Commission's and U.S. Fish and Wildlife Service's lists) that use the area for habitat (e.g., feeding, mating, breeding, refuge, or nesting);

6. Nesting sites for solitary or colonial birds.

Submerged areas that are characterized by the absence of the above resource attributes will be designated as a **Secondary Resource Protection Area (SRPA)**, and will be assigned a resource value of **"2"**. A SRPA is a Resource Protection Area 3 as defined by Section 18-20.003(33), F.A.C.

As stated previously, resource values are to be incorporated into the classification of management areas. For example, if an area within the preserve is determined to have a primary resource protection area, and if the adjacent land is zoned as a single-family residential neighborhood, it would be classified as a **SF/1** management area.

Minimum criteria has been outlined for a number of uses and activities that can occur in the aquatic preserve. The minimum criteria provided in Chapter 18-20, F.A.C. applies to the uses and activities allowed for each management area.

Criteria more restrictive than that listed in Chapter 18-20, F.A.C. will be used if the biological and physical conditions of an area warrant it. These areas will be referred to as **special management areas**, and will be labeled with an additional letter. Again, as an example, if an SF/1 area needs additional restrictive criteria, it then becomes a special management area and would be classified as **SF/1a.** Upon approval of this management plan by the Board of Trustees, the St. Andrews State Park Aquatic Preserve management plan will be incorporated into Chapter 18-20, F.A.C., rule by reference; therefore, new or more restrictive criteria in this plan will have the force and effect of rule upon adoption of this plan into rule.

C. MINIMUM CRITERIA FOR ALLOWABLE USES

Chapter 18-20, F.A.C., (Appendix A), provides the minimum standards in regard to utilization of the state-owned submerged lands within an aquatic preserve. The minimum standards for each allowable use are detailed below:

Private residential single docks:
Section 18-20.004(5)(a), F.A.C., provides that all docks within an aquatic preserve shall meet the following standards and criteria.

1. No dock shall extend the lesser of 500 feet waterward of the mean or ordinary high water line or 20% of the width of the water body at that particular location.

2. Areas of significant biological, scientific, historic, and/or aesthetic value require special management considerations. Modifications to docks in these areas may be more restrictive and are determined on a case-by-case analysis.

3. The number, lengths, drafts, and types of vessels allowed to utilize the proposed facility may be stipulated.

4. Where local governments have more stringent standards and criteria for docking facilities, the more stringent standards for protection and enhancement of the aquatic preserve shall prevail.

In addition, Section 18-20.004(5)(b), F.A.C., provides that private residential single docks shall conform to the following specific design standards and criteria:

1. An access dock must have a maximum width of 4 feet.

2. Must be designed and constructed to ensure maximum light penetration.

3. May extend from the shoreline to a maximum depth of -4 feet mean low water (MLW).

4. When the water depth is -4 feet MLW at an existing bulkhead, the maximum dock length from the bulkhead shall be 25 feet, subject to modifications accommodating shoreline vegetation overhang.

5. Wave break devices shall be designed to allow for maximum water circulation and built in such a manner as to be part of the dock structure.

6. The maximum size of the terminal platform shall be 160 square feet.

7. Dredging is strongly discouraged.

Private residential multi-slip docks:
In addition to meeting the standards for all docking facilities noted above, Section 18-20.004(5)(c), F.A.C., provides that private residential multi-slip docks shall conform to the following specific design standards and criteria:

1. The area of sovereignty submerged land preempted by the docking facility shall not exceed the square footage amounting to ten times the riparian waterfront footage of the affected water body of the applicant, or the square footage attendant to providing a single dock in accordance with the criteria for private residential single docks, whichever is greater. A conservation easement or other such restriction acceptable to the Board must be placed on the riparian shoreline, used for the calculation of the 10:1 threshold, to conserve and protect shoreline resources and subordinate/waive any further riparian rights of ingress and egress for additional docking facilities.

2. Docking facilities and access channels shall be prohibited in Resource Protection Areas 1 and 2, except as allowed pursuant to Sections 258.42 (3)(e)(1), F.S., while dredging in Resource Protection Area 3's shall be strongly discouraged.

3. Water depths adjacent to and within the facility shall have a minimum of one foot of clearance between the deepest draft of a vessel and the bottom at MLW.

4. Main access docks and connecting or cross walks shall not exceed 6 feet in width.

5. Terminal platforms shall not exceed 8 feet in width.

6. Finger piers shall not exceed 3 feet in width and 25 feet in length.

7. Pilings may be utilized as required to provide adequate mooring capabilities.

8. Specific provisions of Section 18-20.004 (5)(d), F.A.C., for commercial industrial, and other revenue generating/income related docking shall also apply to private residential multi-slip docks.

Commercial-Industrial docking facilities and marinas:
Section 18-20.004(5)(d), F.A.C., provides that commercial, industrial, and other revenue generating/income related docking shall conform to the following specific design criteria and standards:

1. Docking facilities shall only be located in or near areas with good circulation, flushing, and adequate water depths.

2. Docking facilities and access channels shall not be located in Resource Protection Areas 1 or 2; however, main access docks may be allowed to pass through Resource Protection Areas 1 or 2 that are located along the shoreline, to reach an acceptable Resource Protection Area 3, provided that such crossing will generate minimal environmental impact.

3. The siting of docking facilities shall take into account the access of the boat traffic to avoid marine grassbeds or other aquatic resources in the surrounding area.

4. The siting of new facilities within the aquatic preserve shall be secondary to the expansions of existing facilities when such expansion is consistent with other standards.

5. The location of new facilities and expansion of existing facilities shall consider the use of upland dry storage as alternative to multiple wet slip docking.

6. Marina siting will be coordinated with local governments to insure consistency with local plans and ordinances.

7. Marinas shall not be sited within state designated manatee sanctuaries.

8. In any area with known manatee concentrations, manatee warning/notice and/or speed limit signs shall be erected at the marina and/or ingress and egress channels, according to Florida Marine Patrol specifications.

Exceptions to the standards and criteria for any docking facility may be considered, but only upon demonstration that such exceptions are necessary to ensure reasonable riparian ingress and egress.

Piers:
Follow standards of private residential single docks or private residential multi-slip docks in accordance with the appropriate dock requirement for each management area's designated uses. In addition, the following applies to all piers:

1. no temporary or permanent vessel mooring shall be permitted; at least one well displayed "no docking" sign shall be placed and maintained on each side of the pier; and railings shall be placed around the entire perimeter of the pier; and,

2. dredging is strictly prohibited when associated with pier construction or maintenance.

Ramps:
May be permitted only on a case-by-case basis, after site inspection to assess the type and amount of shoreline or benthic vegetation or other habitat that would be impacted; the amount of filling of submerged lands required; and, the accessibility to the ramp from water or land access.

Sale, lease, or transfer of lands, (Private Leases):
Section 18-20.004(1)(b), F.A.C., provides that there shall be no further sale, lease or transfer of sovereignty lands within an aquatic preserve unless such transaction is in the public interest. Section 18-20.004(2), F.A.C., specifically defines The public interest test (see Appendix A for a copy of Chapter 18-20, F.A.C.). Section 18-20.004(1)(e), F.A.C., states that lease, easement, or consent may be authorized for only the following activities: a public navigation project; maintenance

of an existing navigation channel; installation or maintenance of navigation aids; creation or maintenance of a commercial/industrial dock, pier, or marina; creation or maintenance of private docks; minimum dredging of navigation channels attendant to docking facilities; creation or maintenance of shore protection structures; installation or maintenance of oil and gas transportation facilities; creation, maintenance, replacement, or expansion of facilities required for the provision of public utilities; and, other activities which are a public necessity or which are necessary to enhance the quality or utility of the preserve and which are consistent with the Florida Aquatic Preserves Act (Section 258.35, F.S., through Section 258.46, F.S.). Section 18-20.004(1)(f), F.A.C., provides that structures to be built in, on, or over sovereignty lands are limited to those necessary to conduct water dependent activities.

Utility Easements:
Section 18-20.004(3)(c), F.A.C., provides that utility cables, pipes, and other such structures shall be constructed and located in a manner that will cause minimal disturbance to submerged land resources such as oyster bars and submerged grassbeds and do not interfere with traditional uses. It will be the policy within the aquatic preserve to encourage the placement of utilities in designated corridors, or existing easements.

Spoil Disposal:
Section 18-20.004(3)(d), F.A.C., provides that spoil disposal within an aquatic preserve shall be strongly discouraged and may be approved only where the applicant has demonstrated that there is no other reasonable alternative and that the spoiling activity may be beneficial to, or at a minimum, not harmful to the quality and utility of the preserve.

D. MANAGEMENT AREAS

In this section, management areas have been delineated for the St. Andrews State Park Aquatic Preserve (Figure 5). Boundaries, descriptions, and allowable uses are listed for each area. Due to changes that may occur from rezoning of adjacent uplands, and altering biological conditions on submerged lands, the final decision on approving, modifying or denying uses of the submerged lands within the preserve will be made based on field surveys and assessments of project sites.

In addition to what is listed for allowable uses, certain activities are generally permissible in all management areas, in accordance with general rules. These include shoreline stabilization, maintenance dredging, and maintenance of channel markers.

The determination of management area classifications have been based on information presented earlier. In the event that a site visit concludes that the management area for a specific site is different from that shown on the map in Figure 5, the determination made during the site visit will be judged as the correct determination.

MANAGEMENT AREA SF-MF/1
(single family - multi-family/
primary resource protection area)

Boundaries: This management area is defined as all state-owned submerged lands from MHWL out 500 feet in T4S/R15W, Section 14 (Alligator Point north to Courtney Point).

Description: This area is characterized by sparse to dense seagrass beds in shallow and deeper water. There are several single-family residences with docks or piers and one improved canal associated with this area.

Note: This management area classification combines the two upland categories because of a number of single-family and multi-family residences intermixed throughout this area.

Allowable Uses: Utility easements (in designated corridors), private residential single docks (a single two-slip dock built in accordance with standards and criteria for private residential single docks); piers.

MANAGEMENT AREA PR/1
(public recreational/primary resource protection area)

Boundaries: This area management area is defined as all state-owned submerged lands from MHWL out 500 feet in T4S/R15W, Sections 22 (southwestern edge of jetties north to Grand Lagoon), southeastern edge of jetties north and the entire bayside length of Shell Island to the eastern tip of the island (excluding all privately owned uplands), all of Tyndall from T4S/R14W, Section 18 (Redfish Point) to the eastern boundary of the Preserve (Southeastern end of Section 33).

Description: This area is characterized by sparse to dense seagrass beds, expansive salt marshes, bird nesting areas, and important cultural resources.

Allowable Uses: Utility easements (in designated corridors) public docks (a single two-slip dock built in accordance with the standards and criteria for private residential single docks), ramps.

MANAGEMENT AREA PR/2
(public recreational/secondary resource protection area)

Boundaries: This management area is defined as all state-owned submerged lands from MHWL out 500 feet on the Gulf side of the Preserve from the western end of the Preserve to the eastern tip of Shell Island.

Description: This area is characterized by high energy beaches and hard sand bottoms.

Allowable Uses: utility easements, public docks (meeting the requirements of a private residential multi-slip dock), ramps.

MANAGEMENT AREA P/1
(preservation/primary resource protection area)

Boundaries: This management area is defined as all state-owned submerged lands from MHWL out 500 feet in T4S/R15W, Section 23 and 25 where the uplands are privately owned.

Description: This area is characterized by sparse and dense seagrass beds and salt marshes.

Allowable Uses: A single two-slip dock built in accordance with standards and criteria for private residential single docks.

MANAGEMENT AREA OW/1
(open water/primary resource protection area)

Boundaries: This management area is defined as all state-owned submerged lands of St. Andrews Bay, which are 500 feet waterward of MHW, within the aquatic preserve.

Description: This area is characterized by relatively clear, deep waters with turtle and manatee grass.

Allowable Uses: Utility easements (in designated corridors).

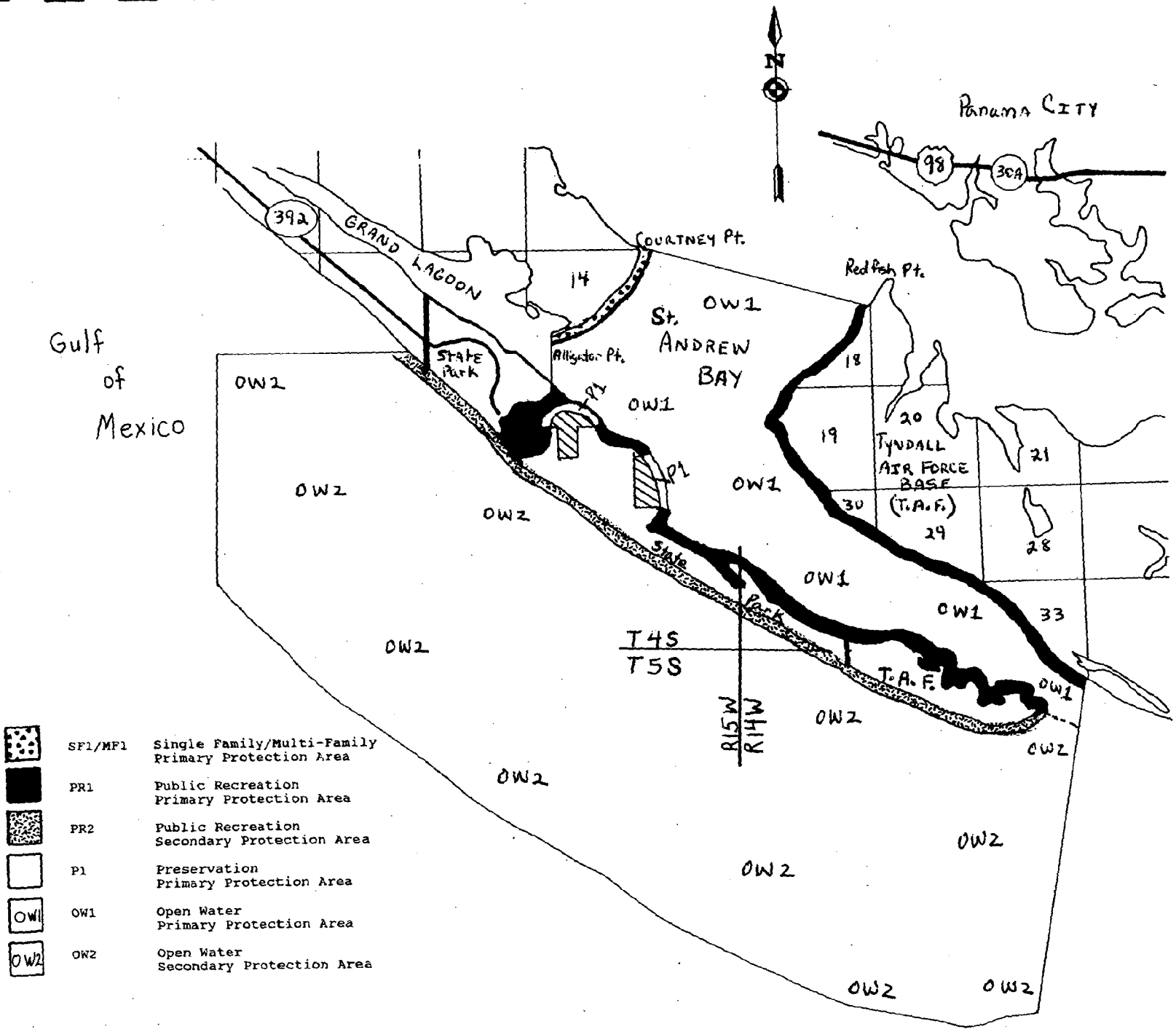
MANAGEMENT AREA OW/2

(open water/secondary resource protection area)

Boundaries: This management area is defined as all state-owned submerged lands of the Gulf of Mexico, which are 500 feet waterward of MHW, within the aquatic preserve.

Description: This area is characterized by relatively clear, deep waters with hard sand bottoms.

Allowable Uses: Private leases, utility easements (in designated corridors), spoil disposal.



	SF1/MF1	Single Family/Multi-Family Primary Protection Area
	PR1	Public Recreation Primary Protection Area
	PR2	Public Recreation Secondary Protection Area
	P1	Preservation Primary Protection Area
OW1	OW1	Open Water Primary Protection Area
OW2	OW2	Open Water Secondary Protection Area

FIGURE 5. Management Areas

CHAPTER V

SITE SPECIFIC MANAGEMENT ISSUES & NEEDS

This chapter deals with management issues and policy guidelines involving specific activities and environmental processes that directly affect the biological integrity of the preserve. The issues that are specific to this area include, but are not limited to, increasing boat and jet ski traffic, dredging of adjacent submerged lands and cooperation with Tyndall Air Force Base. Policy guidelines relative to these issues are intended to provide additional management direction not set forth by Chapter 258, F.S., Chapter 18-20, F.A.C., or Chapter IV of this plan.

A. MANAGEMENT ISSUES AND SPECIAL NEEDS

1. Boat and Jet Ski Traffic

As the population of Florida grows, the traffic from boats and jet skis is expected to increase. This trend poses a number of problems, both from the standpoint of the expected impacts on the biological resources and from related safety issues. The biological aspects include: (1) an increase in turbidity, with the resultant loss of seagrasses sensitive to lowered levels of incident light penetration, (2) cutting of seagrasses by propellers and "prop dredging", and (3) pollution from refueling jet skis on beaches and shallow bay areas.

Safety issues primarily revolve around the dramatic increase in jet ski use in recent years. By their very nature, jet skis are fast and highly maneuverable, making them a potential hazard for boaters and swimmers.

2. Dredging of Adjacent Submerged Lands

As boat traffic grows in the area there is an increased demand for boat docks/slips in the adjacent areas. Grand Lagoon is rapidly being developed and dredged to accommodate more boats. Turbidity from the dredging can have a disastrous affect on water clarity that results in a loss of seagrasses.

3. Tyndall Air Force Base

Tyndall Air Force Base is a major land holding adjacent to the preserve, owning all the lands on the northeast end of the preserve and the eastern end of Shell Island. The lands are used mainly for recreational purposes.

B. POLICY GUIDELINES

This section of the plan contains a number of management policies that address the issues identified as being particular to the St. Andrews State Park Aquatic Preserve. Adoption of these policies will provide specific direction for managing those issues not addressed directly by statue or rule. The major policy guidelines for these issues include:

1. Promote recognition of the fact that seagrasses provide valuable habitat and a food source for organisms essential to the biological integrity of the preserve. This biological integrity translates into a significant economic fisheries value to this region.

2. Protect beaches from pollution by jet skis by prohibiting refueling except at commercial docks and marinas that have been approved as fueling sites which incorporate procedures and equipment for spill prevention and clean-up.

3. Protect boaters and swimmers from traffic by designating the channel from Grand Lagoon through the jetties as an idle-speed zone. Prohibit jet skis from around the swimming area at the jetties.

4. Reduce the impact of turbidity on seagrasses by prohibiting new dredging for the sole purpose of accommodating boats with drafts greater than the mooring capabilities of a given site.

5. Develop a cooperative status with Tyndall Air Force Base personnel regarding present or future uses of the preserve.

6. Promote the mutual exchange of environmentally sound information and ideas relating to such issues as military maneuvers and/or other operations that may require direct utilization or otherwise impact the preserve.

CHAPTER VI

MANAGEMENT ACTION PLAN

The objective of this chapter is to establish guidelines that allow for the management and protection of the aquatic preserves natural resources for the benefit of future generations (Section 258.35, F.S.).

Before an effective program can be designed to manage and protect natural resources, it is necessary to recognize the type of resources present, their location, function, and importance. Additional efforts should concentrate on identifying those activities or parameters that affect these resources, either positively or negatively. This information will form the foundation from which action will be initiated to manage and protect these resources. The strategies used in managing an aquatic preserve must consist of a variety of components such as **resource management, resource protection, research,** and **environmental education.**

In general, the management role of the aquatic preserve program includes:

* providing information on the ecological functions and their economic importance.

* overseeing activities that affect or could affect the natural resources of the preserve.

* ensuring that accurate biological and physical information is considered in permit-related issues and planning decisions.

* ensuring that all statutes and rules regarding the preserves natural resources are complied and that violations are enforced by appropriate authorities.

* conducting on-site surveys for specific activities.

* coordinating with other resource management and enforcement agencies.

* educating the public on the inherent values associated with natural resources.

* conducting or cooperating with other entities to conduct pertinent research projects.

* developing a comprehensive management program that can be periodically updated.

A. RESOURCE MANAGEMENT

The overall goals of resource management within aquatic preserves are:

* conducting and maintaining resource inventories,
* assessing the impact of human activities on the resource,
* cooperating with other agencies in water quality improvement,
* participating in local land use decisions that may affect the submerged resources.

GOAL A.1: Conduct and Maintain Resource Inventories

Objective A.1.1: To conduct and maintain a resource inventory of submerged and emergent vegetation.

Task A.1.1.1: Conduct a detailed inventory of submerged and emergent vegetation by using LANDSAT imagery, aerial photography and ground truthing efforts.

Task A.1.1.2: Conduct inventory once every two years.

Objective A.1.2: To conduct an inventory of all animal species, including designated species, and their habitats.

Task A.1.2.1: Conduct an inventory of all animal species, with emphasis on designated species, that feed, roost, loaf, breed, or nest in the preserve, as well as their associated habitats by using data from existing literature and current research studies.

Task A.1.2.2: Conduct inventory once every two years.

GOAL A.2: Assess the Impact of Human Activities

Objective A.2.1: To inventory and assess the effects of human activities on the natural resources and possible needs for restoration:

Task A.2.1.1: Conduct a survey of all structures and activities in the preserve, to determine the extent and relationship between, human impact and the degradation of the natural resources.

Task A.2.1.2: Conduct inventory once every two years.

GOAL A.3: Coordinate With Other Agencies To Improve Water Quality

Objective A.3.1: To coordinate with DER and water management districts on improving water quality in the preserve.

Task A.3.1.1: Maintain a file, and periodically assess data received from DER on water quality for the preserve. If water quality decline is indicated, consult with DER to determine source of degradation and evaluate possible actions to improve the water resources.

Task A.3.1.2: Coordinate with the local mosquito control district(s), to review arthropod control plans submitted in compliance with Section 388.4111, F.S., and to monitor arthropod control activities for compliance with the management plan.

GOAL A.4: Participate in Local Land Use Decisions

Objective A.4.1: To coordinate with local planning departments, regional planning councils, and the Department of Community Affairs to develop/revise/evaluate Local Government Comprehensive Plans and amendments.

Task A.4.1.1: Contact local planners and establish your role as a field representative and source of assistance in the development of policies that concern state-owned submerged lands.

B. RESOURCE PROTECTION

In order to maintain the biological integrity of the aquatic preserve, it is imperative to protect the resources that comprise the system. The primary thrust of resource protection is the protection of the various habitats that make up the preserve. The goals of the Aquatic Preserve Program with regard to resource protection therefore include:

* protection of existing submerged and emergent vegetation.

* protection of animal species, particularly designated species, and their associated habitats.

GOAL B.1: Protection of Submerged and Emergent Vegetation

Objective B.1.1: To minimize potential damage to vegetation through the review of applications for use of state-owned land in the aquatic preserve.

Task B.1.1.1: Develop a standard format for surveying the biological resources at the project site. The report shall include the following information:

a) location of the area surveyed, including the majority of the potentially affected area.

b) assessment of the submerged bottoms and affected shorelines physical and biological features.

c) the definition of Primary and Secondary Resource Protection Areas will be used to determine if significant resources exist within the expected area of impact.

Task B.1.1.2: Coordinate with appropriate DNR staff in order to process the field comments in a timely manner.

Task B.1.1.3: Coordinate with other appropriate agencies that have regulatory authority for these projects.

Objective B.1.2: To ensure that structures and projects that have been built or are occurring have been authorized and are in compliance with authorized conditions.

Task B.1.2.1: Report activities that do not appear to have been authorized to the appropriate DNR enforcement agent.

Task B.1.2.2: Coordinate with the appropriate DNR staff to receive copies of all letters of consent, easements agreements, lease agreements, and other forms of authorizations.

Task B.1.2.3: Report variations from the authorized conditions to the appropriate DNR enforcement agent.

Task B.1.2.4: Coordinate with other appropriate agencies that have regulatory authority for these projects.

Objective B.1.3: To ensure other human uses of the preserve do not degrade the submergent or emergent vegetation.

Task B.1.3.1: Seek to establish local government ordinances that will serve to further protect the vegetative resources.

GOAL B.2: Protection of Animal Species, Particularly Designated Species, and their Associated Habitats

Objective B.2.1: To comply with Objective C.2.1 through the Implementation of Tasks C.2.1.1 and C.2.1.2.

Objective B.2.2: To ensure that these habitats are given maximum protection through the permit-review process.

Task B.2.2.1: Recommend modifications to proposed projects in order to take into account known habitat of designated species whether that habitat is on the adjacent upland or over state-owned submerged land.

C. RESEARCH

The effective management of any biological system relies almost entirely on information relating how a system functions. Research is the foundation upon which this information is based. The goals of the research program for the Aquatic Preserves Program is primarily geared toward applied research, rather than toward basic or theoretical research. The goals of the research program are:

* to gain a better understanding of what factors are essential to the continued biological integrity of the major habitats within the aquatic preserve,

* to gain a better understanding of what factors govern the continued survival and propagation of designated species that use the aquatic preserve for any portion of their life cycle.

Goal C.1: Integrity of Major Habitats

Objective C.1.1.1: To determine the primary factors that affect the survival of species associated with salt marshes and seagrasses.

Task C.1.1.1: Pursue, information search by examining existing literature and any current research studies.

Task C.1.1.2: Assess the need for research on the major habitat types within the preserve.

Task C.1.1.3: Encourage researchers to conduct studies in the preserve that will benefit the overall management of the resources.

Goal C.2: Survival and Propagation of Designated Species

Objective C.2.1: To determine which portions of the preserve serve as habitat for designated species.

Task C.2.1.1: Coordinate with the Game and Fresh Water Fish Commission, the U.S. Fish and Wildlife Service, the Audubon Society, and any other relevant group to determine which designated species use what portion of the aquatic preserve for various aspects of their life cycle.

Task C.2.1.2: Establish a system of seasonal monitoring sites to determine the preserves use by designated species, particularly by birds.

Objective C.2.2: To determine the patterns and trends in manatee use of the aquatic preserve.

Task C.2.2.1: Promote and, and whenever feasible, participate in research on the factors that affect the continued survival of manatees.

Task C.2.2.2: Coordinate with and, if necessary, lend assistance on a local level to the Division of Marine Resources manatee--related research program.

D. ENVIRONMENTAL EDUCATION

Unless the public knows the importance and value of a resource, it cannot be expected to use that resource wisely. The integrity of the salt marsh system is a resource that can have both direct and indirect impacts on the public's enjoyment of the aquatic preserve. Without a biologically "healthy" aquatic system, water quality will deteriorate, fisheries will fail due to loss of habitat, and many species

of wading birds will disappear. One of the primary aims of the aquatic preserve program, therefore, is to educate the public as to the importance of the factors that affect the integrity of the preserve. The public may include students; waterfront property owners; user groups, such as developers and marine contractors; special interest groups, such as Audubon and boating clubs; and local, regional and state government agencies that are involved in making decisions regarding the aquatic preserve.

The overall goal of the environmental education element is to instruct individuals as to the importance of preserving our natural resources so that they may consider all issues prior to making decisions that affect these resources. In general, the intent of this element is to educate the public and make them responsible users of the preserve. Two DNR publications, Environmental Education in Florida: Needs and Goals, and A Guide for Environmental Education, are notable references available for the preserve-manager to aid in accomplishing this goal.

GOAL D.1: Public Education Toward Wise Resource Use

Objective D.1.1: To establish and conduct environmental educational programs for public and private schools and to provide assistance to other educational centers and organizations.

Task D.1.1.1: Notify the county school boards on the Aquatic Preserves Program education efforts and the availability of its staff to assist or provide guidance for educational programs.

Task D.1.1.2: Coordinate with and assist local educational centers and other facilities, (such as St. Andrews State Recreation Area), on their interpretive programs.

Task D.1.1.3: Provide off-site classroom instruction and field trips to the aquatic preserve, for the schools and any interested parties.

Task D.1.1.4: Target educational programs towards audiences that will have the greatest potential impact on aquatic resources (e.g., boating clubs, homeowners associations, developers, etc.).

Task D.1.1.5: Conduct or assist in informal seminars, classes, or workshops for public discussion of the current resource management issues, resource utilization, and regulatory activities. Public forums such as these

should involve private and public resource users.

<u>Objective D.1.2:</u> To produce educational literature and materials that inform the public of the preserves natural resources and the importance of preserving and protecting these resources.

Task D.1.2.1: Set up educational display at St. Andrews State Recreation Area distributing brochures and other educational materials about the preserve.

Task D.1.2.2: Maintain and expand a specimen collection of species commonly found in the aquatic preserve. This collection is to be used by public and private schools in their educational programs.

Task D.1.2.3: Develop brochures, pamphlets, and/or booklets that describes to the public both the purpose of and activities conducted by aquatic preserve field staff, and also presents general information of the preserve's ecosystem.

Task D.1.2.4: Develop at the field office a reference library of material relevant to the areas natural resources.

Task D.1.2.5: Submit newspaper articles and radio announcements designed to educate the general public about the ecological functions and economic importance of the natural resources within the preserve. This approach may be the vehicle with which to disseminate the findings of recent research efforts to the public.

<u>Objective D.1.3:</u> To provide informal workshops to instruct other environmental educators of the preserves natural resources.

Task D.1.3.1: Schedule biannual instructional workshops designed to teach other environmental educators.

Task D.1.3.2: Participate in environmental education conferences and seminars to further increase teaching skills, and to become familiar with other education programs.

CHAPTER VII

MANAGEMENT COORDINATION NETWORK

This chapter briefly presents a general overview of the various federal, state, regional, and local agencies that regulate or hold any interest in the management or use of the St. Andrews State Park Aquatic Preserve. One of the goals and objectives of the Aquatic Preserve Program is to coordinate with these agencies to achieve common goals relevant to the management and protection of resources in the preserve. Table 2 provides the manager with a quick reference matrix of those agencies with specific jurisdictions in the preserve.

A. FEDERAL AGENCIES

A number of federal agencies have property interests, land and wildlife management programs, research activities, construction activities, and regulation programs that deal either directly or indirectly with aquatic preserves.

In accordance with the federal consistency review process the Bureau of Submerged Lands & Preserves reviews the federal programs and activities as to how they affect the objectives of the Aquatic Preserve Program. This review is coordinated through the Florida Department of Environmental Regulation's Office of Coastal Management in order to enforce the provisions of the Federal Coastal Zone Management Act of 1972, as amended.

The **U.S. Army Corps of Engineers (COE)** has jurisdiction over inland navigable waters under the Rivers and Harbors Act of 1899. A revision of the Rivers and Harbors Act in 1968 extended the Corps jurisdiction allowing them to consider the fish and wildlife, conservation, pollution, aesthetics, ecology and other relevant factors of a project. The Corps regulatory program expanded in 1972 with the Federal Water Pollution Control Act Amendments, also known as the Clean Water Act (CWA). Section 404 of this act controls dredge and fill activities by the Corps and has since been extended to wetlands from Amendments to the CWA in 1977.

The **U.S. Coast Guard (USCG)** monitors for boating safety and navigational problems; operates search and rescue missions; conducts surveillance of narcotics contraband; and enforces maritime laws. The USCG also regulates construction of bridges, causeways, and aerial utilities that may pose navigation hazards. In the inland waters a volunteer group called the Coast Guard Auxiliary performs boating safety inspections and search and rescue missions.

The **U.S. Environmental Protection Agency (EPA)** has jurisdiction over surface waters in the state. Enforcement authority was given under the Clean Water Act of 1972 and broaden under the 1977 revision. In general EPA is responsible for pollution control and abatement, including: air, water, noise, solid waste, toxic waste, and radiation. They review permits issued by DER for the treatment, disposal and storage of hazardous wastes. Authority is divided between EPA and the U.S. Coast Guard in regarding the discharge of oil or hazardous substances into surface water.

The **U.S. Geological Survey (USGS)** performs surveys and research pertaining to topography geology, and the mineral and water resources, and collects and publishes water resource data.

The **U.S. Fish and Wildlife Service (USFWS)** has responsibility for fish and wildlife as authorized in the Coastal Resources Barrier Act, National Environmental Protection Act, Migratory Bird Act, Endangered Species Act, and Fish and Wildlife Coordination Act. "Under provision of the Fish and Wildlife Coordination Act, the Fish and Wildlife Service must be consulted before the Corps of Engineers can submit a plan for Congressional approval. The USFWS comments on the impacts of proposed projects on endangered species, migratory birds and other fish and wildlife and their habitats" (Barile et al., 1987). They are directed to prepare environmental impacts assessments or statements for proposed projects by the Corps, and are authorized to issue "Jeopardy Opinion" against any proposed project which will negatively effect an endangered species (Barile et al., 1987).

The **National Marine Fisheries Service (NMFS)** under the U.S. Department of Commerce, records commercial fish landings, enforces national fishery laws, and protects vital fishery habitats.

B. STATE AGENCIES

Many state agencies have property interests, land and wildlife management programs, research activities, regulatory authority and construction activities within the preserve. Additionally, DNR administers other programs which may affect the resources and watershed of the preserve.

The **Department of Natural Resources (DNR)** jurisdiction include state lands, sovereignty submerged lands, and marine resources which include marine research projects.

The Division of Marine Resources has several programs beneficial to aquatic preserves. The Marine Research laboratory in St. Petersburg has several projects including

resource protection area mapping, a survey of the status of oyster bars, and fishery habitat utilization studies which generate valuable resource management information. They also administer a permitting program for the collection certain marine species and the use of certain chemicals. The Aquatic Preserve Program receives notification of issuance of permits within the preserve. Marine Resources also conducts a variety of research projects, including those aimed at manatee and marine turtle protection.

The Division of Law Enforcement's Marine Patrol enforces statutes relating to marine resources, fishery management laws, boating safety, vessel titling/registration and illegal narcotics.

The Division of State Lands, is granted authority under Chapters 18-20 and 18-21 F.A.C., "Sovereignty Submerged Land Management" which gives DNR the responsibility to regulate commercial and residential docks and other structures and activities conducted on submerged lands. In addition to the work related to aquatic preserves, the Division of State Lands is charged with overseeing uses, sales, leases, or transfers of all state-owned lands. The aquatic preserve staff interact with other staff of State Lands in all transactions concerning submerged lands within the preserve including acquisition of privately titled submerged lands or contiguous uplands important to the integrity of the preserve. Land acquisition is conducted through the Conservation and Recreation Lands (CARL) program, authorized under Chapter 253, F.S.

The Division of Resource Management is responsible for the management of aquatic plants, mineral resources, oil and gas exploration, and geologic studies. Under Chapter 16C F.S., responsibility is given for various aquatic plant control programs, including permitting for mechanical, biological, and chemical control of aquatic plants. Permits are also necessary under Chapter 16C-52 F.S, "Aquatic Plant Importation, Transportation, Cultivation and Possession", for any persons cultivating, vegetating, or collecting aquatic plants. The Division of Resource Management also supervises state Navigation Districts and Canal Authority.

The Division of Beaches and Shores is responsible for managing erosion control, hurricane protection, coastal flood control, shoreline and offshore rehabilitation, and the regulation of work activities likely to affect the physical condition of the beach and shore (Chapter 161, F.S.)

The **Marine Fisheries Commission (MFC)** manages marine life by regulating the harvesting of all marine life except designated species. Their authority covers gear specification, prohibited gear, bag limits, size limits, species that may not be sold, protected species, closed areas, quality control

codes, harvesting seasons, special considerations related to egg-bearing females, and oyster and clam relaying. The MFC is required to make annual recommendations to the Governor and Cabinet regarding marine fisheries research priorities, which can in turn directly influence research efforts and priorities at the preserve.

The **Department of Environmental Regulation (DER)** is responsible for regulating air, water, noise, wastewater, stormwater, and hazardous waste pollution through a permitting and certification process. DER also serves as the state contact for the initiation of dredge and fill applications in conjunction with the COE and DNR. The permitting process is a key management tool for the protection of the preserve.

The DER's rules significant to the Aquatic Preserve Program are Chapters 17-301, 17-302, 17-4, and 17-312, F.A.C. Authority for these rules is based in Chapter 403, F.S. Chapter 17-301 and 17-302, F.A.C., addresses water quality standards with the most stringent category being "Outstanding Florida Waters" (OFW). Special protection for OFW's is found in 17.302.700, F.A.C. As an OFW, ambient conditions, instead of prescribed values, become the water quality standards for the waterbody. As an aquatic preserve, Yellow River Marsh was automatically designated an OFW in 1979. Chapter 17-4, F.A.C. addresses permit requirements, and Chapter 17-312, F.A.C. covers dredge and fill activities.

Section 253.77, F.S., as amended by the Warren S. Henderson Wetlands Protection Act of 1984, requires that any person requesting use of state-owned lands shall have prior approval of the Board of Trustees. An interagency agreement between DNR and DER provides for DNR staff comments into the DER permitting process for environmental impacts in aquatic preserves.

The DER Office of Coastal Management is charged with coordinating activities related to coastal management and reviewing federal actions for consistency with the state Coastal Management Program. The Office of Coastal Management also awards grants for research and management planning.

The **Department of Health and Rehabilitative Services (DHRS)** has responsibilities to protect the public's health by overseeing functions that involve water supplies, on site sewage disposal, septic tank cleaning, and solid waste control. Authority for these responsibilities are found in Chapter 154, 381, and 386, F.S. and in the 10D Series of F.A.C., known as the "Sanitary Code". The local county DHRS office (County Health Department), has jurisdiction overseeing these responsibilities.

Also affecting the public's health and the Aquatic Preserve Program is the arthropod (mosquito) control program, which is usually administered through the local mosquito control district. DNR staff are involved in the management programs developed by the Florida Coordinating Council on Mosquito Control, and subsequent policy recommendations resulting from this groups will be evaluated for their potential effects on the aquatic preserve.

The **Florida Game and Fresh Water Fish Commission (FGFWFC)** authority is provided in the rules and regulations of Chapters 39.101 and 39.102, F.A.C. This authority involves the implementation of specific regulations and their enforcement, for all wildlife. The Office of Environmental Services reviews projects which may affect local fish and wildlife habitat. FGFWFC is the state coordinator of the non-game Wildlife and Endangered Species Program in Florida. The Division of Wildlife is also responsible for designating Critical Wildlife Management Areas to protect designated species. They also oversee habitat restoration and fish re-stocking of freshwater rivers and lakes. And, the FGFWFC has law enforcement officers that patrol the aquatic preserves.

The **Department of State (DOS), Division of Historical Resources (DHR)** has the responsibility granted under Chapter 267, F.S., regarding the preservation and management of Florida's archaeological and historical resources. This responsibility includes those cultural resources located on state-owned lands, including aquatic preserves.

The **Department of Transportation (DOT)** has responsibilities that include right of way and surface water run-off in the areas of roads, bridges and causeways. The DOT also updates a state-wide aerial photographic survey every four years, rotating on a district basis.

The **Department of Community Affairs (DCA)** and the Regional Planning Councils (RPC) are authorized under Section 380.06, F.S., for administering the Development of Regional Impact (DRI) program. The DRI process was established to provide a review and monitoring procedure for development projects potentially affecting the health, safety or welfare of citizens of more than one county.

The Department of Community Affairs also oversees the development of Local Government Comprehensive Plans (LGCP) for both counties and municipalities, as required by the Local Government Comprehensive and Land Development Regulation Act, Chapter 163, Part II, F.S. Subsection 163.3202(5), F.S., provides that DCA shall adopt rules for the review of local government land development regulations. Local governments are required to adopt land development regulations which are consistent with the adopted local comprehensive plan within

one year after submission of the local comprehensive plan for review by the Department pursuant to subsection 163.3167(2), F.S.

The **Office of Planning and Budgeting of the Executive Office of the Governor**, in conjunction with the DER's Coastal Zone Management Section, is responsible for administering project reviews applicable to Florida's Coastal Management Program Federal Consistency evaluation process. This process includes all projects in the state that involve federal permitting, federal assistance or direct federal activities. Each project must undergo this additional review to determine if the project is consistent with established programs, policies and rules of the state. This includes projects affecting resources in aquatic preserves.

C. REGIONAL AGENCIES

In addition to state and federal agencies, two regional agencies have a major role in the use and management of the preserve: These organizations conduct activities that are on a broader scale than are those of the local governments, but they are on a smaller scale than the state level.

Northwest Florida Water Management District (NWFWMD)
The Water Management District administers permitting programs for consumptive water use, management and storage of surface water well drilling and operation, regulation of artificial recharge facilities, and works of the district. This includes withdrawal of water from rivers, streams, and wells. The types of water uses permitted by the NWFWMD which could affect the preserve include irrigation and public water supply. The water management district is also involved in various studies on water supply and management that may be of use to the preserve.

Northwest Florida Regional Planning Council (NWFRPC)
The Northwest Florida Regional Planning Council serves as a regional planning body for the local government of Santa Rosa County. Among its duties are: aides local governments with planning expertise; is the regional representative for the DRI review process; serves as a regional clearinghouse for state and federal projects to the state and federal levels; assists local governments in getting grant aides; and prepares and administers the Regional Policy Plan.
The DRI review of projects which affect the preserve will be reviewed by both the central office staff and field personnel. DRI's for marinas or subdivisions adjacent to the preserve, and commercial or industrial developments will be reviewed closely for their potential impact on the preserve.

D. LOCAL GOVERNMENTS/INTEREST GROUPS

Local governments are the incorporated cities and counties that border the preserve. The entire St. Andrews State Park Aquatic Preserve is bounded by Bay County. Panama City and Panama City Beach lie in close proximity to the preserve's boundary.

Field personnel are the liaison with local governments, and they will provide input into modifications of local government policies and practices to insure conformance with the objectives of the aquatic preserve management plan.

Private Interest Groups and Public

Effective management of the preserve will be enhanced by continued support from organized groups, associations, and individuals. Citizen support organizations are particularly valuable through the provision of technical, non-technical, and financially assistance. The administrative and field staff will actively solicit the organization of and participation from citizen support organizations at this aquatic preserve.

The relationship of non-governmental entities to the preserve will include the coordination of activities such as scientific research, environmental education, and other activities relating to the protection, management or improved understanding of the preserve. Field staff will be active in communicating with the above groups.

TABLE 2 : MANAGEMENT COORDINATION NETWORK

LOCAL AGENCIES

LGT	Local Governments (Cities, Towns, Municipalities)
CGT	County Governments
LDD	Local Drainage Districts
MCD	Mosquito Control Districts
ICD	Inlet Commissions/Districts
SWC	Soil and Water Conservation Districts

REGIONAL AGENCIES

RPC	Regional Planning Council
WMD	Water Management Districts
FIN	Florida Inland Navigation District

STATE AGENCIES

DCA	Florida Department of Community Affairs
DER	Florida Department of Environmental Regulation
DNR	Florida Department of Natural Resources
GFC	Florida Game and Freshwater Fish Commission
DOS	Florida Department of State
DOT	Florida Department of Transportation
FMP	Florida Marine Patrol
FSG	Florida Sea Grant
MFC	Marine Fisheries Commission
DAC	Florida Department of Consumer and Agricultural Services
HRS	Florida Department of Health and Rehabilitative Services

FEDERAL AGENCIES

CG	United States Coast Guard
COE	United States Army Corps of Engineers
EPA	United States Environmental Protection Agency
FWS	United States Fish and Wildlife Service
NMF	National Marine Fisheries
GS	United States Geological Survey

Source: modified from the Indian River Lagoon Joint Reconnaissance Report, 1987

	Local						Regional				State										Federal					
	LGT	CGT	LDD	MCD	ICD	SWC	RPC	VMD	FIN	DAC	DCA	DER	DNR	GFC	HRS	DOS	DOT	FMP	FSG	MFC	CG	COE	EPA	FWS	NMF	GS
Dredge and Fill Permitting	●	●						●	●			●	●	●						●	●	●	●	●		●
Docks, Fishing Piers, Seawalls	●	●										●	●									●				
Marinas	●	●					●				●	●	●							●		●		●		
Submerged Lands Management									●				●													
Habitat Protection	●	●					●	●			●	●	●	●				●		●		●		●	●	
Mangroves/Wetlands Protection	●	●					●	●			●	●	●	●								●		●		
Seagrass Protection	●	●					●	●			●	●	●									●		●	●	
Habitat Restoration		●						●			●	●	●	●			●					●		●		
Mangroves/Wetlands Restoration		●		●				●			●	●	●									●		●		
Seagrass Restoration								●			●	●	●									●		●		●
Resource Inventory							●	●	●		●	●	●	●					●	●				●	●	
Manatees/Porpoises	●	●					●				●		●											●	●	
Endangered Species	●	●					●				●		●	●			●	●	●	●	●			●	●	●
Shellfish/Aquaculture		●		●						●		●	●													
Public Awareness/Education		●						●	●		●	●	●	●				●	●	●	●	●	●	●	●	
Research				●				●				●	●	●					●						●	
Fisheries Research				●							●		●	●					●	●				●	●	
Fisheries Management				●							●		●						●	●				●	●	
Recreational Fishing											●		●	●				●	●	●				●	●	
Commercial Fishing											●		●					●	●	●				●	●	
Wildlife Management								●			●			●				●		●		●		●	●	
Mosquito Impoundments		●		●						●	●		●									●				
Historical/Archeological Sites	●	●					●				●		●			●										
Water Quality	●	●		●		●	●	●		●	●	●	●		●			●					●	●		
Nonpoint Source Pollution	●	●				●	●	●			●	●	●		●		●					●	●	●		
Point Source Pollution	●	●					●	●			●	●	●		●							●	●	●		
Oil/Chemical Spills		●					●	●			●	●	●					●			●	●	●	●		
Drainage/Freshwater Control	●	●	●			●	●	●		●	●	●	●									●		●		
Emergency Response	●	●					●				●	●	●	●				●								
Upland Development	●	●					●	●			●															
Land Use Planning	●	●					●				●															
Navigational/Boating	●	●			●		●		●				●	●	●			●	●		●	●		●		
Recreational Areas	●	●					●		●				●					●	●			●		●		●
Bridges and Roads		●					●	●			●	●	●				●				●	●				●

CHAPTER VIII

STAFFING AND FISCAL NEEDS

Historically, the Aquatic Preserves Program has been largely dependent on federal coastal zone grant funds for both its operation, and as a result, the funding of both field positions and central office positions has been limited.

In order for the St. Andrews State Park Aquatic Preserve to be managed in accordance with goals, objectives, and tasks set forth in this plan, adequate funding, staffing, and equipment is essential. Currently there is no legislative funding for staffing at the Preserve. Instead, management is conducted on a part-time basis by the manager of the Alligator Harbor Aquatic Preserve and permitting is handled by District staff in Pensacola. It is anticipated that the above program can be implemented with one full-time employee for the most part to the St. Joseph Bay Aquatic Preserve and a full-time secretarial assistant. This estimate does not include staff-time or expenses by DNR and other state agency employees involved intermittently in the various tasks necessary to manage and conserve the natural resources of the aquatic preserve. An annual review of the accomplishments of the program relative to the tasks listed in Chapter VI will help to determine if the initial staffing estimate is adequate to meet the legislative intent of the program.

A budget covering projected staff time, equipment, travel and other expenses for this area is found in Table 3. The budget is required to fulfill the short-range needs of the preserve as described in this management plan, and accomplish the Department of Natural Resources goal of on-site management of all aquatic preserves by 1991, as expressed in the Agency Functional Plan.

TABLE 3

ESTIMATED BUDGET FOR THE FIRST TWO YEARS FOR ST. ANDREWS STATE PARK AQUATIC PRESERVE

SALARY	FIRST YEAR	SECOND YEAR
ES II (including benefits)	$ 32,010	$ 32,970
Secretary Specialist	16,324	16,814
Subtotal	$ 48,334	$ 49,784
OPERATING CAPITAL OUTLAY		
Vehicle	$ 15,000	
Boat/Motor/Trailer	12,000	
Office Equipment	3,500	
Computer	2,600	
Subtotal	$ 33,100	
OPERATING EXPENSES		
Office Rent, Gas, Phone	$ 19,000	$ 21,000
TOTAL COST	$100,434	$ 70,784

CHAPTER IX

RESOURCE AND ACTIVITY MONITORING PROGRAM

To ensure that this management plan is effectively implemented, on-site staffing is imperative. The position of a preserve manager will be necessary in order to institute programs targeted at (1) monitoring the status of natural resources, (2) monitoring usage of the aquatic preserve, and (3) tracking progress and accomplishments that are directed at retaining the original integrity and value of the preserve.

A. RESOURCE MONITORING

It is important to understand whether the efforts of the Aquatic Preserve Program and other federal, state, and local efforts to protect the natural resources of St. Andrews State Park Aquatic Preserve for future generations are working. Therefore, it is essential that the status of the natural resources be monitored on a continued basis. Features which should be monitored include, but should not be limited to, trends in water and sediment quality, areal coverage, location, and health of salt marshes and seagrass communities, recreational and commercial harvesting of marine resources, and development trends on adjacent uplands. As Resource management Goal A.1, A.2, A.3, and A.4 of the St. Andrews State Park Aquatic Preserve Management Action Plan (Chapter VI) provides, the preserve manager shall biannually prepare a report describing the state of the environment of the aquatic preserve. This report will be the heart of the resource monitoring program. It should discuss the findings of the resource monitoring program, most recent water quality data and any trends in water quality; any changes in resource community boundaries; status of designated species within the aquatic preserve; permit applications within the preserve; land development trends on adjacent uplands; and any enforcement actions necessary.

To monitor changes in the natural resources, use of a regional geographic information system (GIS) is highly recommended. A GIS is a computer-based system that is used to capture, edit, display, and analyze geographic information. The first GIS programs were developed about 20 years ago to manage large collections of natural resource and environmental information. Since their development, they have been used in other areas such as utilities mapping, inventory management, and land use planning; however, their most important function continues to be natural resource management.
Future use of a GIS system at the St. Andrews State Park Aquatic Preserve could include the periodic inventory, compilation, and analysis of temporal and spatial data

concerning the present state of the natural resources within the preserve. Historical aerial photography could be computerized for comparison with later data to conduct a temporal analysis of resource abundance. Detailed monitoring of any re-vegetation or restoration efforts could also be computer analyzed. The on-line access to these natural resource date bases will facilitate informed management decisions concerning the use and protection of submerged lands and their resources. Cooperation and file sharing is possible with other agencies handling data with identical or similar systems.

B. ACTIVITY MONITORING

As human interaction in and around the aquatic preserve increases, additional pressures are to be expected in the form of recreational and development activities. Monitoring the type of use of activities and their compatibility, their frequency of occurrence, as well as proven and expected detrimental effects on the preserve's natural resources, will provide a foundation to amending the policies of the aquatic preserve to protect its natural resources.

C. ACCOMPLISHMENTS AND PROGRESS MONITORING

For this management plan to be effectively implemented, it is necessary to monitor the accomplishments of the on-site program on a regular basis. Therefore as noted above, staff of the St. Andrews State Park Aquatic Preserve will be required to biannually submit a report to the main office and the Bay County Commission on the state of the natural environment of the preserve, what was done in the previous two years towards the tasks listed in Chapter VI, and what are needs and directions of the preserve for the coming two years. This report should be closely keyed to the tasks listed in Chapter VI and will serve as the basis for judging the adequacy of staffing and funding estimates listed in Chapter VIII.

Specific information which should be included in the biannual state of the preserve report includes any noted change in acreage or health of seagrasses and salt marshes; number of permits applied for, issued, and denied; whether any exemptions to standards were granted; number of structures built adjacent to the preserve; and whether any violations were uncovered.

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APPENDIX A

Relevant Legislation

CHAPTER 18-20
FLORIDA AQUATIC PRESERVES

18-20.001	Intent.
18-20.002	Boundaries and Scope of the Preserves.
18-20.003	Definitions.
18-20.004	Management Policies, Standards and Criteria.
18-20.005	Uses, Sales, Leases, or Transfer of Interests in Lands, or Materials, Held by the Board. (Repealed)
18-20.006	Cumulative Impacts.
18-20.007	Protection of Riparian Rights. (Repealed)
18-20.008	Inclusion of Lands, Title to Which Is Not Vested in the Board, in a Preserve.
18-20.009	Establishment or Expansion of Aquatic Preserves.
18-20.010	Exchange of Lands.
18-20.011	Gifts of Lands.
18-20.012	Protection of Indigenous Life Forms.
18-20.013	Development of Resource Inventories and Management Plans for Preserves.
18-20.014	Enforcement.
18-20.015	Application Form. (Repealed)
18-20.016	Coordination with Other Governmental Agencies.
18-20.017	Lake Jackson Aquatic Preserve.

Library References: Riparian rights to navigable waters. I. Henry Dean, 55 Fla. Bar J. 247, 250 (Mar., 1981).

18-20.001 Intent.

(1) All sovereignty lands within a preserve shall be managed primarily for the maintenance of essentially natural conditions, the propagation of fish and wildlife, and public recreation, including hunting and fishing where deemed appropriate by the board, and the managing agency.

(2) The aquatic preserves which are described in 73-534, Laws of Florida, Sections 258.39, 258.391, 258.392 and 258.393, Florida Statutes, future aquatic preserves established pursuant to general or special acts of the legislature, and in Rule 18-20.002, Florida Administrative Code, were established for the purpose of being preserved in an essentially natural or existing condition so that their aesthetic, biological and scientific values may endure for the enjoyment of future generations.

(3) The preserves shall be administered and managed in accordance with the following goals:

(a) To preserve, protect, and enhance these exceptional areas of sovereignty submerged lands by reasonable regulation of human activity within the preserves through the development and implementation of a comprehensive management program;

(b) To protect and enhance the waters of the preserves so that the public may continue to enjoy the traditional recreational uses of those waters such as swimming, boating, and fishing;

(c) To coordinate with federal, state, and local agencies to aid in carrying out the intent of the Legislature in creating the preserves;

(d) To use applicable federal, state, and local management programs, which are compatible with the intent and provisions of the act and these rules, and to assist in managing the preserves;

(e) To encourage the protection, enhancement or restoration of the biological, aesthetic, or scientific values of the preserves, including but not limited to the modification of existing manmade conditions toward their natural condition, and discourage activities which would degrade the aesthetic, biological, or scientific values, or the quality, or utility of a preserve, when reviewing applications, or when developing and implementing management plans for the preserves;

(f) To preserve, promote, and utilize indigenous life forms and habitats, including but not limited to: sponges, soft coral, hard corals, submerged grasses, mangroves, salt water marshes, fresh water marshes, mud flats, estuarine, aquatic, and marine reptiles, game and non-game fish species, estuarine, aquatic and marine invertebrates, estuarine, aquatic and marine mammals, birds, shellfish and mollusks;

(g) To acquire additional title interests in lands wherever such acquisitions would serve to protect or enhance the biological, aesthetic, or scientific values of the preserves;

(h) To maintain those beneficial hydrologic and biologic functions, the benefits of which accrue to the public at large.

(4) Nothing in these rules shall serve to eliminate or alter the requirements or authority of other governmental agencies, including counties and municipalities, to protect or enhance the preserves provided that such requirements or authority are not inconsistent with the act and this chapter.

Specific Authority 120.53, 258.43(1) FS. Law Implemented 258.35, 258.36, 258.37, 258.39, 258.393 FS. Chapter 80-280 Laws of Florida. History—New 2-23-81, Amended 8-7-85, Formerly 16Q-20.01, Transferred from 16Q-20.001.

18-20.002 Boundaries and Scope of the Preserves.

(1) These rules shall only apply to those sovereignty lands within a preserve, title to which is vested in the board, and those other lands for which the board has an appropriate instrument in writing, executed by the owner, authorizing the inclusion of specific lands in an aquatic preserve pursuant to Section 2(2) of Chapter 73-534, Laws of Florida, Sections 258.40(1) and 258.41(5), Florida Statutes, future aquatic preserves established through general or special acts of the legislature, and pursuant to Rule 18-20.008, Florida Administrative Code. Any publicly owned and maintained navigation channel authorized by the United States Congress, or other public works project authorized by the United States Congress, designed to improve or maintain commerce and navigation shall be deemed to be excluded from the

provisions of this chapter, pursuant to Subsection 258.40(2), Florida Statutes. Furthermore, all lands lost by avulsion or by artificially induced erosion shall be deemed excluded from the provisions of this chapter pursuant to Subsection 258.40(3), Florida Statutes.

(2) These rules do not apply to Boca Ciega Bay, Pinellas County or Biscayne Bay Aquatic Preserves.

(3) These rules are promulgated to clarify the responsibilities of the board in carrying out its land management functions as those functions apply within the preserves. Implementation and responsibility for environmental permitting of activities and water quality protection within the preserves are vested in the Department of Environmental Regulation. Since these rules are considered cumulative with other rules, a person planning an activity within the preserves should also consult the other applicable department rules (Chapter 18-21, Florida Administrative Code, for example) as well as the rules of the Department of Environmental Regulation.

(4) These rules shall not affect previous actions of the board concerning the issuance of any easement or lease; or any disclaimer concerning sovereignty lands.

(5) The intent and specific provisions expressed in 18-20.001(e) and (f) apply generally to all existing or future aquatic preserves within the scope of this chapter. Upon completion of a resource inventory and approval of a management plan for a preserve, pursuant to 18-20.013, the type designation and the resource sought to be preserved may be readdressed by the Board.

(6) For the purpose of clarification and interpretation, the legal description set forth as follows do not include any land which is expressly recognized as privately owned upland in a pre-existing recorded mean high water line settlement agreement between the board and a private owner or owners. Provided, however, in those instances wherein a settlement agreement was executed subsequent to the passage of the Florida Coastal Mapping Act, the determination of the mean high water line shall be in accordance with the provisions of such act.

(7) Persons interested in obtaining details of particular preserves should contact the Bureau of State Lands Management, Department of Natural Resources, 3900 Commonwealth Blvd., Tallahassee, FL 32303 (telephone 904-488-2297).

(a) The preserves are described as follows:

1. Fort Clinch State Park Aquatic Preserve, as described in the Official Records of Nassau County in Book 108, pages 343-346, and in Book 111, page 409.

2. Nassau River — St. Johns River Marshes Aquatic Preserve, as described in the Official Records of Duval County in Volume 3183, pages 547-552, and in the Official Records of Nassau County in Book 108, pages 232-237.

3. Pellicer Creek Aquatic Preserve, as described in the Official Records of St. Johns County in Book 181, pages 363-366, and in the Official Records of Flagler County in Book 33, pages 131-134.

4. Tomoka Marsh Aquatic Preserve, as described in the Official Records of Flagler County in Book 33, pages 135-138, and in the Official Records of Volusia County in Book 1244, pages 615-618.

5. Wekiva River Aquatic Preserve, as described in Section 258.39(30), F.S.

6. Mosquito Lagoon Aquatic Preserve, as described in the Official Records of Volusia County in Book 1244, pages 619-623, and in the Official Records of Brevard County in Book 1143, pages 190-194.

7. Banana River Aquatic Preserve, as described in the Official Records of Brevard County in Book 1143, pages 195-198, less those lands dedicated to the U. S. A. prior to the enactment of the act, until such time as the U. S. A. no longer wishes to maintain such lands for the purpose for which they were dedicated, at which time such lands would revert to the board, and be managed as part of the preserve.

8. Indian River — Malabar to Sebastian Aquatic Preserve, as described in the Official Records of Brevard County in Book 1143, pages 199-202, and in the Official Records of Indian River County in Book 368, pages 5-8.

9. Indian River — Vero Beach to Fort Pierce Aquatic Preserve, as described in the Official Records of Indian River County in Book 368, pages 9-12, and in the Official Records of St. Lucie County in Book 187, pages 1083-1086.

10. Jensen Beach to Jupiter Inlet Aquatic Preserve, as described in the Official Records of St. Lucie County in Book 218, pages 2865-2869.

11. North Fork, St. Lucie Aquatic Preserve, as described in the Official Records of Martin County in Book 337, pages 2159-2162, and in the Official Records of St. Lucie County in Book 201, pages 1676-1679.

12. Loxahatchee River — Lake Worth Creek Aquatic Preserve, as described in the Official Records of Martin County in Book 320, pages 193-196, and in the Official Records of Palm Beach County in Volume 1860, pages 806-809.

13. Biscayne Bay — Cape Florida to Monroe County Line Aquatic Preserve, as described in the Official Records of Dade County in Book 7055, pages 852-856, less, however, those lands and waters as described in Section 258.165, F. S., (Biscayne Bay Aquatic Preserve Act of 1974), and those lands and waters within the Biscayne National Park.

14. Lignumvitae Key Aquatic Preserve, as described in the Official Records of Monroe County in Book 502, pages 139-142.

15. Coupon Bight Aquatic Preserve, as described in the Official Records of Monroe County in Book 502, pages 143-146.

16. Cape Romano — Ten Thousand Islands Aquatic Preserve, as described in the Official Records of Collier County in Book 381, pages 298-301.

17. Rookery Bay Aquatic Preserve, as described in Section 258.39(31), FS.

18. Estero Bay Aquatic Preserve as described in Section 258.39(28), Florida Statutes.

19. Pine Island Sound Aquatic Preserve, as described in the Official Records of Lee County in Book 648, pages 732-736.

20. Matlacha Pass Aquatic Preserve, as described in the Official Records of Lee County in Book 800, pages 725-728.

21. Gasparilla Sound — Charlotte Harbor Aquatic Preserve, as described in Section 258.392, F.S.

22. Cape Haze Aquatic Preserve, as described in Section 258.39(29), F.S.

23. Cockroach Bay Aquatic Preserve, as described in Section 258.391, F.S.

24. St. Martins Marsh Aquatic Preserve, as described in the Official Records of Citrus County in Book 276, pages 238-241.

25. Alligator Harbor Aquatic Preserve, as described in the Official Records of Franklin County in Volume 98, pages 82-85.

26. Apalachicola Bay Aquatic Preserve, as described in the Official Records of Gulf County in Book 46, pages 77-81, and in the Official Records of Franklin County in Volume 98, pages 102-106.

27. St. Joseph Bay Aquatic Preserve, as described in the Official Records of Gulf County in Book 46, pages 73-76.

28. St. Andrews State Park Aquatic Preserve, as described in the Official Records of Bay County in Book 379, pages 547-550.

29. Rocky Bayou State Park Aquatic Preserve, as described in the Official Records of Okaloosa County in Book 593, pages 742-745.

30. Yellow River Marsh Aquatic Preserve, as described in the Official Records of Santa Rosa County in Book 206, pages 568-571.

31. Fort Pickens State Park Aquatic Preserve, as described in the Official Records of Santa Rosa County in Book 220, pages 60-63, in the Official Records of Escambia County in Book 518, pages 659-662, less the lands dedicated to the U. S. A. for the establishment of the Gulf Islands National Seashore prior to the enactment of the act, until such time as the U. S. A. no longer wishes to maintain such lands for the purpose for which they were dedicated, at which time such lands would revert to the board and be managed as part of the preserve.

32. For the purpose of this section the boundaries of the Lake Jackson Aquatic Preserve, shall be the body of water in Leon County known as Lake Jackson in Sections 1, 2, 3, 5, 10, 11 and 14, Township 1 North, Range 1 West and Sections 11, 12, 13, 14, 15, 21, 22, 23, 26, 27, 28, 29, 32, 33, 34, and 35, Township 2 North, Range 1 West lying below the ordinary high water line. Such lands shall include the submerged bottom lands and the water column upon such lands, as well as all publicly owned islands, within the boundaries of the preserve. Any privately held upland within the boundaries of the preserve shall be deemed to be excluded therefrom; provided that the Board may negotiate an arrangement with any such private upland owner by which such land may be included in the preserve.

33. Terra Ceia Aquatic Preserve, as described in Section 258.393, Florida Statutes.

34. Future aquatic preserves established pursuant to general or special acts of the legislature.

Specific Authority 120.53, 258.43(1) FS. Law Implemented 258.39, 258.391, 258.392, 258.393, 258.40, 258.41, 258.42, 258.43, 258.44, 258.45 FS. History—New 2-23-81, Amended 8-7-85, Formerly 16Q-20.02, Transferred from 16Q-20.002.

18-20.003 Definitions. When used in these rules, the following words shall have the indicated meaning unless the context clearly indicates otherwise:

(1) "Act" means the provisions of Section 258.35 through 258.46, F.S., the Florida Aquatic Preserve Act.

(2) "Activity" means any project and such other human action within the preserve requiring board approval for the use, sale, lease or transfer of interest in sovereignty lands or materials, or which may require a license from the Department of Environmental Regulation.

(3) "Aesthetic values" means scenic characteristics or amenities of the preserve in its essentially natural state or condition, and the maintenance thereof.

(4) "Applicant" means any person making application for a permit, license, conveyance of an interest in state owned lands or any other necessary form of governmental approval in order to perform an activity within the preserve.

(5) "Beneficial biological functions" means interactions between flora, fauna and physical or chemical attributes of the environment, which provide benefits that accrue to the public at large, including, but not limited to: nutrient, pesticide and heavy metal uptake; sediment retention; nutrient conversion to biomass; nutrient recycling and oxygenation.

(6) "Beneficial hydrological functions" means interactions between flora, fauna and physical geological or geographical attributes of the environment, which provide benefits that accrue to the public at large, including, but not limited to: retardation of storm water flow; storm water retention; and water storage, and periodical release;

(7) "Biological values" means the preservation and promotion of indigenous life forms and habitats including, but not limited to: sponges, soft corals, hard corals, submerged grasses, mangroves, saltwater marshes, fresh water marshes, mud flats, marine, estuarine, and aquatic reptiles, games and non-games fish species, marine, estuarine, and aquatic mammals, marine, estuarine, and aquatic invertebrates, birds and shellfish.

(8) "Board" means the Governor and Cabinet sitting as the Board of Trustees of the Internal Improvement Trust Fund.

(9) "Channel" means a trench, the bottom of which is normally covered entirely by water, with the upper edges of its sides normally below water.

(10) "Commercial, industrial and other revenue generating/income related docks" means docking facilities for an activity which produces income, through rental or any other means, or which serves as an accessory facility to other rental, commercial or industrial operations. It shall include, but not be limited to docking for: marinas, restaurants, hotels, motels, commercial fishing, shipping, boat or ship construction, repair, and sales.

(11) "Department" means the State of Florida Department of Natural Resources, as administrator for the board.

(12) "Division" means the Division of State Lands, which performs all staff duties and functions related to the administration of lands title to which is, or will be, vested in the board, pursuant to section 253.002, F.S.

(13) "Dock" means a fixed or floating structure, including moorings, used for the purpose of berthing buoyant vessels either temporarily or indefinitely.

(14) "Essentially natural condition" means those functions which support the continued existence or encourage the restoration of the diverse population of indigenous life forms and habitats to the extent they existed prior to the significant development adjacent to and within the preserve.

(15) "Extreme hardship" means a significant burden, unique to the applicant and not shared by property owners in the area. Self-imposed circumstances caused to any degree by actions of any person subsequent to the enactment of the Act shall not be construed as an extreme hardship. Extreme hardship under this act shall not be construed to include any hardship which arises in whole or in part from the effect of other federal, state or local laws, ordinances, rules or regulations. The term may be inherent in public projects which are shown to be a public necessity.

(16) "Fill" means materials from any source, deposited by any means onto sovereignty lands, either for the purpose of creating new uplands or for any other purpose, including spoiling of dredged materials. For the purpose of this rule, the placement of pilings or riprap shall not be considered to be filling.

(17) "Lease" means a conveyance of interest in lands, title to which is vested in the board, granted in accordance with specific terms set forth in writing.

(18) "Marina" means a small craft harbor complex used primarily for recreation.

(19) "Oil and gas transportation facilities" means those structures necessary for the movement of oil and gas from the production site to the consumer.

(20) "Person" means individuals, minors, partnerships, corporations, joint ventures, estates, trusts, syndicates, fiduciaries, firms, and all other associations and combinations, whether public or private, including governmental entities.

(21) "Pier" means a structure in, on, or over sovereignty lands, which is used by the public primarily for fishing, swimming, or viewing the preserve. A pier shall not include a dock.

(22) "Preserve" means any and all of those areas which are exceptional areas of sovereignty lands and the associated water body so designated in Section 258.39, 258.391, and 258.392, F.S., including all sovereignty lands, title to which is vested in the board, and such other lands as the board may acquire or approve for inclusion, and the water column over such lands, which have been set aside to be maintained in an essentially natural or existing condition of indigenous flora and fauna and their supporting habitat and the natural scenic qualities and amenities thereof.

(23) "Private residential single dock" means a dock which is used for private, recreational or leisure purposes for a single family residence, cottage or other such single dwelling unit and which is designed to moor no more than two boats.

(24) "Private residential multi-slip dock" means a docking facility which is used for private recreational or leisure purposes for multi-unit residential dwellings which shall include but is not limited to condominiums, townhouses, subdivisions and other such dwellings or residential areas and which is designed to moor three or more boats. Yacht clubs associated with residential developments, whose memberships or utilization of the docking facility requires some real property interest in the residential area, shall also be included.

(25) "Public interest" means demonstrable environmental, social, and economic benefits which would accrue to the public at large as a result of a proposed action, and which would clearly exceed all demonstrable environmental, social, and economic costs of the proposed action. In determining the public interest in a request for use, sale, lease, or transfer of interest in sovereignty lands or severance of materials from sovereignty lands, the board shall consider the ultimate project and purpose to be served by said use, sale, lease, or transfer of lands or materials.

(26) "Public navigation project" means a project primarily for the purpose of navigation which is authorized and funded by the United States Congress or by port authorities as defined by Section 315.02(2), F.S.

(27) "Public necessity" means the works or improvements required for the protection of the health and safety of the public, consistent with the Act and these rules, for which no other reasonable alternative exists.

(28) "Public utilities" means those services, provided by persons regulated by the Public Service Commission, or which are provided by rural cooperatives, municipalities, or other governmental agencies, including electricity, telephone, public water and wastewater services, and structures necessary for the provision of these services.

(29) "Quality of the preserve" means the degree of the biological, aesthetic and scientific values of the preserve necessary for present and future enjoyment of it in an essentially natural condition.

(30) "Resource management agreement" means a contractual agreement between the board and one

or more parties which does not create an interest in real property but merely authorizes conduct of certain management activities on lands held by the board.

(31) "Resource Protection Area (RPA) 1" — Areas within the aquatic preserves which have resources of the highest quality and condition for that area. These resources may include, but are not limited to corals; marine grassbeds; mangrove swamps; salt-water marsh; oyster bars; archaeological and historical sites; endangered or threatened species habitat; and, colonial water bird nesting sites.

(32) "Resource Protection Area 2" — Areas within the aquatic preserves which are in transition with either declining resource protection area 1 resources or new pioneering resources within resource protection area 3.

(33) "Resource Protection Area 3" — Areas within the aquatic preserve that are characterized by the absence of any significant natural resource attributes.

(34) "Riparian rights" means those rights incident to lands bordering upon navigable waters, as recognized by the courts of this state and common law.

(35) "Sale" means a conveyance of interest in lands, by the board, for consideration.

(36) "Scientific values" means the preservation and promotion of certain qualities or features which have scientific significance.

(37) "Shore protection structure" means a type of coastal construction designed to minimize the rate of erosion. Coastal construction includes any work or activity which is likely to have a material physical effect on existing coastal conditions or natural shore processes.

(38) "Sovereignty lands" means those lands including, but not limited to: tidal lands, islands, sandbars, shallow banks, and lands waterward of the ordinary or mean highwater line, to which the State of Florida acquired title on March 3, 1845, by virtue of statehood, and of which it has not since divested its title interest. For the purposes of this rule sovereignty lands shall include all submerged lands within the boundaries of the preserve, title to which is held by the board.

(39) "Spoil" means materials dredged from sovereignty lands which are redeposited or discarded by any means, onto either sovereignty lands or uplands.

(40) "Transfer" means the act of the board by which any interest in lands, including easements, other than sale or lease, is conveyed.

(41) "Utility of the preserve" means fitness of the preserve for the present and future enjoyment of its biological, aesthetic and scientific values, in an essentially natural condition.

(42) "Water dependent activity" means an activity which can only be conducted on, in, over, or adjacent to, water areas because the activity requires direct access to the water body or sovereignty lands for transportation, recreation, energy production or transmission, or source of water and where the use of the water or sovereignty lands is an integral part of the activity.

Specific Authority 258.43(1) FS. Law Implemented 258.37, 258.43(1) FS. History—New 2-25-81. Amended 8-7-85. Formerly 16Q-20.03. Transferred from 16Q-20.003.

18-20.004 Management Policies, Standards and Criteria. The following management policies, standards and criteria are supplemental to Chapter 18-21, Florida Administrative Code (Sovereignty Submerged Lands Management) and shall be utilized in determining whether to approve, approve with conditions or modifications or deny all requests for activities on sovereignty lands in aquatic preserves.

(1) GENERAL PROPRIETARY

(a) In determining whether to approve or deny any request the Board will evaluate each on a case-by-case basis and weigh any factors relevant under Chapter 253 and/or 258, Florida Statutes. The Board, acting as Trustees for all state-owned lands, reserves the right to approve, modify or reject any proposal.

(b) There shall be no further sale, lease or transfer of sovereignty lands except when such sale, lease or transfer is in the public interest (see Section 18-20.004(2) Public Interest Assessment Criteria).

(c) There shall be no construction of seawalls waterward of the mean or ordinary high water line, or filling waterward of the mean or ordinary high water line except in the case of public road and bridge projects where no reasonable alternative exists.

(d) There shall, in no case, be any dredging waterward of the mean or ordinary high water line for the sole or primary purpose of providing fill for any area landward of the mean or ordinary high water line.

(e) A lease, easement or consent of use may be authorized only for the following activities:

1. a public navigation project;

2. maintenance of an existing navigational channel;

3. installation or maintenance of approved navigational aids;

4. creation or maintenance of a commercial/industrial dock, pier or a marina;

5. creation or maintenance of private docks for reasonable ingress and egress of riparian owners;

6. minimum dredging for navigation channels attendant to docking facilities;

7. creation or maintenance of a shore protection structure;

8. installation or maintenance of oil and gas transportation facilities;

9. creation, maintenance, replacement or expansion of facilities required for the provision of public utilities; and

10. other activities which are a public necessity or which are necessary to enhance the quality or utility of the preserve and which are consistent with the act and this chapter.

(f) For activities listed in paragraphs 18-20.004(1)(e)1.—10. above, the activity shall be

designed so that the structure or structures to be built in, on or over sovereignty lands are limited to structures necessary to conduct water dependent activities.

(g) For activities listed in paragraphs 18-20.004(1)(e)7., 8., 9. and 10. above, it must be demonstrated that no other reasonable alternative exists which would allow the proposed activity to be constructed or undertaken outside the preserve.

(h) The use of state-owned lands for the purpose of providing private or public road access to islands where such access did not previously exist shall be prohibited. The use of state-owned lands for the purpose of providing private or public water supply to islands where such water supply did not previously exist shall be prohibited.

(i) Except for public navigation projects and maintenance dredging for existing channels and basins, any areas dredged to improve or create navigational access shall be incorporated into the preempted area of any required lease or be subject to the payment of a negotiated private easement fee.

(j) Private residential multi-slip docking facilities shall require a lease.

(k) Aquaculture and beach renourishment activities which comply with the standards of this rule chapter and Chapter 18-21, Florida Administrative Code, may be approved by the board, but only subsequent to a formal finding of compatibility with the purposes of Chapter 258, Florida Statutes, and this rule chapter.

(l) Other uses of the preserve, or human activity within the preserve, although not originally contemplated, may be approved by the board, but only subsequent to a formal finding of compatibility with the purposes of Chapter 258, Florida Statutes, and this rule chapter.

(2) PUBLIC INTEREST ASSESSMENT CRITERIA

In evaluating requests for the sale, lease or transfer of interest, a balancing test will be utilized to determine whether the social, economic and/or environmental benefits clearly exceed the costs.

(a) GENERAL BENEFIT/COST CRITERIA:

1. any benefits that are balanced against the costs of a particular project shall be related to the affected aquatic preserve;

2. in evaluating the benefits and costs of each request, specific consideration and weight shall be given to the quality and nature of the specific aquatic preserve. Projects in the less developed, more pristine aquatic preserves such as Apalachicola Bay shall be subject to a higher standard than the more developed urban aquatic preserves such as Boca Ciega Bay; and,

3. for projects in aquatic preserves with adopted management plans, consistency with the management plan will be weighed heavily when determining whether the project is in the public interest.

(b) BENEFIT CATEGORIES:

1. public access (public boat ramps, boatslips, etc.);

2. provide boating and marina services (repair, pumpout, etc.);

3 improve and enhance public health, safety, welfare, and law enforcement;

4. improved public land management;

5. improve and enhance public navigation;

6. improve and enhance water quality;

7. enhancement/restoration of natural habitat and functions; and

8. improve/protect endangered/threatened/unique species.

(c) COSTS:

1. reduced/degraded water quality;

2. reduced/degraded natural habitat and function;

3. destruction, harm or harassment of endangered or threatened species and habitat;

4. preemption of public use;

5. increasing navigational hazards and congestion;

6. reduced/degraded aesthetics; and

7. adverse cumulative impacts.

(d) EXAMPLES OF SPECIFIC BENEFITS:

1. donation of land, conservation easements, restrictive covenants or other title interests in or contiguous to the aquatic preserve which will protect or enhance the aquatic preserve;

2. providing access or facilities for public land management activities;

3. providing public access easements and/or facilities, such as beach access, boat ramps, etc.;

4. restoration/enhancement of altered habitat or natural functions, such as conversion of vertical bulkheads to riprap and/or vegetation for shoreline stabilization or re-establishment of shoreline or submerged vegetation;

5. improving fishery habitat through the establishment of artificial reefs or other such projects, where appropriate;

6. providing sewage pumpout facilities where normally not required, in particular, facilities open to the general public;

7. improvements to water quality such as removal of toxic sediments, increased flushing and circulation, etc.;

8. providing upland dry storage as an alternative to wetslip; and

9. marking navigation channels to avoid disruption of shallow water habitats.

(3) RESOURCE MANAGEMENT

(a) All proposed activities in aquatic preserves having management plans adopted by the Board must demonstrate that such activities are consistent with the management plan.

(b) No drilling of oil, gas or other such wells shall be allowed.

(c) Utility cables, pipes and other such structures shall be constructed and located in a manner that will cause minimal disturbance to submerged land resources such as oyster bars and submerged grass beds and do not interfere with traditional public uses.

(d) Spoil disposal within the preserves shall be strongly discouraged and may be approved only

structures shall be constructed and located in a manner that will cause minimal disturbance to submerged land resources such as oyster bars and submerged grass beds and do not interfere with traditional public uses.

(d) Spoil disposal within the preserves shall be strongly discouraged and may be approved only where the applicant has demonstrated that there is no other reasonable alternative and that activity may be beneficial to, or at a minimum, not harmful to the quality and utility of the preserve.

(4) RIPARIAN RIGHTS

(a) None of the provisions of this rule shall be implemented in a manner that would unreasonably infringe upon the traditional, common law and statutory riparian rights of upland riparian property owners adjacent to sovereignty lands.

(b) The evaluation and determination of the reasonable riparian rights of ingress and egress for private, residential multi-slip docks shall be based upon the number of linear feet of riparian shoreline.

(c) For the purposes of this rule, a private, residential, single docking facility which meets all the requirements of Rule 18-20.004(5) shall be deemed to meet the public interest requirements of Rule 18-20.004(1)(b), Florida Administrative Code. However, the applicants for such docking facilities must apply for such consent and must meet all of the requirements and standards of this rule chapter.

(5) STANDARDS AND CRITERIA FOR DOCKING FACILITIES

(a) All docking facilities, whether for a single or multi-slip residential or commercial, shall be subject to the following standards and criteria:

1. no dock shall extend waterward or the mean or ordinary high water line more than 500 feet or 20 percent of the width of the waterbody at that particular location whichever is less;

2. certain docks may fall within areas of special or unique importance. These areas may be of significant biological, scientific, historic and/or aesthetic value and require special management considerations. Modifications may be more restrictive than the normally accepted criteria. Such modifications shall be determined on a case-by-case analysis, and may include, but shall not be limited to changes in location, configuration, length, width and height;

3. the number, lengths, drafts and types of vessels allowed to utilize the proposed facility may also be stipulated; and

4. where local governments have more stringent standards and criteria for docking facilities, the more stringent standards for the protection and enhancement of the aquatic preserve shall prevail.

(b) Private residential single docks shall conform to the following specific design standards and criteria:

1. any main access dock shall be limited to a maximum width of four (4) feet;

2. the dock decking design and construction will insure maximum light penetration, with full consideration of safety and practicality;

3. the dock will extend out from the shoreline no further than to a maximum depth of minus four (−4) feet (mean low water);

4. when the water depth is minus four (−4) feet (mean low water) at an existing bulkhead the maximum dock length from the bulkhead shall be 25 feet, subject to modifications accommodating shoreline vegetation overhang;

5. wave break devices, when necessary, shall be designed to allow for maximum water circulation and shall be built in such a manner as to be part of the dock structure;

6. terminal platform size shall be no more than 160 square feet; and

7. dredging to obtain navigable water depths in conjunction with private residential, single dock applications is strongly discouraged.

(c) Private residential multi-slip docks shall conform to the following specific design standards and criteria:

1. the area of sovereignty, submerged land preempted by the docking facility shall not exceed the square footage amounting to ten times the riparian waterfront footage of the affected waterbody of the applicant, or the square footage attendant to providing a single dock in accordance with the criteria for private residential single docks, whichever is greater. A conservation easement or other such use restriction acceptable to the Board must be placed on the riparian shoreline, used for the calculation of the 10:1 threshold, to conserve and protect shoreline resources and subordinate/waive any further riparian rights of ingress and egress for additional docking facilities;

2. docking facilities and access channels shall be prohibited in Resource Protection Area 1 or 2, except as allowed pursuant to Section 258.42(3)(e)1., Florida Statutes, while dredging in Resource Protection Area 3 shall be strongly discouraged;

3. docking facilities shall only be approved in locations having adequate existing water depths in the boat mooring, turning basin, access channels, and other such areas which will accommodate the proposed boat use in order to insure that a minimum of one foot clearance is provided between the deepest draft of a vessel and the bottom at mean low water;

4. main access docks and connecting or cross walks shall not exceed six (6) feet in width;

5. terminal platforms shall not exceed eight (8) feet in width;

6. finger piers shall not exceed three (3) feet in width, and 25 feet in length;

7. pilings may be utilized as required to provide adequate mooring capabilities; and

8. the following provisions of Rule 18-20.004(5)(d) shall also apply to private residential multi-slip docks.

(d) Commercial, industrial and other revenue generating/income related docking facilities shall conform to the following specific design standards and criteria:

1. docking facilities shall only be located in or near areas with good circulation, flushing and adequate water depths;

2. docking facilities and access channels shall be prohibited in Resource Protection Area 1 or 2, except as allowed pursuant to Sections 258.42(3)(e)1., Florida Statutes; while dredging in Resource Protection Area 3 shall be strongly discouraged;

3. the docking facilities shall not be located in Resource Protection Area 1 or 2; however, main access docks may be allowed to pass through Resource Protection Area 1 or 2, that are located along the shoreline, to reach an acceptable Resource Protection Area 3, provided that such crossing will generate minimal environmental impact;

4. beginning July 1, 1986 new docking facilities may obtain a lease only where the local governments have an adopted marina plan and/or policies dealing with the siting of commercial/industrial and private, residential, multi-slip docking facilities in their local government comprehensive plan;

5. the siting of the docking facilities shall also take into account the access of the boat traffic to avoid marine grassbeds or other aquatic resources in the surrounding areas;

6. the siting of new facilities within the preserve shall be secondary to the expansions of existing facilities within the preserve when such expansion is consistent with the other standards;

7. the location of new facilities and expansion of existing facilities shall consider the use of upland dry storage as an alternative to multiple wet-slip docking;

8. marina siting will be coordinated with local governments to insure consistency with all local plans and ordinances;

9. marinas shall not be sited within state designated manatee sanctuaries; and

10. in any areas with known manatee concentrations, manatee warning/notice and/or speed limit signs shall be erected at the marina and/or ingress and egress channels, according to Florida Marine Patrol specifications.

(c) Exceptions to the standards and criteria listed in Rule 18-20.004(5), Florida Administrative Code, may be considered, but only upon demonstration by the applicant that such exceptions are necessary to insure reasonable riparian ingress and egress.

(6) MANAGEMENT AGREEMENTS

The board may enter into management agreements with local agencies for the administration and enforcement of standards and criteria for private residential single docks.

(7) In addition to the policies, standards and criteria delineated in subsections (1) through (6), the provisions of the following management plans apply to specific aquatic preserves and are incorporated herein by reference. Where regulatory criteria in 18-20, F. A. C., may differ with specific policies in the management plans listed herein, the general rule criteria shall prevail.

	Date Adopted
Alligator Harbor	September 23, 1986
Banana River	September 17, 1985
Cockroach Bay	April 21, 1987
Estero Bay	September 6, 1983
Charlotte Harbor (Cape Haze, Gasparilla Sound-Charlotte Harbor, Matlacha Pass and Pine Island Sound)	May 18, 1983
Indian River-Malabar to Vero Beach	January 21, 1986
Indian River Lagoon (Vero Beach to Fort Pierce and Jensen Beach to Jupiter Inlet)	January 22, 1985
Loxahatchee River-Lake Worth Creek	June 12, 1984
Nassau River-St. Johns River Marshes and Fort Clinch State Park	April 22, 1986
North Fork of the St. Lucie River	May 22, 1984
St. Joseph Bay	June 2, 1987
St. Martins Marsh	September 9, 1987
Terra Ceia	April 21, 1987
Wekiva River	August 25, 1987

Specific Authority 258.43(1) FS. Law Implemented 258.41, 258.42, 258.43(1), 258.44 FS. History—New 2-25-81, Amended 8-7-85, Formerly 16Q-20.004, Transferred from 16Q-20.004, Amended 9-4-88.

18-20.005 Uses, Sales, Leases, or Transfer of Interests in Lands, or Materials, Held by the Board.

Specific Authority 258.43(1) FS. Law Implemented 253.02, 253.12, 258.42 FS. History—New 2-25-81, Repealed 8-7-85, Formerly 16Q-20.05, Transferred from 16Q-20.005.

18-20.006 Cumulative Impacts. In evaluating applications for activities within the preserves or which may impact the preserves, the department recognizes that, while a particular alteration of the preserve may constitute a minor change, the cumulative effect of numerous such changes often results in major impairments to the resources of the preserve. Therefore, the department shall evaluate a particular site for which the activity is proposed with the recognition that the activity may, in conjunction with other activities adversely affect the preserve which is part of a complete and interrelated system. The impact of a proposed activity shall be considered in light of its cumulative impact on the preserve's natural system. The department shall include as a part of its evaluation of an activity:

(1) The number and extent of similar human actions within the preserve which have previously affected or are likely to affect the preserve, whether considered by the department under its current authority or which existed prior to or since the enactment of the Act; and

(2) The similar activities within the preserve

which are currently under consideration by the department; and

(3) Direct and indirect effects upon the preserve and adjacent preserves, if applicable, which may reasonably be expected to result from the activity; and

(4) The extent to which the activity is consistent with management plans for the preserve, when developed; and

(5) The extent to which the activity is permissible within the preserve in accordance with comprehensive plans adopted by affected local governments, pursuant to section 163.3161, F.S., and other applicable plans adopted by local, state, and federal governmental agencies;

(6) The extent to which the loss of beneficial hydrologic and biologic functions would adversely impact the quality or utility of the preserve; and

(7) The extent to which mitigation measures may compensate for adverse impacts.

Specific Authority 258.43(1) FS. Law Implemented 258.36, 258.43, 258.44 FS. History—New 2-25-81, Formerly 16Q-20.06, Transferred from 16Q-20.006.

18-20.007 Protection of Riparian Rights.

Specific Authority 258.43(1) FS. Law Implemented 258.123, 258.124(8), 258.44 FS. History—New 2-25-81, Repealed 6-7-85, Formerly 16Q-20.07, Transferred from 16Q-20.007.

18-20.008 Inclusion of Lands, Title to Which Is Not Vested in the Board, in a Preserve.

(1) Lands and water bottoms which are within designated aquatic preserve boundaries, or adjacent thereto and which are owned by other governmental agencies, may be included in an aquatic preserve upon specific authorization for inclusion by an appropriate instrument in writing executed by the agency.

(2) Lands and water bottoms which are within designated aquatic preserve boundaries or adjacent thereto, and which are in private ownership, may be included in an aquatic preserve upon specific authorization for inclusion by an appropriate instrument in writing executed by the owner.

(3) The appropriate instrument shall be either a dedication in perpetuity, or a lease. Such lease shall contain the following conditions:

(a) The term of the lease shall be for a minimum period of ten years.

(b) The board shall have the power and duty to enforce the provisions of each lease agreement, and shall additionally have the power to terminate any lease if the termination is in the best interest of the aquatic preserve system, and shall have the power to include such lands in any agreement for management of such lands.

(c) The board shall pay no more than $1 per year for any such lease.

Specific Authority 258.43(1) FS. Law Implemented 258.40, 258.41 FS. History—New 2-25-81, Formerly 16Q-20.08, Transferred from 16Q-20.008.

18-20.009 Establishment or Expansion of Aquatic Preserves.

(1) The board may expand existing preserves or establish additional areas to be included in the aquatic preserve system, subject to confirmation by the legislature.

(2) The board may, after public notice and public hearing in the county or counties in which the proposed expanded or new preserve is to be located, adopt a resolution formally setting aside such areas to be included in the system.

(3) The resolution setting aside an aquatic preserve area shall include:

(a) A legal description of the area to be included. A map depicting the legal description shall also be attached.

(b) The designation of the type of aquatic preserve.

(c) A general statement of what is sought to be preserved.

(d) A statement that the area established as a preserve shall be subject to the management criteria and directives of this chapter.

(e) A directive to develop a natural resource inventory and a management plan for the area being established as an aquatic preserve.

(4) Within 30 days of the designation and establishment of an aquatic preserve, the board shall record in the public records of the county or counties in which the preserve is located a legal description of the preserve.

Specific Authority 258.43(1) FS. Law Implemented 258.41 FS. History—New 2-25-81, Formerly 16Q-20.09, Transferred from 16Q-20.009.

18-20.010 Exchange of Lands. The board in its discretion may exchange lands for the benefit of the preserve, provided that:

(1) In no case shall an exchange result in any land or water area being withdrawn from the preserve; and

(2) Exchanges shall be in the public interest and shall maintain or enhance the quality or utility of the preserve.

Specific Authority 258.43(1) FS. Law Implemented 258.41(5), 258.42(1) FS. History—New 2-25-81, Formerly 16A-20.10, Transferred from 16Q-20.010.

18-20.011 Gifts of Lands. The board in its discretion may accept any gifts of lands or interests in lands within or contiguous to the preserve to maintain or enhance the quality and utility of the preserve.

Specific Authority 258.43(1) FS. Law Implemented 258.42(5) FS. History—New 2-25-81, Formerly 16Q-20.11, Transferred from 16Q-20.011.

18-20.012 Protection of Indigenous Life Forms. The taking of indigenous life forms for sale or commercial use is prohibited, except that this prohibition shall not extend to the commercial taking of fin fish, crustacea or mollusks, except as prohibited under applicable laws, rules or regulations. Members of the public may exercise their rights to fish, so long as not contrary to other statutory and regulatory provisions controlling such activities.

Specific Authority 258.43(1) FS. Law Implemented 258.43(1) FS. History—New 2-25-81, Formerly 16Q-20.12, Transferred from 16Q-20.012.

18-20.013 Development of Resource Inventories and Management Plans for Preserves.

(1) The board authorizes and directs the division to develop a resource inventory and management plan for each preserve.

(2) The division may perform the work to develop the inventories and plans, or may enter into agreements with other persons to perform the work. In either case, all work performed shall be subject to board approval.

Specific Authority 258.43(1) FS. Law Implemented 253.03(7), 253.03(8) FS. History—New 2-25-81, Amended 6-7-85, Formerly 16Q-20.13, Transferred from 16Q-20.013.

18-20.014 Enforcement. The rules shall be enforced as provided in Section 258.46.

Specific Authority 258.43(1) FS. Law Implemented 258.46 FS. History—New 2-25-81, Formerly 16Q-20.14, Transferred from 16Q-20.014.

18-20.015 Application Form.

Specific Authority 253.43(1) FS. Law Implemented 258.43 FS. History—New 2-25-81, Repealed 6-7-85, Formerly 16Q-20.15, Transferred from 16Q-20.015.

18-20.016 Coordination with Other Governmental Agencies. Where a Department of Environmental Regulation permit is required for activities on sovereignty lands the department will coordinate with the Department of Environmental Regulation to obtain a copy of the joint Department of Army/Florida Department of Environmental Regulation permit application and the biological survey. The information contained in the joint permit application and biological assessment shall be considered by the department in preparing its staff recommendations to the board. The board may also consider the reports of other governmental agencies that have related management or permitting responsibilities regarding the proposed activity.

Specific Authority 253.43(1) FS. Law Implemented 258.43 FS. History—New 2-25-81, Formerly 16Q-20.16, Transferred from 16Q-20.016.

18-20.017 Lake Jackson Aquatic Preserve. In addition to the provisions of Rules 18-20.001 through 18-20.016, the following requirements shall also apply to all proposed activities within the Lake Jackson Aquatic Preserve. If any provisions of this Rule are in conflict with any provisions of Rules 18-20.001 through 18-20.016 or Chapter 73-534, Laws of Florida, the stronger provision for the protection or enhancement of the aquatic preserve shall prevail.

(1) No further sale, transfer or lease of sovereignty lands in the preserve shall be approved or consummated by the Board, except upon a showing of extreme hardship on the part of the applicant or when the board shall determine such sale, transfer or lease to be in the public interest.

(2) No further dredging or filling of sovereignty lands of the preserve shall be approved or tolerated by the Board of Trustees except:

(a) Such minimum dredging and spoiling as may be authorized for public navigation projects or for preservation of the lake according to the expressed intent of Chapter 73-534, Laws of Florida; and

(b) Such other alteration of physical conditions as may be necessary to enhance the quality or utility of the preserve.

(3) There shall be no drilling of wells, excavation for shell or minerals, and no erection of structures (other than docks), within the preserve, unless such activity is associated with activity authorized by Chapter 73-534, Laws of Florida.

(4) The Board shall not approve the relocations of bulkhead lines within the preserve.

(5) Notwithstanding other provisions of this act, the board may, respecting lands lying within the Lake Jackson basin:

(a) Enter into agreements for and establish lines delineating sovereignty and privately owned lands;

(b) Enter into agreements for the exchange and exchange sovereignty lands for privately owned lands;

(c) Accept gifts of land within or contiguous to the preserve.

Specific Authority 258.39(26) FS. Law Implemented 258.39(26), 258.43 FS. History—New 6-7-85, Formerly 16Q-20.017, Transferred from 16Q-20.017.

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