Anastasia State Park

APPROVED
Unit Management Plan

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Division of Recreation and Parks
June 17, 2016

Florida Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Jonathan P. Steverson
Secretary

June 20, 2016

Ms. Sine Murray
Division of Recreation and Parks
Department of Environmental Protection
3900 Commonwealth Boulevard, MS 525
Tallahassee, Florida 32399-3000

RE: Anastasia State Park - Lease #2324 & 3608

Dear Ms. Murray:

On **June 17, 2016**, the Acquisition and Restoration Council recommended approval of the **Anastasia State Park** management plan. Therefore, 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 **Anastasia State Park** management plan. The next management plan update is due June 17, 2026.

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,

Joseph Wilson, Chief
Office of Environmental Services
Division of State Lands

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INTRODUCTION

Anastasia State Park is located in St. Johns County (see Vicinity Map). Access to the park is from State Road A1A, approximately one mile north of State Road 312 and two miles south of the Bridge of Lions (see Reference Map). The Vicinity Map also reflects significant land and water resources existing near the park.

Anastasia State Park was initially acquired on March 31, 1949 by the Florida Board of Forestry and Parks. Since the initial acquisition, the State has acquired three parcels – one through transfer, another through dedication, and a third through purchase under the Save Our Coast program. Currently, the park comprises 1,593 acres. The Board of Trustees of the Internal Improvement Trust Fund (Trustees) hold fee simple title to the park and on January 23, 1968, leased the park to the Florida Board of Parks and Historic Memorials (predecessor to the Division of Recreation and Parks) under a 99-year lease (Lease No. 2324) which will expire on January 22, 2067. On August 28, 1988, the Trustees assigned the lease (Lease Number 3608) to the DRP without changing any of the terms and conditions of the previous lease. The current lease will expire on January 22, 2067.

Anastasia 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 Anastasia State Park is to provide for resource-based public outdoor recreational activities, especially saltwater beach activities. 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

- Anastasia State Park provides habitat for a variety of imperiled animals including the largest population of the federally endangered Anastasia Island beach mouse on public lands. The park is also one of the most important areas for beach nesting shorebirds along the east coast of Florida.

- The park contains one of the largest, contiguous stands of the globally rare maritime hammock along Florida's east coast.

- The Spanish Coquina Quarries, listed on the National Register of Historic Places, are located in the park. These were the primary sources of coquina used in the construction of the Castillo de San Marcos and other buildings in the Spanish colonial town of St. Augustine.

- Anastasia State Park provides visitors an exceptional barrier island experience with four miles of beach and one mile of estuary shoreline for a

variety of saltwater-based recreational activities along Florida's highly developed northeast coast.

Anastasia 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.

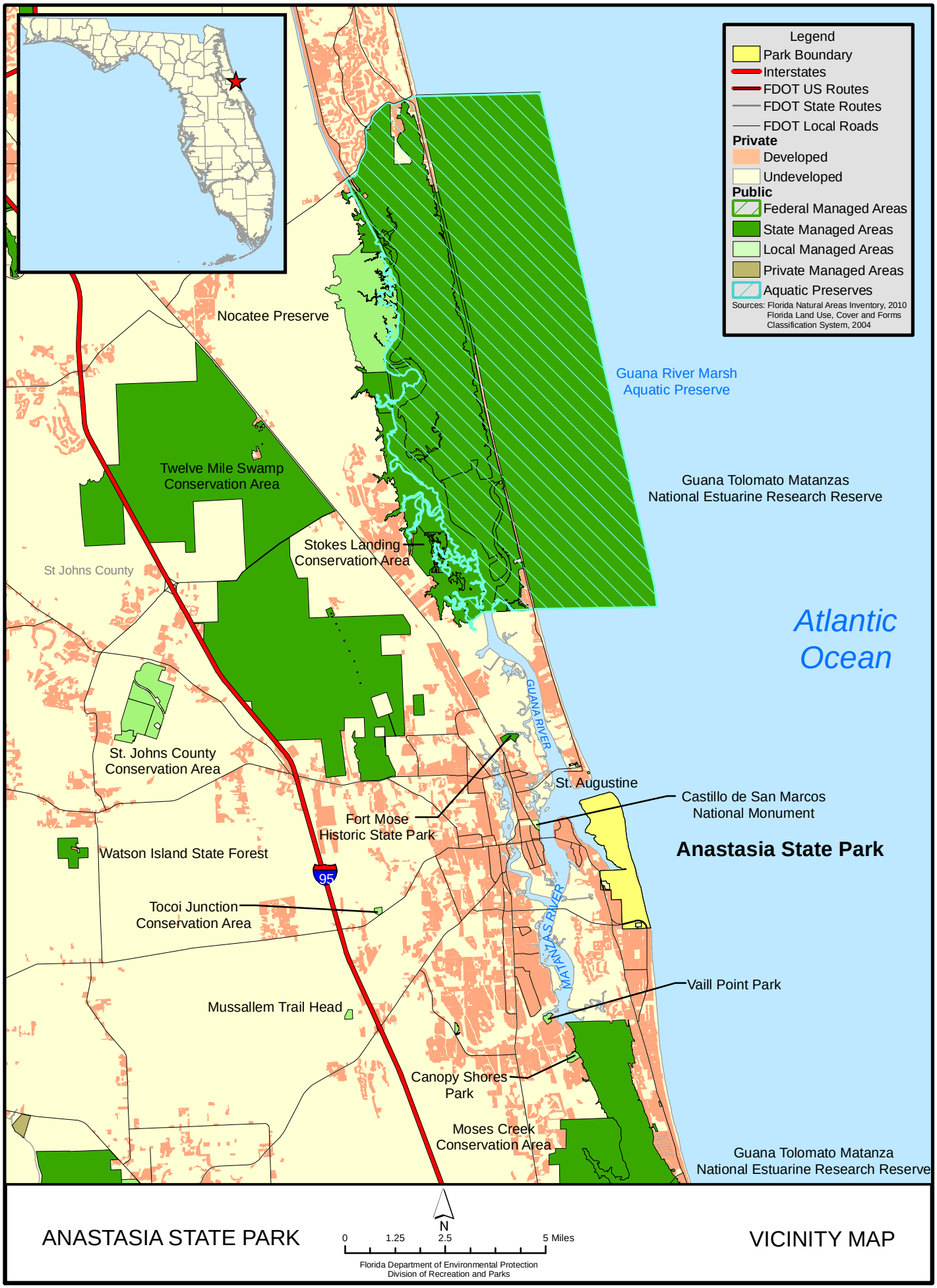
Purpose and Scope of the Plan

This plan serves as the basic statement of policy and direction for the management of Anastasia 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 2004 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


Legend
Park Boundary
Interstates
FDOT US Routes
FDOT State Routes
FDOT Local Roads
Private
Developed
Undeveloped
Public
Federal Managed Areas
State Managed Areas
Local Managed Areas
Private Managed Areas
Aquatic Preserves
Sources: Florida Natural Areas Inventory, 2010
Florida Land Use, Cover and Forms Classification System, 2004
Nocatee Preserve
Guana River Marsh Aquatic Preserve
Twelve Mile Swamp Conservation Area
Guana Tolomato Matanzas National Estuarine Research Reserve
Stokes Landing Conservation Area
St Johns County
Atlantic Ocean
GUANA RIVER
St. Johns County Conservation Area
St. Augustine
Castillo de San Marcos National Monument
Fort Mose Historic State Park
Anastasia State Park
Watson Island State Forest
95
Tocoi Junction Conservation Area
MATANZAS RIVER
Vaill Point Park
Mussallem Trail Head
Canopy Shores Park
Moses Creek Conservation Area
Guana Tolomato Matanza National Estuarine Research Reserve
ANASTASIA STATE PARK
N
0
1.25
2.5
5 Miles
Florida Department of Environmental Protection
Division of Recreation and Parks
VICINITY MAP

ANASTASIA STATE PARK

0 487.5 975 1,950 Feet

Florida Department of Environmental Protection
Division of Recreation and Parks
Date of Aerial: 2010

REFERENCE MAP

(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.

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 Coastal 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 August 26 and 27, 2015, respectively. Meeting notices were published in the Florida Administrative Register, August 18, 2015 [VOL 41/160], 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

Anastasia State Park 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 designated site in 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 also classified as Class III waters by the Department. This park is not within or adjacent to an 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: Anastasia State Park Management Zones			
Management Zone	**Acreage**	**Managed with Prescribed Fire**	**Contains Known Cultural Resources**
AN-01	40.61	N	Y
AN-02	37.13	N	N
AN-03	57.81	N	Y
AN-04	55.45	N	Y
AN-05	5.19	N	N
AN-06	6.80	N	N
AN-07	19.47	N	Y
AN-08	95.33	N	Y
AN-09	46.29	N	Y
AN-10	32.38	N	N
AN-11	1196.70	Y	Y

Resource Description and Assessment

Natural Resources

Topography

Anastasia State Park is located within the Eastern Flatwoods District (Brooks 1981a). Within this district, the park lies along the Central Atlantic Coastal Strip physiographic division. This area was created or was modified by shoreline processes during the Late Pleistocene, when sea levels were at about 18 feet (six to ten feet above its present level). In this division, the park lies along the St. Augustine-Edgewater Ridge. The park is also situated along the Silver Bluff Terrace, which formed during the Pleistocene; during the formation of this terrace, sea level was approximately 8 to 10 feet higher than the current level (Healy 1975). Elevations in the park range from sea level to 30 feet (see Topographical Map).

Geology

The unit is underlain by two different geologic deposits (Brooks 1981b). The majority of the park (with the exception of the westernmost part) consists of Holocene deposits of undifferentiated sand, shell, clay, marl, and peat, laid mostly less than 4500 years before the present. The oldest deposits occur on the Anastasia Formation, which formed during the Pleistocene. This formation is characterized by high-energy beach and bar, shelly sand with some dune sand, and loose coquina to very hard shelly limestone.

Soils

The Natural Resources Conservation Service identified eight soil types in Anastasia State Park in the Soil Survey of St. Johns County (Soil Survey Staff 2011). The

ANASTASIA STATE PARK

N

0 500 1,000 2,000 Feet

Florida Department of Environmental Protection
Division of Recreation and Parks
Date of Aerial: 2010

MANAGEMENT ZONES MAP

Legend

0 Feet
2 Feet
4 Feet
6 Feet
8 Feet
10 Feet
12 Feet
14 Feet
16 Feet
18 Feet
20 Feet
22 Feet

N

0 500 1,000 2,000 Feet

Florida Department of Environmental Protection
Division of Recreation and Parks
Date of Aerial: 2010

ANASTASIA STATE PARK

TOPOGRAPHIC MAP

ANASTASIA STATE PARK

SOILS MAP

locations of these soil types within the unit are shown on the soils map (see Soils Map). Addendum 4 contains detailed descriptions of the soil types within this unit.

An extensive amount of erosion has occurred at both ends of the park; at the north end the erosion is due to repeated dredging of the ebb shoal, and at the south end of the park the erosion is due to the influence of the St. Augustine Inlet and its jetties. Past efforts to slow the erosion at the south end of the park have included the placement of riprap and sand on the south beach. Beach nourishment will be periodically needed to mitigate the erosion.

The riprap, placed years ago to protect what was then State Road A1A, was removed in 2002. Four beach renourishment projects have taken place in the park since 2002.

Soil erosion is also occurring along some areas of the nature trail where bicyclists and hikers have bypassed trail steps. Management activities will follow generally accepted best management practices to prevent soil erosion and conserve soil and water resources on site.

Minerals

No deposits of commercially valuable minerals have been identified at the park.

Hydrology

Anastasia State Park is located within the Upper East Coast drainage basin, which covers approximately 730 square miles (Hand et al. 1996). This basin, which begins south of Jacksonville, extends southward to New Smyrna Beach, consists of a coastal ridge which separates the Atlantic Ocean from a narrow lagoon system and the mainland. The park is bordered to the east by the Atlantic Ocean and on the north by St. Augustine Inlet. Salt Run extends south from the Inlet, bisects the park, and terminates north of the main beach parking lot.

Two aquifers are found in the region of the park (Hyde 1965). The shallow aquifer is composed of Pleistocene and Recent deposits of sand and shell; it may extend downward in some areas to include Miocene or Pliocene-age deposits. This aquifer is often of limited horizontal and vertical extent and generally exists as a water table aquifer. Occasionally it is confined by clay beds that place it under artesian pressure. Recharge is by rainfall and discharge occurs through evapotranspiration and seepage to surface water bodies.

This unit is underlain by the Floridan aquifer. In this area of the state, this aquifer contains highly mineralized water (Hyde 1965). Recharge to the Floridan aquifer near the park is minimal (Stewart 1980; Fernald and Patton 1984).

The water quality of Salt Run has exceeded standard for fecal coliform levels since 1993. St. Johns County Health Department tests water quality in Salt Run monthly and posts the information on their website. In addition, there is a Florida

Department of Health sign posted at the kayak rental area at Salt Run which displays monthly status updates on Salt Run's water quality.

Natural Communities

This section of the management plan describes and assesses each of the natural communities found in the state park. It also describes of 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 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 a "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 seven distinct natural communities as well as altered landcover types (see Natural Communities Map). A list of known plants and animals occurring in the park is contained in Addendum 5.

<u>Beach Dune</u>

Desired future condition: A coastal mound or ridge of unconsolidated sediments found along shorelines with high energy waves. Vegetation will consist of herbaceous dune-forming grass species such as sea oats (*Uniola paniculata*) and saltmarsh cordgrass (*Spartina alterniflora*). Other typical species may include searocket (*Cakile* spp.), railroad vine (*Ipomea pes-caprae*), seashore paspalum (*Paspalum vaginatum*), beach morning-glory (*Ipomea imperati*), and east coast

ANASTASIA STATE PARK

NATURAL COMMUNITIES
EXISTING CONDITIONS MAP

dune sunflower (*Helianthus debilis debilis*). Occasionally shrubs such as wax myrtle (*Myrica cerifera*) may be scattered within the herbaceous vegetation.

Description and assessment: Beach dune generally occurs parallel to the shoreline along the east and north part of Conch Island. South of Range Monument 127 (R127; see Reference Map), this community can be considered to be in good to excellent condition. There are healthy populations of sea oats, railroad vine, beach morning-glory, seashore paspalum, and seacoast marshelder (*Iva imbricata*). There has been substantial erosion and loss of this natural community north of R127 associated with repeated dredging of the ebb shoal offshore of the inlet and Conch Island; erosion north of R125 has been in excess of 900 feet from the pre-dredging coastline. As a result, the condition of this community north of R127 is considered poor. The degradation and loss of this habitat will prove harmful to the last large population of the federally endangered Anastasia Island beach mouse (*Peromyscus polionotus phasma*) on publicly owned lands. Resting, loafing, and nesting habitat for shorebirds, including least terns (*Sterna antillarum*), Wilson's plovers (*Charadrius wilsonia*), and piping plovers (*Charadrius melodus*) has been lost, as has habitat for nesting sea turtles.

General management measures: South of R127 this natural community is in a maintenance state requiring little management other than protection from visitor impacts. In order to stabilize this community north of R127, erosion must be addressed and reversed. It may be necessary for beach renourishment projects to be conducted to restore this community in the northern area of the park.

Coastal Grassland

Desired future condition: A predominantly herbaceous community occupying the flatter and drier portions of the transition zone between the primary beach dunes and the natural communities dominated by woody species (such as coastal strand or maritime hammock). With the exception of overwash from severe storms, it is a relatively stable community compared to the dynamic primary dunes. Coastal grassland occurs primarily on the broader barrier islands and capes along the sandy coasts of Florida. Characteristic plant species include bluestem grasses (*Andropogon* spp.), camphorweed (*Heterotheca subaxillaris*) and earleaf greenbriar (*Smilax auriculata*). Other common species include sea oats (*Uniola paniculata*) and marshhay cordgrass (*Spartina patens*).

Description and assessment: Coastal grassland can be found on Conch Island, north of Pope Road, and west of the beach dune community. It also occurs as pockets within the coastal interdunal swale community. In general, it is sparsely herbaceous, with scattered sea oats, bluestems, muhly grass (*Muhlenbergia capillaris*), sand cordgrass (*Spartina bakeri),* and pricklypear (*Opuntia* spp.). It is in good to excellent condition.

General management measures: This natural community is in a maintenance state requiring little management other than protection from visitor impacts. Although Florida Natural Areas Inventory does not ascribe a fire return interval for this

community, prescribed fire will occasionally be utilized to reduce fuel accumulation and to delay natural succession of vegetation.

Coastal Interdunal Swale

Desired future condition: A variable community which occurs as marshes, moist grasslands, dense shrublands, or damp flats which occur in strips between successive dune ridges that develop as beach building occurs seaward (accretion). Dominant plant species are quite variable and a function of local hydrology, salt water occurrence, and the age of the swale. Wetter areas can include needle rush (*Juncus roemerianus*), while shallower areas have diverse mixture of herbs, including spadeleaf (*Centella asiatica*) and broomsedges (*Andropogon* spp.). Shrubby areas may contain wax myrtle (*Myrica cerifera*) or coastalplain willow (*Salix caroliniana*). Hurricanes and tropical storms can flood the swales with salt water after which are recolonized with salt-tolerant species like needle rush (*Juncus roemerianus*) and spikerush (*Eleocharis* spp).

Description and assessment: Coastal interdunal swale is generally found north of R137, between the primary dune and the salt marsh communities. The predominant vegetation in these swales is wax myrtle, with some interspersed American elder (*Sambucus nigra* ssp. *canadensis*). Painted buntings (*Passerina ciris*) utilize the older stands of wax myrtle for nesting habitat. The wax myrtles on Conch Island form dense thickets that can serve as a barrier to the movement of beach mice across the island. Following Hurricanes Opal, Wooten and Holler (1996) showed that Alabama beach mice (*Peromyscus polionotus ammobates*) moved inland and utilized more inland habitats following the destruction of primary dune habitat. Brazilian pepper (*Schinus terebinthifolius*) and Chinese tallow tree (*Sapium sebiferum*) have been found and treated in this community. Overall, the condition of this community is good.

General management measures: It may be necessary to mow selected areas of wax myrtles to provide areas of escape for Anastasia Island beach mice in advance of tropical storms or hurricanes. These areas would continue to be carefully chosen to avoid adverse impacts to painted buntings. Surveys for and treatment of exotic species will continue. Although FNAI does not ascribe a fire return interval for this community, prescribed fire will occasionally be utilized to reduce fuel accumulation and to maintain an early successional vegetative stage.

Estuarine Unconsolidated Substrate

Desired future condition: 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: This community is found on the west side of Conch Island, encompassing most of Salt Run within the park. This community is represented by both subtidal and intertidal components, and is mostly devoid of

attached macrophytes; some of the subtidal areas contain attached *Codium*, a green alga. The intertidal and shallow subtidal areas are important forage areas for shore and wading birds. Due to outside influences, the water quality of Salt Run has exceeded standard for fecal coliform levels since 1993; as a result, the condition of this community is poor to fair.

General management measures: This natural community is in a maintenance state requiring little management other than protection from visitor impacts.

Marine Unconsolidated Substrate

Desired future condition: 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: This community consists of the portion of the beach lying seaward of the beach dune community. It is largely devoid of rooted plant species. This community provides critical habitat for shorebirds (for breeding, resting, loafing, and feeding) and nesting and hatchling sea turtles. The park is occasionally utilized as a feeder beach for beach renourishment projects, which results in varying quantities of beach-quality sand being dredged from the inlet, the ebb shoal, or Salt Run and deposited on this community, typically to the southeastern boundary of the park. The sand is typically carried off to the south over a series of regular high tides. The community condition is good.

General management measures: This natural community is in a maintenance state requiring little management other than protection from visitor impacts.

Maritime Hammock

Desired future condition: A coastal evergreen hardwood forest occurring in narrow bands along stabilized coastal dunes. Canopy species will typically consist of live oak (*Quercus virginiana*), red bay (*Persea borbonia*), and cabbage palm (*Sabal palmetto*). The canopy is typically dense and often salt-spray pruned. Understory species may consist of yaupon holly (*Ilex vomitoria*), saw palmetto (*Serenoa repens*), and/or wax myrtle (*Myrica cerifera*). Very sparse or absent herbaceous groundcover will exist.

Description and assessment: The majority of maritime hammock occurs west of Salt Run, although there is a small amount of it in the northwest portion of Conch Island. This community is composed of an overstory of live oak and red bay, with a midstory of southern magnolia (*Magnolia grandiflora*), red cedar (*Juniperus virginiana*), saw palmetto, and American beautyberry (*Callicarpa americana*). This community type is ranked by the Florida Natural Areas Inventory as G3S2, which indicates that it is imperiled in the state due to its rarity or because of vulnerability to extinction due to natural or human-caused factors. Within Anastasia State Park, the maritime hammock community has been fragmented by roads and park

development. Laurel wilt has also killed most of the large red bays (*Persea borbonia* var. *borbonia*). As a result, this community's condition is fair.

General management measures: In order to maintain its integrity, additional fragmentation of this community must be avoided. Replanting of appropriate overstory and midstory plant species may be conducted where necessary (e.g., unauthorized trails). Surveys for and treatment of exotic species will continue. There is no fire return interval assigned to this community.

Salt Marsh

Desired future condition: A largely herbaceous community that occurs in the portion of the coastal zone affected by tides and seawater and protected from large waves. Salt marsh typically has distinct zones of vegetation based on water depth and tidal fluctuations. Saltmarsh cordgrass (*Spartina alterniflora*) dominates the seaward edge (the areas most frequently inundated by tides). Needle rush (*Juncus roemerianus*) dominates the higher, less frequently flooded areas. Other characteristic species include Carolina sealavender (*Limonium carolinianum*), perennial saltmarsh aster, marsh fimbry (*Fimbristylis spadicea*), and shoreline seapurslane (*Sesuvium portulacastrum*). A landward border of salt-tolerant shrubs including groundsel tree (*Baccharis halimifolia*), saltwater falsewillow (*Baccharis angustifolia*), marshelder (*Iva frutescens*), and Christmasberry (*Lycium carolinianum*) may exist. Soil salinity and flooding are the two major environmental factors that influence salt marsh vegetation. While there are little data on natural fire frequency in salt marshes, fire probably occurred sporadically and with a mosaic pattern, given the patchiness of the fuels intermixed with creeks, salt flats, etc.

Description and assessment: The majority of salt marsh at Anastasia lies east of the estuarine unconsolidated substrate community and west of the coastal grassland community in zone AN-11. The predominant vegetation in this community is saltmarsh cordgrass; bushy seaside oxeye (*Borrichia frutescens*), Carolina sealavender, marshhay cordgrass (*Spartina patens*), saltwater falsewillow, and Christmasberry can also be found. Black mangrove (*Avicennia germinans*) has become widespread within the salt marsh in the last 15 years, likely due to the lack of extended hard freezes during this time. The Florida Natural Areas Inventory indicates that fire is sporadic in this community, and no fire return interval is assigned to it. The community's condition is excellent.

General management measures: This natural community is in a maintenance state requiring little management other than protection from visitor impacts.

Altered Land Cover Types

Description and assessment: The altered areas have been included in the community types in which they occur. These areas include canal/ditch, clearing, artificial pond, and developed areas.

There are approximately three miles of canal/ditch in the park. Many of these were created to convey water from outside the park, through the park to Salt Run. Others were created for mosquito control purposes.

A 1.5 acre clearing, located just south of the park entrance, is the site of a historically significant Spanish coquina quarry, described below in the Cultural Resources section.

Located just south of the beach access area, the artificial pond is a 1.5 acre former road construction borrow pit. Its waters are tidally influenced due to the connection to Salt Run via a mosquito control ditch.

The developed areas include the ranger station, campgrounds, park office, four resident sites, picnic areas with pavilions, concession buildings, and parking lots.

Desired future condition: The altered areas within the park will be managed to remove Florida Exotic Pest Plant Council (FLEPPC) Category I and II priority invasive exotic plant species. Other management measures include limited restoration efforts designed to minimize the effects of the disturbed areas on adjacent natural areas. Cost-effectiveness and consideration of other higher priority restoration projects within the park will determine the extent of restoration measures in disturbed areas. The developed areas within the park will be managed to minimize the effect of the developed areas on adjacent natural areas. Priority invasive exotic plant species (FLEPPC Category I and II species) will be removed from developed areas. Other management measures include proper stormwater management.

General management measures: Control of FLEPPC Category I and II priority invasive exotic plant species will be ongoing.

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.

Anastasia State Park supports the largest population of the Anastasia Island beach mouse on public lands. Monitoring of this population through the use of mark-recapture techniques has occurred regularly since 1990. This population depends on the beach dune and coastal grassland communities in zones AN-11, AN-10, AN-07, and AN-08. Based on information from this long-term monitoring effort, the population at the park is declining. The cause for the decline may be due to the loss in the amount and quality of critical habitat on Conch Island, due to erosion caused by dredging of the ebb shoal for material for beach renourishment projects. Ongoing loss of habitat and fragmentation of remaining habitat will put the beach mouse population at a much greater risk for extirpation. Since the population at the

park constitutes the largest group of Anastasia Island beach mice within the occupied range of the subspecies, the increased threat to the population at the park puts the subspecies at greater risk for extinction.

Anastasia State Park is located along the eastern coastal flyway for migrating birds. The park conducts winter bird surveys in non-nesting seasons to document loafing and resting seabirds and shorebirds on the beach. These birds migrate thousands of miles in the fall and spring and often suffer from exhaustion and malnutrition. The park provides a critical stopping point for birds to feed and rest. The ban on beach driving significantly increases its value as a roosting and feeding sanctuary.

The park is one of the most important areas for beach-nesting birds along the east coast of Florida. Conch Island has been historically utilized as a nesting area by the least tern, Wilson's plover, and gull-billed tern but in the last two decades, nesting has been limited to the first two species listed. The beach areas are surveyed every other week for beach-nesting birds each year from April 1st to August 31st and year round for species of interest like the red knot, piping plover, and other rarities. Areas that show a high likelihood of shorebirds or seabirds utilizing them are often pre-posted in March in order to protect the area prior to nesting. Beach-nesting birds are sensitive to various types of disturbances that can be controlled in many cases. Beach-nesting bird nest predation by coyotes, foxes, and raccoon has been an ongoing problem and the park will continue address the problem when it comes up. Track surveys that can detect potential nest predators are done from January thru March each year by park and district staff.

When a bird nest or nesting colony is discovered, park management is notified and the site is immediately posted with poles, signs, and twine in accordance with the DRP's procedures and FWC guidelines. The park is a part of the St. Johns County Shorebird Partnership which is comprised of the County, FWC, St. Johns County Audubon Society, the Guana Tolomato Matanzas National Estuarine Research Reserve (GTMNERR), the DRP, and other local volunteers who pull resources together to protect beach-nesting birds in the area. This partnership works cooperatively to protect shorebird nests and colonies county-wide as well as to educate the public. When a colony or solitary nest is found at the park, people from the partnership known as bird stewards come out to help protect them. The bird stewards work hand in hand with the park to watch over the nests, inform park management of potential problems, and work with FWC law enforcement if any problems arise. The park helped establish this partnership and has been involved since its inception in 2008. Coordination and cooperation with local bird stewards and the partnership is ongoing.

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 the 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).
- Implementing appropriate measures when new breeding sites are indicated, including demarcating new protected areas and expanding or initiating interpretive programs.
- Coordinating with the 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.

Sea turtles nest each year on the park's 4.2 miles of beach. Loggerhead sea turtles (*Caretta caretta*) typically make up the bulk of nesting at the park, with green and leatherback sea turtles (*Chelonia mydas* and *Dermochelys coriacea*, respectively) nesting sporadically. Salt Run provides important habitat for juvenile green sea turtles that need nearshore feeding areas sheltered from waves and currents to protect them from large predators while providing crustaceans and other food sources. Depending on the year, sometimes coyotes or foxes predate sea turtle nests and control is needed. These animals are trapped and removed from the park when funding is available and when all the necessary permits have been obtained.

Gopher tortoises (*Gopherus polyphemus*) are present throughout the park. The population appears to be thriving in small numbers, and reproducing.

Florida manatees (*Trichechus manatus*) are often sighted in Salt Run. Mating herds and birthing are occasionally noted.

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*	N/A	N	LE	G2, S2	10	Tier 1
Coastal mock vervain *Glandularia maritima*	N/A	N	LE	G3, S3	10	Tier 1
REPTILES						
American alligator *Alligator mississippiensis*	FT(S/A)	T (S/A)		G5, S4	4, 10	Tier 1
Loggerhead sea turtle *Caretta caretta*	FT	T		G3, S3	8, 10	Tier 2
Green sea turtle *Chelonia mydas*	FE	E		G3, S2	8, 10	Tier 2
Leatherback sea turtle *Dermochelys coriacea*	FE	E		G3, S2	8, 10	Tier 2
Eastern indigo snake *Drymarchon corais couperi*	FT	T		G3, S3	1, 7, 10	Tier 1
Gopher tortoise *Gopherus polyphemus*	ST	N		G3, S3	1,6,7 ,8,10 ,13	Tier 1
Kemp's ridley sea turtle *Lepidochelys kempii*	FE	E		G1, S1	8, 10	Tier 2
BIRDS						
Limpkin *Aramus guarauna*	SSC	N		G5, S3	10	Tier 1
Piping Plover *Charadrius melodus*	FT	E		G3, S2	10, 13	Tier 2
Wilson's Plover *Charadrius wilsonia*	N	N		G5, S2	8, 10, 13	Tier 3

Table 2: Imperiled Species Inventory						
Common and Scientific Name	**Imperiled Species Status**				**Management Actions**	**Monitoring Level**
	FWC	**USFWS**	**FDACS**	**FNAI**		
Little Blue Heron *Egretta caerulea*	SSC	N		G5, S4	10	Tier 1
Reddish Egret *Egretta rufescens*	SSC	N		G4, S2	10	Tier 1
Snowy Egret *Egretta thula*	SSC	N		G5, S3	10	Tier 1
Tricolored Heron *Egretta tricolor*	SSC	N		G5, S4	10	Tier 1
Swallow-tailed Kite *Elanoides forficatus*	N	N		G5, S2	10	Tier 1
White Ibis *Eudocimus albus*	SSC	N		G5, S4	10	Tier 1
Merlin *Falco columbarius*	N	N		G5, S2	10	Tier 1
Peregrine Falcon *Falco peregrinus*	N	N		G4, S2	10	Tier 1
American Oystercatcher *Haematopus palliatus*	SSC	N		G5, S2	10	Tier 3
Caspian Tern *Hydroprogne caspia*	N	N		G5, S2	10	Tier 1
Wood Stork *Mycteria americana*	FT	T		G4, S2	10	Tier 1
Osprey *Pandion haliaetus*	N	N		G5, S3, S4	10	Tier 1
Brown Pelican *Pelecanus occidentalis*	SSC	N		G4, S3	10	Tier 1
Roseate Spoonbill *Platalea ajaja*	SSC	N		G5, S2	10	Tier 1
Black Skimmer *Rhynchops niger*	SSC	N		G5, S3	10, 11	Tier 1
American Redstart *Setophaga ruticilla*	N	N		G5, S2	10	Tier 1
Least Tern *Sterna antillarum*	ST	N		G4, S3	8, 10, 11, 13	Tier 3

Table 2: Imperiled Species Inventory						
Common and Scientific Name	**Imperiled Species Status**				**Management Actions**	**Monitoring Level**
	FWC	**USFWS**	**FDACS**	**FNAI**		
Sandwich Tern *Thallasseus sandvicensis*	N	N		G5, S2	10	Tier 1
MAMMALS						
Anastasia Island beach mouse *Peromyscus polionotus phasma*	FE	E		G1, S1	1, 7, 10, 13	Tier 2, Tier 3
West Indian (Florida) manatee *Trichechus manatus latirostris*	FE	E		G2, S2	10	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.

The coastal grassland, coastal interdunal swale, maritime hammock, and altered communities are all subject to the aggressive spread of exotic plants. Several highly invasive exotic plant species are currently being treated at Anastasia State Park, including air-potato, cogon grass, lantana, rose Natalgrass, Chinese tallow tree, Brazilian pepper, and wedelia.

All the exotic plant species are a threat to the integrity of the park's natural communities and are in conflict with the Division's goal of preserving and maintaining examples of the natural Florida. Staff have successfully obtained several grants to treat exotic plants. In addition, staff regularly monitor treated areas, GPS their locations, and patrol the park for any new infestations. Since 2004, at least 196 acres of invasive exotic plants have been treated at the park.

Table 3 contains a list of the FLEPPC Category I and II invasive, exotic plant species found within the park (FLEPPC, 2013). 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)
PLANTS			
Air-potato *Dioscorea bulbifera*	I	2	AN-04
		3	AN-09
Cogon grass *Imperata cylindrica*	I	2	AN-11
Lantana *Lantana camara*	I	2	AN-03, AN-04, AN-05, AN-08
Rose Natalgrass *Melinis repens*	I	2	AN-01, AN-02
Chinese tallow tree *Sapium sebiferum*	I	1	AN-08
		2	AN-01, AN-09, AN-11
Brazilian pepper *Schinus terebinthifolius*	I	1	AN-02, AN-05
		2	AN-01, AN-08, AN-09, AN-11

Table 3: Inventory of FLEPPC Category I and II Exotic Plant Species			
Common and Scientific Name	**FLEPPC Category**	**Distribution**	**Management Zone (s)**
Wedelia *Sphagneticola trilobata*	II	2	AN-03

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 animals are discussed in the Resource Management Program section of this component.

Special Natural Features

Salt Run and its associated tidal marshes historically supported a population of Carolina diamondback terrapins (*Malaclemys terrapin centrata*). Due to habitat loss, historic overharvesting, mortality in crab traps, depredation, collision with boats, road mortality, and stochastic factors, populations of diamondback terrapin have declined throughout the species' range (Roosenburg et al. 1997; Forstner pers. comm. 1998, Dorcas et al. 2007). Although numerous terrapins were sighted in Salt Run in 1984-1985 (Perry pers. comm.), lower numbers have been seen in recent years. Annual monitoring conducted by district biological staff have determined that a small population still remains in the park and utilizes areas of Conch Island for nesting.

Painted bunting nest in the park, particularly on Conch Island in the wax myrtle thickets in the coastal interdunal swale community. The beachfront areas of Anastasia State Park are important shorebird and seabird loafing, resting, and feeding areas, especially toward the north end of the park. The usage of these areas peaks during migration. Thousands of shorebirds and seabirds have been counted on a single day during bird surveys.

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.

Prehistoric and Historic Archaeological Sites

Desired future condition: All significant archaeological sites within the park 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.

The Florida Master Site File currently lists 12 recorded archaeological sites within Anastasia State Park: 8SJ69, 8SJ3317, 8SJ3483, 8SJ3527, 8SJ3528, 8SJ3529, 8SJ3530, 8SJ3531, 8SJ3532, 8SJ3533, 8SJ3536, and 8SJ4853.

Description: Northeast Florida has a rich cultural prehistory and history. Anastasia State Park falls within the East and Central Lake Archaeological Region (Milanich and Fairbanks 1980). The area around present-day Anastasia Island was occupied and utilized by Native Americans during the full sequence of Pre-Columbian cultural periods, beginning with the Paleo-Indian and continuing through the Archaic, Mount Taylor, Orange, Transitional, and St. Johns Period. At least four cultural resource surveys have been conducted for Anastasia State Park, including a Cultural Resource Assessment Survey in 1999 and three underwater/coastal surveys in the first decade of 2000.

An archaeological predictive model has been completed for the park (Collins et al. 2010). The model predicts areas of high, medium, and low probability of historical or cultural resources. This model was created for terrestrial site sensitivity only, although off-shore and near-shore modeling for the occurrence of historic shipwrecks is possible with different developed matrix values and corresponding data such as bathymetry and other remote sensing data. Two-thirds of the park falls in a low sensitivity area, as the majority of Conch Island has accreted since the mid-20th century. The areas of high sensitivity correspond to the historic land masses. One area from the current model development that does potentially relate to non-terrestrial site potential is in the northern section of the park where historic

maps and aerials indicate only a small extent of present land relative to the historical peninsula. At this northern section of the park, two known sites relating to historic shipwrecks occur, and directly correspond to where the inlet pass area historically was located. This region should be considered to hold potential for both terrestrial and submerged offshore sites relating to historic shipwrecks.

The terrestrial site model, when verified using the Florida Master Site File site location data, captured 10 of the 12 recorded sites known at the time in the designated high sensitivity areas. The only site that the model does not capture was a submerged historic shipwreck (8SJ4853), which is located in an area that the model rules out due to land form modification. Using the aforementioned shipwreck sensitivity area, however, the site does fall within noted sensitivity allowances. Separate models for this park would be necessary to understand the potential for off-shore and near-shore sites relating to historic shipwrecks.

The model for Anastasia State Park correctly indicated 99.9% of known sites in a mapping that covered 33% of the model area.

Condition assessment: The Spanish Quarries site, 8SJ69, is one of the major Spanish quarry sites which produced coquina used in the construction of the Castillo de San Marcos and St. Augustine. The quarry site is listed on the National Register (FDOS, 8SJ69). Small amounts of loose coquina are occasionally removed for use by the National Park Service in preservation projects at the Castillo de San Marcos. The main threats to the quarry site are erosion, vegetation, and the freeze and thaw cycle. Through grant funding, kiosks were added to further interpret the site in the mid to late 1990s. The condition assessment is good.
8SJ3317, the Shipwreck site, is comprised of three pieces from a historic ship that washed ashore on Conch Island during a high tide in 1996. The three pieces appear to be a small piece of hull and two beams. Because of preservation concerns and lack of conservation facilities at the park, the wooden pieces were measured and photographed, then covered over and left buried on the beach where they were found (FDOS 8SJ3317). The site is monitored to insure that it remains undisturbed and covered. The condition assessment is poor but stable.

8SJ3483, the St. Johns Electric Railroad North Line site, is the still-visible northern corridor of the tramline that ran from St. Augustine to the beach on Anastasia Island (FDOS, 8SJ3483). In 1880-1888 a ferry service took people from St. Augustine across what was then known as Matanzas Bay to Anastasia Island. Once there, they boarded a mule-drawn trolley with wooden rails which took them to the beach at Lighthouse Park. In 1895 a wooden bridge was constructed which connected Anastasia Island to St. Augustine. The mule-drawn trolley continued to run until 1899. In that year, a steam engine called the old dummy line began operating from the foot of King Street across Matanzas Bay to the South Beach area and Lighthouse Park. In 1907 an electric trolley which utilized steel rails began running to the South Beach, eliminating the steam engine. In 1925 the rail line was rebuilt, which allowed the electric trolley to go to Anastasia Island and the South Beach; this continued in operation until 1930. At that time, beach erosion destroyed the attractions at South Beach at the end of the line. The surviving portions of the

corridor have been impacted by park development, and are threatened by vegetative encroachment. The condition assessment is fair.

8SJ3532, the Rifle Shell Midden Site, appears to be associated with a Spanish American War era military camp. The site is located within the southern portion of the park, and is bisected by SR 5A. Most of the site is on undeveloped park land and appears to be undisturbed (FDOS 8SJ3532). The site may be eligible for listing in the National Register. The condition assessment is good.

8SJ3533, the Buttons Site, is a historic refuse scatter site located on a remnant dune ridge near the Cross and Sword parking lot (FDOS 8SJ3533). The condition assessment is poor, as the site was essentially removed by the archaeologists who located it.

8SJ3536, the Groin site, is a historic groin or jetty, built by the U.S. Army Corps of Engineers, now located in the dunes in an undeveloped area of Conch Island (FDOS 8SJ3536). The groin was built between 1889 and 1902 along North Point for erosion control. In 1940, the U.S. Army Corps of Engineers dredged the St. Augustine Inlet through North Point. Conch Island grew around the groin through sand accretion, and eventually connected with Anastasia Island to the south. Today the groin is stranded inland in the dunes, and is covered with sand. Its condition assessment is good.

8SJ4853, the Blowhole Wreck, was determined to be the bow section of a relatively small, copper-sheathed wooden sailing vessel, dated to the mid-19th century. Based on analysis obtained by the Lighthouse Archaeological Maritime Program (LAMP) of wood samples collected from the hull, the vessel was most likely built in North America. The use of red oak species suggests that it originated from a northern region outside of the southeast U.S. A British origin is also possible, if the white oak ceiling planking was actually fashioned from English oak. These artifacts are currently at the LAMP facility in St. Augustine; the remainder of the site is located in a dynamic section of the beach. The condition assessment is poor.

Level of significance: Anastasia State Park contains the Spanish Coquina Quarries (8SJ69), the primary source of coquina used in the construction of the Castillo de San Marcos (started in 1672) and other buildings in the Spanish colonial town of St. Augustine. This fort, with its durable construction, protected the seat of Spanish colonial power in La Florida in the 17th century. The quarries were listed on the National Register of Historic Places on February 23, 1972. The park also contains three other archaeological sites that are potentially eligible for the National Register of Historic Places, including portions of two railroad lines and a former military site. The St. John's Railroad North and South lines (8SJ3483 and 8SJ3531) brought visitors from St. Augustine to the beaches of Anastasia Island in the late 19th and first quarter of the 20th centuries. The Rifle Shell Midden Site (8SJ 3532) appears to be a cartridge disposal feature associated with a Spanish-American War period military camp. Anastasia State Park is located near St. Augustine, whose waters and its archaeological sites were recognized for their historical significance in 1968 by the state legislature.

General management measures: Preservation, including protection from damage from resource management, natural causes, construction, or human damage is the primary treatment which will be used to keep the significant archaeological sites in their Desired Future Condition.

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: There are 17 historic structures located in the park. These buildings, constructed for park use from 1956 to 1971 include: the Maintenance Shop, Assistant Park Manager's Residence, Hill Top Pavilions #2 through #11, Sea Bean Bathhouse, Sea Urchin Bathhouse, Sand Dollar Bathhouse, Coquina Bathhouse, Utility and Lumber Shed, and Mower Shed.

Condition assessment: All of the historic structures in the park have been determined to be in good condition. There are no known issues of threats related to the condition of the structures that require management action.

Level of significance: The 17 historic structures, while well-constructed and functional, were considered not to meet National Register criteria for either individual listing or as a potential district by the recorder of the FMSF forms. Therefore, they are listed as Not Significant (NS) on Table 4. None of the 17 buildings have been formally evaluated for significance by the State Historic Preservation Officer (SHPO).

General management measures: All the historic structures listed below are considered as not meeting National Register criteria (Not Significant) and accordingly have a treatment of N/A listed in the table.

Collections

Desired future condition: All historic, natural history, and archaeological objects within the park that represent Florida's cultural periods, significant historic events or persons, or natural history specimens are preserved in good condition in perpetuity, protected from physical threats and interpreted to the public.

Description: The park's collection largely consists of natural history objects which are used for interpretive purposes. They are as follows:

Two loggerhead sea turtle skulls and two loggerhead shells in good and fair condition respectively; a taxidermied leatherback sea turtle hatchling in good condition, a taxidermied hawksbill sea turtle in fair condition; two taxidermied Anastasia Island beach mice in fair condition; a taxidermied great horned owl donated from Tomoka State Park, in good condition; a taxidermied eastern

diamondback rattlesnake donated from Tomoka State Park, in good condition; a shell display in good condition.

In addition, there is a book library, a map library, and a photograph library at the park.

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
8SJ69 Spanish Quarries	17th and 18th century 1st Spanish	Archaeological Site	NRL	G	P
8SJ3317 Historic Shipwreck	Historic/Unspecified	Archaeological Site	NS	P	P
8SJ3483 St. Johns Electric Railroad, N. Line	19th-20th century American	Archaeological Site	NR	F	P
8SJ3527 Kelly Site	Historic/Unspecified	Archaeological Site	NS	G	N/A
8SJ3528 Steve Site	St. Johns 700 B.C.-1500 A.D. 20th century American, 1900-present	Archaeological Site	NS	P	N/A
8SJ3529 Single Musketball Site	American, 1821-present	Archaeological Site	NS	P	N/A
8SJ3530 Fenceline Site	American unspecified, 1821-present	Archaeological Site	NS	P	N/A

Table 4: Cultural Sites Listed in the Florida Master Site File					
Site Name and FMSF #	**Culture / Period**	**Description**	**Significance**	**Condition**	**Treatment**
8SJ3531 St. Johns Electric Railroad, S. Line	19th century American, 1821-1899 20th century American, 1900-present	Archaeological Site	NR	F	P
8SJ3532 Rifle Shell Midden Site	19th century American, 1821-1899 Spanish-American War, 1898-1916 20th century American, 1900-present	Archaeological Site	NR	G	P
8SJ3533 Buttons Site	19th century American, 1821-1899 20th century American, 1900-present	Archaeological Site	NS	P	N/A
8SJ3536 Groin	20th century American, 1900-present	Archaeological Site	NS	G	P
8SJ4853 Blowhole Wreck	Spanish-second period, 1783-1821 American, 1821-present	Archaeological Site	NS	P	P
8SJ05520 Maintenance Shop	1956	Historic Structure	NS	G	N/A
8SJ05521 Assistant Manager's Residence	1956	Historic Structure	NS	G	N/A

Table 4: Cultural Sites Listed in the Florida Master Site File					
Site Name and FMSF #	**Culture / Period**	**Description**	**Significance**	**Condition**	**Treatment**
8SJ05522 Hill Top Pavilion #2	1962	Historic Structure	NS	G	N/A
8SJ05523 Hill Top Pavilion #3	1962	Historic Structure	NS	G	N/A
8SJ05524 Hill Top Pavilion #4	1962	Historic Structure	NS	G	N/A
8SJ05525 Hill Top Pavilion #5	1962	Historic Structure	NS	G	N/A
8SJ05526 Hill Top Pavilion #6	1962	Historic Structure	NS	G	N/A
8SJ05527 Hill Top Pavilion #7	1962	Historic Structure	NS	G	N/A
8SJ05528 Hill Top Pavilion #8	1962	Historic Structure	NS	G	N/A
8SJ05529 Hill Top Pavilion #9	1962	Historic Structure	NS	G	N/A
8SJ05530 Hill Top Pavilion #10	1962	Historic Structure	NS	G	N/A

Table 4: Cultural Sites Listed in the Florida Master Site File					
Site Name and FMSF #	**Culture / Period**	**Description**	**Significance**	**Condition**	**Treatment**
8SJ05531Sea Bean Bath House	1966	Historic Structure	NS	G	N/A
8SJ05532 Sea Urchin Bath House	1966	Historic Structure	NS	G	N/A
8SJ05533 Sand Dollar Bath House	1967	Historic Structure	NS	G	N/A
8SJ05534 Utility Shed	1966	Historic Structure	NS	P	N/A
8SJ05535 Coquina Bath House	1969	Historic Structure	NS	G	N/A
8SJ05536 Mower Shed	1971	Historic Structure	NS	P	N/A

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 Anastasia 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 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: Conduct/obtain an assessment of the park's hydrological restoration needs.

Action 1 Assess hydrological restoration needs
Action 2 Assess mosquito ditch impacts

Although there are human-made ditches and topographical changes within the park's boundary, it is unknown what impacts those changes have caused and continue to cause. Staff will work with the St. Johns River Water Management District and any other agencies which may be able to provide assistance in obtaining an assessment of the park's hydrological restoration needs. It will also be necessary to work with Anastasia Mosquito Control District to identify which ditches are not essential for arthropod control activities. Once an assessment of the park's hydrological needs is completed, if it is determined that the human-made ditches that are not essential for arthropod control activities are causing an impact, a restoration plan will be written for their restoration.

Objective: Restore natural hydrological conditions and functions to approximately .3 acres of coastal interdunal swale and 3 acres of maritime hammock natural communities.

Action 1 Develop canal/ditch removal plan
Action 2 Implement canal/ditch removal plan

Many ditches have been dug in different areas of the park for particular purposes. Some were created specifically for mosquito control purposes in order to artificially drain the landscape. Other ditches were created to drain areas that are outside the park and channel the water through the park to Salt Run while other ditches are of an unknown origin and purpose. A plan must be developed in order to determine which, if any, of the ditches could be removed in order to prioritize natural community improvement activities. Representatives from the park have already begun this process by setting up multiple meetings with the St. Johns River Water Management District and the local mosquito control. Ditch plugs and partial removal of some of the ditches are some ideas that have already been discussed.

Natural Communities Management

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

As discussed above, the DRP practices natural systems management. In most cases, this entails returning fire to its natural role in fire-dependent natural communities. Other methods to implement this goal include large-scale restoration projects as well as smaller scale natural communities' improvements. Following are

the natural community management objectives and actions recommended for the state park.

Prescribed Fire Management

Prescribed fire is used to mimic natural lightning-set fires, which are one of the primary natural forces that shaped Florida's ecosystem. Prescribed burning increases the abundance and health of many wildlife species. A large number of Florida's imperiled species of plants and animals are dependent on periodic fire for their continued existence. Fire-dependent natural communities gradually accumulate flammable vegetation; therefore, prescribed fire reduces wildfire hazards by reducing these wild land fuels.

All prescribed burns in the Florida state park system are conducted with authorization from the FDACS, Florida Forest Service (FFS). Wildfire suppression activities in the park are coordinated with the FFS.

The Florida Natural Areas Inventory does not categorize any of the natural communities found within Anastasia State Park as fire-dependent natural communities, nor does it assign a fire return interval to any of these communities. However, the park does contain some communities that are considered fire-influenced and would benefit from some periodic fire. As fuel conditions warrant, it may be desirable to burn the coastal grassland and interdunal swale communities in zone AN-11 along with the beach dune to reduce wildfire potential and to benefit beach mice.

Objective: Apply fire to approximately 884 acres of fire influenced habitat in zone AN-11 on a 3-15 year rotation in order to benefit habitat for beach mice, shorebirds, and to reduce fuel loading.

Action 1	Develop/update annual burn plan
Action 2	Burn 884 acres of zone AN-11 on a 3-15 year rotation

The park is partitioned into management zones including those designated as burn zones (see Management Zones Table and Map). Prescribed fire is planned for each burn zone on the appropriate fire return interval. The park's burn plan is updated annually because fire management is a dynamic process. To provide adaptive responses to changing conditions, fire management requires careful planning based on annual and very specific burn objectives. Each annual burn plan is developed to support and implement the broader objectives and actions outlined in this ten-year management plan.

Zone AN-11 is the only zone that would benefit from fire to some degree. Since FNAI does not assign a fire return interval for coastal grassland and coastal interdunal swale, DRP has assigned one to this zone. When weather and staffing permit, DRP will attempt to burn this zone on a 3-15 year burn rotation. Applying fire to this management zone will allow staff to control invasive plant infestations, fuel loads, and woody vegetation encroachment while restoring and sustaining habitat for beach mice and shorebirds.

In order to track fire management activities, the DRP maintains a statewide burn database. The database allows staff to track various aspects of each park's fire management program including individual burn zone histories and fire return intervals, staff training/ experience, backlog, if burn objectives have been met, etc. The database is also used for annual burn planning which allows the DRP to document fire management goals and objectives on an annual basis. Each quarter the database is updated and reports are produced that track progress towards meeting annual burn objectives.

Natural Communities Restoration

In some cases, the reintroduction and maintenance of natural processes is not enough to reach the natural community desired future conditions in the park, and active restoration programs are required. Restoration of altered natural communities to healthy, fully functioning natural landscapes often requires substantial efforts that may include mechanical treatment of vegetation or soils and reintroduction or augmentation of native plants and animals. For the purposes of this management plan, restoration is defined as the process of assisting the recovery and natural functioning of degraded natural communities to desired future condition, including the re-establishment of biodiversity, ecological processes, vegetation structure and physical characters.

Examples that would qualify as natural communities' restoration, requiring annual restoration plans, include large mitigation projects, large-scale hardwood removal and timbering activities, roller-chopping and other large-scale vegetative modifications. The key concept is that restoration projects will go beyond management activities routinely done as standard operating procedures such as routine mowing, the reintroduction of fire as a natural process, spot treatments of exotic plants, and small-scale vegetation management.

Currently there is not a need for natural community restoration at this park, and all natural community improvements can be accomplished with routine resource management practices such as prescribed burning. Restoration measures for the beach dune community may become necessary at some point in response to future storm events.

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, the 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.

Action 1 Update the species list for the park

DRP staff will continue to update the imperiled species inventory list for the park. Partnerships with other agencies, organizations and academic institutions to assist in the inventory will be developed when possible.

Objective: Monitor and document 8 selected imperiled animal species in the park.

Action 1 Implement monitoring protocols for 8 imperiled animal species including Anastasia Island beach mouse, sea turtles (loggerhead, green, leatherback, and Kemp's ridley), piping plover, Wilson's plover, and least tern

DRP staff will survey and monitor the park's population of Anastasia Island beach mouse, sea turtles (loggerhead, green, leatherback, and Kemp's ridley), piping plover, Wilson's plover, and least terns per the U.S. Fish and Wildlife Service and/or FWC established guidelines.

The DRP needs to continue to be involved in beach renourishment coordination meetings in order to share and impress upon contractors the protections needed to safeguard imperiled species. The Division will continue to depend upon the partnerships with other agencies in the monitoring of other imperiled species that have been documented at the park.

Objective: Monitor and document 2 selected imperiled plant species in the park.

Action 1 Develop monitoring protocols for 2 selected imperiled plant species including sand dune spurge and coastal mock vervain

Action 2 Implement monitoring protocols for the 2 selected imperiled plant species listed above

DRP staff will survey known locations for sand dune spurge and coastal mock vervain and establish a monitoring protocol for each plant species, since there is no existing monitoring protocol for these species. Areas which could potentially support these species but which are not known to contain them will be incorporated into the surveying efforts as resources allow.

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 ecological damage. Removal techniques may include mechanical treatment, herbicides or biocontrol agents.

Objective: Annually treat .5 acre of exotic plant species in the park.

Action 1 Annually develop/update exotic plant management work plan

Action 2 Implement work plan by annually treating .5 acres in park and continuing maintenance and follow-up treatments as needed

The numbers of exotic plants treated per year is likely to vary depending on the status of current infestations and any new infestations that might arise during the life of this management plan. Brazilian pepper, Chinese tallow tree, air-potato, and cogon grass will continue to be treated promptly. All infestations of rose Natalgrass must be located and herbicided. Priority should be given to FLEPPC Category I and II species when treating exotic plant species in the park.

Objective: Practice preventative measures to avoid accidental introduction and spreading of exotics within the park.

Action 1 Develop and implement preventative measures

Guidelines for clean sod, fill dirt and other material, mowing, cleaning and inspecting equipment that enters the park will be developed. New infestations of exotics can be prevented by ensuring that contractors and staff clean their equipment and do not spread exotics by moving from a contaminated area within the park without cleaning their equipment.

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

Control activities will focus on areas where nine-banded armadillos and coyotes are causing the most damage. The park occasionally has to remove feral or stray cats

from the property; these animals are typically turned over to the local animal control facility.

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 Anastasia 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, monitoring of the project by a certified archaeological monitor, cultural resource assessment survey by a qualified professional archaeologist, 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 29 of 29 recorded cultural resources in the park.

Action 1 Complete evaluations of 29 recorded cultural sites

All recorded cultural sites will be assessed and evaluated on a yearly basis, at a minimum. The assessments will include an examination of each site with attention being paid to any threats to the site's condition such as natural erosion, vehicular damage, bicycle or pedestrian damage, looting, construction including damage from firebreak construction, animal damage, plant or root damage, or other factors that might cause deterioration of the site. Any preservation and stabilization identified by the assessments/evaluations will need to be prioritized.

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

Action 1 Ensure all known sites are recorded or updated in the Florida Master Site File

Action 2 Conduct a Level 1 archaeological survey for 1 priority area identified by the predictive model

Information on the park's historical and cultural resources will continue to be updated in the Florida Master Site File as needed. The archaeological predictive model will provide guidance for future development and will aid selecting the best locations for future Level 1 archaeological surveys. There is no need at this time to conduct oral history interviews or compile a park administrative history. A Scope of Collections Statement has already been completed by the park.

Objective: Bring 4 of 29 recorded cultural resources into good condition.

Action 1 Design and implement regular monitoring programs for 29 cultural sites
Action 2 Create and implement a cyclical maintenance program for each cultural resource
Action 3 Bring 4 cultural sites into good condition

The park has an ongoing regular monitoring program for all recorded cultural sites. Four of the cultural resource sites are recorded on the National Register or are National Register-eligible. These sites are in fair to good condition. Preservation is the recommended treatment for these sites.

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. The 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.

During the development of this plan, an analysis was made regarding the feasibility of timber management activities for this park. It was then determined that the primary management objectives of the unit could be met without conducting timer management activities for this management plan cycle. Timber management will be re-evaluated 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 60 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.

St. Augustine Inlet was created by dredging a new inlet in 1940 north of the historic St. Augustine Inlet, located near the south end of Salt Run. A north jetty was constructed in 1941 and a south jetty was completed in 1957. In 1973, a spur groin was built at Anastasia State Park. The inlet is part of the federal St. Augustine Harbor Navigation Project. Maintenance dredging of the inlet channel follows the best natural alignment across the inlet bar that exists at the time. Between 1940 and 1986, 1,373,000 cubic yards of material were dredged from the inlet. Maintenance dredging occurred frequently during the 1970s, but the channel was only dredged in 1986 and 1996 due to reductions in the authorized channel depth and changes in shoaling patterns. Dredged material was typically disposed of offshore until the 1996 dredging event placed 170,000 cubic yards of sand on the beaches both north and south of the revetment at St. Augustine Beach. In 1998, the St. Augustine Inlet Management Study Implementation Plan was approved for adoption. In 1999, periodic maintenance dredging of the Intracoastal Waterway near St. Augustine Inlet and the Salt Run navigation channel was initiated with beach placement of dredged material at Anastasia State Park and St. Augustine Beach. Initially authorized in 1986, the federal St. Johns County Shore Protection Project was reauthorized in 1999 to add mitigation of the effects of the navigation project as a new project purpose. Initial sand placement as part of this project was completed in January 2003 with sand excavated from the St. Augustine Inlet ebb shoal and included the State of Florida's extension of the project 4600 feet north into Anastasia State Park to R132. Following Hurricanes Frances and Jeanne in 2004, the beach renourishment schedule was accelerated, and construction of the next project was completed in September 2005 with sand excavated from the inlet ebb shoal.

There are approximately 4.2 miles of beach within Anastasia State Park; of this, 1.76 miles is considered critically eroded. Within the park, the section of beach from R132-R141 is considered to be within the area of influence of the inlet (Florida Department of Environmental Protection 2008). There are 0.56 miles of shoreline along St. Augustine Inlet.

A "St. Augustine Inlet Management Plan" 1997 study report by Taylor Engineering, led to the St. Augustine Inlet Management Study Implementation Plan" (IMP) adoption by DEP in 1998 (Florida Department of Environmental Protection 1998). The implementation plan calls for five actions, all of which pertain to preventing or offsetting the erosive impacts that the navigation inlet causes to the adjacent beach and dune systems of Anastasia State Park and St. Augustine to the south as well as

Vilano Beach and Ponte Vedra beaches to the north. The Inlet Management Plan was revised in 2013 with the results of studies and stakeholder input in 2011 and 2012. The Florida Park Service will remain an active participant in the inlet management planning, as the outcome has direct impact on future beach and dune management activities at Anastasia State Park. In addition, the Florida Park Service will actively participate in the planning and permitting of shore protection and inlet/Intracoastal Waterway projects.

While the Anastasia Island beach mouse population has been stable, the greatest threat to this population is the substantial and ongoing erosion that is occurring in the northeast portion of Conch Island. Surveys based on historical transects will continue. An emergency action plan to move a subset of the mice in advance of a major hurricane is on file in the park office.

The north end of the park was a very important nesting area for many beach-nesting birds for decades but has recently been affected by erosion to the point where there is not much habitat remaining for successful nesting. The gull-billed tern, black skimmer, least tern, and Wilson's plover all used the north end of the park, but only the latter two are currently using it. The beach has become so narrow that the high tide comes up and into the primary dune. Beach-nesting birds need an area between the high tide mark and the toe of the primary dune to nest; due to erosion, this area is now completely absent from most of the historic nesting area. Wilson's Plover can nest anywhere along the beach above the high tide mark and prefer to be in areas with very little vegetation. These are often areas where park staff and contractors prefer to drive their vehicles. It is important that DRP continues to be involved with beach renourishment coordination meetings in order to share concerns with contractors and permitting agencies. DRP will also continue to educate their staff on the proper precautions to take when driving on a beach with beach-nesting birds present.

Management of Anastasia State Park includes certain activities within the 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. The submerged resources within the buffer zone significantly increase the species diversity within the park and offer additional recreational opportunities for park visitors. Visitors are able to access this area either from the beach or from a kayak, canoe, surfboard, or paddleboard. The park collaborates with other government agencies in the management of these submerged communities. Collaborative management actions include conducting resource inventories, monitoring, and beach renourishment projects. These activities are carried out for increased protection of the park's natural resources and for the safety of park visitors.

Additional Considerations

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 responds within the allotted time and reaches consensus with the mosquito control district. 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 temporarily may be set aside under declared threats to public or animal health, or during a Governor’s Emergency Proclamation. An approved Arthropod Control Plan is in effect for Anastasia State Park.

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.

Anastasia State Park was subject to a land management review on November 29 and 30, 2010. 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 operation 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.

Anastasia State Park is located on Anastasia Island in St. Johns County, about two miles southeast of downtown St. Augustine in the northeast part of the state. More than 1 million people live within 50 miles of the park, which includes the cities of Jacksonville, St. Augustine, Palm Coast, Daytona Beach, Palatka, and Green Cove Springs (U.S. Census 2011).

According to U.S. Census data, approximately fifteen percent of residents in St. Johns County identify as black, Hispanic or Latino or another minority group. Almost half (49%) of residents can be described as youth or seniors. Per capita

income in the county is $36,639 as compared to the statewide average of $26,451 (U.S. Census 2014).

The park is located in the Northeast Vacation Region, which includes Nassau, Baker, Duval, Clay, Putnam, St. Johns, and Flagler counties (Visit Florida 2011). According to the 2011 Florida Visitor Survey, six percent of domestic visitors to Florida visited this region. Of the estimated 4.5 million domestic visitors who came to this region in 2011, approximately 82 percent traveled for leisure. Visiting the beach/waterfront, shopping and dining were the most popular activities for those visitors. Spring and summer were the most popular seasons for visitors. Most visitors traveled by ground transportation (84 percent), reporting an average stay of 3.4 nights and spending an average of $95 per person per day (Visit Florida 2011).

There are many resource-based recreation areas within 15 miles of the park including Guana Tolomato Matanzas National Estuarine Research Reserve, Guana River Wildlife Management Area, Twelve Mile Swamp, Stokes Landing and Moses Creek Conservation Areas, Nocatee Preserve, Ft. Mose Historic State Park, Faver-Dykes State Park, Matanzas State Forest, Castillo de San Marcos National Monument, and Fort Matanzas National Monument. These lands and waters support an array of resource-based outdoor activities including swimming, fishing, surfing, canoeing/kayaking, boating, camping, picnicking, hiking, biking, horseback riding, wildlife viewing, and nature study. The park is a component of the A1A Trail, a priority corridor in the Florida Greenways and Trails System. This trail also serves as a component of the St. Johns River to Sea Loop within the East Coast Greenway, a developing 3,000 mile trail system that links all of the major cities on the eastern seaboard between Canada and Key West.

Existing Use of Adjacent Lands

Property to the south, west and north of the park is predominately low-density single family residential with a few commercial strip developments along the major roads. State Road A1A, which provides access to the unit, is a highly developed, tourist oriented, commercial corridor located south and west of the park. State Road A1A separates the southernmost 46-acre parcel from the main body of the park. The St. Augustine Family YMCA owns an inholding within this parcel where it operates a community center and exercise facility. The shoreline along St. Augustine Inlet forms the northern boundary of the state park. Pope Road in St. Augustine Beach forms the park's southern boundary.

Planned Use of Adjacent Lands

Future Land Use (FLU) designations for parcels within St. Augustine at the northwest corner of the park are Low Density Residential, Low Intensity Commercial, and Public-Semi Public (City of St. Augustine 2011). Zoning is RS-1 Single-Family Residential with a maximum density of eight dwelling units per acre (City of St. Augustine 2014). Land along the park's western boundary is

within St. Johns County. These parcels have a FLU designation of Residential-C, allowing for single and multi-family dwellings along with appropriate commercial uses (St. Johns County 2010). Zoning for these parcels is RS-3 Single Family Residential allowing for single-family homes, not to exceed four dwelling units per acre, and compatible neighborhood public services (St. Johns County 2013). Property along the south boundary of the park in St. Augustine Beach is a mix of Low Density Residential, High Density Residential, and Commercial (St. Augustine Beach 2006). A review of proposed comprehensive plan amendments in cities and counties showed that no substantial development projects are proposed that would impact the park.

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 topography of the state park is characteristic of barrier islands in this region of the state. Dunes and swales occur throughout the park. The portion of the park west of Salt Run is typical of an old dune system with stabilized vegetative succession. The ancient dunes now covered by maritime hammock still exhibit sharply rolling dune formations. Elevations range from about 10 to 20 feet. Trails for nature study and wildlife observation are appropriate for these areas if developed in a way that protects the steep sandy slopes. Conch Island is representative of a recent dune system. The highest elevations in the park are found on its north end, which was historically part of the Vilano Beach peninsula. These dunes are particularly sensitive to vehicular and foot traffic.

Water Area

Salt Run is the most important surface water within the park. It is a very popular spot for windsurfing, standup paddleboarding, canoeing and kayaking. In addition to Salt Run and its associated tidal marshes, the southern portion of the property includes a borrow pit with tidally influenced water, swampy areas, and a series of mosquito control drainage ditches dug by the county that drain

into Salt Run. The borrow pit could provide fishing opportunities for park visitors as both fresh and saltwater species inhabit this water body.

Shoreline

The shoreline along the Atlantic Ocean is almost four miles long and provides substantial beach-related recreational opportunities in terms of swimming, surfing, picnicking, and fishing. Of the five miles of shoreline along Salt Run, only one miles along its western shoreline are suitable for activities such as wade fishing and crabbing.

Natural Scenery

The natural scenery at Anastasia, especially the wide, white sandy beach, with blowing dunes and swaying sea oats, encourages nature photography and study. The maritime hammock provides a shaded woodland experience in contrast to the sunny, exposed conditions on the beach.

Significant Habitat

Anastasia State Park offers a variety of coastal habitats with excellent opportunities for wildlife viewing. The coastal hammock, with several hundred species of plants, is a prime habitat for raccoons, squirrels, and other upland species. The beach area provides habitat for nesting shorebirds and sea turtles. Salt Run supports a population of diamondback terrapins and the dunes provide habitat for one of only three remaining populations of the endangered Anastasia Island beach mouse.

Natural Features

The most outstanding feature of the recreation area is the high-energy Atlantic front beach. This is the focal point of most of the recreational activities in the park.

Archaeological and Historical Features

In terms of archaeological and historical features, Anastasia State Park is in a historically rich area that was vitally important in European colonization of Florida and the entire continent of North America. A coquina rock quarry used by the Spanish masons is located on the northwest corner of the park property. This rock was used in the construction of the Castillo de San Marcos starting in 1672. The quarry is an important interpretive element providing a tangible link to the Spanish Colonial period.

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.

ANASTASIA 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

BASE MAP

Past Uses

The park site has always been a popular recreation area. In the late 1800s, recreation seekers came to a beach resort located along the Salt Run shore overlooking the Atlantic Ocean. The U.S. Government owned the park site, known as the Naval Observatory Tract, during World War II. The property was declared surplus in 1949 and was purchased by the State of Florida. The north end of Conch Island was privately-owned before purchase by the State. The Spanish Quarry site produced coquina used in the construction of the Castillo de San Marcos and St. Augustine. The site was used for a short time as a borrow pit for in-park use; this activity stopped over 20 years ago.

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.

The southern half of the park is within the St. Augustine city limits and is designated recreation/open space on the City's Future Land Use Map (City of St. Augustine 2011). The northern half of the park is designated as parks/recreation on the St. John's County Future Land Use Map (St. Johns County 2010). Both designations permit uses and activities as allowed by the governing agency's approved management plan. The portion of the park with the City of St. Augustine is zoned for Government Use (City of St. Augustine 2014). Any lawful government use is allowed under this designation so long as title to the land is vested in the government. Zoning in the northern half of the park (Conch Island) has the St. Johns County zoning designation of Open Rural. This category allows for low density residential and agricultural uses (St. Johns County 2013). No conflicts to park development and management are anticipated.

Current Recreational Use and Visitor Programs

The existing forms of recreation at Anastasia State Park include ocean swimming, picnicking, fishing, camping, surfing, wind surfing, canoeing, kayaking, sailing, hiking, and nature study. Existing concessions include a camp/beach store and restaurant operated at the beach area and a non-motorized boat rental service at the Salt Run day use area. A number of interpretive exhibits are located throughout the park to provide visitors with information about the conservation of sea turtles, the Anastasia Island beach mouse, and shorebirds. The park is part of the Great Florida Birding and Wildlife Trail and has been designated as an Important Birding Area by the National Audubon Society.

Anastasia State Park recorded 1,060,093 visitors in FY 2014/2015. By DRP estimates, the FY 2014/2015 visitors contributed $90,710,745 million in direct economic impact, the equivalent of adding 1,451 jobs to the local economy (FDEP 2014).

Other Uses

St. Johns County leases 16.7 acres for use as an outdoor amphitheater located just east of State Road A1A. The amphitheater development was part of the state park at one time. It is now leased directly from the Board of Trustees and is no longer included in the Division's management boundaries. The local YMCA holds a Trustees lease of 9.9 acres, bounded by State Road A1A and Pope Road, at the south end of the 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 Anastasia State Park the dune system, estuarine salt marsh and the undisturbed portions of the maritime hammock have been designated as protected zones as delineated on the Conceptual Land Use Plan.

Existing Facilities

Existing facilities at Anastasia State Park focus on three different locations: the Atlantic Ocean day use area, Salt Run day use area, and the campground area (see Base Map).

Recreation Facilities

Hilltop Picnic Area
Picnic pavilions
Restroom
Parking (25 cars)

Beach Area
Picnic pavilion
Picnic tables
Playground
Concession building
Parking (300 cars)
Beach showers
Late arrival RV parking area
Restroom/changing rooms
Beach access boardwalk
Scenic overlook

Salt Run Day Use Area:
Picnic pavilion
Picnic tables
Canoe/kayak/sailboard rental concession
Restroom
Parking (20 cars)

Camping Area:
Campsites (139)
Playground
Campfire circle
Nature trail (.5 miles)
Camper bathhouses (4)

Spanish Quarry Interpretive Area
Interpretive trail (100ft.)

Support Facilities
Ranger station
Shop
Garage (3-bay)
Paint sheds
Mower shed
Park office
Residences (2)
Storage buildings (3)
Park roads (4.5 mi.)

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 and 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. New and/or improved activities and programs are also recommended and discussed below.

Objective: Maintain the park's current recreational carrying capacity of 3,812 users per day.

Anastasia State Park should continue as a leading provider of resource-based recreation activities in the northeastern region of Florida. The park will continue to be a primary destination for nature-based travel in the St. Augustine Beach area. The existing forms of recreation will continue at the park including ocean swimming, picnicking, fishing, camping, surfing, wind surfing, canoeing, kayaking, sailing, hiking, and nature study.

Objective: Expand the park's recreational carrying capacity by 560 users per day.

Considering the popularity and high occupancy rate of the Anastasia State Park campground and the fact that the level of service for RV/trailer camping in northeast region of Florida is below the statewide average (FDEP 2013), camping opportunities will be expanded in the park. Beach access will be improved with the addition of beach access boardwalks. Non-motorized boating opportunities will be enhanced with the addition of a new and improved boat rental concession building at the Salt Run Day Use Area. Picnicking opportunities will be expanded at the Salt Run Day Use Area with the addition of a large picnic pavilion.

Objective: Continue to provide the current repertoire of 5 interpretive, educational and recreational programs on a regular basis.

A series of kiosks located at key locations to provide visitors with information about significant natural resources including nesting shorebirds and sea turtles and the endangered Anastasia Island beach mouse. The Citizen Support Organization sponsors an annual 5K and 10K run on the parks roads and trails. The Beach Bash is an annual event located in the beach use area featuring fun activities for kids that promote environmental awareness. A monthly music festival for campers and the local community is held in the beach area in partnership with the concessionaire. The Junior Ranger program is conducted annually in partnership with a local elementary school. This six-week program teaches students about coastal habitats and wildlife.

Objective: Develop 2 new interpretive, educational and recreational programs.

Two new interpretive programs are proposed for the park. A trailhead kiosk and wayside interpretive signs will be installed along the Coquina Quarry Trail to

ANASTASIA STATE PARK

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

highlight the cultural and historical significance of this site. The proposed Fall Festival will be an annual community event to raise environmental awareness about coastal habitats and imperiled species. Outdoor exhibits and displays by environmental/conservation organizations and ranger-guided hikes will be featured.

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 improved or renovated and/or new facilities needed to implement the conceptual land use plan for Anastasia 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. Currently, there is no fee collection system in place for visitors that enter the park from the beach at the southern boundary near the public parking area at the terminus of Pope Road. Signs have been installed that mark the boundary to let visitors know when they have entered the park and to inform them of park rules. Additional signage will be installed to inform visitors of the park's fee requirements.

***Objective: Improve/repair 5 existing facilities, .25 miles of trail,* and 500 feet of road.**

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 the DRP). The following discussion of other recommended improvements and repairs is organized by use area within the park.

Beach Area: One additional access point is proposed for the beach area. It will be created by converting the existing beach overlook to an access point by extending the boardwalk across the dune and onto the beach. Improvements are proposed for the beach area driveway and parking lot to enhance visitor and vehicle circulation. The existing on-grade boardwalk along the service road to the beach will be made ADA-accessible.

Salt Run Day Use Area: The boat rental concession is very popular and attracts large numbers of visitors. The existing building is too small and will be replaced with a new, larger structure to improve concession operations. A large picnic pavilion will be added in this area to provide additional space in this popular picnicking area. The parking lot next to the canoe/kayak launching area is subject to flooding. It will be moved upslope in a disturbed area along the main park drive and stabilized as was done to the parking lot just to the north.

Camping Area: Thirty additional campsites are proposed for a new camping loop to be located near the old borrow pit south of the beach area parking lot. The proposed loop will accommodate a variety of camping equipment. The camping area will include paved or stabilized roads, stabilized camping pads, bathhouses, picnic tables and grills, connections for water and electrical service. A .25 mile nature trail will be developed around the borrow pit pond and provide access to a fishing platform at the water's edge. Both the trail and fishing platform will be provided as an amenity for campers. Approximately 500 feet of road from the main park drive to the proposed camping area will be required. The campground addition will be designed to fit within the footprint of past disturbance as much as possible to protect the maritime hammock in this area. Campground construction activities will be staged to minimize disturbance to migratory bird species. Major construction activities will be scheduled when migratory activity is at minimal levels.

Spanish Quarry Interpretive Area: The coquina rock quarry provided building materials for construction of the Castillo de San Marcos. A trailhead kiosk and interpretive wayside signs will be installed to describe the historical significance of this site and the link to Spanish Colonial period.

Residence Area: It is recommended that up to three new staff residences be provided during this planning cycle. The existing residence area just east of the park entrance will be expanded to accommodate new residences.

Facilities Development

Preliminary cost estimates for these recommended facilities and improvements are provided in the Ten-Year Implementation Schedule and Cost Estimates (Table 6) 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:

Beach Area
Beach access boardwalk
Driveway and parking lot reconfiguration
ADA improvements to on-grade boardwalk

Camping Area
Standard camping loop (30 sites)
Nature trail (.25 mi.)
Fishing platform

Salt Run Day Use Area
Concession building replacement
Large picnic pavilion
Stabilized parking (up to 20 spaces)

Spanish Quarry Interpretive Area
Interpretive kiosk
Interpretive wayside signs (6)

Residence Area
Staff residence (up to 3)

In the future, any additional support facilities will be located in the Future Support Facilities Area as delineated on the Conceptual Land Use Plan.

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		Estimated Recreational Capacity	
Activity / Facility	One Time	Daily	One Time	Daily	One Time	Daily
Beach Use	950	1,900	100	200	1,050	2,100
Fishing						
Shoreline	50	100			50	100
Boating						
	40	80			40	80
Sailing	40	80			40	80
Camping						
Standard	1,112	1,112	240	240	1,352	1,352
Picnicking	200	400	40	80	240	480
Trails						
Nature	30	140	10	40	40	180
TOTAL	**2,422**	**3,812**	**390**	**560**	**2,812**	**4,372**
*Existing capacity revised from approved plan according to DRP guidelines.						

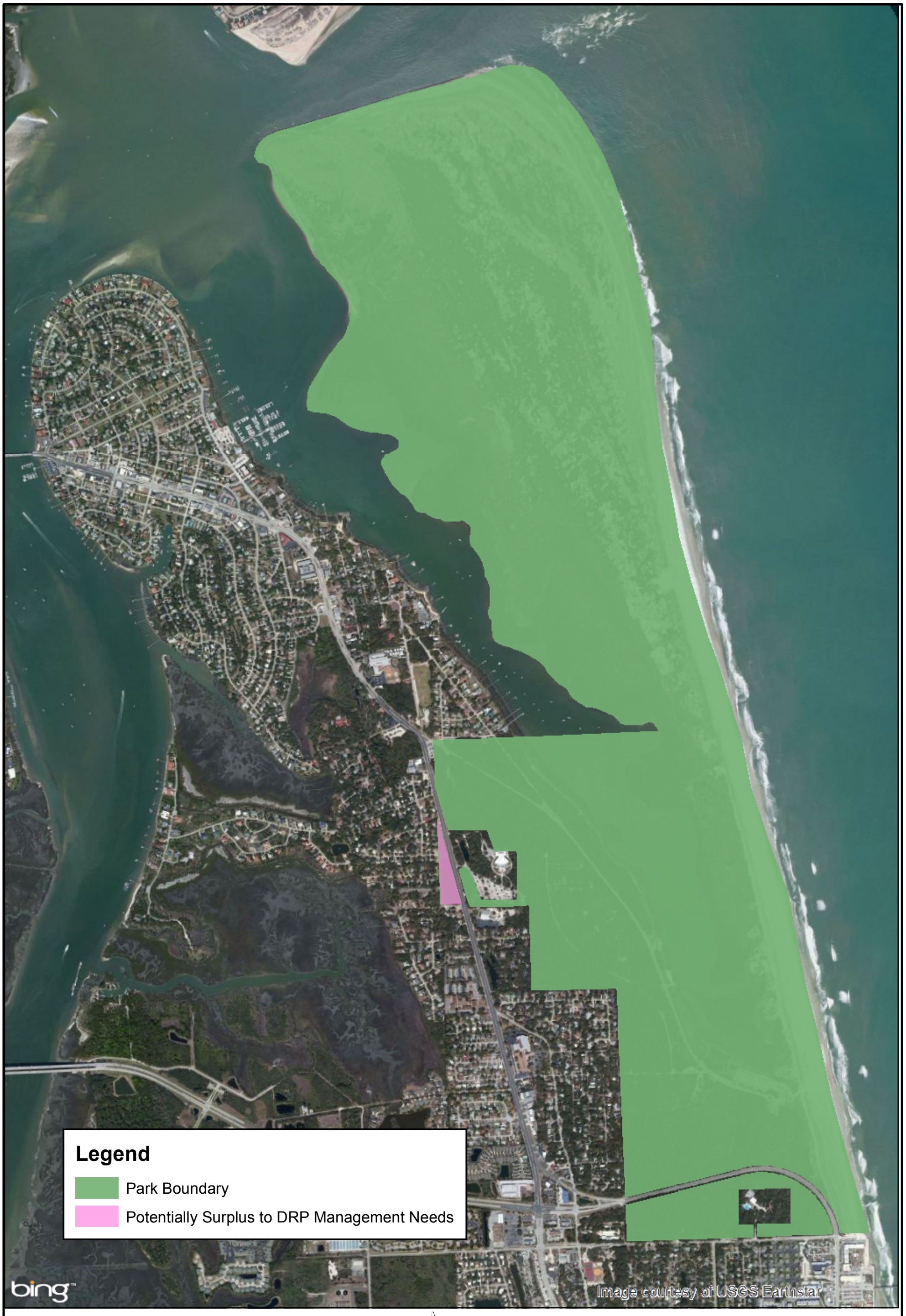
Optimum Boundary

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 the 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.

A small parcel located across State Road A1A from the park office driveway has been identified for surplus (see Optimum Boundary Map). This 5-acre property is not connected to the main body of the park and offers little in the way of resource, recreational, or operational value.



ANASTASIA 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: 2010

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 Anastasia State Park in 2004, significant work has been accomplished and progress made towards meeting the DRP's management objectives for the park. These accomplishments fall within four of the five general categories that encompass the mission of the park and the DRP.

Park Administration and Operations

- Completed ranger station renovations to improve visitor safety and energy efficiency.

Resource Management

Natural Resources

- Over 850 acres of Management Zone AN-11 have twice been treated with prescribed fire.
- Continued maintenance removal of exotic plant species. Over 200 acres of exotic plant species have been treated at the park since the previous UMP, including Brazilian pepper, rose natal grass, giant reed, air potato, and Chinese tallow.
- Two FWC Upland Invasive Plant Management projects have been successfully completed on site.
- Continued removal of exotic animals.
- Ongoing monitoring of the endangered Anastasia Island beach mouse, diamondback terrapins, shorebirds (least tern, Wilson's plover, willet, piping plover, red knot, black skimmer), and sea turtles.
- A total of 219 sea turtles nests were documented: 185 loggerheads, 27 greens, and 7 leatherbacks.
- District and park staff have met with staff from St. Johns River Water Management District, FDEP regulatory district, and Anastasia Mosquito Control District to discuss hydrological restoration and ditch restoration.

- District and park staff have met with staff from FDEP Beaches and Coastal Systems, U.S. Army Corps of Engineers, and other entities to assist in the update of the St. Augustine Inlet Management Plan.

Cultural Resources

- All known cultural sites are routinely visited to assess their condition and determine whether additional protection measures are warranted.

Park Facilities

- Installed a new playground in the Beach Use Area.

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 6) 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 6 may need to be adjusted during the ten-year management planning cycle.

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	**$1,030,000**
Objective B	**Expand administrative support as new lands are acquired, new facilities are developed, or as other needs arise.**	Administrative support expanded	UFN	**$205,000**
Goal II: Protect water quality and quantity in the park, restore hydrology to the extent feasible, and maintain the restored condition.		**Measure**	**Planning Period**	**Estimated Manpower and Expense Cost* (10-years)**
Objective A	**Conduct/obtain an assessment of the park's hydrological needs.**	Assessment conducted	LT	**$6,400**
Action 1	Assess hydrological restoration needs	Assessment conducted	UFN	$3,200
Action 2	Assess mosquito ditch impacts	Assessment conducted	UFN	$3,200
Objective B	**Develop a canal/ditch removal plan to determine the feasibility of eliminating ditches within the coastal interdunal swale and maritime hammock communities.**	# Acres restored or with restoration underway	UFN	**$40,000**
Action 1	Develop canal/ditch removal plan	Plan developed/updated	UFN	$3,200
Action 2	Implement canal ditch removal plan	Plan implemented	UFN	$36,800
Goal III: Restore and maintain the natural communities/habitats of the park.		**Measure**	**Planning Period**	**Estimated Manpower and Expense Cost* (10-years)**
Objective A	**Apply fire to approximately 884 acres of fire influenced habitat in zone AN-11 on a 3-15 rotation**	# Acres within fire return interval target	C	**$46,000**
Action 1	Develop/update annual burn plan.	Plan updated	C	$1,800
Action 2	Burn 884 acres of zone AN-11 on a 3-15 year rotation	Average # acres burned annually	C	$44,200
Goal IV: 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	**$1,600**
Objective B	**Monitor and document 8 selected imperiled animal species in the park.**	# Species monitored	C	**$8,000**
Action 1	Implement monitoring protocols for 8 imperiled animal species including Anastasia beach mouse, sea turtles (loggerhead, green, leatherback, and Kemp's ridley), piping plover, Wilson's plover, and least tern.	# Species monitored	C	$8,000
Objective C	**Monitor and document 2 selected imperiled plant species in the park.**	# Species monitored	C	**$3,200**
Action 1	Develop monitoring protocols for 2 selected imperiled plant species including sand dune spurge and coastal mock vervain	# Protocols developed	ST	$1,600

* 2015 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

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Action 2	Implement monitoring protocols for 2 imperiled plant species including those listed in Action 1 above	# Species monitored	C	$1,600
Goal V: 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 .5 acres of exotic plant species in the park.**	# Acres treated	C	**$1,900**
Action 1	Annually develop/update exotic plant management work plan.	Plan developed/updated	C	$1,600
Action 2	Implement annual work plan by treating .5 acres in park, annually, and continuing maintenance and follow-up treatments, as needed.	Plan implemented	C	$300
Objective B	**Practice preventative measures to avoid accidental introduction and spreading exotics within the park.**		C	**$300**
Objective C	**Implement control measures on 4 exotic and nuisance animal species in the park.**	# Species for which control measures implemented	C	**$500**
Goal VI: 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 29 of 29 recorded cultural resources in the park.**	Documentation complete	LT	**$500**
Action 1	Complete 29 assessments/evaluations of cultural sites. Prioritize preservation and stabilization projects.	Assessments complete	LT	$500
Objective B	**Compile reliable documentation for all recorded historic and archaeological sites.**	Documentation complete	LT	**$7,600**
Action 1	Ensure all known sites are recorded or updated in the Florida Master Site File.	# Sites recorded or updated	ST	$600
Action 2	Conduct Level 1 archaeological survey for 1 priority area idenitified by the archaeological predictive model	Survey completed	UFN	$7,000
Objective C	**Bring 4 of 29 recorded cultural resources into good condition.**	# Sites in good condition	UFN	**$8,000**
Action 1	Design and implement regular monitoring programs for 12 cultural sites	# Sites monitored	C	$2,000
Action 2	Create and implement a cyclical maintenance program for each cultural resource.	Programs implemented	C	$2,000
Action 3	Bring 4 cultural sites into good condition	Projects completed	UFN	$4,000
Goal VII: 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 3,812 users per day.**	# Recreation/visitor	C	**$5,170,000**
Objective B	**Expand the park's recreational carrying capacity by 560 users per day.**	# Recreation/visitor	ST or LT	**$1,031,000**

* 2015 Dollars
ST = actions within 2 years
LT = actions within 10 years
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UFN = currently unfunded need

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.

Objective C	**Continue to provide the current repertoire of 5 interpretive, educational and recreational programs on a regular basis.**	# Interpretive/education programs	C	**$25,000**
Objective D	**Develop 2 new interpretive, educational and recreational programs.**	# Interpretive/education programs	ST or LT	**$15,000**
Goal VIII: 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	**$2,068,000**
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	ST or LT	**$350,000**
Objective C	**Improve and/or repair 5 existing facilities, .25 miles of trail and 500 feet of road as identified in the Land Use Component.**	# Facilities/Miles of Trail/Miles of Road	LT	**$5,153,000**
Objective D	**Expand maintenance activities as existing facilities are improved and new facilities are developed.**	Facilities maintained	C	**$500,000**

Summary of Estimated Costs

Management Categories		**Total Estimated Manpower and Expense Cost* (10-years)**
Resource Management		**$124,000**
Administration and Support		**$1,235,000**
Capital Improvements		**$5,503,000**
Recreation Visitor Services		**$8,809,000**
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.

* 2015 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 Florida Board of Forestry and Parks (FBFP), predecessor in interest to the Florida Board of Forestry (FBF), initially acquired the property to use and maintain as a public park and recreational area.

Sequence of Acquisition:

On March 31, 1949, FBFP obtained title to an 852-acre property constituting the initial area of Anastasia State Park. The property was purchased from the United States of America War Assets Administration for $20,000. Since the 1949 initial acquisition, FBFP and succeeding state agencies acquired three parcels (one through a transfer, another through a dedication, and the third through a purchase) and added them to Anastasia State Park. The purchase was funded under the Save Our Coast (SOC) program. On September 16, 1949, FBF transferred the title and interest it had in Anastasia State Park to the Florida Board of Parks and Historic Memorials (FBPHM), predecessor in interest to the State of Florida Department of Environmental Protection, Division of Recreation and Parks (DRP). On September 28, 1967, the FBPHM transferred and conveyed its title and interest in Anastasia State Park to the Trustees of the Internal Improvement Fund of the State of Florida (TIIF), which is now commonly known as the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida (Trustees). The current area of the park is 1,593 acres.

Title Interest:

The Trustees hold fee simple title interest in Anastasia State Park.

Lease Agreement:

On January 23, 1968, the TIIF leased Anastasia State Park back to FBPHM under a generic lease, Lease No. 2324. Lease No. 2324 is for a period of ninety-nine (99) years, which will expire on January 22, 2067. On August 24, 1988, Trustees assigned a new lease number, Lease Number 3608, to Anastasia State Park, without changing any of the terms and conditions of Lease No. 2324. According to Trustees Lease No. 3608, DRP manages Anastasia State Park for the purpose of developing, operating and maintaining the property for outdoor recreational, park, conservation, historic and related purposes.

Special Conditions on Use:

Anastasia State Park is designated single-use 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, linear facilities and sustainable agriculture and forestry are not consistent with the purpose for which DRP manages Anastasia State Park, and are not allowed in the park. However, if these activities are reviewed and approved in the park's Unit Management Plan, they are allowed in the park.

Addendum 2—Advisory Group Members and Report

Local Government Officials

The Honorable Nancy Shaver
Mayor, City of St. Augustine

The Honorable Andrea Samuels,
Mayor
City of St. Augustine Beach

The Honorable Rachael Bennett, Chair
St. Johns County Board of
County Commissioners

Agency Representatives

Warren Poplin, Park Manager

Gary Raulerson, Assistant Manager
Guana Tolomato Matanzas National
Esturarine Research Reserve

Jimmy Conner, District Wildlife
Biologist
Florida Fish and Wildlife Conservation
Commission

J.B. Miller, Senior Land Resource
Planner
St. John's River Water Management
District

Mike Wisenbaker, Archaeology
Supervisor
Bureau of Archaeological Research
Florida Division of Historical Resources

Craig Hartwig, Chair
St. Johns Soil and Water
Conservation District

Tourist Development Council

Glenn Hastings, Executive Director
St. Johns County Tourist
Development Council

Environmental Representatives

Chris Farrell, Northeast Florida Policy
Associate
Audubon Florida

Paul Hayden, Chair
Surfrider Foundation, First Coast
Chapter

Alex Farr, President
Florida Native Plant Society
Sea Oats Chapter

Cultural Resource Representatives

Robert Storey
The St. Augustine Historical Society

User Groups

Jon DePreter, Regular Park User

Davis Walker, President
Florida Living History, Inc.

David Hernandez, President
St. Augustine Kayak Anglers

Citizen Support Organization

Greg Adams, President
Friends of Anastasia

Charles Ellis, President
Fort Mosé Historical Society

Adjacent Landowners

Maurice F. Lucas

Michael "Mick" Gurick

The Advisory Group meeting for Anastasia State Park and Fort Mose Historic State Park was held at the Fort Mose Historic State Park visitor center on August 27, 2015. Max Royle represented Mayor Andrea Samuels, Jan Brewer represented Commissioner Rachael Bennett, and Hugh Lewis represented Mick Gurick. Mayor Nancy Shaver, Gary Raulerson, Mike Wisenbaker, Craig Hartwig, and Davis Walker were unable to attend. All other Advisory Group members were in attendance. Mike Wisenbaker and Chris Farrell submitted written comments. Attending staff were Larry Fooks, Robert Yero, Alice Bard, Warren Poplin, Vicki Tiseth, Sine Murray, Jason Mahon, and David Copps.

Mr. Copps began the meeting by explaining the purpose of the Advisory Group, reviewing the meeting agenda, and summarizing the comments from public workshop that was held the previous evening. Mr. Copps then asked each member of the Advisory Group to express his or her comments on the draft plan.

Summary of Advisory Group Comments

Jon DePreter (Recreational User) asked that the park consider the possibility of providing hiking trails on Anastasia State Park's (ASP) Conch Island. He stated that he would like to see some of the beach areas at the northern tip of Conch Island managed to maintain the natural contours of sloughs and swales rather than flattening them out during the beach re-nourishment projects. These areas provide good fish habitat and contribute to a more interesting beach experience. Mr. DePreter said that the proposed northernmost beach access boardwalk is not necessary and would not be worth the construction costs. He recommended removing this facility from the plan. Mr. DePreter asked about the status beach renourishment at ASP. Alice Bard described upcoming projects proposed for 2016.

Jan Brewer (representing the St. Johns County Board of County Commissioners) recommended the installation of better wayfinding signs on U.S. 1 so visitors can more easily locate the turn to Fort Mose Historic State Park (FMHSP). She also recommended that the location of the original Fort Mose should be delineated on the ground. Alice Bard said that archaeological studies have not yet identified the location of the original fort. For ASP, Ms. Brewer recommended that the resource management component of the management plan provide more discussion about population trends of the Anastasia Island beach mouse. She asked if trail development on Conch Island would impact the beach mouse. Alice Bard replied that it would not impact the mouse in the proposed area.

J.B. Miller (St. Johns River Water Management District) recommended that the proposed campground expansion at ASP be sensitively sited within the successional maritime hammock to avoid the high quality areas. He stated that ASP was designated an Important Bird Area not only for shorebird nesting significance but for the very large numbers of birds that use the beach area for resting/loafing. He recommended that the resource management component of the plan be revised to better describe this phenomenon. Mr. Miller described Salt Run as good habitat for juvenile green sea turtles and recommended that this be mentioned in the resource

management section of the plan. He stated support for developing a loop trail on Conch Island's mosquito control service roads. Mr. Miller said that the proposed extension of the northernmost beach access boardwalk is not necessary and recommended removing this proposed facility from the plan. He stated concern that there is not enough room to expand the proposed Salt Run parking area as described in the plan. Mr. Miller said that the use of the accent mark in the word Mosé is incorrect and recommended its removal.

Chris Farrell (Audubon Florida) recommended the addition of better wayfinding signs on U.S 1 to help visitors locate the turn for FMHSP. He stated his support for the development of a loop trail at FMHSP so long as the connector piece through the strip of maritime hammock doesn't negatively impact that habitat. Mr. Farrell described the importance of maritime hammock for migrating neotropical songbirds and stated his opposition to the campground expansion proposed for ASP. He said that even successional hammock provides important habitat and should be left to mature. Mr. Farrell stated that the parking improvements proposed for Salt Run should be carefully implemented. He described the open areas along the main park drive as important gopher tortoise habitat and urged better roadside management and signage to reduce road kills. Warren Poplin said that the park has added signs and implemented roadside mowing strategies to increase tortoise awareness and visibility for motorists. Mr. Farrell said that the proposed beach access facilities are not necessary and should be removed from the plan.

David Hernandez (St. Augustine Kayak Anglers) described his organization's paddling and fishing program for wounded war veterans call "Honoring the Brave." He said that the Salt Run Day Use area is a very desirable location for hosting events for groups of veterans. Mr. Hernandez stated that he would like to see improved infrastructure at Salt Run to better accommodate this important user group including improved parking, improved restrooms, and the provision of showers.

Paul Hayden (Surfrider Foundation, First Coast Chapter) said that ASP doesn't need the proposed boardwalk extensions and recommended their removal from the plan. He noted the congested parking situation at the Salt Run Day Use Area and suggested a shuttle service from the main beach parking area to Salt Run as a possible solution to the problem. Mr. Hayden expressed his opposition to the campground expansion. Warren Poplin explained that the proposed campground expansion is intended to accommodate larger RVs so that the integrity of the existing camping areas can be protected. Mr. Hayden recommended that the impacts of trail development on the north end be fully considered before providing new trails in that area.

Mel Lucas (adjacent landowner) stated that Lew Boulevard residents like having ASP as a neighbor. He said that the residents would like for the park to establish a pedestrian entrance where Lew Boulevard terminates at the park boundary and asked that this facility be considered for the plan update. Mr. Lucas noted that traffic problems may arise at the Surf Station intersection if the proposed

campground expansion is developed due to the larger RVs that will be attracted to the park. If this occurs, he recommended that the Florida Park Service work with local government to have a traffic signal installed.

Jimmy Connor (Florida Fish and Wildlife Conservation Commission) noted the importance of the beach and dunes at ASP in providing critical habitat for the beach mouse and nesting least terns. He stated that the proposed addition of beach access facilities could cause negative impacts to critical habitat and recommended that these facilities be removed from the plan.

Alex Farr (Florida Native Plant Society, Sea Oats Chapter) stated that the entry experience at FMHSP does not feel safe. She recommended more staffing to provide a welcoming environment. Warren Poplin said that the proposed volunteer campsite and staff residence at FMHSP should address this issue by providing more of a staff presence. Ms. Farr stated her objection to the proposed beach access boardwalks at ASP and recommended their removal from the plan. She stated that the park should consider banning plastic bottles and Styrofoam containers to reduce the amount of litter at ASP. She recommended the addition of more signage to improve fishing line disposal. Ms. Farr said that wheelchair access to the ASP beach needs to be improved. Warren Poplin said that four beach wheel chairs are available on a first come first serve basis. She said that the shuttle service proposed by Mr. Hayden, which would take visitors to the Salt Run Day Use Area from the beach area parking lot, should be ADA accessible.

Glenn Hasting (St. Johns County Tourist Development) said that area visitors are looking to connect with local stories. He stated that the parks need to share their stories more effectively with improved interpretive facilities at both parks. He said that interpretation should connect the dots by highlighting the relationships with other historic sites in the area. Mr. Hastings said that building respect for the historic character of cultural sites can be achieved by engaging visitors with good storytelling. He stated that he does not agree with more commercialization in the parks and recommended that they should be kept as primitive as possible. Mr. Hastings said FMHSP should consider offering a living history exhibit along the lines of the cow camp at Lake Kissimmee State Park.

Max Royal (representing the City of St. Augustine Beach) stated that he had no comments.

Greg Adams (Friends of Anastasia) said that volunteers are always needed for park improvement activities and asked those attending the advisory group meeting to help get the word out. He stated that he is in favor of no development on Conch Island at ASP as is proposed in the current, approved plan. Mr. Adams supports the construction of the proposed beach access boardwalks at ASP to accommodate older and infirmed visitors. He said more staffing and better staff pay is needed for the parks to combat the high turnover rate.

Charles Ellis (Fort Mose Historical Society) said that FMHSP is a jewel of historical information but relatively few know about it. He stated that the greatest challenge for the park is to increase visitation through greater visibility. He recommended that the park install better wayfinding signage on US 1 and consider developing a new entrance road to the park to take advantage of a stop light and public right-of-way next to Schooner's Restaurant on U.S. 1. Mr. Ellis stated support for an increase in the number of days that special events are provided in the park. He recommended the addition of a gift shop in the visitor center and three more chosa exhibits in the outdoor interpretive area. Mr. Ellis is concerned about the staff turnover rate and supports more staffing at the park to keep it open seven days a week. He recommended that the canoe/kayak landing be extended further out to provide better access from the Tolomato River. The landing is currently useable only during high tide.

Robert Storey (St. Augustine Historical Society) recommended that the parks should make an extra effort to understand the needs of their visitors so that park improvements can be tailored to those needs. He recommended the addition of more wayfinding signs on US 1 to better guide visitors to FMHSP. He stated that the improved relationship with Cuba will significantly increase tourism. He recommended that historical relationship between Cuba and St. Augustine be promoted to increase visitation to FMHSP. Mr. Storey said visitation to the parks could be increased by creating and distributing marketing publications to area restaurants and attractions. He explained that increased visitation will require the provision of additional facilities. He said that the public should be made aware of the history of the area and the artifacts that have been found in the parks to build understanding and appreciation. Mr. Storey said he doesn't support the construction of additional beach access boardwalks at ASP and recommended that they be removed from the plan. He recommended the installation signs to warn visitors of biting insects (no-seeums). He suggested that the parks should consider providing opportunities for visitors to make monetary contributions to implement park projects. Mr. Storey recommended constructing a replica of the fort somewhere on the property to provide visitors with a tangible, physical experience. He said visitors won't really care if it is in the exact location of the original fort.

Warren Poplin (Anastasia State Park/Fort Mose Historic State Park) agreed that better wayfinding signage is needed on US 1 to guide visitors to FMHSP. Mr. Ellis recommended signage on Interstate 95 to promote FMHSP. Mr. Adams recommended smart phone-coded park promotional publications be placed in I-95 rest stops and promotional paper place mats for distribution to area restaurants. Mr. Hayden said that the promotional activities used by the Lost Colony in North Carolina should be emulated to create interest for FMHSP. Mr. Miller mentioned that the Visit Florida website has much good information about FMHSP. Mr. Hastings said the St. Johns County Tourist Development Council could collaborate with FMHSP on marketing and promotional efforts.

Hugh Lewis (adjacent landowner) said that he is often asked by park visitors about the location of Fort Mose. He said that the construction of the bastion wall will

help satisfy visitors' curiosity by providing a tangible experience. Mr. Lewis expressed concern about the impacts to the neighborhood from all proposed improvements and asked the timeline for development. Mr. Poplin said that construction is dependent on funding allocations and the timeline for that is not known at this time. Mr. Lewis asked how the optimum boundary map relates to Mr. Ellis' suggestion of providing a new park entrance from the public right-of-way next to Schooners restaurant on US 1. Sine Murray explained the land acquisition process and that land is purchased only from willing sellers. She said if a new entrance was approved, all property involved in the development of such a facility would have to be delineated on the optimum boundary map.

Summary of Public Comments

Eric Powell stated that ASP north end (Conch Island) trails would not be appealing to the general public. He recommended against developing a loop trail in this area. Mr. Powell stated his opposition to the proposed beach access boardwalk extensions at ASP. He recommended removing these facilities from the plan update. Mr. Powell described the need for better interpretation of the Spanish Quarry area and recommended the installation of better signs. He described the fence between the Spanish Quarry and the St. Johns County property as a wildlife hazard and recommended its removal. Mr. Powell noted the abundance of lantana along the Spanish Quarry trails and recommended treatment. He recommended that interpretation at ASP be expanded to tell the story of Salt Run as the original inlet.

Summary of Written Comments

Mike Wisenbaker (Division of Historical Resources) provided documentation of archaeological sites in both parks. He provided Florida Master Site File information for ASP showing ten archaeological and historical surveys and ten recorded archaeological sites. For Fort Mose the site file indicates nine archaeological and historical surveys as well as six recorded archaeological sites within the park. He asked that the Division of Recreation and Parks (DRP) compare their records with DHR records and work with DHR to resolve any differences. He recommended that the parks monitor their archaeological sites on an annual basis. Mr. Wisenbaker encouraged the parks to send as many staff as possible to archaeological resource monitoring (ARM) training. He encouraged DRP to interpret as many archaeological sites as possible within state parks. The written comments are attached.

Chris Farrell (Audubon Florida) stated that Audubon Florida supports the management goals listed on pages 8 and 9 of the draft management plan which recognize conservation and restoration as fundamental aspects of park management. He recommended that boardwalk construction be eliminated from the plan as it does not increase user access but does impact Anastasia Island beach mouse habitat. He also recommended the elimination of additional camping areas from the plan to preserve wildlife habitat. He said that camping demand beyond what the park currently offers should be directed to nearby private camping facilities. The written comments are attached.

Staff Recommendations

Suggestions received from the Advisory Group meeting resulted in the following modifications to the draft management plan:

- The proposed northernmost beach access boardwalk at ASP will be removed from the land use component of the plan.
- Language will be added to the ASP resource management component to describe population trends of the Anastasia Island beach mouse.
- Language will be added to the ASP resource management component to describe the very large numbers of shorebirds that use the beach for resting and loafing and the fact that Salt Run provides good habitat for juvenile green sea turtles.
- Language will be added to the FMHSP plan stating that the DRP will coordinate with local and state agencies to explore the feasibility of installing additional wayfinding signs and developing a new entrance route on US 1 to enhance the parks visibility for area travelers.

Several Advisory Group members recommended the development of a loop trail system on Conch Island at ASP. The decision was made not to develop trails in this area due to operational and safety concerns.

One Advisory Group member stated that the accent mark in Mosé is incorrect and recommended its removal from the text. The DRP will review the proper use of the accent mark and modify the text if warranted.

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

With these modifications, DRP staff recommends approval of the proposed management plan for Anastasia State Park and Fort Mose Historic State Park.

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.

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population genetics of Alabama beach mice (*Peromyscus polionotus ammobates*). Informal pub. In *Peromyscus Newsletter* 21:33.

Addendum 4—Soil Descriptions

(19) Pompano fine sand – the map unit composition for this soil type is Pompano, nonhydric, and similar soils-70%; Pompano, hydric, and similar soils-20%; and minor components (Adamsville; Riviera, hydric; and Holopaw, hydric)-10%. This series is a poorly drained, nearly level soil in low areas bordering poorly to well-defined drainageways and broad, low, flat areas on marine terraces; slopes are less than 2 percent. The parent material is sandy marine deposits. Typically, the surface layer is very dark grayish brown fine sand about 4 inches thick. The material between depths of 4 and 28 inches is white fine sand. Below this, and extending to a depth of 80 inches or more, is light gray and light olive gray fine sand mixed with sand-sized shell fragments.

The depth to water table is approximately 6 to 18 inches. Permeability is rapid or very rapid throughout; available water capacity is very low. The natural fertility and organic matter content of this soil type are low.

(28) Beaches – beaches consist of long, narrow strips of nearly level sand along the Atlantic Ocean. Seawater covers these areas twice daily during normal high tides. Beaches also include some small areas of low dunes that area adjacent to the narrow strips that are overwashed by tidal waves.

The map unit composition for this soil type is Beaches-95% and minor components (Pomona, nonhydric; Fripp; and Satellite)-5%. The material making up Beaches is a mixture of light gray to white quartz sand, few to many brown and black sand-size grains of heavy minerals, and seashells and shell fragments. It is subject to movement by wind and tide and is practically bare of vegetation. The natural vegetation grows only on some of the low dunes. It is sparse and consists of sea oats, railroad vine, and a few other salt-tolerant plants.

Depth to the water table varies considerably, commonly ranging from 0 to 6 feet, depending on distance from the shore, elevation of the beach, and the tides.

This map unit can be used only as recreational areas and wildlife habitat. Severe erosion is often a problem during severe storms. Because they have great esthetic value, the beaches are an important part of the coastline.

(29) Satellite fine sand – the map unit composition for this soil type is Satellite and similar soils-90% and minor components (Fripp; Pompano, nonhydric; and Moultrie)-10%. This soil type is a somewhat poorly drained, nearly level soil in narrow to broad swales between higher relict sand dunes, on low knolls adjacent to drainageways, and on slight ridges in the flatwoods. Most of this soil is in the area between the Intracoastal Waterway and the Atlantic Ocean. Slopes range from 0 to 2 percent. The parent material is sandy marine deposits. Typically, the surface layer is very dark gray fine sand about 6 inches thick. The material between depths of 6 to 33 inches is white fine sand that has brownish-yellow mottles. Below that is approximately 8 inches of light gray fine sand. Below that, to a depth of 80 inches or more, is light brownish-gray fine sand. Fine shell fragments and heavy mineral grains are also found in this layer.

The seasonal high water table is within a depth of 10 to 40 inches for 2 to 6 months in most years. Permeability is rapid in the surface layer and very rapid below. Available water capacity is moderate in the surface layer and very low in the underlying layers. The natural fertility of this soil type is low. Organic matter content is high in the surface layer and very low in the other layers.

(**31) Fripp-Satellite complex** – the map unit composition for this soil type is Fripp and similar soils-55%; Satellite and similar soils-30%; and minor components (Narcoossee and Pompano, nonhydric)-15%. The parent material is eolian or sandy marine deposits.

The soils included in this mapping unit are excessively drained, rolling or hilly Fripp soil on narrow relict beach dunes and somewhat poorly drained, nearly level Satellite soil in narrow swales between areas of the Fripp soil. These soils formed in thick sandy deposits of marine origin mixed with small amounts of shell and shell fragments. Slope of the Fripp soil ranges from 8 to 15 percent, and is convex and short, while slope of the Satellite soil ranges from 0 to 2 percent and is concave and narrow.

Typically, the surface layer of Fripp soils is gray fine sand about 5 inches thick. The upper 1 inch of the surface layer contains many black organic matter particles. Below the surface layer is fine sand, which is mixed with black sand-sized grains of heavy minerals and extends to a depth of 80 inches or more. It is pale brown and very pale brown in the upper 44 inches and white below that depth. Fripp fine sand has rapid permeability and very low available water capacity. Both natural fertility and organic matter content are low. The water table is below a depth of 80 inches during most years.

Typically, Satellite soil has a very dark gray fine sand surface layer about 6 inches thick. The next layer is white fine sand about 27 inches thick. Below that is light gray fine sand that extends to a depth of 80 inches or more. Satellite fine sand has a water table at a depth of 10 to 40 inches for 2 to 6 months during most years and within a depth of 10 inches for us to a few days during wet seasons. Available water capacity is moderate in the surface layer and very low in the other layers. Natural fertility is low; the organic matter content is high in the surface layer and very low in the other layers.

(32) Palm Beach sand, 0 to 5 percent slopes – the map unit composition for this soil type is Palm Beach and similar soils-90%; minor components (Astatula, Fripp, Paola, and Narcoossee)-10%. The parent material is shells and sandy marine deposits.

This is a well-drained to excessively drained, nearly level to gently sloping soil on dune-like ridges parallel to the Atlantic coast. The soil surface is typically covered with a discontinuous root mat, leaves, stems, and other partially decomposed organic material, which is approximately 2 inches thick. The next layer is approximately 3 inches thick. It consists of grayish brown sand mixed with about 5 percent shell fragments. Below that, to a depth of 28 inches, is light brownish gray

and light gray sand mixed with about 10 percent shell fragments. The next layer, to a depth of 80 inches or more, is white coarse sand mixed with about 70 percent shell fragments.

The water table is more than 80 inches deep. Permeability is very rapid; available water capacity is low. The natural fertility of this soil type is low, and the organic matter content is low or very low.

(38) Pits – this miscellaneous soil mapping unit consists of excavations from which soils and geologic material have been removed, primarily for use in road construction, fill for low areas, and building foundations. Pits, locally called borrow pits, range in size from 1 acre to about 30 acres. Included in mapping are waste materials, mostly mixtures of sand, shells, and shell fragments and sandy loam material. These materials are scattered around the edge of the pits.

(49) Moultrie fine sand, frequently flooded – the map unit composition for this soil type is Moultrie and similar soils-90%; minor components (Pellicer and Tisonia)-10%. The parent material is sandy marine deposits.

This very poorly drained, nearly level soil is in tidal marsh areas, generally in long, narrow areas on the margins of the tidal marsh or on low “islands” in the tidal marsh; slopes range from 0 to 1 percent. The surface layer typically consists of dark grayish-brown fine sand about 2 inches thick. The subsurface layer is light gray fine sand in the upper 6 inches and grayish-brown fine sand in the lower 14 inches. The subsoil is very dark gray fine sand in the upper 4 inches and very dark brown fine sand in the lower 3 inches. The next layer is brown fine sand about 18 inches thick. The substratum is grayish-brown fine sand, which extends to a depth of 80 inches or more.

The seasonal high water table is at a depth of less than 10 inches most of the time and is directly influenced by tidal fluctuations. This soil is flooded periodically by abnormally high tides caused by storms or other unusual conditions.

(54) Astatula-Urban land complex – the map unit composition for this soil type is Astatula and similar soils-50%; Urban land-40%; minor components (Immokalee, nonhydric; Paola; Myakka, nonhydric; Pomello; Tavares; and Wesconnett)-10%.

This map unit consists of nearly level to sloping, excessively drained Astatula soils on broad upland ridges as well as Urban land. The areas of Astatula soils and the areas of Urban land can be so intricately mixed or so small that they could not be shown separately at the scale used for mapping. In this area, Astatula soils occur in ridges on marine terraces; the parent material is eolian or sandy marine deposits. Typically, Astatula soils have a surface layer of very dark grayish brown fine sand about 6 inches thick. Below that is fine sand, which extends to a depth of 80 inches or more. It is yellowish brown and has pockets of very dark grayish brown in the upper 11 inches. Below that, the material is strongly brown and has pockets of light yellowish brown. Below that is yellow fine sand. Urban land

consists mainly of streets, sidewalks, parking lots, and other structures, which obscure or alter the soils to such a degree that identification of the soil is not feasible. Astatula soils have a water table at a depth of more than 80 inches. Available water capacity is very low, and permeability is rapid throughout.

Addendum 5 – Plant and Animal List

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

PTERIDOPHYTES

Ebony spleenwort	*Asplenium platyneuron*
Cinnamon fern	*Osmunda cinnamomea*
Golden polypody	*Phlebodium aureum*
Resurrection fern	*Pleopeltis polypodiodes* var. *michauxiana*
Bracken fern	*Pteridium aquilinum*

GYMNOSPERMS

Red cedar	*Juniperus virginiana*
Sand pine	*Pinus clausa*
Slash pine	*Pinus elliottii*
Loblolly pine	*Pinus taeda*

ANGIOSPERMS

MONOCOTS

Bushy bluestem	*Andropogon glomeratus* var. *pumilus*
Hairy bluestem	*Andropogon longiberbis*
Chalky bluestem	*Andropogon virginicus* var. *glaucus*
Broomsedge bluestem	*Andropogon virginicus* var. *virginicus*
Giant reed	*Arundo donax**
Big carpetgrass	*Axonopus furcatus*
Slender sandbur	*Cenchrus gracillimus*
Coast sandbur	*Cenchrus spinifex*
Sanddune sandbur	*Cenchrus tribuloides*
Jamaica swamp sawgrass	*Cladium jamaicense*
Dayflower	*Commelina diffusa*
Whitemouth dayflower	*Commelina erecta*
Asiatic dayflower	*Commelina communis**
Spring coralroot	*Corallorhiza wisteriana*
Baldwin's flatsedge	*Cyperus croceus*
Manyspike flatsedge	*Cyperus polystachyos*
Pinebarren flatsedge	*Cyperus retrorsus*
Southern flatsedge	*Cyperus thyrsiflorus*
Durban crowfootgrass	*Dactyloctenium aegyptium**
Slender crabgrass	*Digitaria filiformis*
Saltgrass	*Distichlis spicata*
Air-potato	*Dioscorea bulbifera**
Canada spikerush	*Eleocharis geniculata*
Blackfruit spikerush	*Eleocharis melanocarpa*
Green-fly orchid	*Epidendrum conopseum*
Bigtop lovegrass	*Eragrostis hirsuta*
Red lovegrass	*Eragrostis secundiflora*
Pinewoods fingergrass	*Eustachys petraea*

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Carolina fimbry	*Fimbristylis caroliniana*	
Forked fimbry	*Fimbristylis dichotoma*	
Hairy fimbry	*Fimbristylis puberula*	
Marsh fimbry	*Fimbristylis spadicea*	
Spiked crested coralroot	*Hexaletris spicata*	
Soft rush	*Juncus effusus*	
Bighead rush	*Juncus megacephalus*	
Needle rush	*Juncus roemerianus*	
Lesser duckweed	*Lemna aequinoctialis*	
Muhly grass	*Muhlenbergia capillaris*	
Woodsgrass	*Oplismenus hirtellus*	
Knotgrass	*Paspalum distichum*	
Vaseygrass	*Paspalum urvillei**	
Seashore paspalum	*Paspalum vaginatum*	
Common reed	*Phragmites australis*	
Rose Natalgrass	*Rhynchelytrum repens**	
Giant whitetop	*Rhynchospora latifolia*	
Widgeongrass	*Ruppia maritima*	
Cabbage palm	*Sabal palmetto*	
Woolgrass	*Scirpus cyperinus*	
Tall nutgrass	*Scleria triglomerata*	
Saw palmetto	*Serenoa repens*	
Coastal bristlegrass	*Setaria corrugata*	
Yellow bristlegrass	*Setaria parviflora*	
Giant bristlegrass	*Setaria magna*	
Narrowleaf blueeyed grass	*Sisyrinchium angustifolium*	
Earleaf greenbrier	*Smilax auriculata*	
Laurel greenbrier	*Smilax laurifolia*	
Saltmarsh cordgrass	*Spartina alterniflora*	
Sand cordgrass	*Spartina bakeri*	
Big cordgrass	*Spartina cynosuroides*	
Marshhay cordgrass	*Spartina patens*	
Florida Keys ladiestresses	*Spiranthes polyantha*	
Spring ladiestresses	*Spiranthes vernalis*	
Smutgrass	*Sporobolus indicus**	
Seashore dropseed	*Sporobolus virginicus*	
Bartram's airplant	*Tillandsia bartamii*	
Ballmoss	*Tillandsia recurvata*	
Southern needleleaf	*Tillandsia setacea*	
Spanish moss	*Tillandsia usneoides*	
Bluejacket	*Tradescantia ohiensis*	
Purple sandgrass	*Triplasis purpurea*	
Broadleaf cattail	*Typha latifolia*	
Seaoats	*Uniola paniculata*	
Spanish bayonet	*Yucca aloifolia*	

*** Non-native Species**

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

DICOTS

Red maple	*Acer rubrum*	
Purple false foxglove	*Agalinis purpurea*	
Common ragweed	*Ambrosia artemesiifolia*	
Giant ragweed	*Ambrosia trifida*	
Peppervine	*Ampelopsis arborea*	
Devil's walkingstick	*Aralia spinosa*	
Pawpaw hybrid	*Asimina* x *nashii*	
Crested saltbush	*Atriplex cristata*	
Black mangrove	*Avicennia germinans*	
Saltwater falsewillow	*Baccharis angustifolia*	
Silverling	*Baccharis glomeruliflora*	
Lemon bacopa	*Bacopa caroliniana*	
Herb-of-grace	*Bacopa monnieri*	
Saltwort	*Batis maritima*	
Beggarticks	*Bidens alba*	
Burrmarigold	*Bidens laevis*	
False nettle	*Boehmeria cylindrica*	
Red spiderling	*Boerhavia diffusa*	
Bushy seaside oxeye	*Borrichia frutescens*	
Bahama strongbark	*Bourreria succulenta*	
American bluehearts	*Buchnera americana*	
Gray nicker	*Caesalpinia bonduc*	
American searocket	*Cakile edentula* spp. *harperi*	
Coastal searocket	*Cakile lanceolata*	
American beautyberry	*Callicarpa americana*	
Hedge false bindweed	*Calystegia sepium* ssp. *limnophila*	
Madagascar periwinkle	*Catharanthus roseus**	
Sugarberry	*Celtis laevigata*	
Spurred butterfly pea	*Centrosema virginianum*	
Partridge pea	*Chamaecrista fasciculata*	
Dixie sandmat	*Chamaesyce bombensis*	
Coastal dune sandmat	*Chamaesyce cumulicola*	BD
Mexican tea	*Chenopodium ambrosioides**	
Snowberry	*Chiococca alba*	
Yellow thistle	*Cirsium horridulum*	
Nuttall's thistle	*Cirsium nuttallii*	
Atlantic pigeonwings	*Clitoria mariana*	
Tread-softly	*Cnidoscolus stimulosus*	
Dwarf Canadian horseweed	*Conyza canadensis var. pusilla*	
Coastalplain tickseed	*Coreopsis gladiata*	
Smallflower fumewort	*Corydalis micrantha* spp. *australis*	
Shakeshake	*Crotolaria incana**	
Smooth rattlebox	*Crotolaria pallida* var. *obovata**	
Rabbitbells	*Crotolaria rotundifolia*	
Gulf croton	*Croton punctatus*	

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Compact dodder	*Cuscuta compacta*	
Gulf coast swallowwort	*Cynanchum angustifolium*	
Leafless swallowwort	*Cynanchum scoparium*	
Western tansymustard	*Descurainia pinnata*	
Dillenius' ticktrefoil	*Desmodium glabellum*	
Poor joe	*Diodia teres*	
Common persimmon	*Diospyros virginiana*	
Varnishleaf	*Dodonea viscosa*	
Tall elephantsfoot	*Elephantopus elatus*	
American burnweed	*Erechtites hieracifolia*	
Oakleaf fleabane	*Erigeron quercifolius*	
Loquat	*Eriobotrya japonica**	
Baldwin's eryngo	*Eryngium baldwinii*	
Coralbean	*Erythrina herbacea*	
Dogfennel	*Eupatorium capillifolium*	
Lateflowering thoroughwort	*Eupatorium serotinum*	
Florida swampprivet	*Forestiera segregata*	
Cottonweed	*Froehlichia floridana*	
Firewheel	*Gaillardia pulchella*	
Elliott's milkpea	*Galactia elliottii*	
Coastal bedstraw	*Galium hispidulum*	
Narrowleaf purple everlasting	*Gamochaeta falcata*	
Southern beeblossom	*Gaura angustifolia*	
Carolina cranesbill	*Geranium carolinianum*	
Coastal mock vervain	*Glandularia maritima*	BD
Pinebarren frostweed	*Helianthemum corymbosum*	
East coast dune sunflower	*Helianthus debilis* ssp. *debilis*	
Camphorweed	*Heterotheca subaxillaris*	
Innocence	*Houstonia procumbens*	
Largeleaf marshpennywort	*Hydrocotyle bonariensis*	
Manyflower marshpennywort	*Hydrocotyle umbellata*	
St. Andrew's-cross	*Hypericum hypericoides*	
Fourpetal St. John's-wort	*Hypericum tetrapetalum*	
John Charles	*Hyptis verticillata**	
American holly	*Ilex opaca* var. *opaca*	
Yaupon	*Ilex vomitoria*	
Anil de pasto	*Indigofera suffruticosa**	
Moonflowers	*Ipomoea alba*	
Beach morning-glory	*Ipomoea imperati*	
Railroad vine	*Ipomoea pes-caprae* var. *brasiliensis*	
Saltmarsh morning-glory	*Ipomoea sagittata*	
Juba's bush	*Iresine diffusa*	
Bigleaf sumpweed	*Iva frutescens*	
Seacoast marshelder	*Iva imbricata*	
Virginia saltmarsh mallow	*Kosteletzkya virginica*	
Virginia dwarfdandelion	*Krigia virginica*	

*** Non-native Species**

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Woodland lettuce	*Lactuca floridana*	
Lantana	*Lantana camara**	
Hairy pinweed	*Lechea mucronata*	
Virginia pepperweed	*Lepidium virginicum*	
Carolina sealavender	*Limonium carolinianum*	
Canada toadflax	*Linaria canadensis*	
Seaside primrosewillow	*Ludwigia maritima*	
Creeping primrosewillow	*Ludwigia repens*	
Savannah primrosewillow	*Ludwigia virgata*	
Christmasberry	*Lycium carolinianum*	
Rusty staggerbush	*Lyonia ferruginea*	
Southern magnolia	*Magnolia grandiflora*	
Black medick	*Medicago lupulina**	
White sweetclover	*Melilotus albus**	
Creeping cucumber	*Melothria pendula*	
Poorman's patch	*Mentzelia floridana*	
Noyau vine	*Merremia dissecta**	
Climbing hempvine	*Mikania scandens*	
Spotted beebalm	*Monarda punctata*	
Indianpipe	*Monotropa uniflora*	
Balsampear	*Momordica charantia**	
Red mulberry	*Morus rubra*	
Southern bayberry	*Myrica cerifera*	
Beach eveningprimrose	*Oenothera drummondii**	
Seabeach eveningprimrose	*Oenothera humifusa*	
Cutleaf eveningprimrose	*Oenothera laciniata*	
Pricklypear	*Opuntia humifusa*	
Cockspur pricklypear	*Opuntia pusilla*	
Erect pricklypear	*Opuntia stricta*	
Wild olive	*Osmanthus americanus*	
Common yellow woodsorrel	*Oxalis corniculata*	
Baldwin's nailwort	*Paronychia baldwinii*	
Virginia creeper	*Parthenocissus quinquefolia*	
Purple passionflower	*Passiflora incarnata*	
Red bay	*Persea borbonia* var. *borbonia*	
Slimleaf bean	*Phaseolus polystachios*	
Oak mistletoe	*Phoradendron leucarpum*	
Turkey tangle fogfruit	*Phyla nodiflora*	
Drummond's leafflower	*Phyllanthus abnormis*	
Chamber bitter	*Phyllanthus urinaria**	
Cutleaf groundcherry	*Physalis angulata*	
Walter's groundcherry	*Physalis walteri*	
American pokeweed	*Phytolacca americana*	
Virginia plantain	*Plantago virginica*	
Sweetscent	*Pluchea odorata*	
Rosy camphorweed	*Pluchea rosea*	

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Paintedleaf	*Poinsettia cyathophora*	
Racemed milkwort	*Polygala polygama*	
Dotted smartweed	*Polygonum punctatum*	
Paraguayan purslane	*Portulaca amilis**	
Little hogweed	*Portulaca oleracea*	
Pink purslane	*Portulaca pilosa*	
Carolina laurelcherry	*Prunus caroliniana*	
Sweet everlasting	*Pseudognaphalium obtusifolium*	
Blackroot	*Pterocaulon pycnostachyum*	
Mock bishopsweed	*Ptilimnium capillaceum*	
Carolina desertchicory	*Pyrrhopappus carolinianus*	
Sand live oak	*Quercus geminata*	
Laurel oak	*Quercus laurifolia*	
Myrtle oak	*Quercus myrtifolia*	
Water oak	*Quercus nigra*	
Live oak	*Quercus virginiana*	
Winged sumac	*Rhus copallina*	
Tropical Mexican clover	*Richardia brasiliensis**	
Southern dewberry	*Rubus trivialis*	
Heartwing dock	R*umex hastatulus*	
Largeflower rosegentian	*Sabatia grandiflora*	
Rose-of-Plymouth	*Sabatia stellaris*	
Smallflower mock buckthorn	*Sageretia minutiflora*	
Carolina willow	*Salix caroliniana* ssp.	
Prickly Russian thistle	*Salsola kali* ssp. *pontica**	
Lyreleaf sage	*Salvia lyrata*	
American elder	*Sambucus nigra* spp. *canadensis*	
Water pimpernel	*Samolus ebracteatus*	
Pineland pimpernel	*Samolus valerandi parviflorus*	
Popcorntree	*Sapium sebiferum**	
Perennial glasswort	*Sarcocornia perennis*	
Brazilian pepper	*Schinus terebinthifolius**	
Rattlebox	*Sesbania punicea**	
Bladderpod	*Sesbania vesicaria*	
Shoreline seapurslane	*Sesuvium portulacastrum*	
Common wireweed	*Sida acuta*	
Cuban jute	*Sida rhombifolia*	
Common wireweed	*Sida ulmifolia*	
Tough bully	*Sideroxylon tenax*	
American black nightshade	*Solanum americanum*	
Pinebarren goldenrod	*Solidago fistulosa*	
Seaside goldenrod	*Solidago sempervirens*	
Wand goldenrod	*Solidago stricta*	
Spiny sowthistle	*Sonchus asper**	
Salt sandspurry	*Spergularia marina*	
Florida hedgenettle	*Stachys floridana*	

*** Non-native Species**

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Common chickweed	*Stellaria media**	
Diamondflowers	*Stenaria nigricans*	
Trailing fuzzybean	*Strophostyles helvula*	
American snowbell	*Styrax americanus*	
Sea blite	*Suaeda linearis*	
Climbing aster	*Symphyotrichum carolinianum*	
Rice button aster	*Symphyotrichum dumosum*	
Perennial saltmarsh aster	*Symphyotrichum tenuifolium*	
Common dandelion	*Taraxacum officinale**	
Wood sage	*Teucrium canadense*	
Poison ivy	*Toxicodendron radicans*	
Forked bluecurls	*Trichostema dichotomum*	
White clover	*Trifolium repens**	
Clasping Venus's looking glass	*Triodanis perfoliata*	
American elm	*Ulmus americana*	
Caesarweed	*Urena lobata**	
Sparkleberry	*Vaccinium arboreum*	
Highbush blueberry	*Vaccinium corymbosum*	
Darrow's blueberry	*Vaccinium darrowii*	
Shiny blueberry	*Vaccinium myrsinites*	
Deerberry	*Vaccinium stamineum*	
Purpletop vervain	*Verbena bonariensis**	
Harsh vervain	*Verbena scabra*	
White crownbeard	*Verbesina virginica*	
Giant ironweed	*Vernonia gigantea*	
Fourleaf vetch	*Vicia acutifolia*	
Common blue violet	*Viola sororia*	
Summer grape	*Vitis aestivalis*	
Muscadine	*Vitis rotundifolia*	
Calloose grape	*Vitis shuttleworthii*	
Tallow-wood	*Ximenia americana*	
Hercules'-club	*Zanthoxylum clava-herculis*	

*** Non-native Species**

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

BRYOZOANS

Lacy crust	*Membranipora* sp	

GASTROPODS

Tortoise-shell limpet	*Acmaea testudinalis*	
Eastern oyster	*Crassostrea virginica*	
Atlantic jackknife clam	*Ensis directus*	
Ribbed mussel	*Ischadium demissus*	
Marsh periwinkle	*Littorina irrorata*	
Florida crowned conch	*Melongena corona*	
Eastern mudsnail	*Nassarius obsoletus*	
Atlantic dogwinkle	*Nucella lapillus*	
Olive	*Oliva sayana*	
Asian green mussel	*Perna viridis**	
Stout tagelus	*Tagelus plebeius*	
Eastern auger	*Terebra dislocata*	
Atlantic oyster drill	*Urosalpinx cinerea*	

CRUSTACEANS

Striped barnacle	*Balanus amphitrite*	
Ivory barnacle	*Balanus eburneus*	
Blue crab	*Callinectes sapidus*	
Little grey barnacle	*Chthamalus fragilis*	
Parasitic isopod	*Cymothoa* sp	
Atlantic jackknife clam	*Emerita talpoida*	
Flat mud crab	*Eurypanopeous depressus*	
Digger amphipods	Haustoriidae	
Sand flea crab	*Lepidopa nebsteri*	
Florida stone crab	*Menippe mercenaria*	
Atlantic ghost crab	*Ocypode quadrata*	
Daggerblade grass shrimp	*Palaemonetes pugio*	
Brown shrimp	*Penaeus aztecus*	
White shrimp	*Penaeus setiferus*	
Heavy marsh crab	*Sesarma reticulatum*	
Atlantic sand fiddler	*Uca pugilator*	
Atlantic marsh fiddler	*Uca pugnax*	

*** Non-native Species**

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

DRAGONFLIES AND DAMSELFLIES

Narrow-winged damselfly ..... *Amphiagrion* sp. .....

GRASSHOPPERS, CRICKETS AND KATYDIDS

STICK INSECTS

Southern two-striped walkingstick.....*Anisomorpha buprestoides*.....

TRUE BUGS, CICADAS, HOPPERS AND KIN

Periodical cicada ..... *Magicicada* sp. .....

BEETLES

Delong's aneflomorpha ..... *Aneflomorpha delongi* .....
Longhorned beetle ..... *Anelaphus inermis* .....
Longhorned beetle ..... *Anelaphus pumilus*.....
Moustached tiger beetle..... *Cicindela hirtilabris* .....
Margined tiger beetle..... *Cicindela marginata* .....
False click beetle..... *Isorhipis nubila*.....
Soft-winged flower beetle ..... *Melyrodes basalis* .....
Eastern bumelia borer.....*Plinthocoelium suaveolens suaveolens*
Ambrosia beetle..... *Xyleborinus gracilis*.....
Bark beetle ..... *Xyleborus californicus* .....
Redbay ambrosia beetle..... *Xyleborus glabratus*.* .....
Ambrosia beetle..... *Xyleborus volvulus*.....

MOSQUITOES

Eastern saltmarsh mosquito ..... *Aedes sollicitans.* .....
Black saltmarsh mosquito ..... *Aedes taeniorhynchus* .....

BUTTERFLIES AND MOTHS

Butterflies and skippers

Gulf fritillary..... *Agraulis vanillae* .....
White peacock ..... *Anartia jatrophe* .....
Queen ..... *Danaus gilippus*.....
Monarch ..... *Danaus plexippus* .....
Zarucco duskywing..... *Erynnis zarucco* .....
Variegated fritillary..... *Euptoieta claudia*.....

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Little yellow	*Eurema lisa*	
Zebra longwing	*Heliconius charitonius*	
Ceraunus blue	*Hemiargus ceraunus*	
Carolina satyr	*Hermeuptychia sosybius*	
Common buckeye	*Junonia coenia*	
Giant swallowtail	*Papilio cresphontes*	
Palamedes swallowtail	*Papilio palamedes*	
Cloudless sulphur	*Phoebis sennae*	
Common sootywing	*Pholisora catullus*	
Phaon crescent	*Phyciodes phaon*	
Pearl crescent	*Phyciodes tharos*	
Long-tailed skipper	*Urbanus proteus*	
Moths		
Great southern white	*Ascia monuste*	
Eastern pygmy-blue	*Brephidium isophthalma*	
White-lined sphinx	*Celerio lineata*	
White-marked tussock moth	*Orgyia leucostigma*	
ANTS, BEES AND WASPS		
Green metallic bee	*Agapostemon splendens*	
Harvester ant	*Pogonomyrmex* sp.	
Carpenter bee	*Xylocopa virginica*	
SPIDERS		
Spiny-backed orbweaver	*Gasteracantha cancriformis*	
Arrow-shaped micrathena	*Micrathena sagittata*	
Golden silk orbweaver	*Nephila clavipes*	
Green lynx	*Peucetia viridans*	
Harvestman	*Phlangium opilio*	
RAYS		
Atlantic stingray	*Dasyatis sabina*	
Smooth butterfly ray	*Gymnura micrura*	
BONY FISHES		
Lined sole	*Achirus lineatus*	
Striped anchovy	*Anchoa hepsetus*	
Bay anchovy	*Anchoa mitchelli*	
Sheepshead	*Archosargus probatocephalus*	

*** Non-native Species**

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Sea catfish	*Arius felis*	
Gafftopsail catfish	*Bagre marinus*	
Atlantic menhaden	*Brevoortia tyrannus*	
Crevalle jack	*Caranx hippos*	
Common snook	*Centropomus undecimalis*	
Black sea bass	*Centropristis striata*	
Bay whiff	*Citharichthys spilopterus*	
Spotted seatrout	*Cynoscion nebulosus*	
Weakfish	*Cynoscion regalis*	
Sheepshead minnow	*Cyprinodon variegatus*	
Irish pompano	*Diapterus auratus*	
Ladyfish	*Elops saurus*	
Silver jenny	*Eucinostomus gula*	
Tidewater mojarra	*Eucinostomus harengulus*	
Mojarra	*Eucinostomus* sp.	
Gulf killifish	*Fundulus grandis*	
Striped/longnose killifish	*Fundulus majalis*	
Eastern mosquitofish	*Gambusia holbrooki*	
Goby	*Gobionellus* spp	
Naked goby	*Gobiosoma bosc*	
Brook silverside	*Labidesthes sicculus*	
Pinfish	*Lagodon rhomboides*	
Spot	*Leiostomus xanthurus*	
Gray snapper	*Lutjanus griseus*	
Tarpon	*Megalops atlanticus*	
Atlantic croaker	*Micropogonias undulatus*	
Fringed filefish	*Monacanthus ciliatus*	
Striped mullet	*Mugil cephalus*	
White mullet	*Mugil curema*	
Mullet	*Mugil* spp	
Leatherjack	*Oligoplites saurus*	
Atlantic thread herring	*Opisthonema oglinum*	
Pigfish	*Orthopristis chrysoptera*	
Gulf flounder	*Paralichthys albigutta*	
Southern flounder	*Paralichthys lethostigma*	
Sailfin molly	*Poecilia latipinna*	
Black drum	*Pogonias cromis*	
Bluefish	*Pomatomus saltratrix*	
Leopard searobin	*Prionotus scitulus*	
Bighead searobin	*Prionotus tribulus*	
Red drum	*Sciaenops ocellatus*	
Lookdown	*Selene vomer*	
Southern puffer	*Sphoeroides nephelus*	
Great barrucuda	*Sphyraena barracuda*	
Atlantic needlefish	*Strongylura marina*	
Redfin needlefish	*Strongylura notata*	

*** Non-native Species**

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Needlefish	*Strongylura* spp	
Blackcheek tonguefish	*Symphurus plagiusa*	
Chain pipefish	*Syngnathus louisianae*	
Gulf pipefish	*Syngnathus scovelli*	
Inshore lizardfish	*Synodus foetens*	
Florida pompano	*Trachinotus carolinus*	
Permit	*Trachinotus falcatus*	

AMPHIBIANS

Frogs and Toads

Southern toad	*Bufo terrestris*	
Green treefrog	*Hyla cinerea*	
Squirrel treefrog	*Hyla squirella*	
Florida leopard frog	*Rana utricularia*	

REPTILES

Crocodilians

American alligator	*Alligator mississippiensis*	

Turtles and tortoises

Loggerhead turtle	*Caretta caretta*	MU
Green turtle	*Chelonia mydas*	MU
Florida snapping turtle	*Chelydra serpentina*	
Leatherback turtle	*Dermochelys coriacea*	MU
Florida chicken turtle	*Deirochelys reticularia chrysea*	
Gopher tortoise	*Gopherus polyphemus*	BD, CL
Striped mud turtle	*Kinosternon bauri*	
Atlantic ridley	*Lepidochelys kempi*	MU
Florida cooter	*Pseudemys floridana peninsularis*	
Carolina diamondback terrapin	*Malaclemys terrapin centrata*	
Florida box turtle	*Terrapene carolina bauri*	
Yellow-bellied slider	*Trachemys scripta scripta*	

Lizards and Skinks

Six-lined racerunner	*Cnemidophorus sexlineatus*	
Southeastern five-lined skink	*Eumeces inexpectatus*	
Eastern glass lizard	*Ophisaurus ventralis*	
Ground skink	*Scincella lateralis*	

Snakes

Southern black racer	*Coluber constrictor priapus*	
Eastern diamondback rattlesnake	*Crotalus adamanteus*	
Eastern indigo snake	*Drymarchon corais couperi*	CG, CS

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Corn snake	*Elaphe guttata guttata*	
Yellow rat snake	*Elaphe obsoleta quadrivittata*	
Eastern coachwhip	*Masticophis flagellum flagellum*	
Rough green snake	*Opheodrys aestivus*	
Florida pine snake	*Pituophis melanoleucus mugitus*	
Dusky pigmy rattlesnake	*Sistrurus miliarius barbouri*	
Bluestripe garter snake	*Thamnophis sirtalis similis*	
Eastern garter snake	*Thamnophis sirtalis sirtalis*	

BIRDS

Ducks

Green-winged teal	*Anas crecca*	
Black scoter	*Melanitta nigra*	
Hooded merganser	*Lophodytes cucullatus*	
Red-breasted merganser	*Mergus serrator*	
Ruddy duck	*Oxyura jamaicensis*	

Loons and Grebes

Common loon	*Gavia immer*	
Pied-billed grebe	*Podilymbus podiceps*	

Seabirds

Greater shearwater	*Puffinus gravis*	
Sooty shearwater	*Puffinus griseus*	

Storks

Wood stork	*Mycteria americana*	

Cormorants

Double-crested cormorant	*Phalacrocorax auritus*	

Gannets and Pelicans

Northern gannet	*Morus bassanus*	
American white pelican	*Pelecanus erythrorhynchos*	
Brown pelican	*Pelecanus occidentalis*	

Bitterns and Herons

Great egret	*Ardea alba*	
Great blue heron	*Ardea herodias herodias*	
Cattle egret	*Bubulcus ibis**	
Green heron	*Butorides striatus*	
Little blue heron	*Egretta caerulea*	
Reddish egret	*Egretta rufescens*	
Snowy egret	*Egretta thula*	
Tricolored heron	*Egretta tricolor*	

*** Non-native Species**

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Ibises and Spoonbills		
White ibis	*Eudocimus albus*	
Roseate spoonbill	*Platalea ajaja*	
Accipiters		
Cooper's hawk	*Accipiter cooperii*	
Sharp-shinned hawk	*Accipiter striatus*	
Red-tailed hawk	*Buteo jamaicensis*	
Red-shouldered hawk	*Buteo lineatus*	
Turkey vulture	*Cathartes aura*	
Northern harrier	*Circus cyaneus*	
Black vulture	*Coragyps atratus*	
Swallow-tailed kite	*Elanoides forficatus*	
Merlin	*Falco columbarius*	
Peregrine falcon	*Falco peregrinus*	
American kestrel	*Falco sparverius*	
Bald eagle	*Haliaeetus leucocephalus*	
Osprey	*Pandion haliaetus*	
Rails, Gallinules, and Coots		
Sora	*Porzana carolina*	
Clapper rail	*Rallus longirostris*	
Limpkin		
Limpkin	*Aramus guarauna*	
Plovers		
Piping plover	*Charadrius melodus*	
Semipalmated plover	*Charadrius semipalmatus*	
Killdeer	*Charadrius vociferus*	
Wilson's plover	*Charadrius wilsonia*	
Black-bellied plover	*Pluvialis squatarola*	
Oystercatchers		
American oystercatcher	*Hamaetopus palliatus*	
Stilts		
Black-necked stilt	*Himantopus mexicanus*	
Snipes and Sandpipers		
Spotted sandpiper	*Actitis macularius*	
Ruddy turnstone	*Arenaria interpres*	
Sanderling	*Calidris alba*	
Dunlin	*Calidris alpina*	
Red knot	*Calidris canutus*	

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Western sandpiper	*Calidris mauri*	
Purple sandpiper	*Calidris maritima*	
Least sandpiper	*Calidris minutilla*	
Semipalmated sandpiper	*Calidris pusilla*	
Wilson's snipe	*Gallinago delicata*	
Short-billed dowitcher	*Limnodromus griseus*	
Marbled godwit	*Limosa fedoa*	
Whimbrel	*Numenius phaeopus*	
Lesser yellowlegs	*Tringa flavipes*	
Greater yellowlegs	*Tringa melanoleuca*	
Willet	*Tringa semipalmata*	
Solitary sandpiper	*Tringa solitaria*	
Gulls		
Bonaparte's gull	*Chroicocephalus philadelphia*	
Herring gull	*Larus argentatus*	
Laughing gull	*Leucophaeus atricilla*	
Ring-billed gull	*Larus delawarensis*	
Lesser black-backed gull	*Larus fuscus*	
Iceland gull	*Larus glaucoides*	
Great black-backed gull	*Larus marinus*	
Black-legged kittiwake	*Rissa tridactyla*	
Terns		
Black tern	*Chlidonias niger*	
Caspian tern	*Hydroprogne caspia*	
Black skimmer	*Rynchops niger*	
Least tern	*Sternula antillarum*	
Forster's tern	*Sterna forsteri*	
Common tern	*Sterna hirundo*	
Royal tern	*Thalasseus maximus*	
Sandwich tern	*Thalasseus sandvicensis*	
Doves		
Common ground-dove	*Columbina passerina*	
Mourning dove	*Zenaida macroura*	
Owls		
Great horned owl	*Bubo virginianus*	
Eastern screech-owl	*Megascops asio*	
Swifts		
Chimney swift	*Chaetura pelagica*	
Kingfishers		
Belted kingfisher	*Megaceryle alcyon*	

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Woodpeckers		
Red-bellied woodpecker	*Melanerpes carolinus*	
Downy woodpecker	*Picoides pubescens*	
Yellow-bellied sapsucker	*Sphyrapicus varius*	
Flycatchers and Kingbirds		
Great-crested fycatcher	*Myiarchus crinitus*	
Eastern phoebe	*Sayornis phoebe*	
Eastern kingbird	*Tyrannus tyrannus*	
Shrikes		
Loggerhead shrike	*Lanius ludovicianus*	
Vireos		
White-eyed vireo	*Vireo griseus*	
Red-eyed vireo	*Vireo olivaceus*	
Jays and Crows		
Fish crow	*Corvus ossifragus*	
Blue jay	*Cyanocitta cristata*	
Swallows and Martins		
Barn swallow	*Hirundo rustica*	
Purple martin	*Progne subis*	
Tree swallow	*Tachycineta bicolor*	
Titmice		
Tufted titmouse	*Parus bicolor*	
Wrens		
Marsh wren	*Cistothorus palustris*	
Carolina wren	*Thryothorus ludovicianus*	
House wren	*Troglodytes aedon*	
Gnatcatchers		
Blue-gray gnatcatcher	*Polioptila caerulea*	
Thrushes		
Veery	*Catharus fuscescens*	
American robin	*Turdus migratorius*	
Thrashers		
Gray catbird	*Dumetella carolinensis*	
Northern mockingbird	*Mimus polyglottos*	

*** Non-native Species**

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Brown thrasher	*Toxostoma rufum*	
Starlings		
European starling	*Sturnus vulgaris**	
Warblers		
Black-throated blue warbler	*Dendroica caerulescens*	
Yellow-rumped warbler	*Dendroica coronata*	
Palm warbler	*Dendroica palmarum*	
Common yellowthroat	*Geothlypis trichas*	
Black-and-white warbler	*Mniotilta varia*	
Northern parula	*Parula americana*	
Prothonotary warbler	*Protonotaria citrea*	
American redstart	*Setophaga ruticilla*	
Sparrows		
Seaside sparrow (Atlantic race)	*Ammodramus maritimus*	
Savannah sparrow	*Passerculus sandwichensis*	
Eastern towhee	*Pipilo erythrophthalmus*	
Cardinals and Buntings		
Northern cardinal	*Cardinalis cardinalis*	
Painted bunting	*Passerina ciris*	
Meadowlarks, Blackbirds and Orioles		
Red-winged blackbird	*Agelaius phoeniceus*	
Common grackle	*Quiscalus quiscula*	
Brown-headed cowbird	*Molothrus ater*	
Eastern meadowlark	*Sturnella magna*	
MAMMALS		
Didelphids		
Virginia opossum	*Didelphis virginiana*	
Insectivores		
Eastern mole	*Scalopus aquaticus*	
Edentates		
Nine-banded armadillo	*Dasypus novemcinctus**	
Lagomorphs		
Marsh rabbit	*Sylvilagus palustris*	
Eastern cottontail	*Sylvilagus carolinensis*	
Rodents		

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Marsh rice rat	*Oryzomys palustris*	
House mouse	*Mus musculus**	
Anastasia Island beach mouse	*Peromyscus polionotus phasma*	BD, CG
Cotton mouse	*Peromyscus gossypinus*	
Black rat	*Rattus rattus**	
Hispid cotton rat	*Sigmodon hispidus*	
Carnivores		
Coyote	*Canis latrans**	
River otter	*Lutra canadensis*	
Southern mink	*Mustela vison*	
Raccoon	*Procyon lotor*	
Gray fox	*Urocyon cinereoargenteus*	
Red fox	*Vulpes vulpes**	
Cetaceans		
Pygmy sperm whale	*Kogia breviceps*	
Atlantic bottle-nosed dolphin	*Tursiops truncatus*	
Sirens		
Florida manatee	*Trichechus manatus*	EU
Artiodactyls		
White-tailed deer	*Odocoileus virginianus*	

* Non-native Species

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 1000 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 1000 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

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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

Memorandum

Florida Department of
Environmental Protection

July 28, 2011

TO: Marianne Gengenbach, Program Administrator
Division of State Lands

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

Albert Gregory, Chief, Office of Park Planning
Division of Recreation and Parks

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

The Land Management Review draft report provided to DRP determined that management of Anastasia 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.

The team recommends that The Park Service make a priority for funding equipment and vehicle replacement and repairs. (VOTE: 4+, 0-)
Managing Agency Response: Agreed. It is important to keep equipment and vehicles in good operating order and these needs are and will be reflected in the unit management plan. However, Division funding is determined annually by the Florida Legislature and funds are allocated to the 160 state parks according to priority needs.

The team recommends that DRP fund the replacement of deteriorating boundary fencing, which may require more boundary surveys. (VOTE: 4+, 0-)
Managing Agency Response: Agreed. DRP has recently repaired many portions of deteriorating fence that had been seen by the review team during the tour. It is DRP's intention to have an intact boundary fence for this park; however, as stated above, the Florida Legislature approves and allocates funds to 160 state parks according to a prioritized list of needs.

The team recommends that DRP investigate an appropriate access policy and fee collection approach to public access in the Pope Road area. (VOTE: 4+, 0-)
Managing Agency Response: Agreed and ongoing. After the 2005 beach renourishment project, a new dune formed which completely buried the entrance on the south end at Pope Road. Visitors are currently entering the park via an entrance provided on county property. DRP will continue to develop the appropriate plan for this area.

The team recommends that DRP remain an active participant in the beach renourishment activities. (VOTE: 4+, 0-)

Managing Agency Response: Agreed.

PLAN REVIEW

Discussion in the management plan regarding Listed Species, specifically plant inventory.

Managing Agency Response: Agreed. Within the approved Unit Management Plan (UMP) for this park, listed species, described in the plan as Designated Species, are described and listed on pages 12, 18, 19, and in Addendum 4 and 5. The plant inventory found in addendum 4 includes a long list of plants that have been found on the park, but there are always those that have not been discovered yet. DRP agrees that a more descriptive discussion of listed plant species could be added to the text of the plan and that plant surveys should continue.

Discussion in the management plan regarding Resource Management, regarding the area being burned, frequency and quality.

Managing Agency Response: Agreed. On page 18 of the UMP, the overall end product of what DRP would like the swale and dune communities to resemble are discussed along with the need for periodic fire, but the specific location, burn frequency and burn quality are not discussed. This information can be included in the next UMP update that is scheduled for 2012.

Discussion in the management plan regarding Resource Protection, specifically the boundary survey.

Managing Agency Response: Agreed. DRP strives to have the most accurate and well defined park boundaries to the best of its ability. When a boundary survey is needed, it is included with the most current UMP and a cost for the need is listed in the Priority Schedule and Cost Estimates (Addendum 6). In the February 2004 plan, no specific boundary survey was identified and therefore not discussed in the UMP. Since then, DRP staff has identified some areas where a boundary survey is warranted and these needs will be included in the next UMP.

Discussion in the management plan regarding Adjacent Property Concerns, regarding Rope Road beach access.

Managing Agency Response: Disagree. Although the problem and a plan for the Pope Road beach access are mentioned in the plan on page 29, it does not discuss in detail all of the concerns associated with it. Much of the information and history that was described to the LMR team has come up since the last UMP and therefore could not be included in the 2004 UMP. This information can be incorporated into the next UMP in 2012.

FIELD REVIEW

Hydrologic/Geologic Function, specifically the ditches, with documentation in the management plan.

Managing Agency Response: Disagree. DRP has met on the ground numerous times with staff from St. Johns water management district to determine the best plan of action for the ditches that exist throughout the park, some in very difficult locations. Many of these ditches convey water from outside of the park, through the park and to Salt Run. Others connect large bodies of water which would be severely affected by removing the connecting ditches. Since much of this information has taken place since the last UMP, it was not included in it and will be incorporated into the next UMP in 2012.

Adjacent Property Concerns, regarding Rope Road beach access, with documentation in the management plan.

Managing Agency Response: Disagree. DRP has been in constant communication with St. Johns County on the planned uses and current management of the Pope Road beach access point. Although the problem and a plan for the Pope Road beach access are mentioned in the UMP on page 29, it does not discuss in detail all of the concerns associated with it. Much of the

information and history that was described to the LMR team has come up since the last UMP and therefore could not be included in the 2004 UMP. This information can be incorporated into the next UMP in 2012.

The need for Management Resources, specifically equipment and funding, with documentation in the management plan.

Managing Agency Response: Agreed. The updated unit management plan will address land management funding and equipment needs. However, Division funding is determined annually by the Florida Legislature and funds are allocated to the 160 state parks according to priority needs.

Thank you for your attention.

GK

CC: Larry Fooks, Chief, Bureau of Parks District 3
Robert Yero, Assistant Chief, Bureau of Parks District 3
Paul Crawford, Park Manager, Anastasia State Park
Jason Depue , Environmental Specialist, Bureau of Parks District 3