Gasparilla Island State Park

APPROVED
Unit Management Plan

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Division of Recreation and Parks

July 7, 2014

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

MARJORY STONEMAN DOUGLAS BUILDING
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GOVERNOR

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LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

July 7, 2014

Ms. Jennifer Carver
Planning Manager
Office of Park Planning, Division of Recreation and Parks
Department of Environmental Protection
3900 Commonwealth Boulevard, MS 525
Tallahassee, FL 32399-3000

Re: Gasparilla Island State Park – Lease # 3338

Dear Ms. Carver:

The Division of State Lands, Office of Environmental Services, acting as agent for the Board of Trustees of the Internal Improvement Trust Fund, hereby approves the Gasparilla Island State Park management plan. The next management plan update is due July 7, 2024.

Approval of this land management plan does not waive the authority or jurisdiction of any governmental entity that may have an interest in this project. Implementation of any upland activities proposed by this management plan may require a permit or other authorization from federal and state agencies having regulatory jurisdiction over those particular activities. Pursuant to the conditions of your lease, please forward copies of all permits to this office upon issuance.

Sincerely,

Marianne S. Gengenbach
Office of Environmental Services
Division of State Lands

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INTRODUCTION

Gasparilla Island State Park is located on the southern half of Gasparilla Island, north of Boca Grande Pass in western Lee County (see Vicinity Map). It is part of a chain of barrier islands that lie well offshore of Florida in the Gulf of Mexico, separated from the mainland by Charlotte Harbor. The park is 18 miles south of Englewood, and access to the park is via County Road 771 to Boca Grande Causeway, across a toll bridge, or by private watercraft (see Reference Map).

Gasparilla Island State Park was initially acquired on May 19, 1983 by donation from the Gasparilla Island Conservation and Improvement Association, Inc. Subsequent to this initial donation, several other parcels were acquired through donation. Currently, the park comprises 127.24 acres. The Board of Trustees of the Internal Improvement Trust Fund (Trustees) hold fee simple title to the park, and on May 19, 1983 the Trustees leased (Lease Number 3338) the property to the DRP under a fifty-year lease. The current lease will expire on March 11, 2034.

Gasparilla Island State Park is designated single-use to provide public outdoor recreation and other park-related uses. There are no legislative or executive directives that constrain the use of this property (see Addendum 1).

Purpose and Significance of the Park

The purpose of Gasparilla Island State Park is to provide opportunity for resource-based public outdoor recreational activities, especially saltwater beach activities and interpretation of the park's unique coastal wildlife and maritime history. The park's natural areas and sandy beaches provide opportunities for outdoor recreation and conservation for the enjoyment of Florida residents and visitors.

Park Significance

- The park is closely adjacent to the historic community of Boca Grande on the north side of Boca Grande Pass between the Gulf of Mexico and Charlotte Harbor, with scenic view across to Cayo Costa State Park.
- The park preserves a wood-frame lighthouse and keeper's residence that were built in 1890 are situated on the southern tip of the island in the park. The lighthouse historically aided in port navigation during early trade and settlement of Florida's Gulf coast.
- The park preserves nearly 42 acres of maritime hammock and 27 acres of coastal strand that once characterized a large extent of the barrier islands along Florida's Gulf coast.
- The park protects critical remaining habitat for the loggerhead sea turtle, gopher tortoise, indigo snake, snowy plover, and roseate tern.
- The park provides approximately one mile of Gulf beach for resource-based outdoor recreation, including swimming, beachcombing, and shoreline fishing.

Gasparilla Island State Park is classified as a State Recreation Area in the DRP's unit classification system. In the management of a state recreation area, major emphasis is placed on maximizing the recreational potential of the unit. However, preservation of the park's natural and cultural resources remains important. Depletion of a resource by any recreational activity is not permitted. In order to realize the park's recreational potential the development of appropriate park facilities is undertaken with the goal to provide facilities that are accessible, convenient and safe, to support public recreational use or appreciation of the park's natural, aesthetic, and educational attributes.

Purpose and Scope of the Plan

This plan serves as the basic statement of policy and direction for the management of Gasparilla Island State Park as a unit of Florida's state park system. It identifies the goals, objectives, actions, and criteria or standards that guide each aspect of park administration, and sets forth the specific measures that will be implemented to meet management objectives and provide balanced public utilization. The plan is intended to meet the requirements of Sections 253.034 and 259.032, Florida Statutes, Chapter 18-2, Florida Administrative Code, and is intended to be consistent with the State Lands Management Plan. With approval, this management plan will replace the 2002 approved plan.

The plan consists of three interrelated components: the Resource Management Component, the Land Use Component and the Implementation Component. The Resource Management Component provides a detailed inventory and assessment of the natural and cultural resources of the park. Resource management needs and issues are identified, and measurable management objectives are established for each of the park's management goals and resource types. This component provides guidance on the application of such measures as prescribed burning, exotic species removal, imperiled species management, cultural resource management, and restoration of natural conditions.

The Land Use Component is the recreational resource allocation plan for the park. Based on considerations such as access, population, adjacent land uses, the natural and cultural resources of the park, current public uses, and existing development. Measurable objectives are set to achieve the desired allocation of the physical space of the park. These objectives identify use areas and propose the types of facilities and programs as well as the volume of public use to be provided.

The Implementation Component consolidates the measurable objectives and actions for each of the park's management goals. An implementation schedule and cost estimates are included for each objective and action. Included in this table are (1) measures that will be used to evaluate the DRP's implementation progress, (2) timeframes for completing actions and objectives, and (3) estimated costs to complete each action and objective.


T. Mabry Carlton, Jr. Memorial Reserve
Carlton Ranch, Inc.
Walton Ranch
Lewis Longino Preserve
Myakka River
Myakkahatchee Creek Conservation Easement
Myakka Mitigation Bank
De Soto County
RV Griffin Reserve (GDC)
Sleeping Turtles Preserve South
Jelks Preserve
Deer Priarie Creek Preserve
South River Road
Caspersen Beach County Park
Alligator Creek Conservation Area
Sarasota County
Charlotte County
South Venice Lemon Bay Preserve
Murdock
Manasota Scrub Preserve
Myakka River
Toppecanoe Environmental Park
Port Charlotte
Charlotte Harbor
Lemon Bay Park & Environmental Center
Englewood
Myakka State Forest
Peace River
Sarasota County
Charlotte County
Charlotte Beach
Charlotte Harbor Preserve State Park
Manasota Key
Lemon Bay Aquatic Preserve
Grove City
Stump Pass Beach State Park
Rotonda
Charlotte Harbor
Gulf of Mexico
Amberjack Environmental Park
Charlotte Harbor Environmental Center
Don Pedro Island State Park
Placida
Charlotte Harbor Preserve State Park
Cayo Pelau Preserve
Cape Haze Aquatic Preserve
Boca Grande
Charlotte Harbor Preserve State Park
Gasparilla Sound-Charlotte Harbor Aquatic Preserve
Gasparilla Island State Park
Lee County
Bocilla Preserve
Bokeelia
Matlacha Pass Aquatic Preserve
Cayo Costa State Park
Smokehouse Bay Preserve
Murdock Point Cayo Costa
Carver Preserve
Charlotte Harbor Preserve State Park
Pine Island National Wildlife Refuge
Charlotte Harbor Preserve State Park
Buttonwood Preserve
Cayo Costa State Park
Pine Island Sound Aquatic Preserve
Legend
Park Boundary
Public
Federal Managed Areas
State Managed Areas
Local Managed Areas
Private Managed Areas
Aquatic Preserves
Interstates
FDOT US Routes
FDOT State Routes
FDOT Local Roads
Private
Developed
Undeveloped
Sources: Florida Natural Areas Inventory, 2013
Florida Land Use, Cover and Forms Classification System, 2004
GASPARILLA ISLAND STATE PARK
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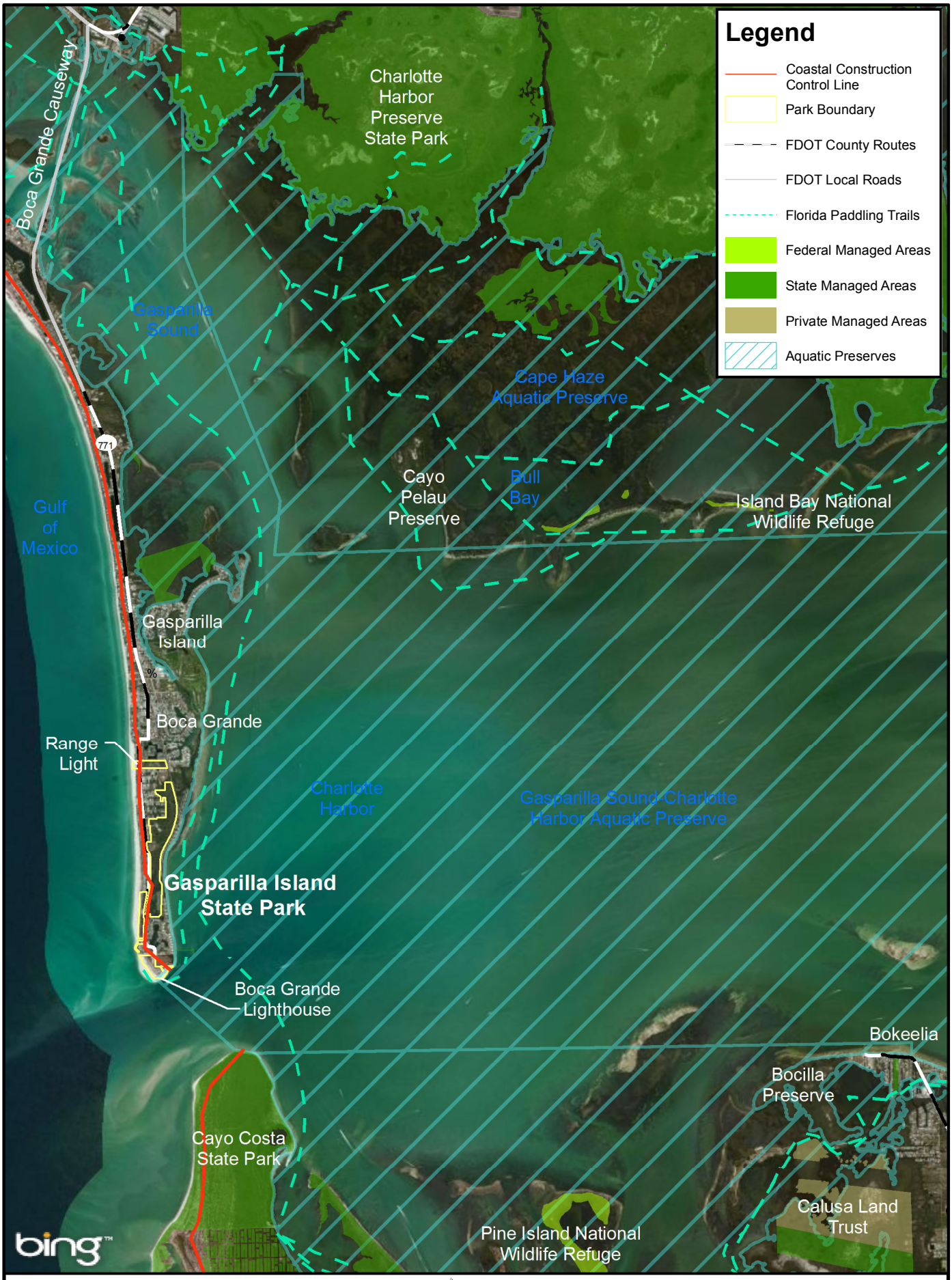
Florida Department of Environmental Protection
Division of Recreation and Parks
VICINITY MAP



GASPARILLA ISLAND STATE PARK

N

0 0.25 0.5 1 Mile

Florida Department of Environmental Protection
Division of Recreation and Parks
Date of aerial; 2011

REFERENCE MAP

All development and resource alteration proposed in this plan is subject to the granting of appropriate permits, easements, licenses, and other required legal instruments. Approval of the management plan does not constitute an exemption from complying with the appropriate local, state, or federal agencies. This plan is also intended to meet the requirements for beach and shore preservation, as defined in Chapter 161, Florida Statutes, and Chapters 62B-33, 62B-36, and 62R-49, Florida Administrative Code.

In the development of this plan, the potential of the park to accommodate secondary management purposes was analyzed. These secondary purposes were considered within the context of the DRP's statutory responsibilities and the resource needs and values of the park. This analysis considered the park natural and cultural resources, management needs, aesthetic values, visitation, and visitor experiences. For this park, it was determined that no secondary purposes could be accommodated in a manner that would not interfere with the primary purpose of resource-based outdoor recreation and conservation. Uses such as water resource development projects, water supply projects, stormwater management projects, linear facilities, and sustainable agriculture and forestry (other than those forest management activities specifically identified in this plan) are not consistent with this plan.

The potential for generating revenue to enhance management was also analyzed. Visitor fees and charges are the principal source of revenue generated by the park. It was determined that multiple-use management activities would not be appropriate as a means of generating revenues for land management. Instead, techniques such as entrance fees, concessions, and similar measures will be employed on a case-by-case basis as a means of supplementing park management funding.

DRP may provide the services and facilities outlined in this plan either with its own funds and staff or through an outsourcing contract. Private contractors may provide assistance with natural resource management and restoration activities or a Visitor Service Provider (VSP) may provide services to park visitors in order to enhance the visitor experience. For example, a VSP could be authorized to sell merchandise and food and to rent recreational equipment for use in the park. A VSP may also be authorized to provide specialized services, such as interpretive tours, or overnight accommodations when the required capital investment exceeds that which DRP can elect to incur. Decisions regarding outsourcing, contracting with the private sector, the use of VSPs, etc. are made on a case-by-case basis in accordance with the policies set forth in DRP's Operations Manual (OM).

Management Program Overview

Management Authority and Responsibility

In accordance with Chapter 258, Florida Statutes and Chapter 62D-2, Florida Administrative Code, the Division of Recreation and Parks (DRP) is charged with the

responsibility of developing and operating Florida's recreation and parks system. These are administered in accordance with the following policy:

It shall be the policy of the Division of Recreation and Parks to promote the state park system for the use, enjoyment, and benefit of the people of Florida and visitors; to acquire typical portions of the original domain of the state which will be accessible to all of the people, and of such character as to emblemize the state's natural values; conserve these natural values for all time; administer the development, use and maintenance of these lands and render such public service in so doing, in such a manner as to enable the people of Florida and visitors to enjoy these values without depleting them; to contribute materially to the development of a strong mental, moral, and physical fiber in the people; to provide for perpetual preservation of historic sites and memorials of statewide significance and interpretation of their history to the people; to contribute to the tourist appeal of Florida.

The Board of Trustees of the Internal Improvement Trust Fund (Trustees) has granted management authority of certain sovereign submerged lands to the DRP under Management Agreement MA 68-086 (as amended January 19, 1988). The management area includes a 400-foot zone from the edge of mean high water where a park boundary borders sovereign submerged lands fronting beaches, bays, estuarine areas, rivers, or streams. Where emergent wetland vegetation exists, the zone extends waterward 400 feet beyond the vegetation. The agreement is intended to provide additional protection to resources of the park and nearshore areas and to provide authority to manage activities that could adversely affect public recreational uses.

Many operating procedures are standardized system-wide and are set by internal direction. These procedures are outlined in the OM that covers such areas as personnel management, uniforms and personal appearance, training, signs, communications, fiscal procedures, interpretation, concessions, public use regulations, resource management, law enforcement, protection, safety, and maintenance.

Park Management Goals

The following park goals express DRP’s long-term intent in managing the state park:

- Provide administrative support for all park functions.
- Protect water quality and quantity in the park, restore hydrology to the extent feasible, and maintain the restored condition.
- Restore and maintain the natural communities/habitats of the park.
- Maintain, improve or restore imperiled species populations and habitats in the park.
- Remove exotic and invasive plants and animals from the park and conduct needed maintenance-control.
- Protect, preserve, and maintain the cultural resources of the park.

- Provide public access and recreational opportunities in the park.
- Develop and maintain the capital facilities and infrastructure necessary to meet the goals and objectives of this management plan.

Management Coordination

The park is managed in accordance with all applicable laws and administrative rules. Agencies having a major or direct role in the management of the park are discussed in this plan.

The Florida Department of Agriculture and Consumer Services (FDACS), Florida Forest Service (FFS), assists DRP staff in the development of wildfire emergency plans and provides the authorization required for prescribed burning. The Florida Fish and Wildlife Conservation Commission (FWC) assists staff in the enforcement of state laws pertaining to wildlife, freshwater fish, and other aquatic life existing within the park. In addition, the FWC aids DRP with wildlife management programs, including imperiled species management. The Florida Department of State (FDOS), Division of Historical Resources (DHR) assists staff to ensure protection of archaeological and historical sites. The Florida Department of Environmental Protection (DEP), Florida Costal Office (FCO) aids staff in aquatic preserves management programs. The DEP, Bureau of Beaches and Coastal Systems aids staff in planning and construction activities seaward of the Coastal Construction Control Line (CCCL). In addition, the Bureau of Beaches and Coastal Systems aid the staff in the development of erosion control projects.

Public Participation

DRP provided an opportunity for public input by conducting a public workshop and an Advisory Group meeting to present the draft management plan to the public. These meetings were held on Tuesday, April 1 and Wednesday, April 2, 2014 respectively. Meeting notices were published in the Florida Administrative Register, March 24, 2014, Volume 40, Issue 57, included on the Department Internet Calendar, posted in clear view at the park, and promoted locally. The purpose of the Advisory Group meeting is to provide the Advisory Group members an opportunity to discuss the draft management plan (see Addendum 2).

Other Designations

Gasparilla Island is not within an Area of Critical State Concern as defined in Section 380.05, Florida Statutes, and it is not presently under study for such designation. The park is a component of the Florida Greenways and Trails System, administered by the Department's Office of Greenways and Trails. All waters within the park have been designated as Outstanding Florida Waters, pursuant to Chapter 62-302, Florida Administrative Code. Surface waters in this park are classified as Class II waters by the Department. This park is adjacent to the Gasparilla Sound-Charlotte Harbor Aquatic Preserve as designated under the Florida Aquatic Preserve Act of 1975 (Section 258.35, Florida Statutes).

RESOURCE MANAGEMENT COMPONENT

Introduction

The Florida Department of Environmental Protection (DEP), Division of Recreation and Parks (DRP) in accordance with Chapter 258, Florida Statutes, has implemented resource management programs for preserving for all time the representative examples of natural and cultural resources of statewide significance under its administration. This component of the unit plan describes the natural and cultural resources of the park and identifies the methods that will be used to manage them. Management measures expressed in this plan are consistent with the DEP's overall mission in ecosystem management. Cited references are contained in Addendum 3.

The DRP's philosophy of resource management is natural systems management. Primary emphasis is placed on restoring and maintaining, to the degree possible, the natural processes that shaped the structure, function, and species composition of Florida's diverse natural communities as they occurred in the original domain. Single species management for imperiled species is appropriate in state parks when the maintenance, recovery, or restoration of a species or population is complicated due to constraints associated with long-term restoration efforts, unnaturally high mortality, or insufficient habitat. Single species management should be compatible with the maintenance and restoration of natural processes, and should not imperil other native species or seriously compromise park values.

The DRP's management goal for cultural resources is to preserve sites and objects that represent Florida's cultural periods, significant historic events, or persons. This goal often entails active measures to stabilize, reconstruct or restore resources, or to rehabilitate them for appropriate public use.

Because park units are often components of larger ecosystems, their proper management can be affected by conditions and events that occur beyond park boundaries. Ecosystem management is implemented through a resource management evaluation program that assesses resource conditions, evaluates management activities and refines management actions, and reviews local comprehensive plans and development permit applications for park/ecosystem impacts.

The entire park is divided into management zones that delineate areas on the ground that are used to reference management activities (see Management Zones Map). The shape and size of each zone may be based on natural community type, burn zone, and the location of existing roads and natural fire breaks. It is important to note that all burn zones are management zones; however, not all management zones include fire-dependent natural communities. Table 1 reflects the management zones with the acres of each zone.

Table 1: Gasparilla Island State Park Management Zones		
Management Zone	**Acreage**	**Managed with Prescribed Fire**
GA-1_RL (Range Light)	2.07	N
GA-2_RL (Range Light)	8.62	N
GA-3_IN (Interior)	86.23	N
GA-4_SG (Seagrape)	11.22	N
GA-5_SW (Seawall)	1.67	N
GA-6_LH (Lighthouse)	16.55	N

Resource Description and Assessment

Natural Resources

Topography

Gasparilla Island is characterized by typical, low relief Gulf of Mexico barrier island topography. Barrier island dunes along the southwest coast are lower than those on the east coast (Myers and Ewell 1990). On the Gulf side of the park, beach sands slope up to a low dune (replaced in one area with a seawall) a few feet above mean sea level (msl). The highest point on the island (11 feet above msl) is an artificial dune located near the lighthouse. Florida Power and Light Company constructed the dune as mitigation for dredging in adjacent offshore waters. The park also contains a large water-filled depression known as Old South Bayou. Slight alterations in topography have occurred in the beach areas as a result of renourishment projects. An extensive erosion control project involving the Army Corps of Engineers, Lee County, and local and state agencies was completed in 2014. The project encompasses a large section of the island's Gulf side, including beach nourishment and upgrades to an existing seawall.

Geology

The park is within the Gulf Coastal Lowlands topographic division of Florida, and is also part of the southwestern Gulf Barrier Chain which extends south from Anclote Key to Cape Romano. The entire area rests upon Pleistocene-aged limestone covered by a relatively shallow soil layer. The upper strata of this limestone belong to a series of sedimentary deposits called the Anastasia Formation, made up of coquinoid limestone, sand, and clay.

Soils

Soils found at Gasparilla are characteristic of barrier islands in this region of the state. They consist mainly of porous sand and shell on the Gulf side of the island, and peat soils on the east side in conjunction with tidal and mangrove swamp. The five soil types are: Canaveral Fine Sand, Captiva Fine Sand, Wulfert Muck, Kesson Fine Sand, and St. Augustine Sand (see Soils map). Complete soils descriptions are contained in Addendum 4.

GASPARILLA ISLAND STATE PARK

N

0 500 1,000 2,000 Feet

Florida Department of Environmental Protection
Division of Recreation and Parks
Date of aerial; 2011

MANAGEMENT ZONES MAP

GASPARILLA ISLAND
STATE PARK

N

0 500 1,000 2,000 Feet

Florida Department of Environmental Protection
Division of Recreation and Parks
Date of aerial; 2011

SOILS MAP

Soil erosion is a natural process that occurs in high-wave energy environments (direct contact to open ocean). Loss of sandy sediment is exacerbated by hard structures such as seawalls and bulkheads. The only areas of the park experiencing high erosion rates are those adjacent to the seawall structure (GA-5_SW). Added erosion precautions are taken in the form of riprap and beach nourishment to accommodate for this expedited sediment loss.

Minerals
There are no known minerals of commercial value at this park.

Hydrology
Within the park boundary at GA-3_IN is a feature known as Old South Bayou that once had a natural tidal connection with Charlotte Harbor. This was subsequently closed by the construction of a road. More recently, the tidal connection was reestablished through two large culverts placed beneath the road. Maintaining this tidal connection is the most important hydrological concern for the park, because mangrove health is directly tied to daily tidal flushing. The culverts are inspected periodically to ensure no blockage is present.

Natural Communities
This section of the management plan describes and assesses each of the natural communities found in the state park. It also describes the desired future condition (DFC) of each natural community and identifies the actions that will be required to bring the community to its desired future condition. Specific management objectives and actions for natural community management, exotic species management, imperiled species management, and habitat restoration are discussed in the Resource Management Program section of this component.

The system of classifying natural communities employed in this plan was developed by the Florida Natural Areas Inventory (FNAI). The premise of this system is that physical factors such as climate, geology, soil, hydrology, and fire frequency generally determine the species composition of an area, and that areas that are similar with respect to those factors will tend to have natural communities with similar species compositions. Obvious differences in species composition can occur, however, despite similar physical conditions. In other instances, physical factors are substantially different, yet the species compositions are quite similar. For example, coastal strand and scrub – two communities with similar species compositions - generally have quite different climatic environments, and these necessitate different management programs. Some physical influences, such as fire frequency, may vary from FNAI's descriptions for certain natural communities in this plan.

When a natural community within a park reaches the desired future condition, it is considered to be in "maintenance condition." Required actions for sustaining a community's maintenance condition may include maintaining optimal fire return intervals for fire dependent communities, ongoing control of non-native plant and animal species, maintaining natural hydrological functions (including historic water flows and water quality), preserving a community's biodiversity and vegetative structure, protecting viable populations of plant and animal species (including those

that are imperiled or endemic), and preserving intact ecotones linking natural communities across the landscape.

The park contains six distinct natural communities, as well as developed areas (see Natural Communities Map). A list of known plants and animals occurring in the park is contained in Addendum 5.

Beach Dune

Desired Future Condition: A coastal mound or ridge of unconsolidated sediments will be found along shorelines with high energy waves. Vegetation will consist of herbaceous dune forming grass species such as sea oats (*Uniola paniculata*) and saltmeadow cordgrass (*Spartina patens*). Other typical species include sea rocket (*Cakile lanceolata*), railroad vine (*Ipomoea pes-caprae*), bitter panicgrass (*Panicum amarum*), beach morning glory (*Ipomoea imperati*), and west coast dune beach sunflower (*Helianthus debilis,* ssp*. vestitus*) along the Gulf coast. Occasionally, shrubs such as seagrape (*Coccoloba uvifera*) will be scattered within the herbaceous vegetation.

Description and Assessment: The Beach Dune community at this park is fragmented and patchy within Management Zones GA-1_RL, GA-4_SG, GA-5_SW, and GA-6_LH. As mentioned before, a large artificial dune has been built on the southern portion of the park near the lighthouse in management zone GA-6_LH. Camphorweed (*Heterotheca subaxillaris*) is scattered over the sides and top of the dune. Planted sea oats and railroad vines thrive and have multiplied on the dune. The material from the erosion control project finishing in early 2014 has created a wide beach, except at the sea wall area. The state-listed snowy plover (*Chardrius nivosus*) and least tern (*Sterna antillarum*) have been documented nesting in this community. Loggerhead sea turtles (*Caretta caretta*) and green sea turtles (*Chelonia mydas*) nest here as well. All areas of beach dune within Gasparilla State Park are in good condition.

General Management Measures: Fires are rare to non-existent in this community type, therefore no fire return interval is described. Park staff should stay alert to the appearance of Australian pine (*Casuarina equisetifolia*), especially after large storm events. All wrack and seaweed deposited naturally on the beach dune community should be left in place to allow for the addition of nutrients to the sandy soil of this community. All new and existing dune walkovers should be designed in winding or zig-zagged patterns to prevent sand blowouts and avoid changing salt exposure for vegetative communities. Care should also be given to use native plants after dune restoration or beach nourishment. Contractors can potentially use east coast dune sunflower (*Helianthus debilis*), which can hybridize with the native west-coast dune sunflower (*Helianthus debilis,* ssp*. vestitus*), an imperilled species. Any plantings to be done at Gasparilla should only include the west coast variety of this plant. Areas of beach dune where birds have nested historically are posted in later winter or early spring and boundary markers are adjusted as needed. Sea turtle nests are also posted for protection and are monitored using FWC protocol throughout the

GASPARILLA ISLAND STATE PARK

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Florida Department of Environmental Protection
Division of Recreation and Parks
Date of aerial; 2011

NATURAL COMMUNITIES MAP

breeding season. With limited amounts of beach dune community available, it is imperative that these shorebird and sea turtle nests are marked, and the areas are protect during the nesting season, March 1– October 31.

Coastal Strand

Desired Future Condition: The strand community will be characterized by stabilized, wind-deposited coastal dunes that are thickly vegetated with evergreen salt-tolerant shrubs. It is an ecotonal community that generally lies between the beach dune and maritime hammock, or tidal swamp. Coastal strand dunes contain deep, well drained sands that are generally quite stable but become susceptible to severe damage if the vegetation is significantly disturbed. Species such as seagrape, coco plum, (*Chrysobalanus icaco*), myrsine, (*Rapanea punctata*), gray nicker, (*Caesalpinia bonduc*), white indigoberry, (*Randia aculeata*), snowberry, (*Chiococca alba*), and numerous others can be found in this community. In some locations, smooth-domed canopies will develop as the taller vegetation is pruned by the windblown salt spray that kills the exposed outer buds. This process is not very prevalent on Gasparilla Island due to prevailing easterly winds. Significant debate exists on the relative occurrence of natural fires compared to inland pyric communities. FNAI estimates that the appropriate fire return interval to be between 4 and 15 years. However, variability outside this range may occur based on site specific conditions and management goals.

Description and Assessment: The coastal strand at Gasparilla Island exists in small, fragmented parcels along the western shore and also at the midpoint of the interior park parcel, GA-3 IN. It is vegetated mainly by seagrape, cocoplum, and mrysine.

Intensive efforts to remove exotic species such as Brazilian pepper (*Schinus terebinthifolius*), Australian pine (*Causarina equisetifolia*), and white leadtree *(Leucaena leucocephala),* in conjunction with replanting efforts have allowed native plants such as cat's claw (*Pithecellobium unguis-cati*), varnish plant (*Dodonea viscosa*), white indigoberry (*Scaevola plumieri*), nickerbean, and coinvine (*Dahlbergia ecastophyllum*) to emerge. Rare plants are also present and include a few scattered Joewood shrubs (*Jacquinia keyensis*) and button sage (*Lantana involucrata*). Gopher tortoises are also common in this community, especially along the ecotone of beach dune and coastal strand. The community also acts as an important stopover resting area for migratory birds. Overall, coastal strand found on Gasparilla Island is in good condition.

General Management Measures: Staff should continue to monitor for invading exotic species and treat cases of exotics when found. There had formerly been illegal vehicles trespassing, primarily by golf carts in the interior, but improved fencing and education has virtually eliminated the problem. Continued education to inform the public living adjacent to park parcels should help decrease illegal entrance to areas of protected coastal strand. Burning coastal strand on Gasparilla Island is not recommended due to the short stature of the dominant grass species hairy gramma (*Bouteloua hirsuta*). Also, burning in such small areas intertwinned with housing developments creates fire management issues. The coastal strand

found in zone GA-3_IN is in fair condition due to past human disturbaces, and the other zones where strand is found on the island are in good condition.

Maritime Hammock

Desired Future Condition: A coastal evergreen hardwood forest will occur in narrow bands along stabilized coastal dunes. Canopy species will typically consist of strangler fig (*Ficus aureus*), gumbo limbo (*Bursera simaruba*), seagrape, and cabbage palm. Understory species may consist of myrsine (*Rapanea punctata*), wild coffee (*Psychotria nervosa*), snowberry, white indigoberry, saw palmetto (*Serenoa repens*), and wax myrtle (*Myrica cerifera*). Very sparse or absent herbaceous groundcover will exist. Variation in species composition exists along the coast as one heads southward, tropical species become more prevalent.

Description and Assessment: The existing Maritime Hammock is fragmented and was infested with Australian pine, white lead tree, and Brazilian pepper. After rigorous efforts to remove these exotic plants, the suite of vegetation associated with this habitat type is returning. Gumbo-limbo, strangler fig, and cabbage palm persisted despite the overwhelming numbers of exotics, and now smaller shrub species such as wild coffee, snowberry, rouge-plant (*Ravina humifusa*), and whisk fern (*Psilotum nudum*) are visible amongst the dead and fallen exotic trees. The area north of the existing maritime hammock formerly described as ruderal has transitioned into maritime hammock, and will continue to increase in native vegetation populations. This community is in fair condition due to the many thousands of white lead tree seedlings and other remaining exotic species.

A portion of maritime hammock in Management Zone GA-3_IN formerly served as a landing strip and a golf course for the members of the Boca Grande Hotel, which no longer exists as of 1975 (pers communication, Marilyn Hoeckel). Later, a coconut palm nursery was present on this site, and remnants of irrigation hoses remain as the only sign of that activity. Most of this interior parcel (95 acres) is designated as a protected area, and has progressed from a historically disturbed site into maritime hammock. Many exotics are found here; however it has been undergoing a transformation from dense stands of Brazilian pepper to a productive natural community. The removal of Brazilian pepper, white leadtree, and scattered Australian pine, and replacement with native species such as buttonwood and strangler fig, define this community. Live oak, cabbage palm, and buttonwood are now visible with wild coffee, gumbo-limbo, Joewood, snowberry, and white indigoberry. It is in fair condition due to the continued persistence of several exotic species.

General Management Measures: Continue to monitor for invading exotic species and treating with mechanical treatment and herbicides. Also, surveying for imperiled plant species should occur yearly. With large amounts of exotics being treated, it is ideal to know the locations of protected plants in order to avoid herbicide contact.

Mangrove Swamp

Desired Future Condition: A dense forest will occur along relatively flat, low wave energy, marine and estuarine shorelines. The dominant overstory includes red mangrove (*Rhizophora mangle*), black mangrove (*Avicennia germinans*), white mangrove (*Laguncularia racemosa*), and buttonwood (*Conocarpus erectus*). These four species can occur either in mixed stands or often in differentiated, monospecific zones based on varying degrees of tidal influence, levels of salinity, and types of substrate. Red mangroves typically dominate the deepest water, followed by black mangroves in the intermediate zone, and white mangroves and buttonwood in the highest, least tidally influenced zone. Mangroves typically occur in dense stands (with little to no understory) but may be sparse, particularly in the upper tidal reaches where salt marsh species predominate. When present, shrub species can include seaside oxeye (*Borrichia frutescens*) and vines including gray nicker, coinvine (*Dahlbergia ecastophyllum*), rubbervine (*Rhabdadenia biflora*), and herbaceous species such as saltwort (*Batis maritima*), shoregrass (*Monanthocloe littoralis*), perennial glasswort (*Sarcocornia perennis*), and giant leather fern (*Acrostichum danaeifolium*). Soils are generally anaerobic and are saturated with brackish water at all times, becoming inundated at high tides. Mangrove swamps occur on a wide variety of soils, ranging from sands and mud to solid limestone rock. Soils in South Florida are primarily calcareous marl muds or calcareous sands and along Central Florida coastlines, siliceous sands. In older mangrove swamps, and the swamps located at Gasparilla which contain red mangroves, a layer of peat has built up over the soil from decaying plant material.

Description and Assessment: The mangrove community is well developed in the vicinity of Old South Bayou. The canopy is quite dense with sparse vegetation on the forest floor. At one time the bayou was undoubtedly a tidal inlet that was subsequently closed off from its connection with Charlotte Harbor by development. It has been re-connected with open water by the installment of two large culverts, placed beneath the road allowing tidal flushing to occur. Listed species of wading birds such as the roseate spoonbill (*Platalea ajaja*) and multiple egrets (*Egretta spp*.) use the bayou for resting and feeding. The community is in good condition. It is important to note that mangrove health is directly linked to flushing from tidal cycles. The installment of the culverts has drastically improved this habitat since its installment.

General Management Measures: Through education efforts, park management will work with neighboring communities to prevent any destruction or removal of mangroves. Public access to this area is limited by the wet tidal conditions. Maintaining the tidal flow through the culverts will continue. It is also important to monitor for exotic plant species such as white leadtree, Brazillian pepper, and carrotwood (*Cupaniopsis anacardioides*) within the mangrove swamp. Being difficult to access, unmonitored areas can be overtaken with exotics in a short period of time. Yearly vegetation surveys will minimize the potential for these exotic to overwhelm the mangrove swamp. Large amounts of exotic vegetation not only limits native food sources for vertebrates and invertebrates in the mangrove swamp, they can also change the hydrology and disrupt the soil chemistry of this intertidal community.

Marine and Estuarine Unconsolidated Substrates

Desired Future Condition: The community will consist of expansive unvegetated, open areas of mineral based substrate composed of shell, coralgal, marl, mud, and/or sand (sand beaches). Desired conditions include preventing soil compaction, dredging activities, and disturbances such as the accumulation of pollutants.

Description and Assessment: The marine unconsolidated substrate communities of this unit consist of siliceous sands along the Gulf of Mexico, and estuarine unconsolidated substrate communities of Old South Bayou consist of mainly mud and peat. The park has approximately 5,389 feet of beachfront, a portion of which was walled with a concrete seawall before acquisition to protect a former public roadway. At the southern end of the park, the beach curves around to the east where it is subject to the formidable hydrodynamics of Boca Grande Pass. The historic lighthouse structures are located here and erosion has been a concern for this area. The sand deposited in a previously mentioned erosion control project has remained in place since 2007. In 2013, another beach renourishment project was initiated on the Gulf side of Gasparilla Island which included parcels of park property. This project was completed in early 2014 and resulted in an increase of the acreage of unconsolidated marine substrate. Both communities are in good condition.

General Management Measures: This community on the beach side is one of the most important recreational areas in Florida, attracting millions of residents and tourists annually. Compaction associated with vehicular traffic and dredging activities should be avoided. At Gasparilla Island, small four-wheel-drive vehicles are used for beach cleanup and to aid with visitor safety. Old South Bayou, which is tidally influenced and seldom visited by humans, is an important foraging and resting area for wading birds.

Estuarine Mollusk Reef

Desired Future Condition: Estuarine mollusk reef will consist of expansive concentrations of sessile mollusks occurring in intertidal and subtidal zones to a depth of 40 feet. In Florida the most developed mollusk reefs are restricted to estuarine areas and are dominated by the eastern oyster (*Crassostrea virginica*). Numerous other sessile and benthic invertebrates live among, attached to, or with the collage of mollusk shells.

Sponges, anemones, barnacles, blue crab (*Callinectes sapidus*), stone crab (*Menippe mercenaria*), pea crab (Pinnotheridae) amphipods, and starfish (Asteroidea) will occur on or near the reef. Several fish species will be found near or feed among the reef, including cownose ray (*Rhinopter bonasus*), gafftopsail catfish (*Bagre marinus*), pin fish (*Lagodon rhombiodes*), spotted seatrout (*Cynoscion nebulosus*), black drum (*Pogonias cromis*), and striped mullet (*Mugil cephalus*). Numerous shorebirds, wading birds, raccoons (*Procyon lotor*), and other vertebrates will frequent the mollusk reef during low tides to forage and rest. Salinities will range from just above fresh water to just below full strength salt water but the reefs develop most frequently in estuarine water between 15 and 30

parts per thousand (ppt). Prolonged exposure to low salinities (less than 2 ppt.) is also known to be responsible for massive mortality of oyster reefs.

Description and Assessment: The mollusk reef in Old South Bayou is less than one acre, and the eastern oyster makes up the majority of invertebrates. Infrequent human activity occurs in the bayou due to the tidal nature and difficulty accessing it. This community is considered to be in good condition.

General Management Measures: Sufficient tidal flushing through the culverts must be maintained to ensure appropriate salinity, which is vital to maintainpopulations of bivalves and mollusks. Pollution from point and nonpoint sources, including runoff of chemicals used on the adjacent properties, must be minimized.

Developed

Almost all of the areas developed on Gasparilla Island occur where coastal grassland, or coastal strand once existed. Both of these communities are relatively flat, free from large woody vegetation, and have desirable views of the water. At the southern tip of the island is the old lighthouse site where most of the visitor services occur. A short distance north is a small parking area known as the Sea Wall Use Area, with beach access between the seawall and a restaurant. The seawall was originally constructed to protect railroad and road beds that formerly existed on this site. The seawall now mitigates erosion of the shoreline where various residential and commercial structures have been built. Sand which was placed in front of the wall, has eroded and the condition of the wall continues to worsen. A study was completed in July 2013 to assess the stability of the seawall, and to address construction needed for continued shoreline stabilization. The findings of the study led to a proposal to cap the top deteriorated portion of the wall and place another layer of riprap seaward of the wall. As of December 2013, work has begun on capping the deteriorated sections of the seawall, and additional riprap features will be placed seaward of the finished wall. North of the restaurant is a larger parking lot and beach access called the Sea Grape Use Area, with an unpaved roadside parking area. The northernmost use areas, known as the Range Light or Sand Spur Use Area, consists of a parking area, bathhouse, and eight picnic shelters. The remaining developed areas are roadways leading to the facilities.

Imperiled Species

Imperiled species are those that are (1) tracked by FNAI as critically imperiled (G1, S1) or imperiled (G2, S2); or (2) listed by the U.S. Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FWC) or the Florida Department of Agriculture and Consumer Services (FDACS) as endangered, threatened, or of special concern.

The DRP strives to maintain healthy populations of imperiled plant and animal species primarily by implementing effective management of natural systems. Single species management is appropriate in state parks when the maintenance, recovery, or restoration of a species or population is complicated due to constraints associated with long-term restoration efforts, unnaturally high mortality, or insufficient habitat. Single species management should be compatible with the

maintenance and restoration of natural processes, and should not imperil other native species or seriously compromise park values.

In the preparation of this management plan, DRP staff consulted with staff of the FWC's Imperiled Species Management or that agency's Regional Biologist and other appropriate federal, state, and local agencies for assistance in developing imperiled animal species management objectives and actions. Likewise, for imperiled plant species, DRP staff consulted with FDACS. Data collected by the USFWS, FWC, FDACS, and FNAI as part of their ongoing research and monitoring programs will be reviewed by park staff periodically to inform management of decisions that may have an impact on imperiled species at the park.

Sea turtles are extensively monitored at Gasparilla Island State Park. The most common species encountered include the loggerhead (*Caretta caretta*) and green turtle (*Chelonia mydas*). In accordance with FWC protocol, park staff and associates of the Boca Grande Sea Turtle Conservancy survey the full length of the beach daily, identifying new nests, locating eggs, and erecting boundary postings with signage. Nests are excavated after either hatching occurs or 70 days have elapsed after eggs were deposited. All nests are documented and recorded, including those lost to erosion. Lighting at developed sites should conform to standards preventing adult and hatchling disorientation. All exterior lighting should incorporate "turtle-friendly" lighting and conform to the FWC Marine Turtle Lighting Guidelines.

Nesting shorebirds are also monitored at Gasparilla, and include snowy plovers (*Chardrius nivosus*), least terns (*Sterna antillarum*), Wilson's plovers (*Charadrius wilsonia*), black skimmers (*Rynchops niger*), and American oystercatchers (*Haematopus palliatus*). Areas throughout the park are to be posted for nesting birds, even though the park is heavily used by visitors in areas which would otherwise be attractive to nesting shorebirds. Timing, size, and enforcement of the closed areas for beach nesting shorebirds and sea turtles are critical to their effectiveness. Posting of significant wildlife habitat in advance of seasonal occupation (pre-posting) can make the difference between occupied and unused nesting sites. Providing a sufficient buffer to ensure that disturbances do not result in abandonment is critical. In areas of intense recreational pressure, outreach and enforcement need to accompany any posting effort. The DRP will continue to coordinate with FWC on enforcement and protection measures for critical shorebird and sea turtle nesting areas.

The DRP will seek a balanced approach to minimize visitor impacts to shorebirds and the park's sensitive coastal habitats, while managing resource-based recreational activities. In collaboration with FWC, other government agencies, local non-governmental organizations, and volunteers, park staff will identify and delineate habitats and educate the public about shorebird protection.

Management decisions will be informed by analysis of data on habitat use in the park during prior nesting seasons. This analysis will suggest areas of importance where focused management actions are needed. These actions will typically include:

- Demarcating potential shorebird habitat by enclosing the perimeter of the habitat and buffer area with appropriate fencing and signage.
- Encouraging and focusing visitor activities into areas less suitable for shorebird nesting habitat.
- Monitoring during the nesting season to identify and protect new breeding sites.
- Providing interpretive and educational outreach to the public prior to and during the nesting season to encourage visitor use that protects shorebirds and their habitat.
- When the same breeding sites are used year after year, posting the protected area will occur prior to the season (pre-posting).
- When new breeding sites are indicated, appropriate measures will be implemented, including demarcating new protected areas and expanding or initiating interpretive programs.
- Coordinating with FWC and local law enforcement agencies to ensure compliance with park rules and shorebird protection, as needed.

When it is necessary to limit recreational activities or visitor access to protect nesting habitat, park staff or volunteers will provide onsite interpretation to educate visitors about the management of imperiled shorebird habitat and identify suitable recreational areas. These outreach programs will commence prior to nesting seasons and prior to placing limits on access to recreational areas. Pre-posting the identified habitat areas combined with early public notification regarding the park's shorebird protection program will improve visitor compliance with park rules and promote broad-based public stewardship of shorebird nesting, resting, and foraging habitats in the park.

Portions of marine unconsolidated substrate at Gasparilla Island are designated as critical habitat for the West Indian manatee (*Trichechus manatus*) by FWC. The Florida Manatee was placed on the United States Endangered Species list in 1973 and is also covered by the Marine Mammal Protection Act (MMPA). Lee County has a manatee protection plan that outlines boating and construction procedures for areas that are utilized by manatees. State Park personnel are directed to contact FWC for important manatee sightings, and for any hurt, sick, or imperiled individuals seen adjacent to park property.

For imperiled plants, the only currently monitored flora is a small population of Joewood that is found in the "preserve" area (GA-3_IN). It is state threatened, rare throughout its range, and is likely the northernmost population with the other nearest population located south on Cayo Costa. Other imperiled species that occur at this park, such as gopher tortoises and manatees, are documented when observed in the field. Biologists maintain a running wildlife list for the park to confirm the continued presence of these species.

As of April, 2015, USFWS will publish a critical habitat document for the federally protected Aboriginal prickly-apple (*Harrisia aboriginum*), a species that FNAI has historically documented as occurring on Gasparilla Island within the state park boundary. This document outlines potential habitat for this endangered cactus,

along with areas to be surveyed and potential areas for relocation. All upland natural communities at Gasparilla Island State Park are being considered as potential critical habitat for the prickly-apple. Land managers will work with USFWS to identify potential habitat and survey for the presence of cacti, and determine if the state park would be suitable as a recipient site for augmentation, introduction, or reintroduction as a protected population for this species.

Table 2 contains a list of all known imperiled species within the park and identifies their status as defined by various entities. It also identifies the types of management actions that are currently being taken by DRP staff or others, and identifies the current level of monitoring effort. The codes used under the column headings for management actions and monitoring level are defined following the table. Explanations for federal and state status as well as FNAI global and state rank are provided in Addendum 6.

Table 2: Imperiled Species Inventory

Common and *Scientific Name*	**Imperiled Species Status**				**Management Actions**	**Monitoring Level**
	FWC	**USFWS**	**FDACS**	**FNAI**		
PLANTS						
Sand dune spurge *Chamaesyce cumulicola*			LE	G2,S2	9	Tier 1
Aboriginal prickly-apple *Harrisia aboriginum*		LE	LE	G1S1	2,3, 10	Tier 4
West coast beach sunflower *Helianthus debilis subsp vestitus*				G5T2 S2	2	Tier 1
Joewood *Jacquinia keyensis*			LT		2	Tier 2
Shell-mound prickly pear cactus *Opuntia stricta*			LT		2	Tier 1
Indigo berry *Scaevola plumieri*			LT		2	Tier 1
Giant wild-pine *Tillandsia utriculata*			LE		3	Tier 1
REPTILES						
American alligator *Alligator mississippiensis*	SSC	T(S/A)		G5S4	13	Tier1
Atlantic loggerhead *Caretta caretta*	FT	LT		G3S3	8,10, 13	Tier 4

Table 2: Imperiled Species Inventory						
Common and *Scientific Name*	**Imperiled Species Status**				**Management Actions**	**Monitoring Level**
	FWC	**USFWS**	**FDACS**	**FNAI**		
Green turtle *Chelonia mydas*	FE	LE		G3S2	8,10, 13	Tier 4
Gopher tortoise *Gopherus polyphemus*	ST	C		G3S3	8,10, 13	Tier2
Kemp's ridley *Lepiodochelys kempii*	FE	LE		G1,S1	2,5,8 10,1 3	Tier 1
BIRDS						
Snowy plover *Chardrius nivosus*	ST			G3S1	9, 10, 13	Tier 4
Wilson's plover *Charadrius wilsonia*				G5S2	9, 10, 13	Tier 4
Little blue heron *Egretta caerulea*	SSC			G5S4	4	Tier 1
Reddish egret *Egretta rufescens*	SSC			G4, S2	2,10, 13	Tier 1
Snowy egret *Egretta thula*	SSC			G5S3	4	Tier 1
Tri-colored heron *Egretta tricolor*	SSC			G5S4	4	Tier 1
White ibis *Eudocimus albus*	SSC			G5S4	4	Tier 1
Peregrine falcon *Falco peregrinus*				G4S2	2	Tier 1
Magnificent frigatebird *Fregata magnificens*				G5S1		Tier 1
American oystercatcher *Haematopus palliatus*	SSC			G5,S2	9, 10, 13	Tier 4
Roseate spoonbill *Platalea ajaja*	SSC			G5S2	2, 4	Tier 1
American avocet *Recurvirostra americana*				G5,S2	10,1 3	Tier 1
Black skimmer *Rynchops niger*	SSC			G5S3	9, 10, 13	Tier 4

Table 2: Imperiled Species Inventory						
Common and *Scientific Name*	**Imperiled Species Status**				**Management Actions**	**Monitoring Level**
	FWC	**USFWS**	**FDACS**	**FNAI**		
Least tern *Sterna altillarum*	ST			G4S3	9, 10	Tier 4
Sandwich tern *Thalasseus sandvicensis*				G5S2	9, 10	Tier 1
MAMMALS						
West Indian manatee *Trichechus manatus*	FE	LE		G2S2	10, 13	Tier 1

Management Actions:

1. Prescribed Fire
2. Exotic Plant Removal
3. Population Translocation/Augmentation/Restocking
4. Hydrological Maintenance/Restoration
5. Nest Boxes/Artificial Cavities
6. Hardwood Removal
7. Mechanical Treatment
8. Predator Control
9. Erosion Control
10. Protection from visitor impacts (establish buffers)/law enforcement
11. Decoys (shorebirds)
12. Vegetation planting
13. Outreach and Education
14. Other

Monitoring Level:

Tier 1. Non-Targeted Observation/Documentation: includes documentation of species presence through casual/passive observation during routine park activities (i.e. not conducting species-specific searches). Documentation may be in the form of Wildlife Observation Forms, or other district specific methods used to communicate observations.

Tier 2. Targeted Presence/Absence: includes monitoring methods/activities that are specifically intended to document presence/absence of a particular species or suite of species.

Tier 3. Population Estimate/Index: an approximation of the true population size or population index based on a widely accepted method of sampling.

Tier 4. Population Census: A complete count of an entire population with demographic analysis, including mortality, reproduction, emigration, and immigration.

Tier 5. Other: may include habitat assessments for a particular species or suite of species or any other specific methods used as indicators to gather information about a particular species.

Detailed management goals, objectives, and actions for imperiled species in this park are discussed in the Resource Management Program section of this component and the Implementation Component of this plan.

Exotic and Nuisance Species

Exotic species are plants or animals not native to Florida. Invasive exotic species are able to out-compete, displace, or destroy native species and their habitats, often because they have been released from the natural controls of their native range, such as diseases, predatory insects, etc. If left unchecked, invasive exotic plants and animals alter the character, productivity, and conservation values of the natural areas they invade.

Coyotes (*Canis latrans*) have recently increased in occurrence at Gasparilla Island. They can potentially impact shorebird nests and sea turtle nests on the beach dunes adjacent to the Gulf of Mexico. These animals are intelligent and adapt to evade traps. If coyote predation on sea turtle and shorebird nests is documented at Gasparilla, park personnel will evaluate the hiring of USDA trappers to remove animals.

Black spiny-tailed iguanas (*Ctenosaura similis*) are the most visible exotic animal at Gasparilla, and occur frequently in beach dune and coastal strand habitat throughout the park. These reptiles can displace gopher tortoises, and limit food sources for many native animals. They can also impact shorebirds and turtle nesting, although this hasn't been document yet at Gasparilla. An intensive island wide extermination program was conducted primarily by USDA trappers to remove the iguana. Since 2008, approximately 10,000 iguanas have been removed (Engeman 2011). DRP staff is also active in removing iguanas.

Exotic plants at Gasparilla are more common than exotic animals. In some areas, the presence of Brazilian Pepper (*Schinus terebinthifolius*), Earleaf Acacia (*Acacia auriculiformis*), Australian pine (*Causarina equisetifolia*), and white leadtree *(Leucaena leucocephala*), is overwhelming. FWC has conducted exotic removal at Gasparilla in the past, and future funding should be obtained to treat the exotics tucked away in the large maritime hammock areas within the island's interior.

Table 3 contains a list of the Florida Exotic Pest Plant Council (FLEPPC) Category I and II invasive, exotic plant species found within the park (FLEPPC 2011). The table also identifies relative distribution for each species and the management zones in which they are known to occur. An explanation of the codes is provided following the table. For an inventory of all exotic species found within the park, see Addendum 5.

Table 3: Inventory of FLEPPC Category I and II Exotic Plant Species			
Common and Scientific Name	**FLEPPC Category**	**Distribution**	**Management Zone (s)**
Earleaf acacia *Acacia auriculiformis*	I	2	GA-3_IN
Australian pine Causarina equisetifolia	I	2	GA-2_RL, GA-3_IN
Carrotwood *Cupaniopsis anacardioides*	I	2	GA-3_IN, GA-4_SG
Durban crowfootgrass *Dactyloctenium aegyptium*	II	2	GA-1_RL, GA-4_SG, GA-5_SW, GA-6_LH
Council tree *Ficus altissima*	II	1	GA-3_IN
Laurel fig *Ficus microcarpa*	I	2	GA-3_IN
Cogon grass *Imperata cylindrica*	I	2	GA-3_IN
Life plant *Kalanchoe pinnata*	II	3	GA-3_IN
Lantana *Lantana camara*	I	2	GA-3_IN
White leadtree *Leucana leucocephala*	II	3	GA-3_IN
Natal grass *Melinus repens*	I	2	GA-2_RL, GA-3_IN, GA-4_SG
Castor bean *Ricinus communis*	II	2	GA-3_IN
Bow-string hemp *Sansevieria hyacinthoides*	II	3	GA-2_RL, GA-3_IN
Naupaka *Scaevola taccada*	I	2	GA-4_SG
Umbrella tree *Schefflera actinophylla*	I	1	GA-3_IN
Brazilian pepper *Schinus terebinthifolius*	I	3	GA-2_RL, GA-3_IN, GA-4_SG, GA-6_LH
Wedelia *Sphagneticola trilobata*	II	3	GA-3_IN, GA-4_SG
Sea hibiscus *Talapariti tiliaceum*	II	1	GA-3_IN
Australian almond *Terminalia muelleri*	II	1	GA-3_IN
Caesar's weed *Urena lobata*	I	2	GA-3_IN
Washington fan palm *Washingtonia robusta*	II	1	GA-3_IN

Distribution Categories:

0 No current infestation: All known sites have been treated and no plants are currently evident.
1 Single plant or clump: One individual plant or one small clump of a single species.
2 Scattered plants or clumps: Multiple individual plants or small clumps of a single species scattered within the gross area infested.
3 Scattered dense patches: Dense patches of a single species scattered within the gross area infested.
4 Dominant cover: Multiple plants or clumps of a single species that occupy a majority of the gross area infested.
5 Dense monoculture: Generally, a dense stand of a single dominant species that not only occupies more than a majority of the gross area infested, but also covers/excludes other plants.
6 Linearly scattered: Plants or clumps of a single species generally scattered along a linear feature, such as a road, trail, property line, ditch, ridge, slough, etc. within the gross area infested.

Exotic animal species include non-native wildlife species, free ranging domesticated pets or livestock, and feral animals. Because of the negative impacts to natural systems attributed to exotic animals, the DRP actively removes exotic animals from state parks, with priority being given to those species causing the greatest ecological damage.

In some cases, native wildlife may also pose management problems or nuisances within state parks. A nuisance animal is an individual native animal whose presence or activities create special management problems. Examples of animal species from which nuisance cases may arise include raccoons, venomous snakes, and alligators that are in public areas. Nuisance animals are dealt with on a case-by-case basis in accordance with the DRP's Nuisance and Exotic Animal Removal Standard.

Detailed management goals, objectives, and actions for management of invasive exotic plants and exotic and nuisance animals are discussed in the Resource Management Program section of this component.

The main nuisance wildlife found at Gasparilla is the raccoon. This animal can devastate multiple sea turtle and shorebird nests in a short period of time. Precautions as to how raccoon predation can be prevented is described later in this document. If raccoon populations become a major threat to sea turtles, shorebirds, and visitors, USDA will be hired to remove animals from the island.

Special Natural Features

Gasparilla Island State Park does not contain any special natural features.

Cultural Resources

This section addresses the cultural resources present in the park that may include archaeological sites, historic buildings and structures, cultural landscapes, and collections. The Florida Department of State (FDOS) maintains the master inventory of such resources through the Florida Master Site File (FMSF). State law requires

that all state agencies locate, inventory and evaluate cultural resources that appear to be eligible for listing in the National Register of Historic Places. Addendum 7 contains the FDOS, Division of Historical Resources (DHR) management procedures for archaeological and historical sites and properties on state-owned or controlled properties; the criteria used for evaluating eligibility for listing in the National Register of Historic Places, and the Secretary of Interior's definitions for the various preservation treatments (restoration, rehabilitation, stabilization, and preservation). For the purposes of this plan, significant archaeological site, significant structure, and significant landscape means those cultural resources listed or eligible for listing in the National Register of Historic Places. The terms archaeological site, historic structure, or historic landscape refer to all resources that will become 50 years old during the term of this plan.

Condition Assessment

Evaluating the condition of cultural resources is accomplished using a three-part evaluation scale, expressed as good, fair, and poor. These terms describe the present condition, rather than comparing what exists to the ideal condition. Good describes a condition of structural stability and physical wholeness, where no obvious deterioration other than normal occurs. Fair describes a condition in which there is a discernible decline in condition between inspections, and the wholeness or physical integrity is and continues to be threatened by factors other than normal wear. A fair assessment is usually a cause for concern. Poor describes an unstable condition where there is palpable, accelerating decline, and physical integrity is being compromised quickly. A resource in poor condition suffers obvious declines in physical integrity from year to year. A poor condition suggests immediate action is needed to reestablish physical stability.

Level of Significance

Applying the criteria for listing in the National Register of Historic Places involves the use of contexts as well as an evaluation of integrity of the site. A cultural resource's significance derives from its historical, architectural, ethnographic or archaeological context. Evaluation of cultural resources will result in a designation of NRL (National Register or National Landmark Listed or located in an NR district), NR (National Register eligible), NE (not evaluated), or NS (not significant) as indicated in the table at the end of this section.

There are no criteria for use in determining the significance of collections or archival material. Usually, significance of a collection is based on what or whom it may represent. For instance, a collection of furniture from a single family and a particular era in connection with a significant historic site would be considered highly significant. In the same way, a high quality collection of artifacts from a significant archaeological site would be of important significance. A large herbarium collected from a specific park over many decades could be valuable to resource management efforts. Archival records are most significant as a research source. Any records depicting critical events in the park's history, including construction and resource management efforts, would all be significant.

The following is a summary of the FMSF inventory. In addition, this inventory contains the evaluation of significance.

Pre-Historic and Historic Archaeological Sites
Desired Future Condition: There are no known archaeological sites within the park.

Historic Structures
*Desired Future Condition***:** All significant historic structures and landscapes that represent Florida's cultural periods or significant historic events or persons are preserved in good condition in perpetuity, protected from physical threats, and interpreted to the public.

Description: The park contains three cultural resources that are recorded in the Florida Master Site File: Boca Grande Lighthouse (LL637a), Lighthouse Assistant Keeper's House (LL637b), and Amory Chapel (LL968). Both the Lighthouse and the Lighthouse Assistant Keeper's house are collectively called the Boca Grande Lighthouse Station. Boca Grande Lighthouse Reservation is located on 3.5 acres of land at the southern tip of Gasparilla Island. The armory chapel is located directly North of the Lighthouse Assistant Keeper's house on the southern tip of the island.

The Boca Grande Lighthouse Station was listed on the National Register of Historic Places on February 28, 1980. The Boca Grande Lighthouse Station National Register listing consists of two contributing buildings and five non-contributing structures. The significant, or contributing, buildings include the Boca Grande Lighthouse (8LL637a) and the Boca Grande Lighthouse Assistant Keeper's House (8LL637b). The non-contributing structures include the two cisterns, the corrugated metal building, the paint locker, and the beacon.

The Lee County Historic Preservation Board designated the properties in the Boca Grande Lighthouse District (98-06-01) as a historic resource on July 9, 1998, including the Lighthouse, Assistant Keeper's House, and Amory Chapel. The Lee County Historic Preservation Board also designated Amory Chapel (95-03-01) an individual historic resource on April 6, 1995. Consequently, the Lee County Land Development Code, Chapter 22, applies to these properties.

Boca Grande Lighthouse
Constructed in 1890, the lighthouse marked the pass from Charlotte Harbor into the Gulf of Mexico until its decommission in 1967. The lighthouse assisted navigation to and from Boca Grande Harbor, which became the major shipping point for phosphate mined in Polk County to a worldwide market. The lighthouse is an iron screw pile design with a wood frame, and is visible up to 12 miles away. Phosphate was originally barged down the Peace River and later moved by railroad to Port Boca Grande for transfer to ocean-going vessels. The structure was restored in the mid 1980s to its 1890 appearance, and is presently used as a museum. The assistant keeper's house, constructed at the same time, has been rehabilitated for use as park offices.

Assistant Keeper's House
The assessment from the same document listed above states that all components of the Assistant Keeper's House are in good condition. The 16 iron pilings are described as having evidence of oxidation but are in good condition. The stairs are not original and no ADA accessibility options are available for this structure.

Amory Chapel
The Amory Chapel served the African Methodist Episcopal and Shiloh Baptist congregations in Tarpon Pass Estates on alternating Sundays from 1959 to the early 1980s. Boca Grande's African American community was largely tied to the development of the railroad, port, and sport fishing in the area in the early 20th century. The opening of the Gasparilla Inn in 1911 increased the need for service workers as the island became a popular resort for wealthy northerners, fishermen, and industry tycoons. In the late 1950s, Boca Grande's African American community was displaced by private landowners who wanted to develop their downtown holdings, and relocated to a new subdivision on the south end of the island called Tarpon Pass Estates. In the early 1980s, residents of the estates were evicted once again, this time due to flooding. The chapel itself is a simple, rectangular building with finished concrete flooring. The interior is a single large open room, with multiple windows that allow in natural light. The chapel is now frequently used for staff and community meetings as well as weddings. The building has air conditioning, and accommodates 75 people. It is in good condition.

Level of Significance: The Boca Grande Lighthouse Station is recognized as significant by the National Register of Historic Places in the areas of Navigation and Transportation. Its primary importance was the role it played in the development of the region's phosphate industry, one of Florida's largest industries. The lighthouse is also important for its architecture, as one of the few remaining lighthouses with screw pilings, which were once typical on the Gulf Coast. In addition to being listed on the National Register in 1980, the Lee County Historic Preservation Board designated the properties in the Boca Grande Lighthouse District historic resources in 1998.

The Amory Chapel is significant for its association with the historic African-American community of Boca Grande. Amory Chapel is the only surviving building from the Tarpon Pass Estates community. The Lee County Historic Preservation Board designated the chapel a historic resource in 1995.

Condition Assessment: A physical condition assessment of the Lighthouse Station is provided in the "Historic Structures Report for the Boca Grande Lighthouse Complex, 2003" document. The document states that all components of the lighthouse are in good condition. Mentioned, however, and corroborated by the park manager is that there is oxidation of the 19 iron pilings, but they remain in good condition. The stairs and deck are in good condition but are not in ADA compliance. An elevator was installed to accommodate visitors needing assistance to the raised deck.

General Management Measures: All three structures are in good condition. The lighthouse structures are painted annually. The management recommendations referenced in the "Historic Structures Report for the Boca Grande Lighthouse Complex, 2003" and the "Secretary of the Interior Standards and Guidelines" for the treatment of historic properties will be followed.

While the lighthouse has been restored to its 1890 appearance, it is managed with a hybrid restoration/rehabilitation approach. Enough modifications have been made to the structure and the surrounding site that it is not a true restoration. Still, the emphasis in the management of the structure, particularly in regards to its external appearance, is to preserve and restore its 1890 appearance to the extent possible.

The Assistant Keeper's House and Amory Chapel have been rehabilitated so that they retain their basic historic character while serving the compatible use of office and meeting space.

Collections

Description: The park has no collections in its possession. All holdings are owned and managed by the citizen support organization, Barrier Island Parks Society, which is in the process of completing an inventory of all materials.

Detailed management goals, objectives, and actions for the management of cultural resources in this park are discussed in the Cultural Resource Management Program section of this component. Table 4 contains the name, reference number, culture or period, and brief description of all the cultural sites within the park that are listed in the Florida Master Site File. The table also summarizes each site's level of significance, existing condition, and recommended management treatment. An explanation of the codes is provided following the table.

Table 4: Cultural Sites Listed in the Florida Master Site File

Site Name and FMSF #	Culture / Period	Description	Significance	Condition	Treatment	Management Zone
Boca Grande Lighthouse (LL637a)	Historic/19th Century	Historic Structure	NR	G	RS/ RH	GA 6
Lighthouse Assistant Keeper's House (LL637b)	Historic/19th Century	Historic Structure	NR	G	RH	GA 6
Amory Chapel (LL968)	Historic/Mid-20th Century	Historic Structure	NE	G	RH	GA 6

Significance:

NRL National Register Listed
NR National Register Eligible
NE Not Evaluated
NS Not Significant

Condition:

G Good
F Fair
P Poor
NA Not Accessible
NE Not Evaluated

Recommended Treatment:

RS Restoration
RH Rehabilitation
ST Stabilization
P Preservation
R Removal
N/A Not Applicable

Resource Management Program

Management Goals, Objectives, and Actions

Measurable objectives and actions have been identified for each of the DRP's management goals for Gasparilla Island State Park. Please refer to the Implementation Schedule and Cost Estimates in the Implementation Component of this plan for a consolidated spreadsheet of the recommended actions, measures of progress, target year for completion and estimated costs to fulfill the management goals and objectives of this park.

While the DRP utilizes the ten-year management plan to serve as the basic statement of policy and future direction for each park, a number of annual work plans provide more specific guidance for DRP staff to accomplish many of the resource management goals and objectives of the park. Where such detailed planning is appropriate to the character and scale of the park's natural resources, annual work plans are developed for prescribed fire management, exotic plant management, and imperiled species management. Annual or longer-term work plans are developed for natural community restoration and hydrological restoration. The work plans provide the DRP with crucial flexibility in its efforts to generate and implement adaptive resource management practices in the state park system.

The work plans are reviewed and updated annually. Through this process, the DRP's resource management strategies are systematically evaluated to determine their effectiveness. The process and the information collected is used to refine techniques, methodologies, and strategies, and ensures that each park's prescribed management actions are monitored and reported as required by Sections 253.034 and 259.037, Florida Statutes.

The goals, objectives, and actions identified in this management plan will serve as the basis for developing annual work plans for the park. The ten-year management plan is based on conditions that exist at the time the plan is developed, and the annual work plans provide the flexibility needed to adapt to future conditions as they change during the ten-year management planning cycle. As the park's annual work plans are implemented through the ten-year cycle, it may become necessary to adjust the management plan's priority schedules and cost estimates to reflect these changing conditions.

Natural Resource Management

Hydrological Management

Goal: Protect water quality and quantity in the park, restore hydrology to the extent feasible and maintain the restored condition.

The natural hydrology of most state parks has been impaired prior to acquisition to one degree or another. Florida's native habitats are precisely adapted to natural drainage patterns and seasonal water level fluctuations, and variations in these factors frequently determine the types of natural communities that occur on a particular site. Even minor changes to natural hydrology can result in the loss of plant and animal species from a landscape. Restoring state park lands to original natural conditions often depends on returning natural hydrological processes and conditions to the park. This is done primarily by filling or plugging ditches, removing obstructions to surface water sheet flow, installing culverts or low-water crossings on roads, and installing water control structures to manage water levels.

Objective: Monitor all hydrological functions at the park, and maintain the culverts in Old South Bayou.

Action 1 Check flow through culverts between Old South Bayou and Charlotte Harbor every 6 months.

Action 2 Assess other hydrological needs as they arise after large storm events.

As previously discussed in the Resource Description and Assessment section, two culverts located in the park maintain a critical tidal connection important to the maintenance of natural communities within Old South Bayou. Staff will continue to monitor the culverts to ensure tidal connectivity between the bayou and Charlotte Harbor. The park will also remove restrictions or impediments as needed.

As barrier islands are constantly shifting, conditions and topography can change over short periods of time. As the landscape morphs over the years, management should be adaptive to the changing hydrological needs in the park.

Natural Communities Management

Goal: Restore and maintain the natural communities/habitats of the park.

As discussed above, the DRP practices natural systems management. Other methods to implement this goal include large-scale restoration projects as well as smaller scale natural communities' improvements. The fire-dependent natural communities at Gasparilla Island State Park are not managed with fire. Logistics and imperiled species management keep land managers from using fire as a tool to maintain coastal strand throughout the park.

Imperiled Species Management

Goal: Maintain, improve or restore imperiled species populations and habitats in the park.

The DRP strives to maintain and restore viable populations of imperiled plant and animal species primarily by implementing effective management of natural systems. Single species management is appropriate in state parks when the maintenance, recovery, or restoration of a species or population is complicated due to constraints associated with long-term restoration efforts, unnaturally high mortality, or insufficient habitat. Single species management should be compatible with the maintenance and restoration of natural processes, and should not imperil other native species or seriously compromise park values.

In the preparation of this management plan, DRP staff consulted with staff of the FWC's Imperiled Species Management or that agency's Regional Biologist and other appropriate federal, state, and local agencies for assistance in developing imperiled animal species management objectives and actions. Likewise, for imperiled plant species, DRP staff consulted with FDACS. Data collected by the USFWS, FWC, FDACS, and FNAI as part of their ongoing research and monitoring programs will be reviewed by park staff periodically to inform management of decisions that may have an impact on imperiled species at the park.

Ongoing inventory and monitoring of imperiled species in the state park system is necessary to meet the DRP's mission. Long-term monitoring is also essential to ensure the effectiveness of resource management programs. Monitoring efforts must be prioritized so that the data collected provides information that can be used to improve or confirm the effectiveness of management actions on conservation priorities. Monitoring intensity must at least be at a level that provides the minimum data needed to make informed decisions to meet conservation goals. Not all imperiled species require intensive monitoring efforts on a regular interval. Priority must be given to those species that can provide valuable data to guide adaptive management practices. Those species selected for specific management action and those that will provide management guidance through regular monitoring are addressed in the objectives below.

Objective: Update baseline imperiled species occurrence inventory lists for plants and animals.

This task is ongoing and is accomplished through opportunistic observations as well as part of focused survey efforts for known imperiled species. Added monitoring will be implemented during the nesting season (February–October) to document imperiled shorebirds and sea turtles that utilize the beach natural communities. Surveys for the Aboriginal prickly-apple which is present on the island will be conducted in conjunction with the USFWS critical habitat designation.

Objective: Monitor and document 7 selected imperiled animal species in the park.

Action 1 Continue to update monitoring protocols for 7 selected imperiled animal species including green turtles, loggerhead turtles, snowy plovers, Wilson's plovers, least terns, black skimmers, and American oystercatchers.

Action 2 Monitor the 7 selected imperiled animals at a Tier 2 level or above.

The following species will continue to be monitored at Tier 2 level or above – green turtle, loggerhead turtle, snowy plover, Wilson's plover, least tern, black skimmer, and American oystercatcher. Monitoring will involve daily surveys in the morning during nesting season for turtle nesting, and monthly surveying for shorebird nesting during the FWC Florida Shorebird Database count windows.

FWC protocols will continue to be used to monitor these imperiled species, and District Biology staff will provide annual reports in partnership with FWC staff. Park staff, volunteers, and conservation groups such as the Boca Grande Sea Turtle Conservancy will work in cooperation to provide monitoring.

Objective: Continue to improve protection and awareness of sensitive shorebird and turtle nesting areas.

Shorebird nesting areas will be posted in advance of seasonal occupation (pre-posting) as warranted. Future posted areas will provide sufficient buffering in an effort to limit abandonment. The park will work to enhance community outreach efforts during shorebird nesting season through improved interpretive programming and regular monitoring of posted areas by park staff and volunteers.

Awareness programs and signage will continue to be utilized to mark nests from sea turtles at Gasparilla Island State Park. The Boca Grande Sea Turtle Conservancy will continue to have access to nesting areas, and be allowed to mark nests in accordance with FWC protocols.

Objective: Monitor and document selected imperiled plant species in the park.

Action 1 Update monitoring protocols for two selected imperiled plant species, Joewood and aboriginal prickly-apple.
Action 2 Continue to monitor two selected imperiled plant species, Joewood and aboriginal prickly-apple.

Joewood is ranked as threatened at the state level and this northernmost population should be monitored. The aboriginal prickly-apple has just been identified as being an endangered species, and Gasparilla Island has been identified as an area of important habitat. A protocol will be developed and the population will be documented using GPS and GIS technology for both of these species.

Exotic Species Management

Goal: Remove exotic and invasive plants and animals from the park and conduct needed maintenance control.

The DRP actively removes invasive exotic species from state parks, with priority being given to those causing the ecological damage. Removal techniques may include mechanical treatment, herbicides, or biocontrol agents.

Objective: Annually treat 7 acres of exotic plant species in the park.

Action 1 Annually update exotic plant management work plan
Action 2 Implement annual work plan by treating seven acres in the park, and continuing maitenance and follow-up treatments, as needed.

The annual acreage is composed of both maintenance activities and initial treatments. All management zones except a portion of zone GA-2_RL and much of zone GA-3_IN contain most of the exotic vegetation. The other zones would require annual monitoring. It is possible that the treatment would consist of a large-scale project covering the entire 70 acres. If funding is available for this project, the area would be treated three times over 10 years, totaling 210 acres treated over that time period.

Monitor and remove exotic species which includes white lead tree, Brazilian pepper, Australian pine, earleaf acacia, bow-string hemp, and any species listed in the Florida Exotic Pest Plant Council's 2011 List of Invasive Plant Species. Replant native species where appropriate. Native canopy species will typically consist of strangler fig, gumbo limbo, seagrape, and cabbage palm. Understory species may consist of myrsine, wild coffee, snowberry, white indigoberry, Joewood, varnish leaf, and coco plum.

Objective: Implement control measures on 3 nuisance and exotic animal species in the park.

Action 1 Continue to coordinate with USDA to remove raccoons, iguanas, and coyotes from the park.

Action 2 Continue to implement the use of wire mesh to protect turtle nests from raccoons and coyotes.

Control of nuisance raccoons is sometimes necessary to prevent excessive depredation of nesting sea turtles and shorebirds. Coyotes have recently been found on the island and are known to predate sea turtle nests. Black spiny-tailed iguanas are removed by park staff and a private trapper hired by the community and permitted to work in the park.

The best protection for sea turtle and shorebird nests to date include wire screen mesh over the nests. If nest protection can be deployed directly after the eggs are deposited, coyotes and raccoons are less likely to predate nests. Park staff and associated monitoring groups will work to prevent predation from nuisance and exotic animals as best possible.

Cultural Resource Management

Cultural resources are individually unique, and collectively, very challenging for the public land manager whose goal is to preserve and protect them in perpetuity. The DRP is implementing the following goals, objectives, and actions, as funding becomes available, to preserve the cultural resources found in Gasparilla Island State Park.

Goal: Protect, preserve, and maintain the cultural resources of the park.
The management of cultural resources is often complicated because these resources are irreplaceable and extremely vulnerable to disturbances. The advice of historical and archaeological experts is required in this effort. All activities related to land clearing, ground disturbing activities, major repairs, or additions to historic structures listed or eligible for listing in the National Register of Historic Places must be submitted to the FDOS, Division of Historical Resources (DHR) for review and comment prior to undertaking the proposed project. Recommendations may include, but are not limited to concurrence with the project as submitted, pre-testing of the project site by a certified archaeological monitor, cultural resource assessment survey by a qualified professional archaeologist, or modifications to the proposed project to avoid or mitigate potential adverse effect. In addition, any demolition or substantial alteration to any historic structure or resource must be submitted to DHR for consultation and the DRP must demonstrate that there is no feasible alternative to removal and must provide a strategy for documentation or salvage of the resource. Florida law further requires that the DRP consider the reuse of historic buildings in the park in lieu of new construction and must undertake a cost comparison of new development versus rehabilitation of a building before electing to construct a new or replacement building. This comparison must be accomplished with the assistance of DHR.

Objective: Assess and evaluate 3 of 3 recorded cultural resources in the park.

A Historic Structures Report was completed on the Boca Grande Lighthouse Complex in 2003 by Renker-Eich-Parks Architects. This report covered the Lighthouse and the Assistant Keeper's House, as well as the five non-contributing structures. The park will review the preservation treatment recommendations and develop a prioritized list of fitting actions.

A *Historic Structures Report* should be considered for the Amory Chapel, which turned fifty years old since the last plan update.

Objective: Compile reliable documentation for all recorded historic and archaeological resources.

Action 1 Ensure all known sites are recorded and updated in the Florida Master Site File.
Action 2 Complete a predictive model for high, medium, and low probability of locating archaeological sites within the park.

The park's data in the FMSF will be updated as needed, and a Scope of Collections Statement is needed for the park. Additionally, research on the African-American community of Boca Grande/Tarpon Pass Estates should be considered to clarify the significance of the Amory Chapel.

A predictive model for high, medium, and low probability sites of unknown archaeological resources has not yet been completed for the park. Priority areas identified by the model should be subject to a Level 1 archaeological survey, especially if any activities that might cause disturbance are planned.

Objective: Maintain 3 recorded cultural resources in good condition.

Action 1 Continue to implement annual monitoring for 3 cultural sites.
Action 2 Continue to monitor shoreline erosion at all cultural sites as needed.

A cyclical monitoring and maintenance program should be created and implemented for each of the 3 historic structures. Restoration, rehabilitation, stabilization, and preservation projects for the structures should be developed on the basis of need revealed by the monitoring program.

Special Management Considerations

Timber Management Analysis

Chapters 253 and 259, Florida Statutes, require an assessment of the feasibility of managing timber in land management plans for parcels greater than 1,000 acres if the lead agency determines that timber management is not in conflict with the primary management objectives of the land. Feasibility of harvesting timber at this park during the period covered by this plan was considered in context of the DRP's

statutory responsibilities and an analysis of the park's resource needs and values. The long-term management goal for forest communities in the state park system is to maintain or re-establish old-growth characteristics to the degree practicable, with the exception of those communities specifically managed as early successional.

A timber management analysis was not conducted for this park since its total acreage is below the 1,000-acre threshold established by statute. Timber management will be reevaluated during the next revision of this management plan.

Coastal/Beach Management

The DRP manages over 100 miles of sandy beach, which represents one-eighth of Florida's total sandy beach shoreline. Approximately one-quarter of Florida's state parks are beach-oriented parks and account for more than 50 percent of statewide park visitation. The management and maintenance of beaches and their associated systems and processes is complicated by the presence of inlets and various structures (jetties, groins, breakwaters) all along the coast. As a result, beach restoration and nourishment have become increasingly necessary and costly procedures for protecting valuable infrastructure. All of these practices affect beaches for long distances on either side of a particular project. DRP staff needs to be aware of and participate in the planning, design, and implementation of these projects to ensure that park resources and recreational use are adequately considered and protected.

Gasparilla Island State Park has 5,389 linear feet of beach frontage. The seawall has effectively mitigated shoreline erosion along the park's southernmost shoreline, from the Dunes Use Area to the Lighthouse Use Area. As the structural integrity of the seawall may deteriorate over time and by the impacts of coastal storms, various significant natural and cultural resources are at risk due to shoreline erosion. These resources include Gulf beach, beach dune communities, and the historic structures of the Boca Grande Lighthouse compound. The area of the seawall where erosion is occurring underwent engineering study and were evaluated for mitigation. Actions are subsequently being taken to stabilize this erosion. A cap on the existing seawall has been installed, and reconstruction of existing riprap is being pursued to attenuate wave energy. In addition, beach nourishment projects to stabilize shoreline north of the park boundary have been completed by Lee County.

The Trustees have granted management authority of certain sovereign submerged lands to the DRP under Management Agreement MA 68-086 (as amended January 19, 1988). Management of Gasparilla State Park includes certain management activities within the buffer zone of sovereign submerged land along the entire beach, beginning at the mean high water or ordinary high water line, or from the edge of emergent vegetation and extending waterward for 400 feet. This area comprises the marine unconsolidated substrates of the park. The submerged resources within the buffer zone significantly increase the species diversity within the park and offers additional recreational opportunities for park visitors. Visitors are able to access this community either from the beach or from a boat. Management actions occurring within the buffer zone include patrolling for boats

and watercraft too close to the park's beaches, removal of trash, litter, and other debris, public safety activities, and resource inventories and monitoring.

Arthropod Control Plan

All DRP lands are designated as "environmentally sensitive and biologically highly productive" in accordance with Ch. 388 and Ch. 388.4111 Florida Statutes. If a local mosquito control district proposes a treatment plan, DRP works with the local mosquito control district to achieve consensus. By policy of DEP since 1987, aerial adulticiding is not allowed, but larviciding and ground adulticiding (truck spraying in public use areas) is typically allowed. DRP does not authorize new physical alterations of marshes through ditching or water control structures. Mosquito control plans may be temporarily set aside under declared threats to public or animal health, or during a Governor's Emergency Proclamation.

There is an adopted Arthropod Control Plan (1999) with Lee County Mosquito Control District (LCMCD) authorizing agreed upon treatment methods on all state parks in Lee County. There is a required annual meeting between LCMCD and DEP staff, prior to the treatment season, to review maps and decide which acreages should be classified as "treatment areas" or "non-treatment areas" for that year.

Sea Level Rise

Potential sea level rise is now under study and will be addressed by Florida's residents and governments in the future. The DRP will stay current on existing research and predictive models, in coordination with other DEP programs and federal, state and local agencies. The DRP will continue to observe and document the changes that occur to the park's shorelines, natural features, imperiled species populations, and cultural resources. This ongoing data collection and analysis will inform the Division's adaptive management response to future conditions, including the effects of sea level rise, as they develop.

Resource Management Schedule

A priority schedule for conducting all management activities that is based on the purposes for which these lands were acquired, and to enhance the resource values, is located in the Implementation Component of this management plan.

Land Management Review

Section 259.036, Florida Statutes, established land management review teams to determine whether conservation, preservation, and recreation lands titled in the name of the Board of Trustees are being managed for the purposes for which they were acquired and in accordance with their approved land management plans. The DRP considered recommendations of the land management review team and updated this plan accordingly.

Gasparilla Island State Park was subject to a land management review on June 20, 2014. The review team made the following determinations:

- The land is being managed for the purpose for which it was acquired.
- The actual management practices, including public access, complied with the management plan for this site.

LAND USE COMPONENT

Introduction

Land use planning and park development decisions for the state park system are based on the dual responsibilities of the Florida Department of Environmental Protection (DEP), Division of Recreation and Parks (DRP). These responsibilities are to preserve representative examples of original natural Florida and its cultural resources, and to provide outdoor recreation opportunities for Florida's citizens and visitors.

The general planning and design process begins with an analysis of the natural and cultural resources of the unit, and then proceeds through the creation of a conceptual land use plan that culminates in the actual design and construction of park facilities. Input to the plan is provided by experts in environmental sciences, cultural resources, park operations, and management. Additional input is received through public workshops and through environmental and recreational user groups. With this approach, the DRP objective is to provide quality development for resource-based recreation throughout the state with a high level of sensitivity to the natural and cultural resources at each park.

This component of the unit plan includes a brief inventory of the external conditions and the recreational potential of the unit. Existing uses, facilities, special conditions on use, and specific areas within the park that will be given special protection, are identified. The Land Use Component then summarizes the current conceptual land use plan for the park, identifying the existing or proposed activities suited to the resource base of the park. Any new facilities needed to support the proposed activities are expressed in general terms.

External Conditions

An assessment of the conditions that exist beyond the boundaries of the unit can identify any special development problems or opportunities that exist because of the unit's unique setting or environment. This also provides an opportunity to deal systematically with various planning issues such as location, regional demographics, adjacent land uses, and park interaction with other facilities.

Gasparilla Island is located near the border of Charlotte and Lee counties, approximately 30 miles south of Venice in the southwest region of the state. The state park, itself, is located at the southern portion of the island and is fully within Lee County. The town of Boca Grande is closely adjacent to the park’s northern boundaries.

To the south is Cayo Costa Island. The pass between Gasparilla and Cayo Costa islands forms the mouth of Charlotte Harbor (see Vicinity Map). Access to the island and park is by the Boca Grande Causeway and Gasparilla Road.

Lee County is located within the Visit Florida Southwest Vacation Region. According to Visit Florida, during 2012, 93% of region's visitors came for leisure purposes with beach or waterfront activities being the top activity at 36%, which is inconsistent with the park's low visitation rates due to limited access to the park' beach use area. Most visitors stayed in non-paid accommodations, including residences of friends or family, a second home, or a timeshare with the longest average length stay of 6.8 nights. Winter and spring constitute the peak tourism seasons of the region with the median age of the adult traveler being 49 years (Visit Florida 2012).

Various significant public conservation lands are located within a 20-mile radius of Gasparilla Island State Park. Lands managed by the Southwest Florida Water Management District (SWFWMD) include Deer Prairie Creek and Myakka River. Lands managed by FWC include the 65,758-acre Fred C. Babcock-Cecil M. Webb Wildlife Management Area and 14,577-acre Yucca Pens Unit. The United States Fish and Wildlife Service (USFWS) manages the Pine Island National Wildlife Refuge. The Florida Forest Service (FFS) manages Myakka State Forest. Division of Recreation and Parks (DRP) manages four state parks, which are located in this region, including Don Pedro Island, Stump Pass Beach, Cayo Costa, and Charlotte Harbor Preserve. Resource-based recreational opportunities provided by these lands include paddling, boating, fishing, hiking, biking, horseback riding, swimming, picnicking, and camping.

Existing Use of Adjacent Lands

Land adjacent to Gasparilla Island State Park is occupied by single and multi-family housing, and limited resort and condominium development. Immediately north of the Lighthouse Use Area is the site of a former oil storage facility where several large petroleum tanks were operated by Florida Power and Light (FP&L). The site is now a brownfield. The outparcel between the Seawall and Seagrape use areas is used by a restaurant. Federal property immediately south of the Range Light/Sandspur Use Area contains the Boca Grande Range Light. The Division is currently pursuing acquisition of this parcel through the U.S. Department of Interior, Bureau of Land Management. Gulf Boulevard provides access to all use areas, terminating at the boundary of the southernmost parcel of the park. This road forms portions of the western boundary of the park for the interior parcels and the eastern boundary of parcels with beach access. The Boca Grande Bicycle Trail follows an old railroad bed on the east side of Gulf Boulevard for much of the length of the island. The park lies adjacent to the Gasparilla Sound-Charlotte Harbor Aquatic Preserve. Cayo Costa State Park is located to the south across Boca Grande Pass.

Planned Use of Adjacent Lands

Lee County Land Development Code (LDC) limits development on Gasparilla Island to a density of three dwelling units per acre and prohibiting any zoning changes other than to single-family residential classification. The unincorporated town of Boca Grande is a designated Historic District. Future land use designations on adjacent lands are Urban Community, Outer Islands, Public Facilities, and Wetland or Upland Conservation. Urban Community uses account for the majority of parcels adjacent to or the park. Land use designations within the park continue to be for Public Facilities and Wetland and Upland Conservation Lands. Land vacancy on Gasparilla Island is estimated at less than 15%, such that no space is available for new urban development. Comprehensive planning emphasis on Gasparilla Island is on historic preservation and environmental conservation. By contrast, substantial population growth and new urban development is anticipated throughout the mainland areas of Lee, Charlotte, and Sarasota counties (Lee County, 2013).

Property Analysis

Effective planning requires a thorough understanding of the unit's natural and cultural resources. This section describes the resource characteristics and existing uses of the property. The unit's recreation resource elements are examined to identify the opportunities and constraints they present for recreational development. Past and present uses are assessed for their effects on the property, compatibility with the site, and relation to the unit's classification.

Recreational Resource Elements

This section assesses the park’s recreational resource elements, those physical qualities that, either singly or in certain combinations, can support various resource-based recreation activities. Breaking down the property into such elements provides a means for measuring the property's capability to support potential recreational activities. This process also analyzes the existing spatial factors that either favor or limit the provision of each activity.

Land Area

The park occupies 128 acres on Gasparilla Island. The island is long and narrow with a low rolling topographic profile and an irregular configuration. The north-south orientation of this island parallels the mainland of Lee County. Although natural conditions have been altered by urban development, some areas still support plants, animals and other features typical of natural barrier islands.

Water Area

The southern third of the largest interior parcel of the park is comprised of wetlands. A shallow brackish depression known as Old South Bayou provides important habitat for birds and other wildlife. Deed restrictions prohibit public access to this area.

Shoreline
With more than one mile of white sand beach on the Gulf of Mexico, the recreational focus of the park is year-around access to sunbathing, swimming, and snorkeling. The park's expansive beachfront also offers opportunities for shoreline fishing and shelling.

Natural Scenery
The most outstanding views on Gasparilla Island are directed westward across the Gulf of Mexico and looking south across Boca Grande Pass to Cayo Costa State Park.

Significant Habitat
Beach and dune areas within the park provide valuable foraging and resting habitat for a number of shorebirds and seabirds. Visitors and birdwatchers have the opportunity to study a number of imperiled species including the least tern (*Sterna antillarum*), Wilson's plover (*Charadrius wilsonia*), snowy plover (*Charadrius alexandrinus*), sandwich tern (*Sterna sandvicensis*), roseate tern (*Sterna dougallii*), and black skimmer (*Rhynchops niger*). The Old South Bayou and associated mangroves provide important habitat for a variety of wildlife, the most visible being wading birds. Boca Grande Pass attracts large numbers of tarpon (*Megalops atlanticus*).

Natural Features
The unique natural features of the island are the focal point for most of the recreational activities at the park and provide opportunities for interpretation of the natural processes of barrier islands and the surrounding coastal and marine environment. The park's high energy Gulf beach and location at the north end of Boca Grande Pass are its most defining natural features. At a depth of 80 feet, Boca Grande Pass is the deepest pass in Florida. The park provides access to recreational shoreline fishing along the Gulf and pass shorelines.

Archaeological and Historic Features
Many of the structures and cultural remains of Gasparilla Island's rich history are still visible today. Of those located within the park, the wood-frame lighthouse and associated structures on the southern tip of the island are the most prominent. Built in 1890 to aid in port navigation, these classic landmarks are listed on the National Register of Historic Places. The lighthouse, keeper's residence, and storage building have been restored with the assistance of the GICIA. The lighthouse now serves as a museum and visitor center and is the centerpiece of historic interpretation at the park. Although not a historic structure, the Amory Chapel is an important reminder of the African American experience on Gasparilla Island. The Chapel is now used as a public meeting space.

Assessment of Use

All legal boundaries, significant natural features, structures, facilities, roads, and trails existing in the unit are delineated on the base map (see Base Map). Specific uses made of the unit are briefly described in the following sections.

Past Uses

Before acquisition by the state, most of the land that now comprises the park was in private ownership, ecologically disturbed yet undeveloped. Unauthorized dumping of debris occurred and a random network of jeep trails crisscrossed the island. Interior portions of the park had been used as a landing strip for small aircraft, golf course, and botanical nursery. Lighthouse keepers and their families lived and worked on the property until 1951. The Amory Chapel was once a church for a local African American congregation. Portions of the property donated by Lee County had been used as a county beach park.

Future Land Use and Zoning

The DRP works with local governments to establish designations that provide both consistency between comprehensive plans and zoning codes and permit typical state park uses and facilities necessary for the provision of resource-based recreation.

Land use designations within the park continue to be for Public Facilities, Wetland, and Upland Conservation Lands. No incompatible land uses or zoning changes are proposed for the Boca Grande community or Gasparilla Island.

Current Recreational Use and Visitor Programs

Recreational opportunities at Gasparilla Island State Park include swimming and snorkeling along the Gulf beach, picnicking, shoreline fishing, other beach activities, and interpretation of the historic lighthouse. The lighthouse is a museum and visitor center. Between January and May, during the park's primary tourism season, the park offers a variety of interpretive, educational, and recreational programs for adults and children.

Gasparilla Island State Park recorded 799,811 visitors in Fiscal Year (FY) 2012-2013. By DRP estimates, the FY 2012-2013 visitors contributed $35,260,272 million in direct economic impact, the equivalent of adding 564 jobs to the local economy. The park generated the sixth greatest direct economic impact in the state, among all parks and trails (FDEP 2013).

Other Uses

No uses, other than resource based recreational opportunity, conservation, and interpretation, are designated at this park.

Protected Zones

A protected zone is an area of high sensitivity or outstanding character from which most types of development are excluded as a protective measure. Generally, facilities requiring extensive land alteration or resulting in intensive

resource use, such as parking lots, camping areas, shops, or maintenance areas, are not permitted in protected zones. Facilities with minimal resource impacts, such as trails, interpretive signs, and boardwalks are generally allowed. All decisions involving the use of protected zones are made on a case-by-case basis after careful site planning and analysis.

At Gasparilla Island State Park, the maritime hammock, estuarine tidal swamp, and interior waters have been designated as protected zones. In addition, deed restrictions require the management of the park's interior area known as Old South Bayou as a nature preserve with no public access and development restrictions. The park's current protected zone is delineated on the Conceptual Land Use Plan.

Existing Facilities
Beach access and limited recreational facilities are provided at the park's four use areas. The Sandspur and Lighthouse use areas provide picnic facilities. The Lighthouse Use Area is also the location of the Boca Grande Lighthouse Museum and park administrative offices. The Amory Memorial Chapel is situated adjacent to the Dunes Use Area. Parking areas of varying size are provided at each use area and fees are collected through honor boxes. The Sandspur and Dunes use areas are the only locations with permanent restrooms. All other use areas are serviced by portable toilets. Support facilities at this park are centrally located and include the park manager's residence, and storage shed. The park's facilities are connected to central sewer and water (see Base Map).

Recreation Facilities
Sandspur Use Area
Small picnic shelters (8 shelters)
Restroom (with outside shower)
Parking (50 vehicles)
Honor box

Seagrape Use Area
Beach boardwalk
Portable toilets (2)
Unpaved parking (40 vehicles)
Honor box

Seawall Use Area
Unpaved parking (25 vehicles)
Portable toilets (2)
Honor box

GASPARILLA ISLAND STATE PARK

N

0 500 1,000 2,000 Feet

Florida Department of Environmental Protection
Division of Recreation and Parks
Date of aerial; 2011

BASE MAP

Dunes Use Area
Amory Memorial Chapel
Beach boardwalk (2)
Unpaved parking (120 vehicles)
Restroom (2)

Lighthouse Use Area
Boca Grande Lighthouse Museum and Visitor Center (historic lighthouse)
Administrative offices (historic assistant lighthouse keeper's residence)
Storage building (historic garage)
Large picnic shelter (8 tables)
Scattered tables (8) and grills (6)
Beach boardwalk
Portable toilets (2)
Unpaved parking (80 vehicles)
Honor box

Support Facilities
Shop Area
Park Manager's residence
Shop building (4-bay)
Storage shed
Flammable storage

Conceptual Land Use Plan

The following narrative represents the current conceptual land use proposal for this park. The conceptual land use plan is the long-term, optimal development plan for the park, based on current conditions and knowledge of the park's resources, landscape, and social setting (see Conceptual Land Use Plan). The conceptual land use plan is modified or amended, as new information becomes available regarding the park's natural and cultural resources or trends in recreational uses, in order to adapt to changing conditions. Additionally, the acquisition of new parkland may provide opportunities for alternative or expanded land uses. The DRP develops a detailed development plan for the park and a site plan for specific facilities based on this conceptual land use plan, as funding becomes available.

During the development of the conceptual land use plan, the DRP assessed the potential impact of proposed uses or development on the park resources and applied that analysis to determine the future physical plan of the park as well as the scale and character of proposed development. Potential resource impacts are also identified and assessed as part of the site planning process once funding is available for facility development. At that stage, design elements (such as existing topography, vegetation, sewage disposal, and stormwater management) and design constraints (such as imperiled species or cultural site locations) are investigated in greater detail. Municipal sewer connections, advanced wastewater treatment, or best available

technology systems are applied for on-site sewage disposal. Creation of impervious surfaces is minimized to the greatest extent feasible in order to limit the need for stormwater management systems, and all facilities are designed and constructed using best management practices to limit and avoid resource impacts. Federal, state, and local permit and regulatory requirements are addressed during facility development. This includes the design of all new park facilities consistent with the universal access requirements of the Americans with Disabilities Act (ADA). After new facilities are constructed, park staff monitors conditions to ensure that impacts remain within acceptable levels.

Potential Uses

Public Access and Recreational Opportunities

Goal: Provide public access and recreational opportunities in the park.

The existing recreational activities and programs of this state park are appropriate to the natural and cultural resources contained in the park and should be continued.

***Objective: Maintain the park's current recreational carrying capacity of 2,290 users per day*.**

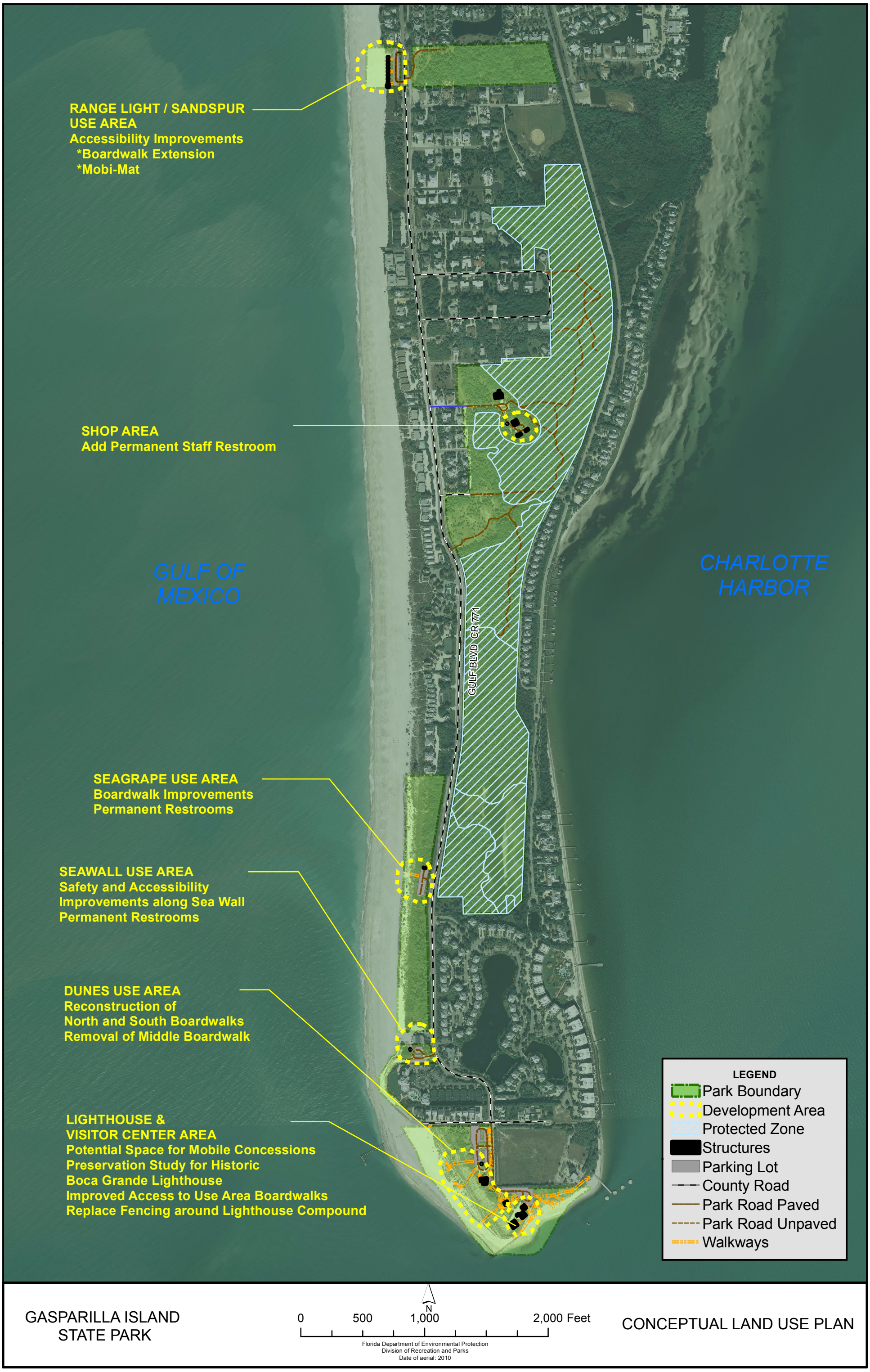
At Gasparilla Island State Park, emphasis is placed on the protection of the park's natural and cultural resources while providing access to beach recreation and historic interpretation. Five separate day use areas exist in the park, each of which offers direct beach access and other visitor amenities. Recreational activities at these use areas generally include swimming, snorkeling, shoreline fishing, and picnicking. The park continues to maintain and improve these use areas for an estimated total carrying capacity of 2,290 users per day. Proposed improvements to the park for the next ten-year planning period will not increase the park's total carrying capacity.

Objective: Continue to provide the current repertoire of five interpretive programs on a regular basis.

A ranger-led beach walk includes topics related to the park's natural and cultural history.

The Lighthouse Explorer's Club offers a series of educational programs about the island's natural resources and cultural history. Programs include lessons, art, guest speakers, and guided walks.

Shells by the Seashore is a program for all ages to educate visitors about types of area seashell. Seasonally, the park and Barrier Island Parks Society organize seashell collection events, such as a scavenger hunt and Easter shell hunt.


RANGE LIGHT / SANDSPUR
USE AREA
Accessibility Improvements
*Boardwalk Extension
*Mobi-Mat
SHOP AREA
Add Permanent Staff Restroom
GULF OF MEXICO
CHARLOTTE HARBOR
GULF BLVD CR 771
SEAGRAPE USE AREA
Boardwalk Improvements
Permanent Restrooms
SEAWALL USE AREA
Safety and Accessibility
Improvements along Sea Wall
Permanent Restrooms
DUNES USE AREA
Reconstruction of
North and South Boardwalks
Removal of Middle Boardwalk
LIGHTHOUSE &
VISITOR CENTER AREA
Potential Space for Mobile Concessions
Preservation Study for Historic
Boca Grande Lighthouse
Improved Access to Use Area Boardwalks
Replace Fencing around Lighthouse Compound
LEGEND
Park Boundary
Development Area
Protected Zone
Structures
Parking Lot
County Road
Park Road Paved
Park Road Unpaved
Walkways
GASPARILLA ISLAND
STATE PARK
N
0
500
1,000
2,000 Feet
Florida Department of Environmental Protection
Division of Recreation and Parks
Date of aerial: 2010
CONCEPTUAL LAND USE PLAN

The Wading Adventure is a guided tour through accessible shallow water around the park, exploring sea grass flats inhabited by marine flora and fauna.

A docent-led Port Boca Grande Lighthouse Museum tour tells about the history of Boca Grande from the time of Native Americans to the Lighthouse, the fishing and phosphate industries, to the present.

Proposed Facilities

Capital Facilities and Infrastructure

Goal: Develop and maintain the capital facilities and infrastructure necessary to implement the recommendations of the management plan.

The existing facilities of this state park are appropriate to the natural and cultural resources contained in the park and should be maintained. New construction, as discussed further below, is recommended to improve the quality and safety of the recreational opportunities, to improve the protection of park resources, and to streamline the efficiency of park operations. The following is a summary of improvements, renovations, or new facilities needed to implement the conceptual land use plan for Gasparilla Island State Park:

Objective: Maintain all public and support facilities in the park.

All capital facilities, trails and roads within the park will be kept in proper condition through the daily or regular work of park staff and/or contracted help.

Objective: Improve and repair six existing facilities at the park.

Major repair projects for park facilities may be accomplished within the ten-year term of this management plan, if funding is made available. These include the modification of existing park facilities to bring them into compliance with the Americans with Disabilities Act (a top priority for all facilities maintained by DRP). The following discussion of other recommended improvements and repairs is organized by use area within the park.

Range Light / Sandspur Beach Access
Improvements to accessibility are recommended, extending Mobi-Mat from the bathhouse walkway to the beach. The mat could be removed during designated shorebird or sea turtle nesting seasons or storm events.

Picnic shelters are located along a stretch of level beach parallel to a low-rise dune ridge. Improvements to the universal access to the picnic shelters and tables are recommended, including extension of the boardwalk directly to the first shelter.

The low-rise dune ridge that separates the parking lot from the beach is currently bisected by an informal footpath that bypasses the honor box. A fence

or barrier to assist with accretion of the dune ridge should be erected direct visitors around the dune along the designated walkway and protect and enhance the dune.

The DRP is evaluating options to lease the 7.4-acre parcel located adjacent to this use area. The parcel consists of beach dune and coastal strand natural communities and is the site of the historic Boca Grande Rear Range Light, which was placed on the National Register of Historic Places in 2012. Proposed recreational uses of the property include beach use activities (i.e., sun bathing, swimming, snorkeling, fishing, and picnicking) and interpretation of the historic range light structure. A picnic area and a short nature trail are also proposed on the property. The existing restrooms, picnic shelters, and parking area located adjacent to the range light parcel would serve to support visitors to the site. Stabilized surfaces such as boardwalks are recommended to facilitate access to the site from these existing use area facilities. Signage would direct visitors from the parking area to the site and interpret the structure's historical significance. Maintenance needs regarding the integrity of the structure or visitor safety would be promptly addressed. Long-term maintenance and recreational access needs would be addressed by a proposed historic preservation and interpretation plan.

The range light/sand spur use area includes the only paved parking in the park. Additional paved walkways to access the adjacent range light site may be required and increased visitor use may necessitate additional maintenance of the paved parking lot surface. Best stormwater management practices should be considered in the design of any future walkway and parking improvements.

Seagrape Beach Access
Permanent restroom facilities are needed to replace the portable toilets stationed in the parking area at this location. An existing sewer line adjacent to the parking area may serve the new restrooms. Off-grade construction may be required. Improvements to the boardwalk, including the addition of a ramp, are recommended for accessibility.

Seawall Beach Access
The defining character of this use area is the seawall and rocky shoreline, which remains as mitigation against beach erosion. Maintenance of the seawall is contingent upon the results of engineering studies conducted in 2012.

Permanent restroom facilities are needed at this site. Additional recommendations for the maintenance of this use area are for improvements to safety and accessibility. Beach sand above the sea wall has eroded, exposing concrete and asphalt debris from the former roadbed and seawall construction. Replenishing sand to this use area is important to reduce risk of injury to visitors. Improved access for swimming and fishing is recommended by constructing a boardwalk from the parking area to the seawall.

Dunes Beach Access
The three boardwalks in this area are in need of reconstruction. The north boardwalk extends from the parking area from an area adjacent to the existing bathhouse. The middle boardwalk extends from the Amory Chapel. The south boardwalk extends from the Boca Grande Lighthouse. When the north boardwalk is reconstructed, a section should be widened to create a scenic observation area with benches. The middle boardwalk near the Amory Chapel should be removed to enhance the natural scenery of the dune ridge.

The main park entrance from Belcher Road is located adjacent to the parking area of the Dunes Beach Access. During peak visitation, long lines of traffic form as entering vehicles stop to pay at the honor box. Traffic frequently backs into Belcher Road and passing or exiting vehicles become blocked. In order to reduce traffic congestion, park entrance modifications are recommended.

Lighthouse Beach Access and Use Area
This site is the park's primary visitor use and administrative area. Recommended improvements include replacement of the existing metal picnic pavilion with a wooden structure. The existing structure requires frequent repairs to mitigate rust and weather damage. A wooden structure will require less maintenance. The footprint of the existing shelter should be retained to preserve the adjacent grove of cabbage palms.

Delineations between public use areas and support or administration areas are not clearly marked. Improved walkways, landscaping, and signage are recommended to guide visitors from the parking lot to the boardwalk and lighthouse museum. An accessible visitor access path should be constructed across the gravel staff parking area adjacent to the lighthouse cisterns.

If additional property is acquired, the park office could be moved from the historic assistant lightkeeper's house and the historic structure could be restored for public interpretive use.

The chain-link perimeter fence around the lighthouse buildings should be replaced with a fence constructed from materials that complement the architecture of the lighthouse.

An engineering study is needed to evaluate actions for historic preservation. Structural concerns include a sagging support beam under the lighthouse on the lower northeast corner closest to the cisterns.

Shop Area
A permanent restroom with showers, locker storage, and changing rooms for rangers and maintenance staff is recommended. This facility should replace the existing portable toilet in the shop area.

Facilities Development

Preliminary cost estimates for these recommended facilities and improvements are provided in the Ten-Year Implementation Schedule and Cost Estimates (Table 7) located in the Implementation Component of this plan. These cost estimates are based on the most cost-effective construction standards available at this time. The preliminary estimates are provided to assist DRP in budgeting future park improvements, and may be revised as more information is collected through the planning and design processes. New facilities and improvements to existing facilities recommended by the plan include:

Rangelight / Sandspur
Beach access improvements (Mobi-Mat)
Boardwalk extension to picnic pavilions
Add fencing along dune ridge

Seagrape
Add permanent restrooms
Boardwalk access improvements

Seawall
Add permanent restrooms
Safety and accessibility improvements
Add boardwalk from parking area to seawall

Dunes
Reconstruct north and south boardwalks
Remove middle boardwalk

Lighthouse
Replace picnic pavilion
Access improvements
Replace fencing around lighthouse compound

Shop
Add permanent staff restroom

Recreational Carrying Capacity

Carrying capacity is an estimate of the number of users a recreation resource or facility can accommodate and still provide a high quality recreational experience and preserve the natural values of the site. The carrying capacity of a unit is determined by identifying the land and water requirements for each recreation activity at the unit, and then applying these requirements to the unit's land and water base. Next, guidelines are applied which estimate the physical capacity of the unit's natural communities to withstand recreational uses without significant degradation. This analysis identifies a range within which the carrying capacity most appropriate to the specific activity, the activity site and the unit's classification is selected (see Table 5).

The recreational carrying capacity for this park is a preliminary estimate of the number of users the unit could accommodate after the current conceptual development program has been implemented. When developed, the proposed new facilities would approximately increase the unit's carrying capacity as shown in Table 5.

Table 5: Recreational Carrying Capacity

	Existing Capacity		**Proposed Additional Capacity**		**Future Capacity**	
Activity/Facility	**One Time**	**Daily**	**One Time**	**Daily**	**One Time**	**Daily**
Beach Swimming and Picnicking	875	1,750			875	1,750
Shoreline Fishing	50	100			50	100
Amory Chapel	60	240			60	240
Lighthouse Museum	50	200			50	200
Totals	1,035	2,290			1,035	2,290

*Existing capacity revised from approved plan according to DRP guidelines.
*Capacity has not been established for the Range Light parcel as it was not under DRP management at the time of the unit management plan update.

Optimum Boundary

The optimum boundary map reflects lands considered desirable for direct management by the DRP as part of the state park. These parcels may include public or privately owned land that would improve the continuity of existing parklands, provide the most efficient boundary configuration, improve access to the park, provide additional natural and cultural resource protection or allow for future expansion of recreational activities. Parklands that are potentially surplus to the management needs of DRP are also identified. As additional needs are identified through park use, development, and research, and as land use

changes on adjacent property, modification of the park's optimum boundary may be necessary.

Identification of parcels on the optimum boundary map is intended solely for planning purposes. It is not to be used in connection with any regulatory purposes. Any party or governmental entity should not use a property's identification on the optimum boundary map to reduce or restrict the lawful rights of private landowners. Identification on the map does not empower or suggest that any government entity should impose additional or more restrictive environmental land use or zoning regulations. Identification should not be used as the basis for permit denial or the imposition of permit conditions.

The Division has approached the U.S. Department of Interior, Bureau of Land Management to acquire the parcel south of the Sandspur Use Area including the Boca Grande Rear Range Light. Acquisition of this parcel would add additional beach frontage and an important historic structure to the park.

A 10-acre parcel at the southern end of the park, owned by Florida Power and Light (FP&L) is located on the north side of the lighthouse use area. Since the parcel formerly contained oil silos, it is now considered a brownfield, which would require restoration prior to recreational public use. Acquisition of the FPL parcel would provide a range of use opportunities. Potential uses include administrative office space, parking, concession space, natural communities restoration, and historic interpretation.

The park also proposes management of the submerged lands located 25 feet seaward of the mean high waterline along the Gulf of Mexico and Boca Grande Pass shorelines (see Optimum Boundary Map). Management of submerged lands would allow DRP staff to enhance resource protection and recreational safety.

At this time, no lands are considered surplus to the needs of the park.

GASPARILLA ISLAND STATE PARK

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0 500 1,000 2,000 Feet

Florida Department of Environmental Protection
Division of Recreation and Parks
Date of aerial; 2011

OPTIMUM BOUNDARY MAP

IMPLEMENTATION COMPONENT

The resource management and land use components of this management plan provide a thorough inventory of the park's natural, cultural, and recreational resources. They outline the park's management needs and problems, and recommend both short and long-term objectives and actions to meet those needs. The implementation component addresses the administrative goal for the park and reports on the Division of Recreation and Parks (DRP) progress toward achieving resource management, operational, and capital improvement goals and objectives since approval of the previous management plan for this park. This component also compiles the management goals, objectives, and actions expressed in the separate parts of this management plan for easy review. Estimated costs for the ten-year period of this plan are provided for each action and objective, and the costs are summarized under standard categories of land management activities.

Management Progress

Since the approval of the last management plan for Gasparilla Island State Park in 2002, significant work has been accomplished and progress made towards meeting the DRP's management objectives for the park. These accomplishments fall within three of the five general categories that encompass the mission of the park and the DRP.

Park Administration and Operations

- Park staff and the Citizen Support Organization (CSO) has continued to operate and maintain the Boca Grande Lighthouse museum, visitor center, and gift shop.
- Three new golf carts for staff use and visitor services and one tractor for maintenance were purchased for the park by the CSO.
- The CSO has continued to organize annual fundraising events.
- The CSO and park and district staff have coordinated to implement plans according to the 2002 Unit Management Plan.

Resource Management

Natural Resources

- All Australian pines were removed from the park in 2010.
- Management Zone GA-3 (86 acres) was treated for exotic plant species through a grant received in 2008.
- Secondary treatment of exotics was successfully completed in Management Zone GA-3 in 2012.
- Two green sea turtle nests were protected through successful hatching in 2013.

- Beaches within Management Zones GA-1 and GA-4 were renourished in 2013 in conjunction with the Lee County beaches, which are located between park use areas.
- Management Zone GA-2 (8 acres) was treated for exotic species through a grant received in 2009.

Cultural Resources

- The historic Boca Grande Lighthouse buildings and museum collections are routinely maintained according to historic preservation standards and to continue providing interpretive opportunities to the public.

Park Facilities

- Mobi-Mat was placed in GA-6 for improved visitor access in 2011.
- Mobi-Mat was placed in GA-1 for improved visitor access in 2013.
- In 2013 in GA-6 a new bathhouse was built at the Dunes beach access area to replace the two portable toilets through a grant from the Lee County Tourism Development Council (TDC).
- Replacement of the boardwalk adjacent to the new bathhouse has been funded through a grant from the Lee County TDC.

Support Facilities

- A new 4-bay shop building was constructed through CSO and PIP funding in 2012.

Management Plan Implementation

This management plan is written for a timeframe of ten years, as required by Section 253.034 Florida Statutes. The Ten-Year Implementation Schedule and Cost Estimates (Table 7) summarizes the management goals, objectives, and actions that are recommended for implementation over this period and beyond. Measures are identified for assessing progress toward completing each objective and action. A time frame for completing each objective and action is provided. Preliminary cost estimates for each action are provided and the estimated total costs to complete each objective are computed. Finally, all costs are consolidated under the following five standard land management categories: Resource Management, Administration and Support, Capital Improvements, Recreation Visitor Services, and Law Enforcement.

Many of the actions identified in the plan can be implemented using existing staff and funding. However, a number of continuing activities and new activities with measurable quantity targets and projected completion dates are identified that cannot be completed during the life of this plan unless additional resources for these purposes are provided. The plan's recommended actions, time frames and cost estimates will guide the DRP's planning and budgeting activities over the period of this plan. It must be noted that these recommendations are based on the information that exists at the time the plan was prepared. A high degree of adaptability and flexibility must be built into this process to ensure that the DRP can

adjust to changes in the availability of funds, improved understanding of the park's natural and cultural resources, and changes in statewide land management issues, priorities, and policies.

Statewide priorities for all aspects of land management are evaluated each year as part of the process for developing the DRP's annual legislative budget requests. When preparing these annual requests, the DRP considers the needs and priorities of the entire state park system and the projected availability of funding from all sources during the upcoming fiscal year. In addition to annual legislative appropriations, the DRP pursues supplemental sources of funds and staff resources wherever possible, including grants, volunteers, and partnerships with other entities. The DRP's ability to accomplish the specific actions identified in the plan will be determined largely by the availability of funds and staff for these purposes, which may vary from year to year. Consequently, the target schedules and estimated costs identified in Table 7 may need to be adjusted during the ten-year management planning cycle.

Table 7
Gasparilla Island State Park
Ten-Year Implementation Schedule and Cost Estimates
Sheet 1 of 3

NOTE: THE DIVISION'S ABILITY TO COMPLETE THE OBJECTIVES OUTLINED BY THE MANAGEMENT PLAN IS CONTINGENT ON THE AVAILABILITY OF FUNDING AND OTHER RESOURCES FOR THESE PURPOSES.				
Goal I: Provide administrative support for all park functions.		**Measure**	**Planning Period**	**Estimated Manpower and Expense Cost* (10-years)**
Objective A	**Continue day-to-day administrative support at current levels.**	Administrative support ongoing	**C**	**$32,000**
Objective B	**Expand administrative support as new lands are acquired, new facilities are developed, or as other needs arise.**	Administrative support expanded	**LT**	**$10,000**
Goal II: Protect water quality and quantity in the park, restore hydrology to the extent feasible and maintain the restored conditions.		**Measure**	**Planning Period**	**Estimated Manpower and Expense Cost* (10-years)**
Objective A	**Monitor all hydrological functions at the park, and maintain the culverts in Old South Bayou.**	# Acres within proper hydrological functions	**UFN**	**$23,000**
Action 1	Check flow through culverts between South Bayou and Charlotte Harbor every six months.	Plan developed/updated	UFN	$3,000
Action 2	Assess other hydrological needs as they arise after large storm events.	Monitoring reports submitted	UFN	$20,000
Goal III: Maintain, improve, or restore imperiled species populations and habitats in the park.		**Measure**	**Planning Period**	**Estimated Manpower and Expense Cost* (10-years)**
Objective A	**Update baseline imperiled species occurrence inventory lists for plants and animals, as needed.**	List developed/updated	**C**	**$6,360**
Objective B	**Monitor and document 7 selected imperiled animal species in the park.**	# Species monitored	**C**	**$111,422**
Action 1	Continue implementing monitoring protocols for 7 imperiled animal species including the loggerhead turtle, green sea turtle, snowy plover, Wilson's plover, least tern, black skimmer, and American oystercatcher.	# Protocols developed	ST	$111,422
Objective C	**Monitor and document 1 selected imperiled plant species in the park.**	# Species monitored	**C**	**$4,024**
Action 1	Develop monitoring protocols for imperiled plant species.	# Protocols developed	ST	$2,404
Action 2	Continue implementing monitoring protocols at a tier 2 level for 1 imperiled plant species including Joewood.	# Species monitored	C	$1,620
Objective D	**Continue to improve protection and awerness of sensitive shorebird and sea turtle nesting areas**	# Species monitored	**C**	**$20,000**

* 2014 Dollars
ST = actions within 2 years
LT = actions within 10 years
C = long term or short term actions that are continuous or cyclical
UFN = currently unfunded need

Table 7
Gasparilla Island State Park
Ten-Year Implementation Schedule and Cost Estimates
Sheet 2 of 3

NOTE: THE DIVISION'S ABILITY TO COMPLETE THE OBJECTIVES OUTLINED BY THE MANAGEMENT PLAN IS CONTINGENT ON THE AVAILABILITY OF FUNDING AND OTHER RESOURCES FOR THESE PURPOSES.				
Goal IV: Remove exotic and invasive plants and animals from the park and conduct needed maintenance-control.		**Measure**	**Planning Period**	**Estimated Manpower and Expense Cost* (10-years)**
Objective A	**Annually treat 7 acres of exotic plant species in the park.**	# Acres treated	**C**	**$25,068**
Action 1	Annually develop/update exotic plant management work plan.	Plan developed/updated	C	$13,868
Action 2	Implement annual work plan by treating 7 acres in park, annually, and continuing maintenance and follow-up treatments, as needed.	Plan implemented	C	$11,200
Objective B	**Implement control measures on 3 exotic and nuisance animal species in the park.**	# Species for which control measures implemented	**C**	**$31,050**
Action 1	Continue to coordinate with USDA to remove raccoons, coyotes, and spiny-tailed iguanas.	# exotic and nuisance animals	C	$11,050
Action 2	Continue to implement the use of wire mesh to protect turtle nests from raccoons, coyotes, and other predators.	# Nests protected by wire mesh	C	$20,000
Goal V: Protect, preserve, and maintain the cultural resources of the park.		**Measure**	**Planning Period**	**Estimated Manpower and Expense Cost* (10-years)**
Objective A	**Assess and evaluate 3 of 3 recorded cultural resources in the park.**	Documentation complete	**C**	**$131,807**
Action 1	Complete assessment/evaluation of 3 archaeological sites. Prioritize preservation and stabilization projects.	Assessments complete	C	$2,307
Action 2	Restore 3 of the 3 recorded cultural resources in the park	# Sites restored or updated	UFN	$129,500
Objective B	**Compile reliable documentation for all recorded historic and archaeological resources.**	Documentation complete	**C**	**$6,190**
Action 1	Ensure all known sites are recorded or updated in the Florida Master Site File.	# Sites recorded or updated	C	$480
Action 2	Complete a predictive model for high, medium, and low probability of locating archaeological sites within the park.	Probability Map completed	UFN	$5,710

* 2014 Dollars
ST = actions within 2 years
LT = actions within 10 years
C = long term or short term actions that are continuous or cyclical
UFN = currently unfunded need

Table 7
Gasparilla Island State Park
Ten-Year Implementation Schedule and Cost Estimates
Sheet 3 of 3

NOTE: THE DIVISION'S ABILITY TO COMPLETE THE OBJECTIVES OUTLINED BY THE MANAGEMENT PLAN IS CONTINGENT ON THE AVAILABILITY OF FUNDING AND OTHER RESOURCES FOR THESE PURPOSES.				
Goal VI: Provide public access and recreational opportunities in the park.		**Measure**	**Planning Period**	**Estimated Manpower and Expense Cost* (10-years)**
Objective A	**Maintain the park's current recreational carrying capacity of 2,290 users per day.**	# Recreation/visitor	**C**	**$55,000**
Objective C	**Continue to provide the current repertoire of 5 interpretive, educational, and recreational programs on a regular basis.**	# Interpretive/education programs	**C**	**$20,000**
Goal VII: Develop and maintain the capital facilities and infrastructure necessary to meet the goals and objectives of this management plan.		**Measure**	**Planning Period**	**Estimated Manpower and Expense Cost* (10-years)**
Objective A	**Maintain all public and support facilities in the park.**	Facilities maintained	**C**	**$45,000**
Objective B	**Continue to implement the park's transition plan to ensure facilities are accessible in accordance with the American with Disabilities Act of 1990.**	Plan implemented	**LT**	**$10,000**
Objective C	**Improve and/or repair 6 existing facilities as identified in the Land Use Component.**	# Facilities/Miles of Trail/Miles of Road	**LT**	**$500,000**
Objective E	**Expand maintenance activities as existing facilities are improved and new facilities are developed.**	Facilities maintained	**LT**	**$4,000**
Summary of Estimated Costs				
Management Categories				**Total Estimated Manpower and Expense Cost* (10-years)**
Resource Management				**$338,921**
Administration and Support				**$42,000**
Capital Improvements				**$559,000**
Recreation Visitor Services				**$75,000**
Law Enforcement Activities[1]				
	1Law enforcement activities in Florida State Parks are conducted by the FWC Division of Law Enforcement and by local law enforcement agencies.			

* 2014 Dollars
ST = actions within 2 years
LT = actions within 10 years
C = long term or short term actions that are continuous or cyclical
UFN = currently unfunded need

Addendum 1—Acquisition History

Purpose of Acquisition

The Board of Trustees of the Internal Improvement Trust Fund of the State of Florida (Trustees) acquired Gasparilla Island State Park to protect, develop, operate, and maintain the property for public outdoor recreational, park, conservation, historic and related purposes.

Sequence of Acquisition

The initial acquisition of Gasparilla Island State Park took place on May 19, 1983, as a result a donation of a 108.41-acre property to the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida (Trustees) by Gasparilla Island Conservation and Improvement Association, Inc. Subsequent to this initial donation, the Trustees acquired several parcels through other donations and added them to the park. Presently Gasparilla Island State Park is comprised of approximately 127 acres.

Title Interest

The Trustees hold fee simple title to Seabranch Preserve State Park.

Lease Agreement

On March 12, 1984, the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida (Trustees) leased Gasparilla Island State Park to the State of Florida Department of Natural Resources, successor in interest to the State of Florida Department of Environmental Protection, Division of Recreation and Parks (DRP), under Lease No. 3338. This lease is for the initial period of thirty (30) years with two (2) ten (10) year renewal options. The first term of the thirty-year lease will expire on March 11, 2014. To date, the Trustees have made four (4) amendments to the lease during this term.

Special Condition on Use

Gasparilla Island State Park is designated as a single-use property to provide resource-based public outdoor recreation and other related uses. Uses such as water resource development projects, water supply projects, storm-water management projects, and linear facilities and sustainable agriculture and forestry are not consistent with the purpose for which DRP manages the park.

Outstanding Reservations

The DRP's lease from Trustees stipulates that all the property be used for public outdoor recreation and related purposes. The following outstanding rights, reservations and encumbrances apply to Gasparilla Island State Park.

Type of Instrument:	Special Warranty Deed
Grantor:	Gasparilla Island Conservation and Improvement Association, Inc.
Grantee:	Trustees
Beginning Date:	March 17, 1988
Ending Date:	In Perpetuity
Outstanding Restrictions:	This Special Warranty Deed is subject to the following terms and conditions that could last for one hundred (100) years as of the date of execution of the Special Warranty Deed unless sooner released or cancelled by mutual agreement between Grantor and Grantee: (1) The subject property is used only for public beach facility, (2) no concession stand is allowed on the subject property, (3) no impact to the existing dune line or vegetation on the subject property, and (4) no night-time use of said real property shall be allowed on the subject property .

Type of Instrument:	Indenture
Grantor:	Gasparilla Island Conservation and Improvement Association, Inc.
Grantee:	Trustees
Beginning Date:	September 23, 1986
Ending Date:	In Perpetuity
Outstanding Restrictions:	The indenture is subject to the following conditions for fifty (50) years as of the date of execution of the indenture unless the conditions are released or cancelled sooner by the grantor or its successors: (1) the subject land shall be used solely for public general park, outdoor recreation and conservation purposes, (2) no night-time use requiring lighting is allowed or permitted in the subject land, (3) no concession stands shall be allowed in the subject property and (4) no parking except in designated areas and no paving of parking lots in the subject area.

Type of Instrument:	Indentures (two indentures executed on the same day but for different parcels)
Grantor:	Gasparilla Island Conservation and Improvement Association, Inc.
Grantee:	Trustees
Beginning Date:	May 19, 1983
Ending Date:	In Perpetuity
Outstanding Restrictions:	(1) The two indentures are subject to a conservation easement which requires that the subject areas are maintained in their natural, scenic, open and wooded conditions suitable for fish, plants or wildlife; (2) The indentures also state that no development of any kind is allowed in the subject areas in general and construction or placing of buildings, roads, signs, and billboards are specifically prohibited ; (3) According to the indentures, the subject areas should be kept clean all the time and no dumping or placing of trash, waste or unsightly or offensive materials are allowed or tolerated; (4) The indentures state that the subject areas should be kept undisturbed and removal or destruction of trees, shrubs (and/or other vegetation), excavation or dredging (and/or removal of loam, peat, gravel, rock, or other material substance) from the subject areas in such manner as to affect the surface or activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation or fish and wildlife habitat reservation are prohibited; (5) According to the indentures, any development that takes place on the subject lands have to be in accordance with the site and architectural plans that exist for the subject areas and must be reviewed and approved by the grantor's development plans; and (6) The conservation easement, which is item 1 above, and all other restrictions stated above go with the subject lands (parcels) and violation of any one of them can result in reverting the title interest in these lands (parcels) to the grantor, assigns, heirs or successors in interest.

Addendum 2—Advisory Group Members and Report

Department of Environmental Protection
Division of Recreation and Parks

Gasparilla Island State Park
Unit Management Plan Amendment
Advisory Group
April 2, 2014

Local Government Representatives

Larry Kiker, Chairman
Lee County Board of County Commissioners
Old Lee County Courthouse
2120 Main Street
Fort Myers, Florida 33901

Agency Representatives

Chad Lach, Park Manager
Gasparilla Island State Park
880 Belcher Road
Boca Grande, Florida 33921

Traci Castellon, Regional Wildlife Biologist
Species Conservation Planning
Florida Fish & Wildlife Conservation Commission
3900 Drane Field Road
Lakeland, Florida 33811

Kevin Podkowka, Forestry Resources Administrator
Caloosahatchee District
2121 52nd Avenue Southeast
Naples, Florida 34117

Heather Stafford, Preserve Manager
Florida Coastal Office
Gasparilla Sound-Charlotte Harbor Aquatic Preserve
12301 Burnt Store Road
Punta Gorda, Florida 33955

Tourist Development Council Representative

Nancy MacPhee, Program Manager
Lee County Visitor & Convention Bureau
2201 Second Street, Suite 600
Fort Myers, Florida 33901

Environmental and Conservation Representatives

Grace Harvey, President
Boca Grande Sea Turtle Conservancy
Post Office Box 1150
Boca Grande, Florida 33921

Phillip O'Bannon, Executive Director
Mote Marine Laboratory
480 East Railroad Avenue, Railroad Plaza
Boca Grande, Florida 33921

Recreational User Representatives

Robert Johnson, Historian
Boca Grande Historical Society
Post Office Box 553
Boca Grande, Florida 33921

Captain Tom McLaughlin, Chairman
Save the Tarpon
Post Office Box 293
Boca Grande, Florida 33921

Adjacent Landowners

Misty Nichols, Executive Director
Gasparilla Island Conservation and Improvement Association
Post Office Box 446
Boca Grande, Florida 33921

Citizen Support Organization Representative

Sharon McKenzie, Executive Director
Barrier Island Parks Society, Inc.
880 Belcher Road, Post Office Box 637
Boca Grande, Florida 33921

Gasparilla Island State Park
Advisory Group Staff Report

The Advisory Group meeting to review the proposed unit management plan (UMP) for Gasparilla Island State Park was held in the Amory Chapel at Gasparilla Island State Park on Wednesday, April 2 at 9:00 AM.

David Harner represented the Lee County Board of County Commissioners. Tom Corcoran was in attendance with Misty Nichols. Representatives of Mote Marine Laboratory were not in attendance. All other appointed Advisory Group members were present. Misty Nichols provided written comments in addition to spoken comments at the meeting.

Attending Division of Recreation and Parks (DRP) staff members were Valinda Subic, Ezell Givens, Chris Becker, Jennifer Manis, Chad Lach, David Dearth, and Daniel Alsentzer.

Mr. Alsentzer began the meeting by explaining the purpose of the Advisory Group and reviewing the meeting agenda. He provided a brief overview of the DRP's planning process. Mr. Alsentzer summarized public comments received during the previous evening's public workshop. Mr. Alsentzer then asked each member of the Advisory Group to express his or her comments on the draft plan.

Summary of Advisory Group Comments

Sharon McKenzie (Barrier Island Parks Society (BIPS)) inquired about the status of the potential acquisition or lease of the Boca Grande Rear Rangelight. She noted that the plans for management of the lighthouse and its parcel are not included in the current draft of the unit management plan. Ms. McKenzie commended the attention to detail in the plan, but recommended generalizing the list of organized events and activities in the park since this list is subject to change over the course of the 10-year planning period.

Robert Johnson (Boca Grande Historical Society) complimented the plan as well written and thorough, but stated that the plan does not address the traffic congestion at the park's main gate. He recommended adding language to the land use component to propose a solution to this problem which has recently become a nuisance to adjacent landowners. Mr. Johnson recommended relocating the gate and pay station further south or converting to a *park and pay* system. Alternatively, he suggested constructing a round-about at the park entrance to facilitate exiting traffic when the parking lot is full. He added that the increased attendance at the park may require an overflow parking area.

Grace Harvey (Boca Grande Sea Turtle Conservancy) expressed concerns about the coyote population on Gasparilla Island and the resulting predation of sea turtles and shorebirds. She did not find that the *Exotic and Nuisance Species* section of the plan thoroughly addressed coyote removal and inquires whether a more effective strategy could be implemented. Ms. Harvey emphasized the value of the park's coastal habitat for sea turtle and shorebird nesting. She acknowledged the challenges of controlling coyotes in the park since trapping activities can only occur within the park boundary while coyotes inhabit the entire island.

David Harner (Lee County) inquired how the Division of Recreation and Parks allocates funding for capital improvements. He additionally inquired whether there is a contingency fund for general maintenance and emergency repairs, noting that increased development of use areas and higher rates of attendance at parks may require significant capital expenditures and reserves; especially at coastal parks vulnerable to storm events. Mr. Harner inquired about the regulations on the use of Mobi-Mat in beach dune areas. He recognized the potential disturbance to sea turtle or shorebird nesting habitat, but the low maintenance and comparatively low-impact of laying this type of removable matting versus constructing permanent boardwalk structures. He observed that Mobi-Mat typically extends further toward the mean high water line than boardwalk structures.

Misty Nichols (Gasparilla Island Conservation & Improvement Association (GICIA)) inquired about the likelihood that the DRP would acquire the Florida Power & Light parcel located adjacent to the park's Lighthouse Use Area. She noted the recreational and administrative purposes that this 10-acre parcel could serve for the park if acquired and inquired about the DRP's budget and prioritization system for land acquisition.

Ms. Nichols recommended clarification of the term "removal" for the DRP's method of controlling exotic and nuisance species in parks, since plants and animals are typically killed rather than trapped and removed. She also noted that the removal of exotic and invasive plant species occasionally diminishes the quality of adjacent landowners' viewshed through vegetated areas of the park. She recognized the need to remove invasive plants from the park's natural communities, but recommended repopulating cleared sites with native vegetation as quickly as possible in order to maintain the desired aesthetics of the island landscape. Ms. Nichols additionally asked for clarification of the high cost estimate for protected species monitoring, as it was unclear whether the estimates account for the entire next 10-year planning period. DRP staff confirmed that all cost estimates in the Implementation Component of the plan are projected for 10-year periods.

Ms. Nichols was concerned that the plan does not sufficiently address the maintenance of the seawall. She found that the plan lacks descriptive language about the resources and extent of land that are protected by the seawall. She noted that recent engineering models indicate that failure of the seawall could result in significant erosion in the area of the lighthouse, possibly jeopardizing the entire complex of historic structures.

Ms. Nichols identified a line in the Cultural Resources section that indicates all collections are owned and managed by the BIPS. She inquired whether a contingency plan exists in case the BIPS dissolves.

Ms. Nichols identified a line in the Acquisition History addendum stating that the first term of the park's lease agreement was set to expire on March 11, 2014. She inquired whether this lease agreement has been renewed and recommends explanation in the text.

Nancy MacPhee (Lee County Visitor & Convention Bureau) commented that the cost estimates in the *Implementation Spreadsheet* were indicated to have been calculated in terms of 2011 dollars. She recommends using tourism data from the Lee County Visitor & Convention Bureau rather than Visit Florida. Data provided by Visit Florida are less locally specific and do not necessarily capture the unique tourism trends of the Charlotte Harbor

and Gasparilla Island sub-region. Ms. MacPhee noted seemingly contradictory language in describing high rates of visitation at the park while also stating that access to the island limits attendance. She interpreted this statement to mean that although the park is highly visited, it would likely attract even higher numbers of visitors if access to the island was quicker or more direct. DRP staff confirmed that the park is among the most visited among all parks statewide, but would likely gain still more visitation if access to the island were less constrained.

Heather Stafford (Florida Coastal Office (FCO), Gasparilla Sound-Charlotte Harbor Aquatic Preserve) inquired whether there have been reports of lionfish in the adjacent waters of the park. She stated that among various reasons, the need to remove invasive-exotic species such as lionfish would support extending the park boundary 25 feet into submerged lands. Ms. Stafford inquired whether extension of the park boundary into submerged lands would subtract from the existing Gasparilla Sound-Charlotte Harbor Aquatic Preserve where there would be jurisdictional overlap. DRP staff explained that the park's boundary extension would not subtract from the existing aquatic preserve and that the overlapping jurisdictions of submerged lands would be jointly managed between the DRP and the Florida Coastal Office.

Ms. Stafford inquired whether the phosphate dock, which extends from the park beach into Boca Grande Pass, should be under the lease of Gasparilla Island State Park instead of Charlotte Harbor Preserve State Park. She explained the history of the dock's transfer from FCO to Charlotte Harbor Preserve. She noted the recreational potential of the dock for fishing and/or snorkeling. Ms. Stafford recommends a lease amendment to improve management efficiency.

Kevin Podkowka (Florida Forest Service (FFS)) inquired whether the DRP has considered the effects of saltwater infiltration on organic soils in upland areas of the park. He recommends monitoring for changes in soil chemistry when considering the potential effects of sea level rise.

Mr. Podkowka commented that prescribed fire may be appropriate for the Old South Bayou portion of the park. He suggests that fire-dependent wiregrass may be a significant plant species in the island's native ecosystem. Mr. Podkowka noted that islands often yield unique sub-species that park's should attempt to preserve. He stated that the FFS maintains the local natural histories and genetics of the unique ecosystems that it manages by using endemic seeds.

Mr. Podkowka commended the land use component of the UMP for its detailed descriptions of proposed future development, but found that the description of support facilities does not itemize the park's equipment or machinery. He stated that FFS management plans itemize all equipment or machinery that requires legislative budget approval (e.g., tractors, road graders, etc.). He stated that itemizing these assets in the management plan may lend additional credibility to funding requests.

Mr. Podkowka recommends using cold-rolled asphalt for permeable road or sidewalk paving. He stated that this type of permeable surface reduces the need for drainage ditching, roadside canals, or water conveyance and retention. He recommended this type of

pavement for the Rangelight use area to mitigate road flooding on Gulf Boulevard and avoid the need to allocate valuable land to stormwater infrastructure.

Captain Tom McLaughlin (Save the Tarpon) stated that boats along the shoreline conflict with beach use and shoreline fishing when Boca Grande Pass becomes crowded with fishing boats. He inquired whether current management authority over state sovereign submerged lands or the proposed 25-foot submerged lands boundary extension could be used to exclude boats from the park's recreational use areas. DRP staff explained the management authority that is provided within the 400-foot zone and the benefits of extending the park boundary. DRP staff noted that the only designated swimming beach is found at the park's northernmost use area where there is no history of boats interfering with beach users. DRP staff referenced the existing rule that only prohibits boats from beaching or anchoring on park beaches.

Mr. McLaughlin responded that the park could utilize the 25-foot submerged lands extension to designate a narrow vessel or motor exclusion zone, which would be beneficial to resource protection and shoreline fishermen.

Mr. McLaughlin noted that during fishing tournaments, boaters often use park restroom facilities without paying an access fee. He urged that if the park boundary is extended, then the DRP should evaluate methods of collecting access fees from boaters who use park facilities and account for this use when establishing the park's carrying capacity.

Traci Castellon (Florida Fish and Wildlife Conservation Commission (FWC)) commented that the potential for gopher tortoise habitat exists beyond the narrow ecotone between beach dune and coastal strand communities. She countered the statement in the General Management Measures section of the coastal strand description that advises against prescribed burning in the strand canopy. Based on language in the Imperiled Species section of the plan, Ms. Castellon inquired whether the park is in need of assistance from FWC with posting for shorebird protection. DRP staff responded that the park may require assistance from FWC or the U.S. Fish and Wildlife Service to post within the Rangelight parcel, where the DRP currently has no management authority. Ms. Castellon added that the advantage of posting in advance of the nesting season helps to ensure that potential nesting sites remain undisturbed and thereby attract shorebirds. Ms. Castellon additionally identified an erroneous reference to shorebird nesting in the month of May. Ms. Castellon affirmed that the FWC would support additional predator control in the park. She recommends minimizing ATV use during shorebird nesting season.

Summary of Written Comments

Misty Nichols (GICIA) provided a written version of her comments that were stated at the Advisory Group meeting, including editorial corrections.

Staff Recommendations

Division staff recommends approval of the proposed management plan for Gasparilla Island State Park as presented, with the following changes:

- Language will be added to Land Use Plan to consider park entrance modifications to reduce traffic congestion.
- Language will be added to further describe the resources that are protected by the seawall. The DRP will continue working to address structural concerns.
- Language will be added to recommend use of best stormwater management practices in the design of future parking and sidewalk improvements.
- The DRP is requesting extension of the park boundary25 feet into submerged lands that will allow DRP staff to manage resource protection, boating access, and recreational safety along the park's shoreline.

Additional revisions were made throughout the document to address editorial corrections, consistency of spellings and notations, and other minor corrections.

Notes on Composition of the Advisory Group

Florida Statutes Chapter 259.032 Paragraph 10(b) establishes a requirement that all state land management plans for properties greater than 160 acres will be reviewed by an advisory group:

"Individual management plans required by s. 253.034(5), for parcels over 160 acres, shall be developed with input from an advisory group. Members of this advisory group shall include, at a minimum, representatives of the lead land managing agency, co-managing entities, local private property owners, the appropriate soil and water conservation district, a local conservation organization, and a local elected official."

Advisory groups that are composed in compliance with these requirements complete the review of state park management plans. Additional members may be appointed to the groups, such as a representative of the park's Citizen Support Organization (if one exists), representatives of the recreational activities that exist in or are planned for the park, or representatives of any agency with an ownership interest in the property. Special issues or conditions that require a broader representation for adequate review of the management plan may require the appointment of additional members. DRP's intent in making these appointments is to create a group that represents a balanced cross-section of the park's stakeholders. Decisions on appointments are made on a case-by-case basis by DRP staff.

Addendum 3—References Cited

Braem, Sally. 2001. Personal communication.

Bureau of Beaches and Coastal Systems, Division of Water Resources Management, Department of Environmental Protection, Florida. Critically Eroded Beaches in Florida 2011. 75 pages.
http://www.state.fl.us/beaches/publications/tech-rpt.htm

Engeman, Richard. 2011. Reptile dysfunction: A review of the aggressive invasion of exotic reptiles in Florida with a focus on prominent species. Current Zoology.
16 pp.

FFWC (Florida Fish and Wildlife Conservation Commission). November 2010. Florida's Endangered and Threatened Species.10 pp.

FLEPPC (Florida Exotic Pest Plant Council). 2011. List of Invasive Plant Species. http://www.fleppc.org/list.htm

FNAI (Florida Natural Areas Inventory). 2010. Guide to the Natural Communities of Florida. Prepared by Florida Natural Areas Inventory and the Department of Natural Resources, Tallahassee, FL. 111 pp.

FNAI. 2010. Element Tracking Summary. 30 pp.

Henderson, Warren G., Jr. 1984. Soil Survey of Lee County, Florida. Soil Conservation
Service, U.S. Department of Agriculture. 185 pp. + 76 maps.

Hoeckel, Marilyn. 2001. Personal communication.

Lee County, Department of Community Development, Division of Planning. 2012. *The Lee Plan Codification*.

Myers, R., and Ewel, J. 1990. *Ecosystems of Florida*. University of Central Florida Press, Gainesville, Florida. 765 pp.

Nongame Wildlife Program Technical Report No.4. Ecology and Habitat Protection needs of Gopher Tortoise (*Gopherus Polyphemus*) Populations Found on Lands Slated for Large-Scale Development in Florida. 1987. Cox, et al. 69 pp.

Renker-Eich-Parks Architects.2003. Historic Structures Report On: Boca Grande Light-House Complex. Prepared for Florida Department of Environmental Protection Gasparilla Island, Florida.

Wunderlin, Richard and Bruce Hansen2003. *Guide to the Vascular Plants of Florida.* Second edition. University Press of Florida. Gainesville, Florida. 806 pp.

Addendum 4—Soil Descriptions

(2) Canaveral fine sand - This is a nearly level, moderately well drained and somewhat poorly drained soil on low ridges. Slopes are smooth to slightly convex and range from 0 to 2 percent.

Typically, the surface layer is black and dark gray fine sand mixed with shell fragments and is about 15 inches thick. The underlying layers are light brownish gray and light gray fine sand mixed with shell fragments to a depth of 80 inches or more.

Included with this soil are small areas of Captiva and Kesson soils. Included soils generally make up less than 10 percent of any mapped areas.

In most years, under natural conditions, this soil has a water table depth of 18 to 40 inches for 2 to 6 months. The water table recedes to a depth of more than 40 inches during February through July. The available water capacity is very low. Natural fertility is low. Permeability is very rapid.

Natural vegetation consists of cabbage palm, seagrape, wild coffee, and an understory of vines and weeds.

(5) Captiva fine sand - This is nearly level, poorly drained soil in sloughs. Slopes are smooth to concave and range from 0 to 1 percent.

Typically, the surface layer is black fine sand about 6 inches thick. The underlying layers are fine sand mixed with shell fragments to a depth of 80 inches or more. The upper 9 inches is pale brown with light gray streaks, the next 11 inches is light gray with many pale brown mottles, the next 4 inches is light gray with about 30 percent multicolored shell fragments, and the lower 50 inches is light gray.

Included with this soil in mapping are small areas of Canaveral and Kesson soils. Also included are scattered areas of Captiva fine sand that is ponded and soils that are similar to Captiva soils but have more than 35 percent multicolored shell fragments larger than 2 millimeters between depths of 10 and 40 inches. Included soils make up about 5 to 10 percent of any mapped area.

In most years, under natural conditions, this soil has a water table within a depth of 10 inches for 1 to 2 months. The water table is at a depth of 10 to 40 inches for 10 months during most years. In some years, the soils are covered by standing water for several days.

The available water capacity is low. Permeability is very rapid.

Natural vegetation consists of cabbage palm, Brazilian pepper, sand cordgrass, leatherleaf fern, and waxmyrtle.

(23) Wulfert Muck - This is a nearly level, very poorly drained soil in broad tidal swamps. Slopes are smooth and range from 0 to 1 percent.

Typically, the surface layer is muck that is dark reddish brown to a depth of 12 inches and dark brown to a depth of 36 inches. Beneath the muck is gray fine sand with light gray streaks and about 10 percent shell fragments.

Included with this soil in mapping, and making up about 15 percent of the mapping unit, are small areas of Kesson soils and soils similar to Wulfert soils, but with limestone at a depth of 20 to 40 inches.

The water table fluctuates with the tide. Areas are subject to tidal flooding.

The available water capacity is high in the organic horizons and low in the horizons below. Natural fertility is medium. Permeability is rapid.

Natural vegetation consists of American mangrove, black mangrove, and needlegrass.

(24) Kesson fine sand - This is a nearly level, very poorly drained soil in broad tidal swamps. Areas are subject to tidal flooding. Slopes are smooth and range from 0 to 1 percent.

Typically, the surface layer is about 6 inches of sand that contains shell fragments. The underlying layers are fine sand that contains shell fragments, and they extend to a depth of 80 inches or more. The upper 4 inches is pale brown, the next 3 inches is light brown, the next 25 inches is light gray with dark gray streaks, and the lower 42 inches is white.

Included with this soil in mapping are areas of Captiva and Wulfert soils and soils that have organic surface layers. Also included are soils that have loamy material throughout. Included soils make up about 10 to 15 percent of any mapped area.

The water table fluctuates with the tide. The available water capacity is low. Natural fertility is low. Permeability is moderately rapid or rapid.

Natural vegetation consists of black mangrove, batis, oxeye daisy, and American mangrove.

(48) St. Augustine sand - This is a nearly level, somewhat poorly drained soil that was formed by earthmoving operations. Most areas are former sloughs and depressions or other low areas that have been filled with sandy material. Slopes are smooth to slightly convex and range from 0 to 2 percent.

This soil has no definite horizonation because of mixing during reworking of the fill material. Typically, the upper 30 inches consists of mixed very dark grayish brown, very dark gray, dark gray, and gray sand with a few lenses of silt loam; it is about 20 percent multicolored shell fragments less than 3 inches in diameter. Below this to a depth of 80 inches or more there is undisturbed fine sand. The upper 10 inches is dark grayish brown with about 15 percent multicolored shell fragments. The lower 40 inches is light gray with about 30 percent multicolored shell fragments.

Included with this soil in mapping are areas where the fill material is underlain by organic soils and other areas where the fill material is less than 20 inches thick. Also included are areas that contain lenses or pockets of organic material throughout the fill. In addition, there are small scattered areas where the fill material is more than 35 percent shells or shell fragments. Several areas with some urban development have been included.

The depth to the water table varies with the amount of fill material and the extent of artificial drainage. However, in most years, the water table is 24 to 36 inches below the surface of the fill material for 2-4 months. It is below a depth of 60 inches during extended dry periods.

The available water capacity is low. Permeability is estimated to be rapid. Natural fertility is low.

Most of the natural vegetation has been removed. The present vegetation consists of cabbage palm and various scattered weeds.

This soil is poorly suited to most plants unless topsoil is spread over the surface to make a suitable root zone.

This soil has severe limitations for most urban and recreational uses. The sandy nature of the fill material, the high water table, and rapid permeability can cause pollution of ground water in areas with septic tank adsorption fields.

This St. Augustine soil is in capability subclass VIIs.

Addendum 5—Plant and Animal List

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)

PTERIDOPHYTES

Asian sword fern*	*Nephrolepis brownii*
Giant leather fern	*Acrostichum danaeifolium*
Tuberous sword fern*	*Nephrolepis cordifolia*
Golden polypody	*Phlebodium aureum*
Resurrection fern	*Pleopeltis polypodioides* var. *michauxiana*
Whisk fern	*Psilotum nudum*
Shoestring fern	*Vittaria lineata*

GYMNOSPERMS

Cardboard cycad*	*Zamia furfuracea*
Coontie	*Zamia pumila*

ANGIOSPERMS

Rosary pea*	*Abrus precatorius*
Earleaf acacia*	*Acacia auriculiformis*
False sisal	*Agave decipiens*
Sisal hemp*	*Agave sisalana*
Yellow joyweed	*Alternanthera flavescens*
Common ragweed	*Ambrosia artemisiifolia*
Coastal ragweed	*Ambrosia hispida*
Toothcups	*Ammannia latifolia*
Bushy bluestem	*Andropogon glomeratus* var. *pumilus*
Broomsedge	*Andropogon virginicus*
Marlberry	*Ardisia escallonioides*
Showy milkwory	*Asemeia violacea*
Sprenger's asparagus-fern*	*Asparagus aethiopicus*
Common asparagus-fern*	*Asparagus setaceus*
Crested saltbush	*Atriplex pentandra*
Black mangrove	*Avicennia germinans*
Saltwater false willow	*Baccharis angustifolia*
Saltbush	*Baccharis halimifolia*
Saltwort	*Batis maritima*
Beggartick	*Bidens alba*
Red spiderling	*Boerhavia diffusa*
Sea oxeye	*Borrichia frutescens*
Hairy gramma	*Bouteloua hirsuta*
American bluehearts	*Buchnera americana*
Gumbo-limbo	*Bursera simaruba*
Gray nicker	*Caesalpinia bonduc*
Coastal searocket	*Cakile lanceolata*
Baybean	*Canavalia rosea*

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Jamaican capertree	*Capparis jamaicensis*	
Papaya	*Carica papaya*	
Love vine	*Cassytha filiformis*	
Australian pine*	*Casuarina equisetifolia*	
Madagascar periwinkle*	*Catharanthus roseus*	
Slender sandbur	*Cenchrus gracillimus*	
Coastal sandbur	*Cenchrus spinifex*	
Spurred butterfly-pea	*Centrosema virginianum*	
Partridge pea	*Chamaecrista fasciculata*	
Sensitive pea	*Chamaecrista nictitans* var. *aspera*	
Limestone sandmat	*Chamaesyce blodgettii*	
Dixie sandmat	*Chamaesyce bombensis*	
Sand dune spurge	*Chamaesyce cumulicola*	BD
Pillpod sandmat	*Chamaesyce hirta*	
Graceful sandmat	*Chamaesyce hypericifolia*	
Coastal beach sandmat	*Chamaesyce mesembrianthemifolia*	
Snowberry	*Chiococca alba*	
Coco plum	*Chrysobalanus icaco*	
Purple thistle	*Cirsium horridulum*	
Jamaica swamp sawgrass	*Cladium jamaicense*	
Atlantic pigeonwings	*Clitoria mariana*	
Tread softly	*Cnidoscolus stimulosus*	
Seagrape	*Coccoloba uvifera*	
Whitemouth dayflower	*Commelina erecta*	
Buttonwood	*Conocarpus erectus*	
Canadian horseweed	*Conyza Canadensis*	
Florida tickseed	*Coreopsis floridana*	
Leavenworth's tickseed	*Coreopsis leavenworthii*	
Shakeshake*	*Crotalaria incana*	
Smooth rattlebox*	*Crotalaria pallida* var. *obovata*	
Rabbit-bells	*Crotalaria rotundifolia*	
Vente conmigo	*Croton glandulosus* var. *floridanus*	
Seaside croton	*Croton punctatus*	
Carrotwood*	*Cupaniopsis ancardioides*	
Fiveangled dodder	*Cuscuta pentagona*	
Gulf coast swallowwort	*Cynanchum angustifolium*	
Bermudagrass*	*Cynodon dactylon*	
Swamp flatsedge	*Cyperus ligularis*	
Fragrant flatsedge	*Cyperus odoratus*	
Many spike flatsedge	*Cyperus polystachyos*	
Durban crowfootgrass*	*Dactyloctenium aegyptium*	
Coinvine	*Dalbergia ecastaphyllum*	
Saltgrass	*Distichlis spicata*	
Varnish leaf	*Dodonaea viscosa*	
Coast cockspur	*Echinochloa walteri*	
False daisy	*Eclipta prostrata*	

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Canada spikerush	*Eleocharis geniculata*	
Florida tassel flower*	*Emilia fosbergii*	
Fireweed	*Erechtites hieraciifolius*	
Oakleaf fleabane	*Erigeron quercifolius*	
Beach creeper	*Ernodea littoralis*	
Coralbean	*Erythrina herbacea*	
Surinam cherry*	*Eugenia uniflora*	
Dogfennel	*Eupatorium capillifolium*	
Saltmarsh fingergrass	*Eustachys glauca*	
Pinewoods fingergrass	*Eustachys petraea*	
Marsh gentian	*Eustoma exaltatum*	
Council tree*	*Ficus altissima*	
Strangler fig	*Ficus aurea*	
Indian laurel*	*Ficus microcarpa*	
Hurricanegrass	*Fimbristylis cymosa*	
Marsh fimbry	*Fimbristylis spadicea*	
Florida yellowtops	*Flaveria floridana*	
Narrowleaf yellowtops	*Flaveria linearis*	
Florida swamp privet	*Forestiera segregata*	
Firewheel	*Gaillardia pulchella*	
Downy milkpea	*Galactia regularis*	
Coastal bedstraw	*Galium hispidulum*	
Hairy bedstraw	*Galium pilosum*	
Stiff marsh bedstraw	*Galium tinctorium*	
Southern beeblossom	*Gaura angustifolia*	
Seven-year apple	*Genipa clusiifolia*	
Waterspider false rein orchid	*Habenaria repens*	
Michaeux's orchid	*Habenaria quinquiseta*	
West coast prickly-apple	*Harrisia aboriginum*	CS, MAH
East coast dune sunflower	*Helianthus debilis*	
West coast dune sunflower	*Helianthus debilis* subsp. *vestitus*	BD, CG
Scorpion tail	*Heliotropium angiospermum*	
Seaside heliotrope	*Heliotropium curassavicum*	
Pineland heliotrope	*Heliotropium polyphyllum*	
Camphor weed	*Heterotheca subaxillaris*	
Mangrove spiderlily	*Hymenocallis latifolia*	
Cogon grass*	*Imperata cylindrical*	
Moonflower	*Ipomoea alba*	
Beach morning-glory	*Ipomoea imperati*	
Ocean-blue morning-glory	*Ipomoea indica*	
Man-of-the-earth	*Ipomoea pandurata*	
Railroad vine	*Ipomoea pes-caprae* subsp. *brasiliensis*	
Saltmarsh morning-glory	*Ipomoea sagittata*	
Beach moonflower	*Ipomoea violacea*	
Juba's bush	*Iresine diffusa*	
Big-leaf marsh elder	*Iva frutescens*	

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Beach elder	*Iva imbricata*	
Joewood	*Jacquinia keyensis*	CS, CG, MAH
Chandelier plant*	*Kalanchoe delagoensis*	
Life plant*	*Kalanchoe pinnata*	
Saltmarsh mallow	*Kosteletzkya virginica*	
White mangrove	*Laguncularia racemosa*	
Lantana*	*Lantana camara*	
Buttonsage	*Lantana involucrata*	
Virginia pepperweed	*Lepidium virginicum*	
White leadtree*	*Leucaena leucocephala*	
Peruvian primrose willow*	*Ludwigia peruviana*	
Christmasberry	*Lycium carolinianum*	
Wild bush bean*	*Macroptilium lathyroides*	
False mallow	*Malvastrum corchorifolium*	
Axilflower	*Mecardonia acuminate* subsp. *peninsularis*	
Snow squarestem	*Melanthera nivea*	
Rose natalgrass*	*Melinis repens*	
Creeping cucumber	*Melothria pendula*	
Poorman's patches	*Mentzelia floridana*	
Climbing hempvine	*Mikania scandens*	
Horsemint	*Monarda punctata*	
Hairawn muhly	*Muhlenbergia capillaris*	
Wax myrtle	*Myrica cerifera*	
Myrsine	*Myrsine cubana*	
Seaside evening-primrose	*Oenothera humifusa*	
Prickly-pear cactus	*Opuntia humifusa*	
Shell-mound prickly-pear	*Opuntia stricta*	BD, CS
Common yellow woodsorrel	*Oxalis corniculata*	
Beachgrass	*Panicum amarum*	
Torpedograss*	*Panicum repens*	
Switchgrass	*Panicum virgatum*	
Florida pellitory	*Parietaria floridana*	
Clustered pellitory	*Parietaria praetermissa*	
Virginia creeper	*Parthenocissus quinquefolia*	
Blue paspalum	*Paspalum caespitosum*	
Bahiagrass*	*Paspalum notatum*	
Thin paspalum	*Paspalum setaceum*	
Seashore paspalum	*Paspalum vaginatum*	
Corkystem passion flower	*Passiflora suberosa*	
Sand dune cinchweed	*Pectis glaucescens*	
Spreading cinchweed	*Pectis prostrata*	
Devil's backbone	*Pedilanthus tithymaloides* subsp. *smallii*	
Red bay	*Persea borbonia*	
Guinea hen weed	*Petiveria alliacea*	
Senegal date palm*	*Phoenix reclinata*	
Fogfruit	*Phyla nodiflora*	

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Drummond's leaf flower	*Phyllanthus abnormis*	
Coastal groundcherry	*Physalis angustifolia*	
Husk tomato	*Physalis pubescens*	
Pokeweed	*Phytolacca americana*	
Jamaican dogwood	*Piscidia piscipula*	
Devil's claw	*Pisonia aculeata*	
Cat's claw	*Pithecellobium unguis-cati*	
Virginia plantain	*Plantago virginica*	
Rosy camphorweed	*Pluchea baccharis*	
Sweetscent	*Pluchea odorata*	
Painted leaf	*Poinsettia cyathophora*	
Procession flower	*Polygala incarnata*	
Rustweed	*Polypremum procumbens*	
Pink purslane	*Portulaca pilosa*	
Red-stem purslane	*Portulaca rubricaulis*	
Sweet everlasting	*Pseudognaphalium obtusifolium*	
Wild coffee	*Psychotria nervosa*	
Live oak	*Quercus virginiana*	
White indigo-berry	*Randia aculeata*	
Red mangrove	*Rhizophora mangle*	
Michaux's snoutbean	*Rhynchosia michauxii*	
Dollarleaf	*Rhynchosia reniformis*	
Starrush whitetop	*Rhynchospora colorata*	
Castorbean*	*Ricinus communis*	
Rougeplant	*Rivina humilis*	
Cabbage palm	*Sabal palmetto*	
Annual glasswort	*Salicornia bigelovii*	
Tropical sage	*Salvia coccinea*	
Water pimpernel	*Samolus ebracteatus*	
Pineland pimpernel	*Samolus valerandi* subsp. *parviflorus*	
Mother-in-law's tongue*	*Sansevieria hyacinthoides*	
Perennial glasswort	*Sarcocornia ambigua*	
Inkberry	*Scaevola plumieri*	BD, CS
Beach naupaka*	*Scaevola taccada* var. *sericea*	
Australian umbrella tree*	*Schefflera actinophylla*	
Brazilian pepper*	*Schinus terebinthifolia*	
Sea purslane	*Sesuvium portulacastrum*	
Coastal foxtail	*Setaria corrugata*	
Coral foxtail	*Setaria macrosperma*	
Knotroot foxtail	*Setaria parviflora*	
Green foxtail*	*Setaria viridis*	
Broomweed	*Sida acuta*	
Saffron plum	*Sideroxylon celastrinum*	
Narrowleaf blue-eyed grass	*Sisyrinchium angustifolium*	
Ear-leaf greenbriar	*Smilax auriculata*	
Saw greenbriar	*Smilax bona-nox*	

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Common nightshade	*Solanum americanum*	
Black nightshade	*Solanum chenopodioides*	
Seaside goldenrod	*Solidago sempervirens*	
Common sow-thistle*	*Sonchus oleraceus*	
Yellow necklace pod*	*Sophora tomentosa* var. *occidentalis*	
Yellow necklace pod	*Sophora tomentosa* var. *truncata*	
Saltmarsh cordgrass	*Spartina alterniflora*	
Saltmeadow cordgrass	*Spartina patens*	
Shrubby false buttonweed*	*Spermacoce verticillata*	
Wedelia*	*Sphagneticola trilobata*	
Coral dropseed	*Sporobolus domingensis*	
Smutgrass*	*Sporobolus indicus*	
Whorled dropseed	*Sporobolus pyramidatus*	
Seashore dropseed	*Sporabolus virginicus*	
Diamond-flowers	*Stenaria nigricans*	
St. Augustinegrass	*Stenotaphrum secundatum*	
Sea blite	*Suaeda linearis*	
Bay cedar	*Suriana maritima*	
Java plum*	*Szygium cumini*	
Mahoe*	*Taliparitі tiliaceum*	
Cape honeysuckle*	*Tecoma capensis*	
Australian almond*	*Terminalia muelleri*	
Ballmoss	*Tillandsia recurvata*	
Spanish moss	*Tillandsia usneoides*	
Giant wild-pine	*Tillandsia utriculata*	MS, MAH
Poison ivy	*Toxicodendron radicans*	
Jamacian feverplant*	*Tribulus cistoides*	
Forked bluecurls	*Trichostema dichotomum*	
Coat buttons*	*Tridax procumbens*	
Southern cattail	*Typha domingensis*	
Sea oats	*Uniola paniculata*	
Frost weed	*Verbesina virginica*	
Hairypod cowpea	*Vigna luteola*	
Muscadine	*Vitis rotundifolia*	
Sleepy morning	*Waltheria indica*	
Washington fan palm*	*Washingtonia robusta*	
Spanish bayonet	*Yucca aloifolia*	
Hercules'-club	*Zanthoxylum clava-herculis*	
Wild lime	*Zanthoxylum fagara*	

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
FISH		
Spotted eagle ray	*Aetobatus narinari*	MUS
Sheepshead	*Archosargus probatocephalus*	MUS
Trumpet fish	*Aulostomus maculatus*	MUS
Gafftopsail catfish	*Bagre marinus*	MUS
Blue runner	*Caranx crysos*	MUS
Jack crevalle	*Caranx hippos*	MUS
Bull shark	*Carcharhinus leucas*	MUS
Blacktip shark	*Carcharhinus limbatus*	MUS
Sandbar shark	*Carcharhinus plumbeus*	MUS
Common snook	*Centropomus undecimalis*	MUS
Black sea bass	*Centropristis striata*	MUS
Spotted seatrout	*Cynoscion nebulosus*	MUS
Southern stingray	*Dasyatis Americana*	MUS
Ladyfish	*Elops saurus*	MUS
Goliath grouper	*Epinephelus itajara*	MUS
Nurse shark	*Ginglymostoma cirratum*	MUS
White grunt	*Haemulon plumierii*	MUS
Pinfish	*Lagodon rhomboids*	MUS
Mangrove snapper	*Lutjanus griseus*	MUS
Atlantic tarpon	*Megalops atlanticus*	MUS
Flathead mullet	*Mugil cephalus*	MUS
Gag grouper	*Mycteroperca microlepis*	MUS
Gulf flounder	*Paralichthys albiguttata*	MUS
Black drum	*Pogonias cromis*	MUS
Cobia	*Rachycentron canadum*	MUS
Red drum	Sciaenops ocellatus	MUS
Spanish mackerel	*Scomberomorus maculatus*	MUS
Southern puffer	*Sphoeroides nephelus*	MUS
Bonnethead shark	*Sphyrna tiburo*	MUS
Florida pompano	*Trachinotus carolinus*	MUS
Permit	*Trachinotus falcatus*	MUS
AMPHIBIANS		
Cuban treefrog*	*Osteopilus septentrionalis*	MTC
REPTILES		
American alligator	*Alligator mississippiensis*	MUS
Green anole	*Anolis carolinensis*	MTC
Cuban brown anole*	*Anolis sagrei*	MTC
Six-lined racerunner	*Aspidoscelis sexlineatus*	MTC

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Loggerhead sea turtle	*Caretta caretta*	BD, MUS
Green sea turtle	*Chelonia mydas*	BD, MUS
Southern black racer	*Coluber constrictor priapus*	MTC
Black spinytail iguana*	*Ctenosaura similis*	BD, DV
Gopher tortoise	*Gopherus polyphemus*	CB, CS, CG
Tropical house gecko*	*Hemidactylus mabouia*	DV
Green iguana*	*Iguana iguana*	MTC
Scarlet kingsnake	*Lampropeltis getula floridana*	MAH
Kemp's ridley sea turtle	*Lepidochelys kempii*	BD, MUS
Eastern coachwhip	*Masticophis flagellum flagellum*	CS, CG, MF
Mangrove salt marsh snake	*Nerodia clarkii compressicauda*	MS, MUS
Eastern ratsnake	*Pantherophis alleghaniensis*	MTC
Southeastern five-lined skink	*Plestiodon inexpectatus*	MTC
Florida box turtle	*Terrapene Carolina bauri*	CS, MAH

BIRDS

Cooper's hawk	*Accipiter cooperii*	OF
Spotted sandpiper	*Actitis macularia*	MUS, BD
Razorbill	*Alca torda*	MUS
Blue-winged teal	*Anas discors*	BM, BS, CDLK
Mottled duck	*Anas fulvigula*	OF
Anhinga	*Anhinga anhinga*	BM, BS, CDLK
Ruby-throated hummingbird	*Archilochus colubris*	OF
Great egret	*Ardea alba*	BD, MUS, MAH, MS
Great blue heron	*Ardea herodias*	MS, MUS, DM
Ruddy turnstone	*Arenaria interpres*	MUS
Cattle egret	*Bubulcus ibis*	MTC
Red-tailed hawk	*Buteo jamaicensis*	OF
Red-shouldered hawk	*Buteo lineatus*	MTC
Green heron	*Butorides virescens*	DM, MS, MUS
Sanderling	*Calidris alba*	MUS
Dunlin	*Calidris alpina*	MUS
Red knot	*Calidris canutus*	MUS
Stilt sandpiper	*Calidris himantopus*	MUS
Western sandpiper	*Calidris mauri*	MUS
Pectoral sandpiper	*Calidris melanotos*	MUS
Least sandpiper	*Calidris minutilla*	MUS
Semipalmated sandpiper	*Calidris pusilla*	MUS
Northern cardinal	*Cardinalis cardinalis*	MTC
Turkey vulture	*Cathartes aura*	MTC
Willet	*Catoptrophorus semipalmatus*	MUS, BD
Belted kingfisher	*Ceryle alcyon*	MUS, MAH, MS, DM
Chimney swift	*Chaetura pelagica*	MTC
Snowy plover	*Charadrius nivosus*	BD, MUS
Semipalmated plover	*Charadrius semipalmatus*	BD, MUS

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Killdeer	*Charadrius vociferus*	BD, MUS, CG
Wilson's plover	*Charadrius wilsonia*	BD, MUS
Common nighthawk	*Chordeiles minor*	OF
Mangrove cuckoo	*Coccyzus minor*	MS
Northern flicker	*Colaptes auratus*	MAH
Common ground-dove	*Columbina passerina*	BD, CS
Black vulture	*Coragyps atratus*	MTC
American crow	*Corvus brachyrhynchos*	MTC
Fish crow	*Corvus ossifragus*	MTC
Blue jay	*Cyanocitta cristata*	MTC
Pileated woodpecker	*Dryocopus pileatus*	MAH
Gray catbird	*Dumetella carolinensis*	MAH
Little blue heron	*Egretta caerulea*	MUS, MS, BD
Reddish egret	*Egretta rufescens*	MUS
Snowy egret	*Egretta thula*	MUS, MS, BD
Tricolored heron	*Egretta tricolor*	MUS, MS, BD
Swallow tailed kite	*Elanoides forficatus*	OF
White ibis	*Eudocimus albus*	MTC
Peregrine falcon	*Falco peregrinus*	BD, OF
American kestrel	*Falco sparverius*	OF
Magnificent frigatebird	*Fregata magnificens*	MUS
American coot	*Fulica americana*	MUS
Common gallinule	*Gallinula galeata*	MS
Common loon	*Gavia immer*	MUS
Gull-billed tern	*Gelochelidon nilotica*	MUS
American oystercatcher	*Haematopus palliates*	MUS, BD
Bald eagle	*Haliaeetus leucocephalus*	MTC
Black-necked stilt	*Himantopus mexicanus*	MUS
Barn swallow	*Hirundo rustica*	OF
Herring gull	*Larus argentatus*	BD, MUS
Laughing gull	*Larus atricilla*	BD, MUS
Ring-billed gull	*Larus delawarensis*	BD, MUS
Bonaparte's gull	*Larus philadelphia*	BD, MUS
Short-billed dowitcher	*Limnodromus griseus*	BD, MUS
Long-billed dowitcher	*Limnodromus scolopaceus*	MUS
Marbled godwit	*Limosa fedoa*	MUS
Red-bellied woodpecker	*Melanerpes carolinus*	MAH
Red-breasted merganser	*Mergus serrator*	MUS
Northern mockingbird	*Mimus polyglottos*	MTC
Black-and-white warbler	*Mniotilta varia*	MAH
Great crested flycatcher	*Myiarchus crinitus*	MAH
Long-billed curlew	*Numenius americanus*	MUS
Whimbrel	*Numenius phaeopus*	MUS
Yellow-crowned night heron	*Nyctanassa violacea*	MUS, MAH, MS
Black-crowned night heron	*Nycticorax nycticorax*	MUS, MAH, MS
Bridled tern	*Onychoprion anaethetus*	MUS

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Osprey	*Pandion haliaetus*	MTC
Northern parula	*Parula americana*	MAH
Indigo bunting	*Passerina cyanea*	MAH
Painted bunting	*Passerina ciris*	MAH
American white pelican	*Pelecanus erythrorhynchos*	MUS, OF
Brown pelican	*Pelecanus occidentalis*	MUS, OF
Double crested cormorant	*Phalacrocorax auritus*	MUS, MS
Eastern towhee	*Pipilo erythrophthalmus*	CS, MAH
Roseate spoonbill	*Platalea ajaja*	MUS
Glossy ibis	*Plegadis falcinellus*	MUS
Black-bellied plover	*Pluvialis squatarola*	BD, MUS
Blue-gray gnatcatcher	*Polioptila caerulea*	MAH
Boat-tailed grackle	Quiscalus major	MTC
Common grackle	*Quiscalus quiscula*	MTC
American avocet	*Recurvirostra americana*	MUS
Ruby-crowned kinglet	*Regulus calendula*	MAH
Black skimmer	*Rynchops niger*	BD, MUS
Eastern phoebe	*Sayornis phoebe*	MAH
Hooded warbler	*Setophaga citrina*	MAH
Yellow-rumped warbler	*Setophaga coronata*	MAH
Prairie warbler	*Setophaga discolor*	OF
Yellow-throated warbler	*Setophaga dominica*	MAH
Palm warbler	*Setophaga palmarum*	CS, MAH
Yellow warbler	*Setophaga petechia*	MAH
American redstart	*Setophaga ruticilla*	MAH
Blackpoll warbler	*Setophaga striata*	MAH
Northern rough-winged swallow	*Stelgidopteryx serripennis*	OF
Least tern	*Sterna antillarum*	BD, MUS
Forster's tern	*Sterna forsteri*	BD, MUS
Common tern	*Sterna hirundo*	BD, MUS
Royal tern	*Sterna maximus*	BD, MUS
Eurasian collared-dove*	*Streptopelia decaocto*	MTC
Barred owl	*Strix varia*	MAH
European starling*	*Sturnus vulgaris*	MTC
Northern gannet	*Sula bassanus*	MUS
Tree swallow	*Tachycineta bicolor*	OF
Sandwich tern	*Thalasseus sandvincensis*	BD, MUS
Carolina wren	*Thryothorus ludovicianus*	MAH
Brown thrasher	*Toxostoma rufum*	MAH
Lesser yellowlegs	*Tringa flavipes*	MUS
Greater yellowlegs	*Tringa melanoleuca*	BD, MUS
House wren	*Troglodytes aedon*	MTC
American robin	*Turdus migratorius*	OF
Gray kingbird	*Tyrannus dominicensis*	MAH, MS
White-eyed vireo	*Vireo griseus*	MAH
Mourning dove	*Zenaida macroura*	MTC

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)

MAMMALS

Coyote*	*Canis latrans*	MTC
Nine-banded armadillo*	*Dasypus novemcinctus*	MTC
Feral cats*	*Felis catus*	DV
North American river otter	*Lontra canadensis*	MS, MUS
Bobcat	*Lynx rufus*	CS, MAH, MS
Raccoon	*Procyon lotor*	MTC
Eastern gray squirrel	*Sciurus carolinensis*	MTC
Feral hog*	*Sus scrofa*	MTC
Marsh rabbit	*Sylvilagus palustris*	MAH
West Indian manatee	*Trichechus manatus*	MUS
Atlantic bottle-nose dolphin	*Tursiops truncates*	MUS

* Non-native Species

TERRESTRIAL

Beach Dune....BD
Coastal Berm....CB
Coastal Grassland....CG
Coastal Strand....CS
Dry Prairie....DP
Keys Cactus Barren....KCB
Limestone Outcrop....LO
Maritime Hammock....MAH
Mesic Flatwoods....MF
Mesic Hammock....MEH
Pine Rockland....PR
Rockland Hammock....RH
Sandhill....SH
Scrub....SC
Scrubby Flatwoods....SCF
Shell Mound....SHM
Sinkhole....SK
Slope Forest....SPF
Upland Glade....UG
Upland Hardwood Forest....UHF
Upland Mixed Woodland....UMW
Upland Pine....UP
Wet Flatwoods....WF
Xeric Hammock....XH

PALUSTRINE

Alluvial Forest....AF
Basin Marsh....BM
Basin Swamp....BS
Baygall....BG
Bottomland Forest....BF
Coastal Interdunal Swale....CIS
Depression Marsh....DM
Dome Swamp....DS
Floodplain Marsh....FM
Floodplain Swamp....FS
Glades Marsh....GM
Hydric Hammock....HH
Keys Tidal Rock Barren....KTRB
Mangrove Swamp....MS
Marl Prairie....MP
Salt Marsh....SAM
Seepage Slope....SSL
Shrub Bog....SHB
Slough....SLO
Slough Marsh....SLM
Strand Swamp....STS

Wet Prairie ..... WP

LACUSTRINE

Clastic Upland Lake ..... CULK
Coastal Dune Lake ..... CDLK
Coastal Rockland Lake ..... CRLK
Flatwoods/Prairie ..... FPLK
Marsh Lake ..... MLK
River Floodplain Lake..... RFLK
Sandhill Upland Lake ..... SULK
Sinkhole Lake ..... SKLK
Swamp Lake..... SWLK

RIVERINE

Alluvial Stream ..... AST
Blackwater Stream ..... BST
Seepage Stream ..... SST
Spring-run Stream ..... SRST

SUBTERRANEAN

Aquatic Cave ..... ACV
Terrestrial Cave ..... TCV

ESTUARINE

Algal Bed ..... EAB
Composite Substrate ..... ECPS
Consolidated Substrate ..... ECNS
Coral Reef ..... ECR
Mollusk Reef..... EMR
Octocoral Bed ..... EOB
Seagrass Bed ..... ESGB
Sponge Bed..... ESPB
Unconsolidated Substrate..... EUS
Worm Reef..... EWR

MARINE

Algal Bed ..... MAB
Composite Substrate ..... MCPS
Consolidated Substrate ..... MCNS
Coral Reef ..... MCR
Mollusk Reef ..... MMR
Octocoral Bed ..... MOB
Seagrass Bed ..... MSGB
Sponge Bed ..... MSPB
Unconsolidated Substrate ..... MUS
Worm Reef ..... MWR

ALTERED LANDCOVER TYPES

Abandoned field ..... ABF
Abandoned pasture ..... ABP
Agriculture ..... AG
Canal/ditch ..... CD
Clearcut pine plantation ..... CPP
Clearing CL
Developed ..... DV
Impoundment/artificial pond ..... IAP
Invasive exotic monoculture ..... IEM
Pasture - improved ..... PI
Pasture - semi-improved ..... PSI
Pine plantation ..... PP
Road ..... RD
Spoil area ..... SA
Successional hardwood forest ..... SHF
Utility corridor ..... UC

MISCELLANEOUS

Many Types of Communities ..... MTC
Overflying ..... OF

Addendum 6—Imperiled Species Ranking Definitions

The Nature Conservancy and the Natural Heritage Program Network (of which FNAI is a part) define an element as any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave or other ecological feature. An element occurrence (EO) is a single extant habitat that sustains or otherwise contributes to the survival of a population or a distinct, self-sustaining example of a particular element.

Using a ranking system developed by The Nature Conservancy and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks to each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element occurrences, estimated abundance (number of individuals for species; area for natural communities), range, estimated adequately protected EOs, relative threat of destruction, and ecological fragility.

Federal and State status information is from the U.S. Fish and Wildlife Service; and the Florida Fish and Wildlife Conservation Commission (animals), and the Florida Department of Agriculture and Consumer Services (plants), respectively.

FNAI GLOBAL RANK DEFINITIONS

G1 ..... Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1,000 individuals) or because of extreme vulnerability to extinction due to some natural or fabricated factor.

G2 ..... Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.

G3 ..... Either very rare or local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.

G4 ..... apparently secure globally (may be rare in parts of range)

G5 ..... demonstrably secure globally

GH ..... of historical occurrence throughout its range may be rediscovered (e.g., ivory-billed woodpecker)

GX ..... believed to be extinct throughout range

GXC ..... extirpated from the wild but still known from captivity or cultivation

G#? ..... Tentative rank (e.g.,G2?)

G#G# ..... range of rank; insufficient data to assign specific global rank (e.g., G2G3)

G#T# ..... rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1)

G#Q..... rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q)
G#T#Q..... same as above, but validity as subspecies or variety is questioned.
GU ..... due to lack of information, no rank or range can be assigned (e.g., GUT2).
G?..... Not yet ranked (temporary)
S1..... Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1,000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
S2..... Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
S3..... Either very rare or local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.
S4..... apparently secure in Florida (may be rare in parts of range)
S5..... demonstrably secure in Florida
SH ..... of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
SX..... believed to be extinct throughout range
SA..... accidental in Florida, i.e., not part of the established biota
SE..... an exotic species established in Florida may be native elsewhere in North America
SN ..... regularly occurring but widely and unreliably distributed; sites for conservation hard to determine
SU ..... due to lack of information, no rank or range can be assigned (e.g., SUT2).
S?..... Not yet ranked (temporary)
N ..... Not currently listed, nor currently being considered for listing, by state or federal agencies.

LEGAL STATUS

FEDERAL

(Listed by the U. S. Fish and Wildlife Service - USFWS)

LE ..... Listed as Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species that is in danger of extinction throughout all or a significant portion of its range.
PE ..... Proposed for addition to the List of Endangered and Threatened Wildlife and Plants as Endangered Species.
LT ..... Listed as Threatened Species. Defined as any species that is likely to become an endangered species within the near future throughout all or a significant portion of its range.

PT ..... Proposed for listing as Threatened Species.
C ..... Candidate Species for addition to the list of Endangered and Threatened Wildlife and Plants. Defined as those species for which the USFWS currently has on file sufficient information on biological vulnerability and threats to support proposing to list the species as endangered or threatened.
E(S/A) ..... Endangered due to similarity of appearance.
T(S/A) ..... Threatened due to similarity of appearance.
EXPE, XE..... Experimental essential population. A species listed as experimental and essential.
EXPN, XN .... Experimental non-essential population. A species listed as experimental and non-essential. Experimental, nonessential populations of endangered species are treated as threatened species on public land, for consultation purposes.

STATE

ANIMALS .. (Listed by the Florida Fish and Wildlife Conservation Commission - FWC)

FE ..... Federally-designated Endangered

FT ..... Federally-designated Threatened

FXN..... Federally-designated Threatened Nonessential Experimental Population

FT(S/A) ..... Federally-designated Threatened species due to similarity of appearance

ST..... Listed as Threatened Species by the FWC. Defined as a species, subspecies, or isolated population, which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat, is decreasing in area at a rapid rate and therefore is destined or very likely to become an endangered species within the near future.
SSC..... Listed as Species of Special Concern by the FWC. Defined as a population which warrants special protection, recognition or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance or substantial human exploitation that, in the near future, may result in its becoming a threatened species.

PLANTS .... (Listed by the Florida Department of Agriculture and Consumer Services - FDACS)

LE ..... Listed as Endangered Plants in the Preservation of Native Flora of Florida Act. Defined as species of plants native to the state that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973,as amended.

LT ..... Listed as Threatened Plants in the Preservation of Native Flora of Florida Act. Defined as species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in such number as to cause them to be endangered.

Addendum 7—Cultural Information

These procedures apply to state agencies, local governments, and non-profits that manage state-owned properties.

A. General Discussion

Historic resources are both archaeological sites and historic structures. Per Chapter 267, Florida Statutes, '*Historic property' or 'historic resource' means any prehistoric district, site, building, object, or other real or personal property of historical, architectural, or archaeological value, and folklife resources. These properties or resources may include, but are not limited to, monuments, memorials, Indian habitations, ceremonial sites, abandoned settlements, sunken or abandoned ships, engineering works, treasure trove, artifacts, or other objects with intrinsic historical or archaeological value, or any part thereof, relating to the history, government, and culture of the state."*

B. Agency Responsibilities

Per State Policy relative to historic properties, state agencies of the executive branch must allow the Division of Historical Resources (Division) the opportunity to comment on any undertakings, whether these undertakings directly involve the state agency, i.e., land management responsibilities, or the state agency has indirect jurisdiction, i.e. permitting authority, grants, etc. No state funds should be expended on the undertaking until the Division has the opportunity to review and comment on the project, permit, grant, etc.

State agencies shall preserve the historic resources which are owned or controlled by the agency.

Regarding proposed demolition or substantial alterations of historic properties, consultation with the Division must occur, and alternatives to demolition must be considered.

State agencies must consult with Division to establish a program to location, inventory and evaluate all historic properties under ownership or controlled by the agency.

C. Statutory Authority

Statutory Authority and more in depth information can be found at:
http://www.flheritage.com/preservation/compliance/guidelines.cfm

D. Management Implementation

Even though the Division sits on the Acquisition and Restoration Council and approves land management plans, these plans are conceptual. Specific information regarding individual projects must be submitted to the Division for review and recommendations.

Managers of state lands must coordinate any land clearing or ground disturbing activities with the Division to allow for review and comment on the proposed project. Recommendations may include, but are not limited to: approval of the project as submitted, cultural resource assessment survey by a qualified professional archaeologist, modifications to the proposed project to avoid or mitigate potential adverse effects.

Projects such as additions, exterior alteration, or related new construction regarding historic structures must also be submitted to the Division of Historical Resources for review and comment by the Division's architects. Projects involving structures fifty years of age or older, must be submitted to this agency for a significance determination. In rare cases, structures under fifty years of age may be deemed historically significant. These must be evaluated on a case by case basis.

Adverse impacts to significant sites, either archaeological sites or historic buildings, must be avoided. Furthermore, managers of state property should make preparations for locating and evaluating historic resources, both archaeological sites and historic structures.

E. Minimum Review Documentation Requirements

In order to have a proposed project reviewed by the Division, certain information must be submitted for comments and recommendations. The minimum review documentation requirements can be found at: http://www.flheritage.com/preservation/compliance/docs/minimum_review_documentation_requirements.pdf .

* * *

Questions relating to the treatment of archaeological and historic resources on state lands should be directed to:

Deena S. Woodward
Division of Historical Resources
Bureau of Historic Preservation
Compliance and Review Section
R. A. Gray Building
500 South Bronough Street
Tallahassee, FL 32399-0250

Phone: (850) 245-6425

Toll Free: (800) 847-7278
Fax: (850) 245-6435

The criteria to be used for evaluating eligibility for listing in the National Register of Historic Places are as follows:

1) Districts, sites, buildings, structures, and objects may be considered to have significance in American history, architecture, archaeology, engineering, and/or culture if they possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- **a)** are associated with events that have made a significant contribution to the broad patterns of our history; and/or
- **b)** are associated with the lives of persons significant in our past; and/or
- **c)** embody the distinctive characteristics of type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; and/or
- **d)** have yielded, or may be likely to yield, information important in prehistory or history.

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

- **a)** a religious property deriving its primary significance from architectural or artistic distinction or historical importance; or
- **b)** a building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or
- **c)** a birthplace or grave of an historical figure of outstanding importance if there is no appropriate site or building directly associated with his productive life; or
- **d)** a cemetery which derives its primary significance from graves of persons of transcendent importance, from age, distinctive design features, or association with historic events; or

e) a reconstructed building, when it is accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and no other building or structure with the same association has survived; or a property primarily commemorative in intent, if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or

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

Restoration is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations and additions while preserving those portions or features that convey its historical, cultural or architectural values.

Stabilization is defined as the act or process of applying measures designed to reestablish a weather resistant enclosure and the structural stability of an unsafe or deteriorated property while maintaining the essential form as it exists at present.

Preservation is defined as the act or process of applying measures necessary to sustain the existing form, integrity and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

Addendum 8 —Land Management Review

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
MARJORY STONEMAN DOUGLAS BUILDING
3900 COMMONWEALTH BOULEVARD
TALLAHASSEE, FLORIDA 32399-3000

RICK SCOTT
GOVERNOR

CARLOS LOPEZ-CANTERA
LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

MEMORANDUM

TO: Keith Singleton, Land Acquisition and Management Planner
Division of State Lands

FROM: Parks Small, Chief, Bureau of Natural and Cultural Resources
Division of Recreation and Parks

Lew Scruggs, Chief, Office of Park Planning
Division of Recreation and Parks

SUBJECT: Response to Draft Land Management Review (LMR) Gasparilla Island State Park

DATE: October 10, 2014

The Land Management Review draft report provided to DRP determined that management of Gasparilla Island State Park by the Division of Recreation and Parks met the two tests prescribed by law. Namely, the review team concluded that the land is being managed for the purposes for which it was acquired and in accordance with the land management plan.

Below are Additional Recommendations and Checklist Findings (items the LMR determined should be further addressed in the management plan update) of the draft LMR report, with our manager's response to each. The responses were prepared via a coordinated effort of the park, district office, and our offices.

FIELD REVIEW

Public Access & Education, specifically parking, received a below average score. The review team is asked to evaluate, based on information provided by the managing agency whether public access & education are sufficient.

Managing Agency Response: *Agree. Parking is consistently an issue on island parks where space is limited. Plans for improved parking and vehicle access are discussed in the newest unit management plan that was approved in 2014. Additional parking would be at the expense of imperiled coastal strand, beach dune, and maritime hammock natural communities.*

PLAN REVIEW

Adjacent Property Concerns, specifically discussion of potential surplus land determination, received a below average score. This is an indication that the management plan does not sufficiently address surplus lands.

Managing Agency Response: *Adjacent property concerns and the determination of surplus lands will more thoroughly addressed in the next management plan update. The current management plan was reviewed by the relevant agencies and was in full compliance with Chapters 253 and 259, F.S. and Chapter 18-2 FAC when it was approved by ARC. The next update of this plan will be in full compliance with changes made to the statutes noted above by the Florida Legislature in 2008.*

Thank you for your attention.

/gk

CC: Valinda Subic, Chief, Bureau of Parks District 4
Ezell (BJ) Givens, Assistant Chief, Bureau of Parks District 4
Chad Lach, Park Manager, Don Pedro Island State Park
Chris Becker, Environmental Specialist, Bureau of Parks District 4