

Management Plan for River to Sea Preserve at Marineland
FCT Project Number: 98-083-P8A

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Flagler County

Town of Marineland

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I. INTRODUCTION

For most Floridians, Marineland is a treasured memory of youth. Constructed in 1938, the world's first oceanarium has entertained and educated generations of visitors. The Marineland Oceanarium is surrounded by ecologically significant land on the Atlantic Ocean and the Matanzas River. This land, known as the River to Sea Preserve at Marineland is being acquired by Flagler County ("County") and the Town of Marineland ("Town") using a Florida Communities Trust ("FCT") Preservation 2000 grant. This acquisition is unique because it captures an environmentally significant corridor connecting the ocean and the river. This river to sea preserve will protect existing natural communities, restore portions of the dune system and coastal scrub, and open the site to the public for passive land and water-based recreational use. The goal of the County and Town in acquiring the River to Sea Preserve at Marineland is to protect an area rich in environmental and historical attributes.

The preserve is located in the northeastern corner of Flagler County and extends into St. Johns County (Exhibit A). Totalling approximately 90 acres, the River to Sea Preserve at Marineland exhibits a vast array of natural and disturbed environments. The maritime hammock along the Matanzas River is the western boundary of the preserve and the eastern boundary is the coquina shore of the Atlantic Ocean. (Note: This plan includes commitments regarding all acreage under consideration for purchase. If any sections are not purchased, any commitments regarding those sections in this management plan are eliminated, for example the hotel site or the campground.)

The coastal scrub on the site contains a family of Florida scrub jays, an increasing rarity throughout the state. The site also contains disturbed areas, including two hotels and a campground for recreational vehicles with a convenience and gas store. The seller will demolish the hotels, which are on the primary dune, and will restore the dune. The commercial campground will be eliminated and the natural vegetation restored on the site. While there will be no campground facility, the County and Town will permit group camping sponsored by non-profit or governmental entities for youth for educational and recreational purposes.

The majority of the lands are natural vegetative communities comprised of maritime hammock of live oaks, coastal strand, beaches, beach dunes, and saltwater marches. These natural lands are habitat for several listed plant and animal species including Florida scrub jay, gopher tortoise, Louisiana heron as well as many other species of wildlife. The preserve is comprised of the following as shown in Exhibit B: Two narrow parcels in St. Johns County on either side of State Road A1A at the north end of the existing Marineland Oceanarium (Lots 9 and 10);

The hotel complex east of A1A and south of the attraction (Lot 5, but only the southern portion of this parcel is included in the proposed preserve);

The existing campground, west of A1A (Lot 3);

A coastal scrub parcel on the east side of A1A opposite the campground (Lot 6); and

An area south and west of the campground (the majority of the Lots 7 and 8).

Coastal scrub covers the majority of Lot 6. The Florida Department of Environmental

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Protection (DEP) has designated the Atlantic coastline extending along Lots 5 and 6 as a critically eroding beach (Exhibit H). Lot 3 comprises the recreational vehicle campground surrounded by the more natural lands of Lots 7 and 8.

The historical significance of the site actually predates the late 1930s construction of the Marineland Oceanarium which is on the National Register of Historic Places. There is evidence that Native Americans utilized the site. The **Marineland Midden/Dupont's Mound** archaeological sites identified in 1885 are partly on Lots 7 and 8. Lot 8 is also the parcel where the Independent Florida Seminole Indians reinterred Native American remains found in the Marineland parking lot area. A portion of the Midden extending onto Lots 7 and 8 may have been burial mound similar to the burial site found in the parking lot area. Further archaeological evaluation and protection measures will be pursued.

The natural, archaeological, historic and scenic qualities make the preserve a valuable community property. The preserve is a major **addition to the Flagler County Coastal Greenway**. The purpose of the greenway is both to conserve sensitive coastal lands and to provide public recreation facilities. This management plan discusses the potential uses of the site for land conservation and passive recreation purposes.

The County will be responsible for management plan implementation. The management plan outlines the activities required to achieve the goals and objectives of the **Flagler County Comprehensive Plan** and the **Town of Marineland comprehensive Plan**. The county and Town have determined that acquisition of the Preserve will further the goals of both their comprehensive plans. Implementation of the management plan also ensures that the preserve will developed in accordance with the **Grant Award Agreement with the FCT** and in furtherance of the grant application.

II. PURPOSE OF THE PROJECT

Flagler County and the Town of Marineland have acquired the River to Sea Preserve at Marineland to **fulfill several beneficial purposes including natural resource protection, historical resource protection, public recreation and public education.** The goal is to combine public access and outdoor activities for environmental, historical and recreational purposes with preservation of relatively intact ecosystems, as well as the restoration of disturbed areas within those systems. To reach this goal, the **character of the land will be maintained by balancing conservation with public access** to the resources.

The preserve will provide passive recreational and educational activities for local and seasonal residents and visitors, while still protecting the natural and historical resources of the preserve. This acquisition also will help **protect the viewshed of the Princess Place Preserve**, which is located across from the project site on the west side of the Matanzas River estuary. Further, this **river to sea preserve enhances the Guana Tolomato Matanzas National estuarine Research Reserve (NERR), the only one that will be located on Florida's east coast, by providing a buffer of natural lands to the estuary.** More importantly, this project will also provide a river to sea corridor that will be integrated into the County's Coastal Greenway (Exhibit L). The project site is also **key to the ongoing scenic A1A designation efforts.** Significantly, the acquisition also will **enhance the educational mission of the Marineland Oceanarium, the University of Florida's research facilities as the Whitney Lab, and the University's Sea Grant Extension college by adding natural resource "laboratories and classrooms"** to the area.

The plan achieves the following objectives:

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- The conservation of sensitive coastal lands;
- The protection of listed plant and animal species, and their respective habitats;
- The restoration of degraded natural habitats;
- The identification and preservation of archaeological artifacts;
- The provision of passive and water-based recreational facilities;
- The provision of public access to waterways;
- The development of educational and interpretive signage; and
- The enhancement of the County's coastal greenway system

Acquisition and management of the preserve is consistent with the comprehensive planning goals of both the county and Town related to conservation, parks and open space. The management plan outlines the activities required to achieve the objectives of the comprehensive plans of both the County and the Town.

Various sections of the County's comprehensive plan support the acquisition of the site and guide its management. Specifically the acquisition and management of the project site will assist the County's implementation of its coastal management element, its recreation and open space element, and its conservation element.

The coastal management element ensures the protection and enhancement of shoreline ecosystems. (Objective 1.3) Shoreline areas are recognized as environmentally sensitive lands that require protection from the adverse impacts of development. The site's management plan specifies that all recreational activities will occur in the upland areas. Thus, the natural shoreline resources will be protected from any adverse development activity. The management plan also discusses restoration of the primary dune along the Atlantic Ocean. The existing hotels are to be demolished, and the oceanfront parcels are to be restored and replanted with provision for appropriate public access and use.

The coastal management element also requires the protection of listed animal species and their habitats (Objective 12). Several listed plant and wildlife species, as classified by the Florida Game and Freshwater Fish Commission (FGFWFC), were observed on the project site. They include Florida scrub jay, gopher tortoise, eastern brown pelican, Louisiana heron, snowy egret, wood stork, east coast coontie and prickly pear cactus. The United States Fish and Wildlife Service (USFWS) also recognizes the Florida scrub jay as a threatened species. The management plan calls for the conservation and restoration of the project site to enhance the natural habitat for wildlife activity.

Additionally, this element ensures the preservation of historical sites (Objective 1.7). The Marineland Midden/Dupont's Mound (8FL2) extends into Lots 7 and 8 of the project site. Also situated in Lot 8 is the site of Independent Florida Seminole Indian reinterred burials. Non-identification and exclusion from development activities will protect these Native American resources. Educational signage regarding their significance in Florida's history will be available to park visitors. Further archaeological investigation will occur prior to any site development.

The recreation and open space element of the comprehensive plan encourages additional public access to publicly owned lands to increase the quality of life. In Flagler County, the primary attraction for residents and visitors are the waterways. The comprehensive plan underscores the desire to maintain public access to waterways such as the Matanzas River and the Atlantic Ocean (Objective 4). This

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preserve provides additional access to both the Atlantic Ocean and the Matanzas River. The plan also calls for the enhancement of degraded areas along both shorelines.

The recreation and open space element ensures the provision of parks and recreation facilities for outdoor, passive recreational activities that meet the needs of the population (Policy 2-2). The management plan for the project site requires the provision of facilities for outdoor recreation activities including nature trails, interpretive displays, educational exhibits, educational programs, picnic areas and primitive tent camping for youth groups.

This element also provides for creation of greenway network. (Policy 2-1) the preserve will be added to the County's Coastal Greenway that consists of publicly owned lands acquired due to their environmental sensitivity, their suitability for outdoor recreation, and their value for hazard mitigation.

The element also provides for the identification, management, protection and preservation of ecological communities and wildlife. (Objective 9) The management plan implements this objective by minimizing development, replacing invasive plant species with native vegetation, and revegetating areas of the site which have been disturbed or degraded. In addition to these preservation and enhancement activities, monitoring and evaluation programs are identified in the management plan. The purpose of these programs is to ensure the continued viability of the ecological communities and wildlife.

The conservation element includes directives that promote the restoration and enhancement of degraded natural areas by requiring the protection of surface water bodies using buffer zones of natural vegetation. (Policy 2-3) The preserve's saltmarshes provide this buffer zone of natural vegetation between the uplands of the preserve and the Matanzas River. Acquisition of the site will result in restoration of the shoreline, removal of non-native vegetation and revegetation of the site using native plants.

These referenced provisions as well as others outlined in Flagler County's comprehensive plan encourage the enhancement of ecologically and historically significant lands for passive recreation. (See exhibit D for more complete listing of comprehensive plan provisions.)

The Town of Marineland's Comprehensive Land Use Plan will be amended in the cycle following the closing to recognize special protection measures and to establish the area as public park lands. This shall include any necessary amendments to the land use designation of the preserve to conservation, outdoor recreation, open space, or other similar category within one year of acquisition. Furthermore, the Town will amend its zoning map to be consistent with the amended future land use designation. Current maps are in Exhibit F and G.

A portion of the preserve lies in St. Johns County. (Exhibit B, lots 9 and 10) Flagler County and Town will coordinate with St. Johns County to submit a land use amendment to change the land use designation for lots 9 and 10 to open space, conservation or outdoor recreation.

The County will identify that the preserve was acquired with funds from the Florida Communities Trust Preservation 2000 Program and is publicly owned and operated as a natural conservation area, outdoor recreational areas and educational site. This identification will be included in all literature, advertising and appropriate signage.

III. SITE DEVELOPMENT

The River to Sea Preserve at Marineland lies within the Town of Marineland. The northern parcels lie in St. Johns County while the majority of the preserve is located in Flagler County. The preserve surrounds the historic Marineland Oceanarium. The site of this tourist attraction is presently built up, and public facilities are available. State Road A1A runs through the preserve. Roadways presently provide access to the campground and parking lots are provided at the restaurant, hotel complex and entrance to Marineland. Additionally, a 45-slip marina exists northwest of the preserve.

The River to Sea Preserve at Marineland has the following structures or improvements in place (Exhibit E):

- An ocean front hotel complex;
- A recreational vehicle (RV) camping facility; and
- A convenience store with fuel pumps.

The following are the proposed site development activities (Exhibit I): removal of the hotels on the dune, restoration of the dunes, removal of the commercial campground, restoration of the campground area, the extension of the existing trail system, establishing parking areas, picnic facilities at various places within the site, and interpretive signage. The convenience store building will be appropriately used for other activities that may be associated with the preserve. The store's fuel tanks and pumps will be removed. The preserve will provide additional passive recreational and educational opportunities that are more ecologically sensitive than current uses.

All proposed site improvements will be completed within three years of closing. A parks development and restoration sketch plan of improvements will be furnished to FCT within six months of closing. FCT will review and determine approval for any improvements not already identified in the management plan.

In addition, the County will manage the property to prevent encroachments. All corner and quarter-section survey markers will be established as permanent monuments that can be easily observed by visitors and policed by County staff. This provision will help to ensure that encroachments are avoided during the development plan review process.

The County and Town will also insure that any adjoining development activities will not encroach on the preserve through the development review process. Additional signage or temporary fencing by the builder during construction, for example, may be required. Additionally, the County will speak with FDOT staff about installing possible encroachment prevention measures as part of the Scenic Highway Program designation for that portion of Flagler County.

Finally, the county Public Works Department will monitor for unauthorized entry. In places of need, the Department will install park boundary signs to delineate boundaries and the protected status of the preserve.

A. *Physical Improvements*

1. Ocean Front Hotel Site

The two oceanfront hotels shall be removed by the Seller or its agent at no expense to the County or Town. The seller shall provide a performance bond to guarantee this obligation. This will be completed as specified in the real estate contract (September 30, 1999, if the present contract is approved in April 1999).

After the hotels are demolished, the beach dune and coastal strand communities on the preserve that have been disturbed by development and uncontrolled beach access shall be restored to a natural state in terms of biological composition and ecological function. This will be completed within two (2) years of acquisition, depending upon the availability of grant funds.

Physical improvements will include oceanfront parking, beach access (dune walkovers), picnic shelters, a pavilion and a pedestrian trail system. This will be completed within three years of acquisition, depending upon the availability of grant funds.

Concerning the demolition of the hotels, the Seller will take the property to grade. All debris will be removed to a suitable depth to assure recreational suitability. With regard to permits, according to Mr. Dana Litino with DEP, Division of Water Facilities, Beaches and coastal Systems, demolition of the tow motel buildings will not require permits from DEP if: 1) all demolition activity is on property landward of the mean high water line, and 2) no fill material is required. Demolition activities required as part of the performance bond between the Trust for Public Land (TPL) and FCT are above the mean high water line, and do not specify fill material, so no DEP permits appear to be required at that time. Mr. Litino indicated that upon completion of the demolition, a DEP field representative would inspect the site to ensure that the amount of remaining debris is acceptable.

In the event that it is determined that fill material is required to mitigate hazards from the pile cappings, 100 cubic yards of fill or less could be permitted directly by the field representative. If the amount is greater than 100 cubic yards, an administrative permit will be required.

The County, Town and FCT will receive a copy of any permits secured for this work. The Seller shall also provide a demolition plan to the governments which shall address precautions to secure debris during the hurricane season. The demolition may include, subject to proper agency approvals, re-use of some of the aggregate in beach restoration or re-nourishment plan.

2. RV Camping Facility

There will be no commercial campground on the preserve. The present recreation vehicle camping facility includes 112 campsites with utility hookups, bathroom facilities, a swimming pool, an adjoining picnic pavilion and utility building. The utility building will be used to house one of the Town's fire trucks

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and for storage of County maintenance supplies and equipment. The supplies and equipment are for on-site management of the property. The fire apparatus is to supply the site with a ready source of water for fire suppression purposes. The county is concerned about the potential for wildfire. The 1985 and 1998 significant wildfires occurred in Flagler County. In 1985, the fire jumped eastward across the Intracoastal Waterway to North Peninsula State Park. The 1998, wildfire embers and ash from the fires on the westside of Matanzas River estuary fell onto Marineland, although no fires were ignited. There are no fire hydrants on the property. Therefore, the fire apparatus, with the consent of the Town, will be housed on the project site.

The bathroom facilities on the campground will remain for users of the park. The County also will retain the picnic pavilion next to the freshwater pond. Campground utilities not needed for the bathrooms or the picnic pavilion will be capped below grade for safety and aesthetics (except for some potable water for park users) and the pool will be demolished. The light poles will be removed from the campground. These campground demolition activities will be completed within six months after closing.

3. Convenience Store and Fuel Pumps

The County proposes using the convenience store property for a wide range of possible public uses, including as a conference center, for meeting rooms, for historical or ecological exhibits and facilities, as a teaching facility, a park's visitor center, or for the use by the NERR, conservation foundations, other governmental agencies, or local natural resource and historical groups that contribute to the management, programs or maintenance of the preserve.

The underground storage tanks shall be removed by the Seller or its agent at no expense to the County or Town and is subject to a performance bond. This activity will be completed within the time specified in the real estate contract (September 30, 1999, if the contract is approved in April 1999).

4. Physical Improvements/Public Access

Outdoor recreational facilities including nature trails, beach access improvements and interpretive displays shall be provided. The facilities shall be developed in a manner that allows the general public reasonable access for observation and appreciation of the natural resources of the preserve without causing harm to those resources.

The physical improvements will minimize impact on vegetative communities and ground disturbance of potential historical artifacts. The areas with the most potential for physical improvements are the hotel site, campground, roadways and the hiking trail system. The proposed facilities shall include:

a. Picnic Area

A picnic pavilion and barbecue will be placed on the east side of the preserve overlooking the ocean. The exact site has not been determined. It will be in close proximity to the parking area designated by the County to be saved from demolition at the hotel sites. This area will be marked on the sketch plan provided to FCT, along with the location of the picnic pavilion. The pavilion will be installed on a poured foundation and will be within 60 to 250 feet from the parking area.

Other picnic areas consisting of tables will also be placed on the property as shown on the master plan of Exhibit 1. The tables along the river and within the campground will be placed on natural ground, except the picnic tables that will be placed in the pavilion that adjoins the freshwater pond. The riverfront tables and the tables along the trails are intended to provide a place of rest, relaxation and refreshment rather than a picnicking area for a large group as the pavilion or picnic shelter.

A parking area will be provided within 250 feet of the picnic pavilion at the pond and its placement will be reflected on the sketch plan to be provided to FCT.

b. Educational Exhibit/Interpretive Station

Using information from the Biological assessment Report, the Cultural Resources Reconnaissance Survey and other sources, the County will develop interpretive signage along the hiking trail system.

c. Signage

Gateway signage will be installed at the northern portion of the preserve. Informational/educational signage will be installed and will identify the site as publicly owned and operated as a natural resource conservation area, outdoor recreation area, and acquired with funds from FCT. The County will pay careful attention in the development of the signage to consider size, lettering, orientation and height and compatibility with the existing park signage.

A permanent recognition sign shall be maintained in the entrance area of the preserve. The sign shall acknowledge that the preserve is open to the public and was purchased with funds from the Florida communities Trust Preservation 2000 (P2000) Program. Such recognition shall also be included in all printed literature and advertising associated with the preserve. The sign will be in place within six (6) months of closing.

d. Gateway Area of Lots 9 and 10

On the north portion of the preserve, the County will revegetate these parcels and provide a gateway feature on the river side. The re-vegetation will be completed within one year of acquisition, depending upon availability of grant funds. A pull off area and a small, pervious parking area will be established. A landscaped barrier will confine vehicles within designated parking areas. An existing stabilized shell put-in will be maintained for non-motorized boats, such as canoes and kayaks. The planted vegetation and landscaped barriers will be installed to serve as a protective barrier to the put-in area. This will prevent unauthorized vehicles or trailers from degrading the estuary and its shoreline vegetation.

e. Public Access

Pedestrian access will be provided by a 6-foot wide crushed shell or mulched pathway on the east and west sides of the preserve. The trail system will connect to the existing pathway along the Matanzas River, which may require some vegetative enhancement. The hiking trail will lead visitors to various interpretive stations, picnic areas, observation areas and the beach. The affected area is approximately 66,000 square feet. The pedestrian access will be compatible with all applicable construction standards, including those of the Americans with Disabilities Act governing natural resource parks.

Scenic overlooks of the saltwater marsh and the Matanzas River estuary will be provided.

Recognizing that State Road A1A, a two-lane undivided highway, passes directly through the site and park users may desire to park on either side of the highway and cross-over to the other, the county will coordinate the Florida Department of Transportation (FDOT) to have the FDOT maintain the existing pedestrian cross walks. In addition, as appropriate, FDOT will be requested to provide traffic calming measures such as speed zones, additional pavement markings or other traffic control techniques. The Town also has pending before the Legislature, a request for FDOT Transit Greenway funding which if appropriated, can provide improvements that will be beneficial to all forms of public access – driving, biking and walking. The county and Town are also both represented on the scenic A1A designation workgroup. When scenic highway designation is obtained that initiative may offer opportunities for enhancing public access.

f. Parking

Parking will be available on the east and west side of State Road A1A. On the east side, some of existing parking will be used from the hotel site. On the west side, parking will be available at the present convenience store site. These parking areas will use existing asphalt pavement. On the north end, parking will be available for visitors to rest and admire the Matanzas River, and it will be pervious. The number of parking spaces at each location will be reported to FCT and the Town in the sketch plan submission. All parking areas shall be set back a minimum of 25 feet and any wetlands or surface waters.

g. Other Improvements

Any other improvements will require the County to request written approval from the FCT and the Town before the County undertakes any site alteration or physical improvements that are not addressed in the FCT approved management plan.

There is an existing water treatment facility which will be an in-holding on the project site. The facility provides potable water for the entire Town. An emergency source of potable water is also available from Florida Water Services. The system interconnection already exists. The water utility has easements for its water transmission lines within the sites. No additional water treatment facilities are contemplated on the project site itself.

There is a PVC pipe discharging saline potable water as part of the potable water distribution system. The utility easement includes this piping. The County will screen the discharge pipe naturally as part of the county's replanting effort so that the area blends in with the rustic nature of the park.

The wastewater treatment plant that serves the Town is off the project site. Wastewater lines on the preserve are connected to the plant and easements already exist for their placement and repair on the project site. No additional wastewater treatment facilities are contemplated on the project site itself.

h. 2014 River to Sea Preserve Management Plan Update/ Cottages Phase I

River to Sea Preserve provides a unique location in the conservation and research landscape as the eastern extent of more than 4,000 contiguous publically owned acres of natural lands in Flagler County. Co-owned with the Town of Marineland, the River to Sea Preserve (Preserve) is home to the Guana Tolomato Matanzas National Estuarine Research Reserve's (GTM-NERR) southern office and is adjacent to the Georgia Aquarium's Dolphin Adventure (Georgia Aquarium) and the University of Florida's Whitney Laboratory for Marine Bioscience (Whitney Lab). Due to proximity and partnerships with these organizations, a demand for temporary lodging for research scientists and graduate students performing research in this area has been identified. Simultaneously, Flagler County envisions itself establishing

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innovative, environmentally sensitive cottages for visitors to this park. A proposed location has been established in close proximity to the GTM-NERR offices and in the former RV campground area at the park.

Cottage details:

The initial cottages planned under this proposal are intended to provide a coveted respite for researchers utilized by and for the benefit of the Guana Tolomato Matanzas National Estuarine Research Reserve (GTMNERR)/FDEP, University of Florida Whitney Lab, and other research entities. Outside of this research capacity, use is intended to include rentals to outside visitors at a higher rate to offset the operational and maintenance costs of the cottage. Over time, additional cottages will be added to this location and others to create an innovative addition to the Preserve and to allow those unable or unwilling to undertake traditional tent camping, to enjoy the beauty of River to Sea Preserve in various ways. These cottages would represent the only state park style cottages with on the east coast of Florida for several hours north and south. The initial cottage and all future cottages will strongly represent Flagler County's commitment to developing a strong eco-tourism base. The location of the River to Sea Preserve offers direct access to the Atlantic Ocean and to Pellicer Creek via the Intracoastal Waterway. The cottages will facilitate accessibility that will attract environmental researchers, nature enthusiasts, kayakers, birders, anglers, surfers and other visitors. The recently rebuilt, Marineland Marina would make boat slips available for those who would like to travel with a boat and enjoy Flagler County's extensive waterways. Large regional events, like Bike Week, and the Daytona 500 may also draw visitors during off-season periods for those seeking a non-traditional lodging experience. The development of these units will be a low-impact, high-value addition to Flagler County's park system offerings and will establish a model for similar projects in the future.

Figure 1. Aerial view of River to Sea Preserve in the Town of Marineland



Some guiding principles for the proposed cottages have been set forth:

A reduced footprint: The new River to Sea cottages and future cottages will be designed to minimize any footprint. The cottage site(s) plan will focus on a compact “walkable” design with the cottage(s) easily accessible but with a minimal impact to the park and gathered in a relatively smaller area away from other park activities.

“Green” design and architecture: This proposal will take advantage of the considerable thought, imagination, and progress currently being made in the area of green building. Design and construction will seek to maximize passive cooling and resistance to wind and storm surge and utilize recycled materials. There likely will be many opportunities for new technologies to

be showcased in this project. A “Florida Water Star” and a LEED designation will be sought for the cottage.

A variety of visitor experiences: There are a multitude of opportunities for tremendous visitor experiences. These include canoeing, boating, birding, hiking, biking, fishing, surfing, researching, and beaching, among others. With the right project design and implementation, access to these activities and those offered by venues like the Georgia Aquarium’s Dolphin Adventure and many more could enhance the appeal of the River to Sea as a destination for researchers, environmentalists and nature lovers of all kinds.

Creating a “sense of place”: Any new cottage(s) should reflect the history and culture of Flagler County. Part of the culture of the County is to preserve cultural and historic resources. Choices of architecture, landscape design, and cottage décor could capture a sense of “Old Florida” and enhance the continuity of the cultural and historical aesthetic already in place at Princess Place Preserve.

Connect with the Research Community: The project should form connections with the GTMNERR, Whitney Lab, the Flagler County School System and Environmental Tourists/Visitors.

Environmental Education/Demonstration: This project will inherently offer the opportunity to employ modern environmental best practices in many aspects. These practices can in turn be used to market to and educate guests through demonstration of these practices incorporated within the project.

Some aspects of the cottage interiors and exteriors as related to environmental sustainability have been conceptually planned:

Solar Power: If funding permits, solar panels will be incorporated into some applications such as hot water and outside lighting.

Energy Efficient Appliances: All appliances will be Energy Star-rated appliances. This will include the refrigerator, stove/oven, microwave, washer/dryers, and similar appliances.

Low Flush Toilets: Water conservation will be a key component of any construction with low flush toilets.

Green Lodging Program: Sheets and towels will not be replaced each day as part of an overall effort to conserve water and to participate in the State’s Green Lodging Program (this is just one of the many measures of the Green Lodging Program).

Energy Efficient Lighting: Light fixtures will be energy efficient with appropriate dimmers, timers, and motion detectors to save additional energy. All light fixtures will be able to accommodate fluorescent bulbs.

Recycled and Renewable Building Materials: Recycled and renewable materials will be incorporated into the cottage where appropriate to demonstrate the use and benefits of utilizing these types of materials.

Recycling: Recycling will be emphasized to all guests to reduce landfill waste streams. All types of recycling will be collected similar to regular home recycling.

Rainwater Cistern: Rain water could be captured in a cistern and recycled back into specific non-essential uses within the cottage or used externally as washdown/ irrigation reservoir.

Minimization of Impervious Areas: Whenever possible, shell and other semi-pervious material will be utilized for the driveways, vehicle paths, parking areas, and trails to minimize the amount of rainwater runoff generated from the site. Design schemes will avoid excessive width of these features to prevent rainwater runoff and reduce the impact of the cottage development on our valuable water resources. Low-impact development concepts will be employed whenever possible.

No Irrigation: There will be no irrigation, with the exception of captured rainwater for reuse if it becomes available.

Native Vegetation and Drought-Tolerant Vegetation: Existing native vegetation will remain to the greatest extent possible. Where replacement or supplemental landscaping/vegetation is needed, native species will be utilized that can survive on their own once established.

Outside Energy Efficient Lighting: Outside lighting will be energy efficient, with photocells and in some cases, motion detectors. Solar lighting will also be used where appropriate.

Roadside Swales: Roadside swales will be utilized for stormwater, rather than standard stormwater piping, inlets and a large detention area. The site will meet or exceed stormwater rules for the site work.

Firewise Design: The area in and around the cabins will be managed utilizing Firewise principles.

Underground Water Recharge: An underground water garden area will be considered to capture on-site stormwater runoff or water overflowing the cistern from roof drainage and to capture any driveway drainage for most storm events. It will be utilized to recharge the groundwater.

Overall, this is an innovative approach that seeks to offer unique research opportunities and expand the visitor base for the Princess Place Preserve. This approach is scalable and has the ability to be a regional model for other parks, shaping how nature-based tourism recreation

can progress, hand-in-hand with the types of research that can be useful in maintaining, improving, and preserving public lands in the future.

Cottage Location and Natural Community Information

The cottages and future cottages will be located north of the freshwater pond on the site and west of A1A. This area of the park is easily accessible by automobile as it is directly adjacent to the existing roadway system. No new road will need to be constructed, only a small driveway.

Natural Community Observation

In Figure 1 the area enclosed in red is the proposed cottage area. The area enclosed in yellow depicted in Figure 1 is the property boundaries of the River to Sea Preserve. The property is bisected by A1A and has borders along the Intracoastal Waterway and the Atlantic Ocean. Natural communities on the park include maritime hammock, estuarine marsh, a freshwater pond, coastal dune and coastal scrub. For many years, the park was privately owned and was utilized as an RV campground. An area for the proposed cottages was identified in the disturbed, former campground area. A wildlife and vegetation survey of the 2.5 acre proposed cottage area was performed by Flagler County staff on February 13, 2014. Besides vegetation and wildlife, existing utility and other built items were noted.

The natural community description of the cottage area most closely resembles a disturbed scrub. There is no overstory canopy for the majority of the area, and the site expresses characteristics of scrub as listed in the Florida Natural Areas Inventory but there is no natural community description that encompasses this disturbed site. If returned to historic or pre-historic conditions, the site would likely exhibit characteristics of coastal strand due to its proximity to the dune, however it has a long history of intense use up until the late 1990's and very little active management since that time.

The tallest vegetation in the observed area is in the southern 0.25 acres of the site and consists of several sand-live oaks and cabbage palms with a maximum height of 15-20 feet. The rest of the site resembles a disturbed area with early-mid successional coastal scrub with maximum height of 12-15 feet. The most recent prescribed burn or natural burn on the site is not known, but due to the vegetation density it appears that there has not been any prescribed fire on the site since its acquisition by the Town of Marineland and Flagler County in the late 1990's. Typical woody vegetation observed on the site includes scrub-live oak, myrtle or chapman's oak, wax myrtle, red cedar, rusty lyonia, and laurel wilt-afflicted red bay. There is a strong expression of saw palmetto throughout the park with some reaching heights of approximately ten to twelve feet.

Smilax vine and salt bush are found along the edges of the vegetation and there are small patches of grasses and forbs colonizing some of the site.

Invasive Plant Species

The River to Sea preserve provides habitat for several invasive species of plants including cogon grass, Brazilian pepper, wedelia, silverthorn, giant reed, and lantana camara. Cogon grass has been found and treated in close proximity to the cottage area and a single Brazilian pepper tree was noted in the southern portion of the site. Giant Reed was found and treated within the cottage area and appears to have been eradicated. The laurel wilt fungus has affected the majority of the red bay population at the preserve.

Wildlife

The site supports an unknown population of gopher tortoises as evidenced by burrow observations during the vegetative survey. Based on vegetation density, limited grasses and forbs, and the number of burrows observed, it is estimated that 3-5 adult tortoises are located within the cottage area depicted in Figure 1.

It is known that at least one bobcat, several white tailed deer, and several wild turkeys utilize the River to Sea preserve as year-round habitat. During spring and fall migrations, the River to Sea preserve is frequented by transient populations of birds due to its position along the Atlantic Flyway.

There have been no sightings of the Florida Scrub-Jay in the River to Sea preserve since around 2006. The closest existing population occurs at North Peninsula State Park about 18 miles south of the River to Sea preserve.

Invasive Animal Species

There are no known invasive animals on the site. No feral hogs or cats have been identified at the site. The red bay ambrosia beetle is the carrier of the laurel wilt fungus and is likely present on the site due to the damage observed to red bay trees on site.

Disturbed areas

Vehicular travel lanes and RV parking areas remain from the site's previous use as a campground and are visible in the aerial image provided as Figure 2. Remnants of utility systems are still found on site including electric meters and wastewater manholes. Possibly some of these utilities are currently used for wastewater piping to the Town of Marineland's water treatment plant, just north of the Preserve. Remnants of the former public restroom and bath house are located adjacent to the cottage area on the southwest. Throughout the site vegetated ditches and drainage areas were notated.

Conservation Status

Conservation status of the site "as-is" is not useful due to the site disturbance.

Habitat Observation

In current condition, the proposed cottage location is usable but not an ideal forage site and habitat for wildlife including gopher tortoise, small mammals, reptiles, and birds.

Figure 2. Aerial view of Proposed Cottage Area at River to Sea Preserve in the Town of Marineland



B. Master Site Plan

The Master Site Plan shows all existing and proposed physical improvements and activity areas. (Exhibit I) It will be supplemented by the sketch plan to be provided to FCT. When the sketch plan is approved, it will become an exhibit to the management plan.

C. Permits

As required, local government approvals for proposed demolition, development or restoration work will be obtained.

Permits from the DEP may be required to restore the dune areas and to construct proposed improvements such as dune walkovers, pavilions, or picnic facilities. Also permits from DEP and the St. Johns River Water Management District may be required in the restoration and access to wetlands and the Matanzas River. In all instances, the FCT will be notified by the County that all required licenses and permits have been obtained prior to the initiation of any construction on the site.

D. Easements, Concessions, or Leases

There are no existing or proposed concessions or leases on the preserve. There is currently a utility easement along the right-of-way of State Road A1A and there are existing easements for potable water, wastewater and electricity on the site. No additional easements are required for the development of the preserve. The existing easements are not revenue generating. The County will provide sixty (60) days prior written notice to FCT regarding any sale or lease of any interest, the operation of any concession, any sale or option to buy things attached other site, the granting of any management contracts, and any use by any person other than in such person's capacity as a member of the general public.

The County may lease the convenience store facility for use as teaching center or for use by the NERR, conservation foundations, other governmental agencies, or local natural resource and historical groups that contribute to the management, programs or maintenance of the preserve. These are not expected to be revenue generating activities. If revenue is generated which exceeds the amount the County spends for maintenance and improvements at the preserve, then the excess will be used for improvement at the preserve.

IV. KEY MANAGEMENT ACTIVITIES

A. Natural Resource Protection

1. Vegetative Communities/Wildlife

The preserve has experienced significant disturbance in some areas. However, the majority of the site is comprised of native forested and non-forested vegetative communities. These communities include:

- Live oak (34.3 acres)
- Coastal scrub (10.87 acres)
- Saltwater marshes (6.71 acres)
- Streams and waterways (1.89 acres)
- Inland ponds and sloughs (2.23 acres)
- Shoreline (0.94 acres)
- Beaches other than swimming beaches (0.79 acres), and
- Developed or disturbed land (32.0 acres)

Biological Consulting Services, Inc. identified multiple vegetative communities on the preserve (Exhibit J). The natural communities of beach dune, saltwater marsh (7 acres), coastal strand (11 acres) and maritime hammock (35 acres) were ranked as S2 by the Florida Natural Areas Inventory. The acreage presented here generally represents those vegetative communities that are in good condition. Degraded and disturbed areas do exist in the campground site and hotel site. Designated pathways and educational signage will be used to limit degradation for these communities. Replanting will restore the natural ecosystems in these areas.

Most significantly, the coastal scrub community provides Florida scrub jay habitat. Suitable Type 1 habitat along the beach and A1A is about 10 acres. Another 9.8 acres in the campground, after replanting, will add to the amount of suitable habitat. This campground acreage is believed to be only used by scrub jays for foraging at present.

The scrub jays at Marineland are part of a regional population of scrub jays along the coast in north Flagler County. The U.S. Fish and Wildlife Service (USFWS) has identified families on the coastal scrub at the Surf Club (Matanzas Shores DRI) approximately one-half mile south of the subject site. Another one-half mile south at Washington Oaks State Gardens, the USFWS also has documented another group of scrub jays. Approximately two miles further south at Malacompra Beach Park, scrub jays also have been documented in the past, but not noted recently. A beach management program was funded by the State's Coastal Zone Management Office to prescribe burn the site to improve habitat. The prescribed burning seasons for this year and last year did not permit the burn. One mile further south, USFWS has documented scrub jays at Old Salt Park at the end of 16th Road at the beach. No management plan has been implemented at that site. The County and Town will cooperate with any habitat management principles development by the USFWS or the FGFWFC to enhance this regional coastal population of scrub jays. For the site itself, the County will plant and manage the new vegetation in conjunction with the U.S. Fish and Wildlife Service and the Florida Game and Fresh Water Fish Commission.

A gopher tortoise burrow was found on-site. West Indian manatees could occur in the open water habitat of the Matanzas River. Several scrub jays were identified on-site. Their habitats will be maintained in a natural state. Recreation on the site will be limited to passive activities and will be controlled by designating pathways. On-site signage will express to visitors the importance of protecting

these animals and ways in which the community can support the species' continued existence. Biological Consulting Services, Inc. identified the listed species. (Refer to Exhibit J).

The County shall be responsible for coordinating the Florida Game and Fresh Water Fish Commission and the Department of Environmental Protection for appropriate guidance, recommendations and permits to avoid impacts to listed species and the natural resources on the project site.

For specific on-site measures, gopher tortoise burrows will not be disturbed during any site development. Measures will be taken to protect nesting sea turtles on the beach. No lights will be installed that directly or indirectly illuminate the beach during nesting season. Further, the town and County will use the volunteer sea turtle organization in Flagler to mark and recorded nesting sites, and integrate that data in its reporting.

Listed wading birds will be protected through shoreline preservation. No taking of animals will be permitted as with the county's other park sites, and such takings will be turned over to law enforcement for prosecution.

2. Waterbodies (Adjacent and On-site)

The preserve is adjacent to the Matanzas River on the west and the Atlantic Ocean on the east. The water quality of the ocean is quite high. The sea water is used for the Marineland Oceanarium and the Whitney Lab. Two indicators of the quality are that Marineland's dolphins are living to twice the average life expectancy of dolphins in captivity. The oldest captive dolphin in the world is at Marineland. This dolphin is 43 years old and the average life span is only 19 years. Another indicator is that the faculty and researchers at the Whitney Laboratory extol the virtues of the sea water quality used in their research projects. They point out, for example, that clams which are filter feeders cannot survive in this water. The activities in the management plan will not compromise the sea water quality.

The water quality of the river and estuary are also relatively high. Although DEP performs no testing, the clarity of the water is consistent and aquaculturists have noted that farming clams near the site would not be productive because of the clarity and low nutrient loading of the water. The estuary has been selected for the NERR program. The program intends to conduct water quality sampling in conjunction with the Northern Coastal Basin Program of the St. Johns River Water Management District. The Town and County will allow access to facilitate the water quality monitoring by these and any other official agencies.

Among other measures, the estuarine waters can be protected from degradation by preserving and enhancing shoreline vegetation. There are 6.79 acres of saltmarsh that will be protected within the proposed preserve as indicated in the Biological consulting Services report. (Exhibit J)

Recreational uses along the Matanzas River will be managed in a manner that is sensitive to the saltwater marsh, and wetland areas. The saltwater marsh provides a buffer zone of natural vegetation between the uplands of the preserve and the river. These wetlands will be enhanced by the removal of any exotics and the restoration of any areas disturbed by prior development or encroachment.

To minimize the erosion and stabilize the shoreline replanting, the County and the Town will request DEP and other involved agencies to have a no wake zone from the marina south to the southern property boundary. The ICW narrows along this stretch, concentrating boat wakes such that they are eroding the shoreline and the riverfront middens. This continuing adverse impact necessitates the no wake zone.

Additionally, the preservation of upland ecological communities and limiting uses on the preserve to passive recreation protects the Matanzas River from point and non-point sources of pollution. The preserve's revegetated shoreline will act as a buffer zone between the uplands and the waterway.

3. Degraded Areas

The preserve will protect healthy vegetative communities and wetlands. Proposed trails make use of the existing trail system and the already disturbed area of the campground. Disturbed areas of the campground will be revegetated. In these areas, invasive plant species will be removed and replaced with native vegetation. Monitoring and evaluation of the site will be performed regularly in partnership with local environmental organizations.

The revegetation of the campground will be done to enhance the ecological communities that already exist. For example, where live oak hammock predominates, that community will be reestablished, and wherever coastal scrub communities exist, re-establishment of that community will occur. Lots 7 and 8 have relatively healthy communities. The dunes on lots 9 and 10 will be revegetated and some saltwater marsh will be enhanced all totaling approximately 4 acres. This will help preserve the dune and estuary system. The area of vegetative restoration at the hotel sites will coincide with the dune line and will consist of coastal scrub in part and beach dune vegetation in part.

All proposed revegetation and existing vegetation within the preserve will be coordinated with the protection of listed plant and animal species. Areas that will be restored will be identified on the sketch plan to be submitted to FCT.

4. Management Techniques

In general, the County will seek to protect the mature live oak canopies (35 acres), coastal scrubs (10.87 acres), saltmarshes (6.79 acres) and shorelines (0.94 acres), and the associated wildlife habitats as identified in the Biological Assessment Report. (Exhibit J) The development of the trail system will minimize impact on healthy mature vegetation. Activity areas will be focused on the existing campground areas (16.81 acres) and disturbed lands (9.84 acres). Water resources will be protected by the restoration of vegetative habitats. Also, periodic surveys of the listed flora and fauna found on the preserve will be forwarded to the Florida Natural Areas Inventory. The Florida Natural Areas Inventory forms are in Appendix B.

5. Vegetative Communities and Animal Species

The County has identified vegetative communities in the Biological Assessment Reports (Exhibit J). The Reports are detailed and identify ecosystems that will assist in any project development to insure

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protection, restoration and preservation of the site's natural resources. Native vegetative communities shall be preserved and appropriately managed to ensure long-term viability. These various ecosystems will be the subject of interpretive signage, field education programs and in-class programs. Prescribed burning as a management technique is discussed later.

Specific activities associated with the above proposal are:

1. A survey of vegetative communities and plant species on the preserve will be completed by January 31, 2001. The survey is intended to ensure the protection of vegetative communities in the preserve and will also address the areas of revegetation. Additional surveys will be conducted every two years thereafter. The results of these surveys will be reported in the stewardship update.

The following listed plant species were observed on-site: East Coast Coontie and Prickly Pear Cactus. East Coast Coontie is listed as an environmentally exploited species, and the cactus is a threatened species. These plants are scattered throughout the site, making a calculation of the number or density of these plants impractical.

These plants and other listed species that may be on-site will be protected because no trails or tent campsites or other amenities will be installed on intact native vegetation. All of the improvements will utilize land already disturbed, i.e. where vegetation has been removed or lost. The designated trail system also will limit the trampling of plants on-site. Educational signage also will protect the plants by providing visitors information to help them understand the importance of listed species to the Florida ecosystems.

There will be restoration of disturbed habitats both on land and along the shoreline. Periodic monitoring and evaluation of the site's natural resources will be reported in the annual stewardship report. Appropriate steps will be taken to ensure the protection of listed species of flora and fauna.

The site supports the maintenance of the Florida scrub jay which were observed on-site by Biological Consulting Services, Inc. Four scrub jays responded to the calls. A family of scrub jays inhabits the southeastern corner of the site. All FGFWFC and USFWS guidelines will be followed to ensure the continued viability of this species. The habitat on the site ranges from moderate to pristine. Revegetation of the site will restore those moderate areas of habitat to a higher quality. With revegetation, about 20 acres of suitable type I habitat will be available to the scrub jays.

The natural vegetation of the northern parcels in St. Johns County will be restored. The disturbed saltwater marsh areas will be restored so that they may serve their intended ecological function of filtering runoff before it enters the Matanzas River estuary. The coastal scrub also will be restored on these northern parcels.

2. The preserve will be managed in a manner that will protect and enhance the listed and non-listed native wildlife species and their habitat including the Florida scrub jay. The County will coordinate with the Florida Game and Fresh Water Fish Commission to ensure preservation and viability of listed and non-listed native wild life species and their habitat.

3. Listed animal species also were surveyed (Exhibit J). More detailed surveys may become available from environmental clubs, the FGFWFC and DEP's Office of Protected Species Management. Input will be sought by the County in determining the success of habitat restoration and the impact of proposed

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activities upon listed species. The county will submit a copy of any supplemental lists of animal species to the FGFWFC, the DEP and the FNAI. Informational signage for listed species protection and their habitat also will be incorporated into the preserve, as well as in the educational programs to be conducted.

4. No feral hogs, domestic ducks or dogs have been seen on the preserve and no indications of their presence have been noted. However, feral and domestic cats from the campground have been noted. The County has informed the landowner and lessee to remove the cats during this period of conceptual grant approval. After closing, the County will take measures to assess and control any feral cats. The County will continually monitor for all feral animal species as a part of its management. If the presence of feral animals is indicated, the County will develop an appropriate plan for removal and remove the animals according to the plan.

5. In coordination with the Division of Forestry and FGFWFC, the County will adopt a prescribed burn plan, if warranted, and develop an outreach program to inform residents of the benefits of prescribed burns. The County will work with the Division of forestry, the FGFWFC, and DEP in the implementation of the plan, as necessary. The plan will be completed within one year of acquisition.

6. Coordination:

The County staff and local volunteer groups (i.e., Sierra Club, Audubon Society, Sea Turtle Watch, etc.) will work to preserve the listed species and monitor to site for degradation of the habitats.

The County will cooperate with the Florida Game and Fresh Water Fish Commission and the Florida Department of Environmental Protection in the identification of animal species on the site.

As an example of anticipated management cooperation, the DEP and Division of Forestry have agreed to conduct prescribed burns for upland habitat management.

B. Resource Restoration and Enhancement

The County proposes the following resource restoration and enhancement activities:

Restore areas affected by hotel demolition and vacant spaces no longer being used as activity areas to increase scrub jay habitat.

Vegetative enhancement of the existing campground trail system through revegetation and under-brushing.

An exotic/invasive plant control program will be developed to remove such species to enhance important ecosystems (for example, coastal scrub).

Native species affected by the construction of public access improvements will be transplanted on-site. The gateway area of lots 9 and 10 will be revegetated with native plants. Lot 10 will be part of the dune restoration plan. To minimize vegetative disturbance, small parking areas with pervious materials and landscaped barriers will be installed. Gateway signage, appropriate to the park area, will be installed on the river side.

Specific activities associated with the above proposal are:

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1. The beach dune and coastal strand communities on the preserve have been disturbed by development and uncontrolled beach access. These communities will be restored to a natural state in terms of biological composition and ecological function.

The existing hotels sit on top of the primary dune. The hotels will be demolished and over time the site will be revegetated. The dunes will be restored to the extent feasible to provide a more natural environment and enhance the health of the dune system through revegetation.

Beach restoration or renourishment for the long term is being pursued by the Town. The Town has enlisted the assistance of University of Florida Coastal Engineering Professor Robert Dean to design a suitable plan for the eroding shoreline. This plan leaves a more natural profile to the beach with progressively layered rocks, aggregate and sand to strengthen it against storms. The plan also permits native beach vegetation to contribute to the dune's resistance to erosion and scouring. The Town will pursue grant funding from DEP's Beaches and Shores Division and other grant sources to implement the plan. The Florida Inland Navigation District is making its sand available from its nearby spoil sites to assist. The County, through its Tourist Development Council funding, has allocated \$140,000 for dune repair.

Implementation of Dr. Dean's beach renourishment/restoration plan will benefit the preserve. The restoration activity also can be used as an educational demonstration opportunity for school children and adult visitors. The grants pursued by the Town also will seek funds for appropriate educational material/programs because of this unique project.

The Town will provide the County and the FCT with a copy of any permits and the approvals since the project site will be affected by beach renourishment/restoration.

Beach access from the dune area will be limited to appropriate walkovers. Educational signage will be placed along the dune emphasizing the importance of the dune system and the dune vegetation.

2. Adjacent development activities will be monitored through the development review and approval process to ensure that such activities do not negatively affect the resources on the preserve.

3. The Matanzas River will be protected and enhanced through the implementation of appropriate watershed and shoreline management practices.

4. An ongoing monitoring and control program for invasive vegetation including exotic (non-native) and nuisance native plant species will be implemented on the preserve. The objective of the control program will be the elimination of invasive exotic plant species and the maintenance of a diverse association of native vegetation. The county will reference the exotic Pest Plant Council's List of Florida's Most Invasive Species to assist in identifying invasive/exotics on the preserve. The definition of the program will depend upon the results of the plant species survey to be completed by January 31, 2001. The removal of exotic and invasive plant species will be accomplished within one year thereafter and will be followed up through the periodic surveys under the management plan.

5. Nature trails, boardwalks, scenic overlooks and interpretive displays will be provided. The nature trails planned make use of existing disturbed areas so as to keep additional impacts to a minimum. The

trail will be made of crushed shell or mulch so that construction is limited. The observation area provides a scenic overlook of the saltwater marsh and the Matanzas River estuary. Educational signage will be provided throughout the site to educate visitors about the natural vegetation and wildlife on-site as well as past uses of the site by humans. The proposed site improvements will encourage the continued growth of native vegetation.

6. The freshwater pond on the site appears to have good water quality based on the quality of shoreline plants and the lack of hydrilla or cattails. The County will monitor the pond area and request the NERR, Northern Coastal Basin Program or the Water Action Volunteers to perform a baseline water quality sampling with periodic follow-up samplings to assure maintenance of water quality. If degradation is detected by these entities, the County will reexamine its management practices for adjustments to correct the situation.

C. Archaeological and Historic Resource Protection

SouthArc, Inc. completed a cultural resources reconnaissance survey of the preserve. (Exhibit K) Several middens and artifacts were found on-site. The Marineland Midden/Dupont's Mound archaeological site (8FL2) identified in 1885 continues into Lots 7 and 8 of the preserve. Based on its size, density and integrity, the Marineland Midden/Dupont's Mound site is potentially eligible for the National Register of Historic Places. Lot 8 is also the site where the Independent Florida Seminole reinterred burials from the Marineland parking lot area. It is believed that the portion of the midden extending onto Lots 7 and 8 may have been a burial mound similar to that found in the area where the parking lot now exists. Further archaeological investigation will occur prior to any site development. The Native American resources will be protected by non-identification, exclusion from development activities and educational signage about their significance in Florida's history.

Also of note, the Marineland Oceanarium site (8FL41) is on the National Register of Historic Places. None of the preserve is within the listed area. The hotels scheduled for demolition were built after 1948 and accordingly do not have listing potential. For archival purposes, however, the County will collect available records for the hotels acquired from the grant process for reference purposes.

There is a possibility that the preserve contains sites which are associated with the historic Bonely-Perpall-Dupont ownerships. Thus, the parcels may be historically related to early 19th century land grants along the Matanzas River. Further historical investigation will be part of the archaeological survey. If confirmed, educational signage will be provided.

The County proposes the following activities for archaeological and historic resource protection: The County will not undertake any activities that would adversely impact archaeological or historical sites as identified in the Cultural Resources Reconnaissance Survey (See Exhibit K) Collection of artifacts and the disturbance of archaeological and historic sites on the preserve will be prohibited without prior authorization from the Department of State, Division of Historical Resources. All management activities of archaeological and historic resources will comply with the provision of Chapter 267, Fla. Stat. and specifically sections 267.061 (2)(a) and (b). Archaeological and historical sites will not be disturbed for construction of any site improvements or structures or alteration of habitat. The county will conduct additional archaeological testing of the preserve within one year of acquisition.

Specifically, the County proposes the following:

Within one year of acquisition, subject to grant funding, an archaeological survey will be conducted to determine the integrity and extent of the various shell midden and other mound features found on the preserve. The results of the survey will be coordinated with the Department of State, Division of Historic Resources to assess the archaeological and historic resources and to develop a plan to protect and preserve the archaeological or historical sites as well as determine the location and design of any proposed improvements near these features.

Prior to the commencement of any proposed development activities, measures will be taken to determine the presence of any archaeological sites. All planned activities involving known archaeological sites or potential site areas shall be closely coordinated with the Department of State, division of Historic Resources in order to prevent the disturbance of significant sites.

The precise location of the site's midden's and burial mound will not be announced in on-site signage or education exhibits. Trails will not approach these significant areas any more than they already do.

The management plan has been forwarded to the Division of Historical Resources for their review. The Division's comments will be incorporated into the management plan as an exhibit to guide management activities.

D. Environmental/Historical Education Program

The County proposes the following activities for the environmental/historical education program: Signage will be developed to explain the native vegetation, habitats and wildlife.

Signage will be developed to explain the cultural significance of the preserve (i.e., the Marineland Midden/Dupont's Mound and the historic association with Marineland)

Further environmental and historical programs will be conducted on site through the Whitney Lab, Sea Grant, the NERR and the local environmental clubs, which include the Sierra Club, The Audubon Society and the Native Plant Society, and the local historical/heritage societies.

The programs for use of the property will be scheduled through the County's Public Works Department.

There are a variety of educational methods that will be used:

Interpretive signage will be developed and posted to describe the native vegetation and wildlife as well as the historic significance of the site. The information provided at the preserve will include natural history. This should promote greater public appreciation for protecting the resources.

Another environmental educational method is to conduct on-site developed education programs through local environmental and historical organizations. Local environmental clubs, such as the Audubon Society, the Sierra Club, the Water Action Volunteers and the Native Plant Society, Already participate in the monitoring and managing of publicly owned wildlife habitats throughout the county. Such activities will be continued on the preserve. Sea turtle and migratory bird counts are examples of educational activities that may occur on-site. The county expects the Native Plant Society, for example, would announce educational tours approximately annually to educate citizens about the ecosystems. The Society also is expected to be on-site at least annually to help in vegetation management or

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planting. The Society conducts similar events in the County with an educational focus and invites regular and new volunteers to participate. The Audubon Society is very active with birding programs and animal species surveys at the County's other natural resource parks. The County expects twice a year activity on-site by Audubon. Similarly, Audubon uses these visitations as educational opportunities for volunteers and citizens. In similar fashion, the County will allow other organizations active in education/volunteer opportunities to integrate the site in their programs. The County will track these on-site events and programs.

Finally the Whitney Laboratory and Sea Grant Extension College already conduct educational programs in the marine and estuarine sciences for adults and public school populations. With the NERR, these programs will be increased with many occurring on the preserve. The Sea Grant schedules programs at least monthly at the preserve on such topics as the coastal scrub, the maritime hammock, the estuary, animal and plant species, right whale migration offshore, and other similar activities. The audiences range from school age youth to elderhostel participants.

The Whitney Lab's on-site programs are expected to be more ad hoc and specialized (for example, specific marine species focus). The NERR is only beginning its establishment. One of its priority missions is public education and the County expects frequent use of the site. These events will be tracked for the management plan.

4. Educational signage also will protect the plants by providing visitors information to help them understand the importance of listed species to Florida ecosystems. Degraded areas do exist in the campground site and hotel site. Designated pathways and educational signage will be used to limit degradation of these communities.

5. The site will be maintained as a passive recreation facility. Interpretive signage and designated pathways will be provided to direct visitors on a tour of the site's natural resources. These resources will be protected through maintenance, monitoring, community involvement and public education.

E. Greenway Management/Coordination

The preserve will be protected and managed as part of linked conservation lands and recreation opportunities within the proposed A1A Scenic Highway Corridor and the Flagler County Coastal Greenway (Exhibit L).

The historical, recreational natural significance of the site will contribute greatly to the ongoing initiative to seek scenic highway designation for the A1A corridor. Although specific assessments and management strategies have not yet been developed as part of that initiative for the corridor, it is expected that the planned restoration, public access and recreational opportunities planned for the site will not only be appropriate to those recommended by the comprehensive management plan for the corridor, but will also serve as an example to be adopted in other areas along the 12-mile corridor.

The acquisition of the River to Sea Preserve at Marineland will further contribute towards the establishment of a non-interrupted greenway for conservation of habitats and important water bodies. This preserve will reinforce the river to sea connection of the greenway system.

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The public access improvements will tie the preserve with the County's Coastal Greenway allowing limited passive activities. The preserve will be coordinated with the NERR as a buffer area to protect the Matanzas River estuary.

The River to Sea Preserve at Marineland is a significant part of the County's Coastal Greenway. In 1994, the Florida Greenways commission, through 1000 Friends of Florida, recognized Flagler County's efforts in establishing this 26 mile coastal greenways network. The County received a statewide award, presented at a formal ceremony, from Attorney General Bob Butterworth. The County's efforts are the result of enactment of its environmentally sensitive lands program and complementary state acquisition of environmentally important areas.

The Coastal Greenway links the County's people, history, wildlife, parks and conservation lands in the area of the County which is experiencing the greatest growth pressures. The Greenway includes state and county parks, water bodies and their attendant wetland systems, as designated by conservation land use designation, upland wildlife habitats preserved by Development of Regional Impact (DRI) orders, state aquatic preserves and environmentally sensitive lands purchased by Flagler County, the St. Johns River Water Management District and the State of Florida. These greenway lands are protected by a variety of methods including outright acquisition, DRI donations, regulatory management programs and land development regulations (zoning and wetlands resource protection). The River to Sea Preserve at Marineland provides opportunity for both recreation and conservation as a County park and with the adoption of the updated County Comprehensive plan in 1999, will be incorporated in the Coastal Greenway. A copy of the greenways map with an overall description of the 20,000 plus acre greenway is included as Exhibit L. It shows the incorporation of the River to Sea Preserve at Marineland. As additional lands are acquired or protected, the greenways map will be updated and included in stewardship reports.

Inclusion of the project site in the Coastal Greenway will affect land use decisions by practice. Greenway lands are to be protected for conservation and recreational values, and as a matter of practice the County examines uses that may impact on the Greenway. The Town has likewise indicated its commitment to examine land use decisions as they may impact the project site.

While the River to Sea Preserve at Marineland occupies the northeast section of the County's Greenway, the preserve and state lands in the recently expanded Faver-Dykes system effectively extends the Greenway into St. Johns County. The Preserve at Marineland will be the eastern cornerstone of the Pellicer Creek Corridor within the Coastal Greenway. This corridor is comprised of the County's 1,500 acre Princess Place Preserve which was funded in part by the FCT and the St. Johns River Water Management District (SJRWMD) 2,900 acres of SJRWMD lands, Faver-Dykes State Park, the site of the state agricultural museum, and the Pellicer Creek Aquatic-Preserve. The result is a 7,100 acre public upland corridor for Pellicer Creek. This corridor will further the resource protection, educational and recreational objectives of acquiring the River to Sea Preserve at Marineland. The county presently is working with the SJRWMD, the DEP state park managers in the area, the Whitney Lab of the University of Florida, DEP's Coastal and Aquatic Resources office and others to coordinate planning and management actions in the Pellicer Creek Corridor. Specifically, there will be an attempt to coordinate education programs, interpretation of historical artifacts, and recreational facilities among the parcels in the Pellicer Creek Corridor and the River to Sea Preserve at Marineland.

Management Plan for River to Sea Preserve at Marineland
FCT Project Number: 98-083-P8A

Greenways serve a number of functions. One function of the County's Coastal Greenway is to provide for hazard mitigation. The Greenway provides for enhanced storm surge suppression, limits the risks normally associated with vulnerable over-developed coastal areas, provides storage capacity for stormwater, and otherwise utilizes the ecosystems as an overall buffer protecting the community.

Another function is to provide for greater protection of a variety of flora and fauna. Recent studies suggest that many species of Florida flora and fauna are threatened with genetic isolation resulting from patchwork protection of habitat. A continuous link of protected lands provides mere opportunity for species to expand their gene pools and avoid problems associated with inbreeding. To effectuate this objective, the County has and will continue to involve non-owner agencies that have a relationship to species management within the greenway. For example, the County will cooperate with agencies like the U.S. Fish and Wildlife Service (USFWS) and the Florida Game and Freshwater Fish Commission (FGFWFC) to identify endangered species and to protect and enhance their habitats within the Greenway. One immediate project will be the revegetation of the disturbed areas along the dunes after the removal of the hotels.

A greenway also serves people. It meets their need for open space and to buffer development. It provides an opportunity for people to link their ecological, historical and cultural attributes. It provides a natural area for recreation and education.

An example of multi-purpose use of a greenway is reflected in the County's attempts to use the greenway in part to illustrate its history.

F. Maintenance

The County will provide maintenance and garbage collection.

In addition, partnerships will be developed with community organizations to augment maintenance of the park through such programs as waterway, beach and scenic A1A clean-up days.

Monthly inspection of facilities to be conducted by the County Public Works Department

G. Security

Park will be monitored and patrolled by the Flagler County Sheriff's Department and the Public Works Department.

Controlled access to the park will also be a part of the security. This may include regulating the access with gates or hours of operation for the preserve.

A security/emergency plan of action that identifies key individuals will be prepared within six (6) months of acquisition.

The County may elect to have a caretaker live on the Preserve at some time in the future and may establish a residence on the Preserve to accomplish it.

H. Staffing

No additional staffing is required, other than the County's Public Works Department.

Volunteer partnerships with local community organizations, local educational programs and clean-up events will be developed to assist in the management and maintenance of the site.

I. Intergovernmental Agreement

The County and Town will prepare an intergovernmental agreement which will become an exhibit to the management plan. Any dispute between the county and the Town concerning the management of the project site shall be mediated in an initial effort to resolve the dispute. The FCT, acting through a designated member or members of its staff, shall act as mediator in any such dispute.

V. COST ESTIMATES AND FUNDING SOURCES

Funding of the development and maintenance for the preserve will come from the County general revenue funds budgeted for recreation as well as from possible grant funds. The cost for the project is estimated at \$136,700. (See Exhibit I for the Completion Schedule for Development Activities which also is included in the following pages). The requirements imposed by other grant programs for funds that may be sought by the County or Town for activities associated with the preserve will not conflict with the terms and conditions of the FCT award. (The conceptual approval agreement is Appendix A. The warranty deed, the grant award agreement and the intergovernmental agreement will be attached as composite Appendix D when such documents are completed and fully executed.)

VI. PRIORITY SCHEDULE

It is anticipated that the property will be fully developed within three years of acquisition. The first priority will be to conduct further archaeological investigation to ascertain the historical significance of the site. The management activities will be performed on an ongoing basis to assess the operation of the park and the conservation efforts.

The following are the priority plan implementations:

- archaeological survey,
- demolition of the hotels and removal of the fuel tanks,
- permits for any improvements,
- revegetation of the dunes after the removal of the hotels,
- welcome/informational sign,
- crushed shell or mulched roadway,
- crushed shell pathway,
- interpretive station,
- gateway feature,
- pavilion,
- picnic tables and
- barbecue grills

Exhibit I Completion Schedule for Development, Management and Monitoring Activities
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Management Plan for River to Sea Preserve at Marineland
 FCT Project Number: 98-083-P8A

Item No	Improvement or Activity	Completion Date			
		1999	2000	2001	2002
	<i>Physical Improvement</i>				
1	Archaeological Survey				
2	Permits	Ongoing from date of property closing			
3	Parks Development and Restoration Sketch Plan				
4	Survey of Vegetative Communities				
5	Remove Exotic Vegetation and Replant Native Vegetation				
6	Demolition of Campground Swimming Pool/Cap Utilities and Remove Light Poles				
7	Construct Mulch Pathways				
8	Pavilion				
9	Barbecues				
10	Picnic Tables				
11	Gateway Feature				
12	Welcome/Information Sign				
13	Interpretive Stations				

	<i>Management Activities</i>				
1	Maintenance (Monthly inspections)				
2	Resource Protection (Periodic survey)				

	<i>Monitoring Activities</i>				
1	Migratory Bird Count				
2	Sea Turtle Activity				
3	Native Vegetation Analysis				
4	Annual Review of Improvements				
5	Annual Stewardship Report				

VII. MONITORING

The County's Public Works Department will work with local environmental groups (i.e., Sierra Club, Audubon Society, Sea Turtle Watch, Native Plant Society, etc.) to continually monitor the progress of the development of the preserve to insure the success and integrity of the project. (See Exhibit I for the monitoring activities) this will be accomplished by:

Completing a migratory bird count during December of every year and documenting evidence of wildlife on-site.

Monitoring of sea turtle habitats annually and documenting evidence of new nesting locations.

Completing an annual visual inspection of the existing native vegetation and monitoring for exotic plant species.

Monitoring the preserve to ensure that improvements and uses do not adversely impact vegetative communities and animal species found on the preserve.

Periodic surveys of the vegetative communities and animal species found on the site by local environmental groups or other environmental agencies.

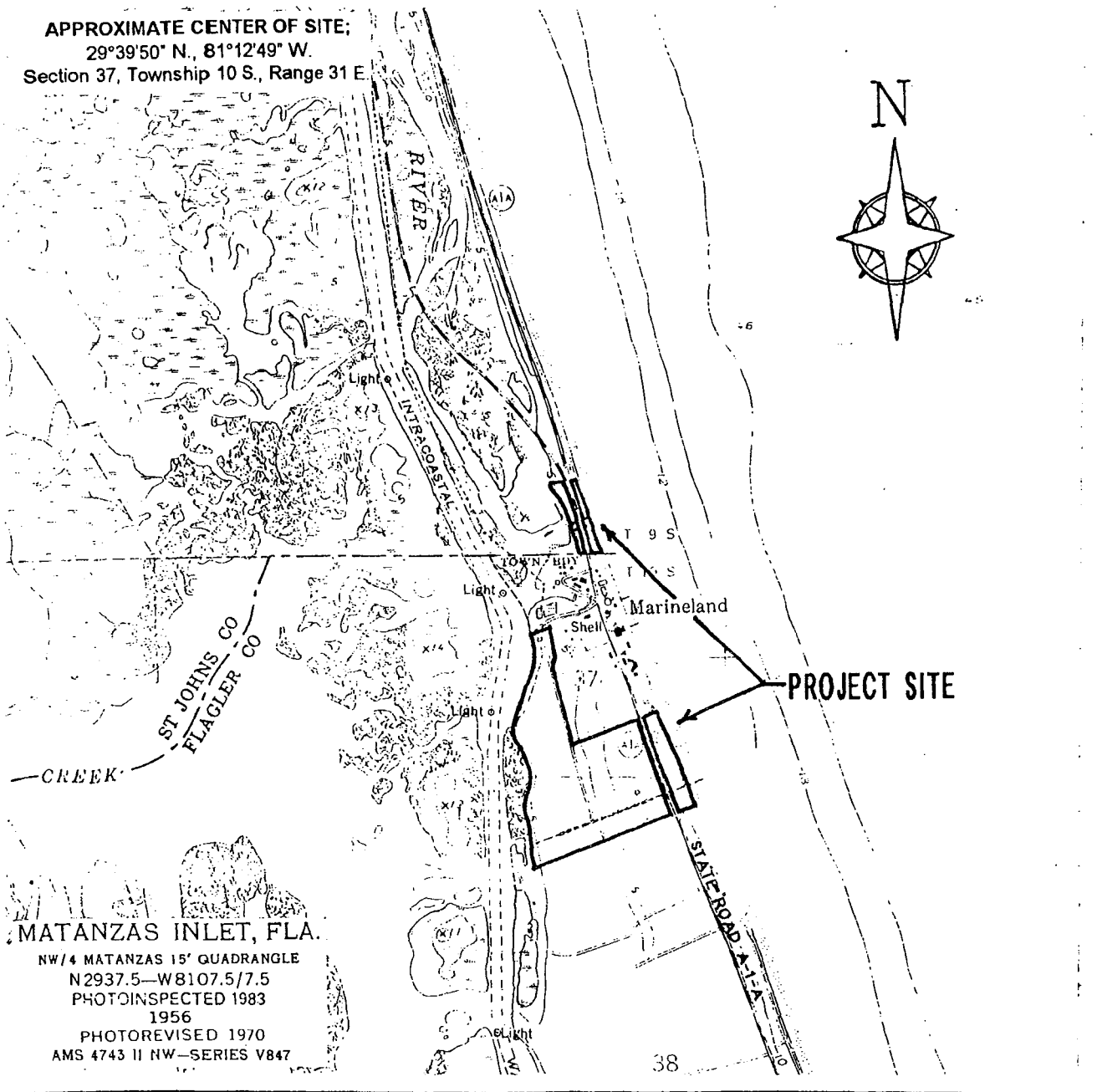
Annually reviewing the completion of the proposed improvements and success of the site management, to determine if additional resources or alternatives are needed to ensure the success of the project.

Based on the above information, the County will prepare an annual stewardship report to the FCT, due on the anniversary date on which the Project Plan is approved by FCT.

If the County elects to amend this management plan, such amendments shall be sent to the FCT and Town for comment and approval.

EXHIBIT A: Location Map

APPROXIMATE CENTER OF SITE;
 29°39'50" N., 81°12'49" W.
 Section 37, Township 10 S., Range 31 E.



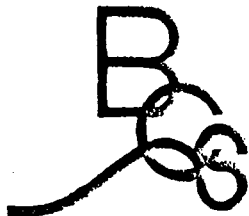
MATANZAS INLET, FLA.

NW/4 MATANZAS 15' QUADRANGLE
 N 2937.5—W 8107.5/7.5
 PHOTOINSPECTED 1983
 1956
 PHOTOREVISED 1970
 AMS 4743 II NW—SERIES V847

QUADRANGLE MAP

MARINELAND PROPERTY

drawn	DAB	date	3/18/98	scale	1"=2000'	job no.	98-03036	sheet	of	sheets
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BIOLOGICAL CONSULTING SERVICES, INC.

Joe H. Young III

Estuarine/Field Biologist

206 Rush Street
 New Smyrna Beach, FL 32168

904-423-3402

Management Plan for River to Sea Preserve at Marineland
FCT Project Number: 98-083-P8A

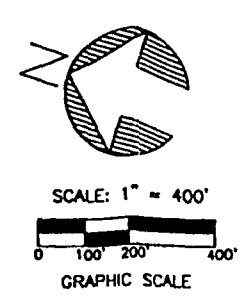
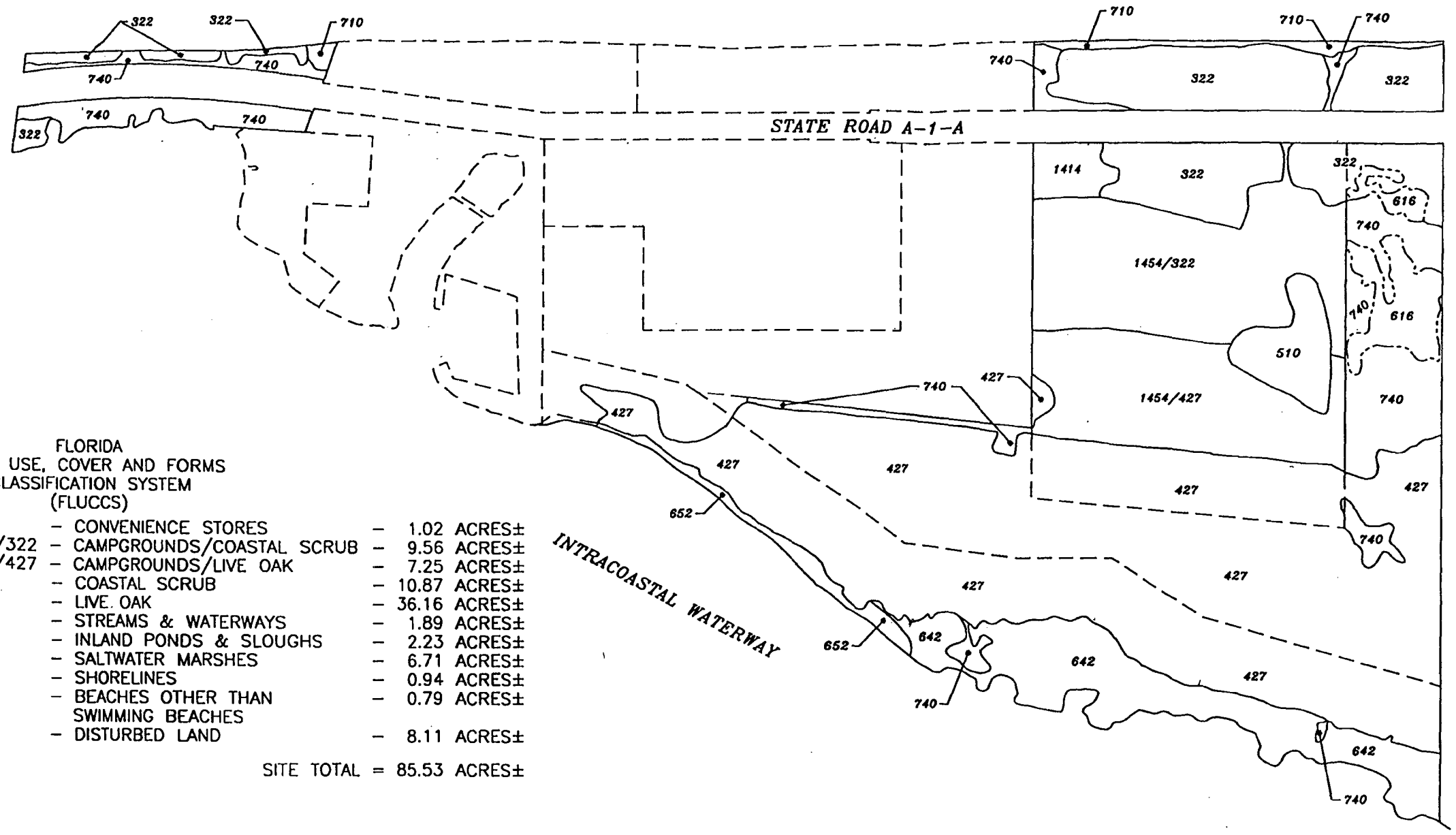
EXHIBIT B: Public Lands Map

River to Sea Preserve Management Plan – Public Lands Map 2014



Management Plan for River to Sea Preserve at Marineland
FCT Project Number: 98-083-P8A

EXHIBIT C: Natural Communities Maps



FLORIDA
LAND USE, COVER AND FORMS
CLASSIFICATION SYSTEM
(FLUCCS)

1414	- CONVENIENCE STORES	- 1.02 ACRES±
1454/322	- CAMPGROUNDS/COASTAL SCRUB	- 9.56 ACRES±
1464/427	- CAMPGROUNDS/LIVE OAK	- 7.25 ACRES±
322	- COASTAL SCRUB	- 10.87 ACRES±
427	- LIVE OAK	- 36.16 ACRES±
510	- STREAMS & WATERWAYS	- 1.89 ACRES±
616	- INLAND PONDS & SLOUGHS	- 2.23 ACRES±
642	- SALTWATER MARSHES	- 6.71 ACRES±
652	- SHORELINES	- 0.94 ACRES±
710	- BEACHES OTHER THAN SWIMMING BEACHES	- 0.79 ACRES±
740	- DISTURBED LAND	- 8.11 ACRES±
		SITE TOTAL = 85.53 ACRES±

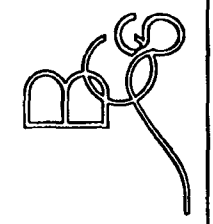
NOTES: BOUNDARY LINES DIGITIZED FROM SURVEY SUPPLIED BY CLIENT AND ARE APPROXIMATE.
TRAILS, WETLAND & FLUCCS LINES, AND SCRUB JAY PLAYBACK STATION LOCATIONS WERE DIGITIZED FROM AERIAL PHOTOGRAPHY AND ARE APPROXIMATE.

F.L.U.C.C.S. MAP

REVISED - 4/14/98 - DAB
dep. no. 03036-2

MARINELAND PROPERTY
BIOLOGICAL ASSESMENT REPORT
scale 1" = 400' date 3/30/98
Job no. 98-03036 drawn DAB

Joe H. Young III
Biologist/Wetland Biologist
206 Puck Street
New Smyrna Beach, FL 32109
904-425-3402



BIOLOGICAL CONSULTING SERVICES, INC.

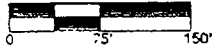
BIOLOGICAL CONSULTING SERVICES, INC.



Joe H. Young III
President/Field Manager
New Smyrna Beach, FL 32909
813-453-3407



SCALE: 1" = 150'



GRAPHIC SCALE

ATLANTIC OCEAN

930'

322

145

STATE ROAD A-1-A

FLORIDA
LAND USE, COVER AND FORMS
CLASSIFICATION SYSTEM
(FLUCCS)

145 - TOURIST SERVICES - 4.28 ACRES±
322 - COASTAL SCRUB - 0.33 ACRES±
SITE TOTAL = 4.61 ACRES±

NOTES: BOUNDARY LINES DIGITIZED FROM SURVEY SUPPLIED
BY CLIENT AND ARE APPROXIMATE.
F.L.U.C.C.S. LINE DIGITIZED FROM AERIAL PHOTOGRAPHY
AND IS APPROXIMATE

REVISED -

F.L.U.C.C.S. MAP

diag. no. 04057-2

drawn: DIAB

MARINELAND PROPERTY

date: 4/23/98

ADDITIONAL AREA

scale: 1"=150'

BIOLOGICAL ASSESSMENT

job no. 98-04057

REPORT






Management Plan for River to Sea Preserve at Marineland
FCT Project Number: 98-083-P8A

EXHIBIT D: Master Site Plan

2014 River to Sea Master Site Plan



Legend:

-  Hiking Trail
-  River to Sea Park Boundary
-  Cottage Area
-  Group Camping
-  Caretaker Residence

Management Plan for River to Sea Preserve at Marineland
FCT Project Number: 98-083-P8A

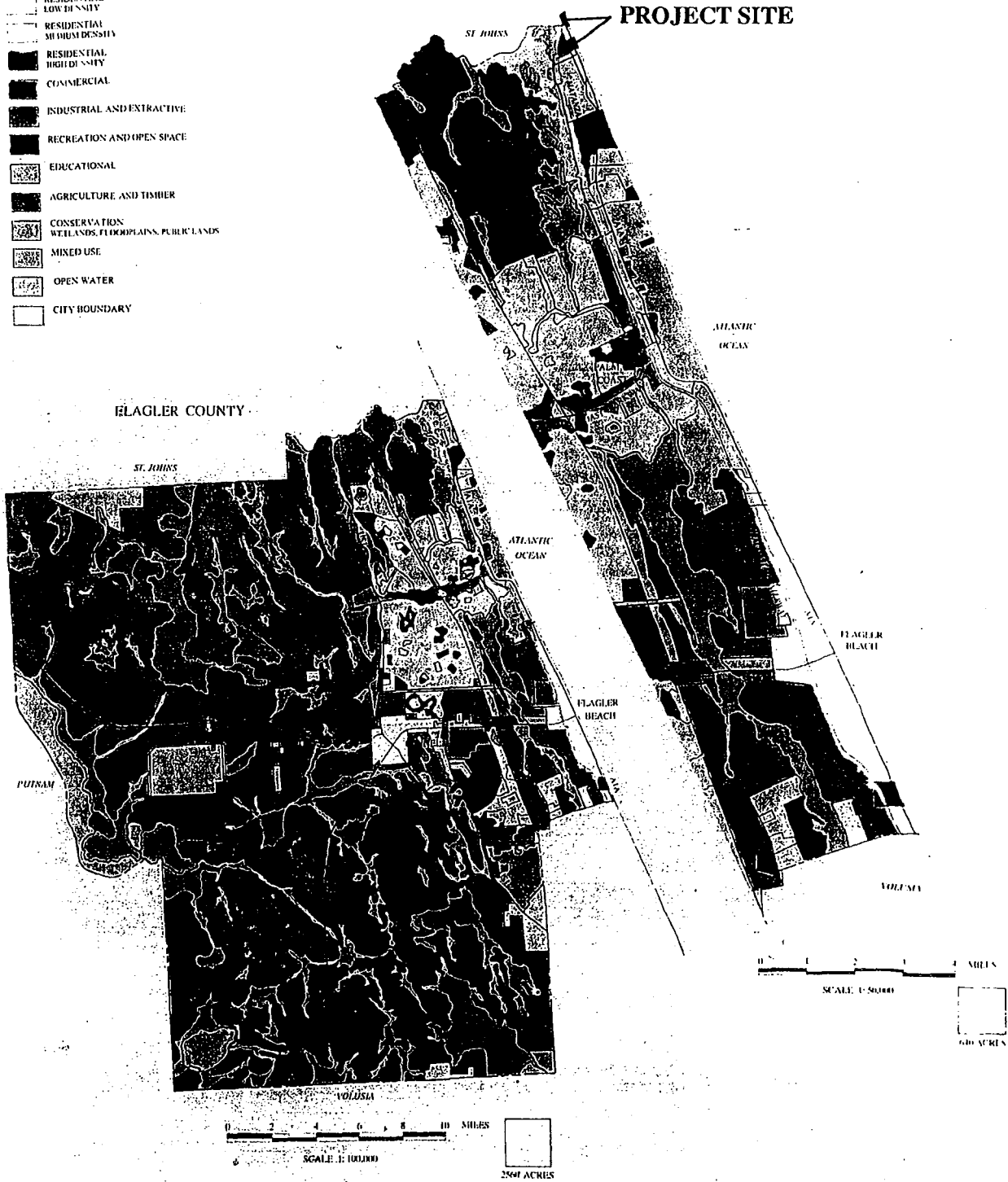
EXHIBIT E: Future Land Use Map

LEGEND

- RESIDENTIAL LOW DENSITY
- RESIDENTIAL MEDIUM DENSITY
- RESIDENTIAL HIGH DENSITY
- COMMERCIAL
- INDUSTRIAL AND EXTRACTIVE
- RECREATION AND OPEN SPACE
- EDUCATIONAL
- AGRICULTURE AND TIMBER
- CONSERVATION WETLANDS, FLOODPLAINS, PUBLIC LANDS
- MIXED USE
- OPEN WATER
- CITY BOUNDARY

COASTAL FLAGLER COUNTY

PROJECT SITE



FLAGLER COUNTY PLANNING STUDY

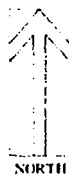
HURRICANE MITIGATION AND POST-DISASTER REDEVELOPMENT

LAND USE

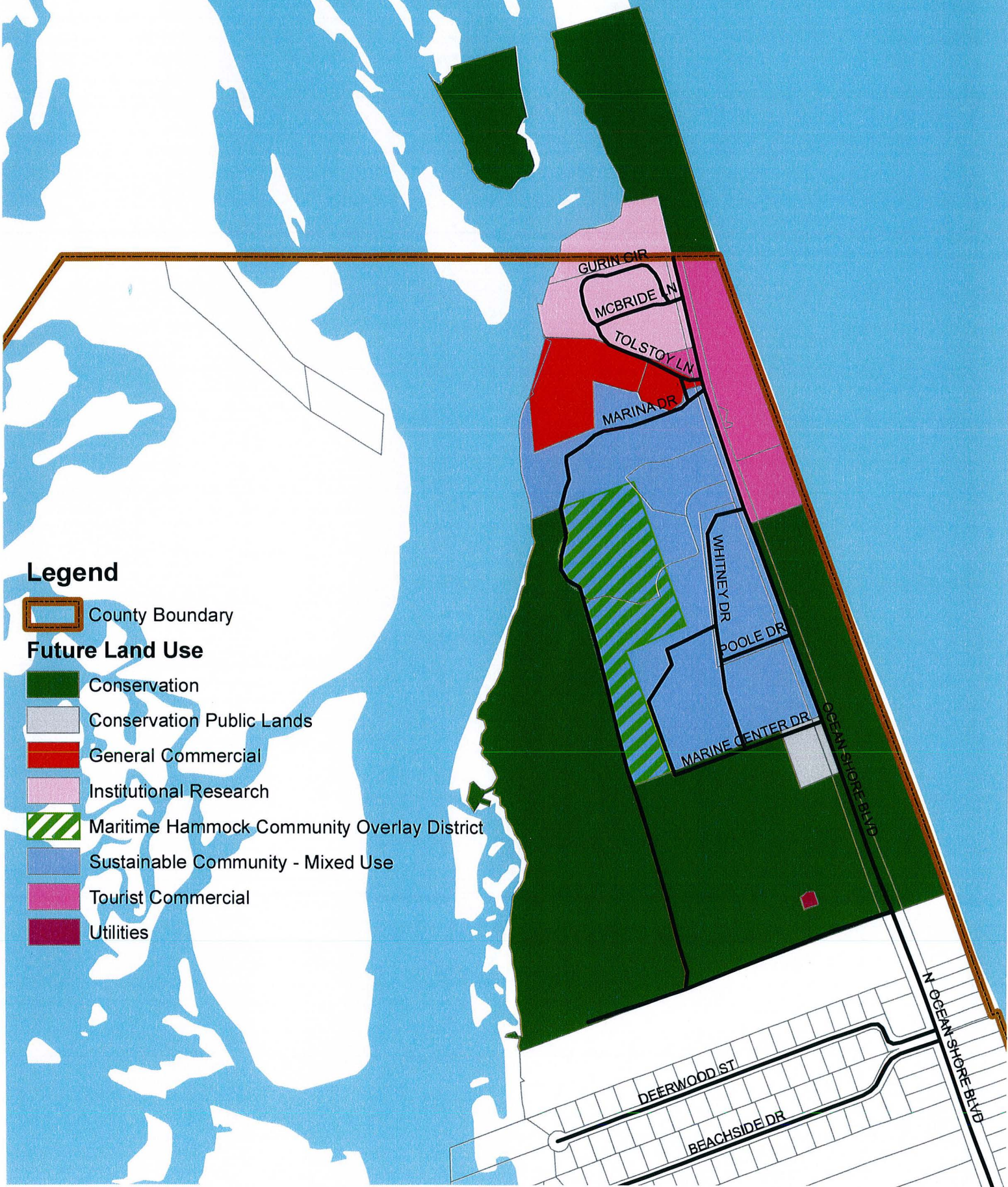
FUTURE

DOUG FITZWATER AND KATHRYN YOUNKIN

PREPARED FOR:
UNIVERSITY OF FLORIDA
FLAGLER COUNTY PLANNING DEPARTMENT
PREPARED BY:
UNIVERSITY OF FLORIDA
DEPARTMENT OF LANDSCAPE ARCHITECTURE
LAA 6656 FALL, 1997



Town of Marineland Future Land Use / Zoning



Legend

 County Boundary

Future Land Use

 Conservation

 Conservation Public Lands

 General Commercial

 Institutional Research

 Maritime Hammock Community Overlay District

 Sustainable Community - Mixed Use

 Tourist Commercial

 Utilities