

## Florida Department of Environmental Protection

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October 23, 2017

Steven Cutshaw  
Division of Recreation and Parks  
Department of Environmental Protection  
3900 Commonwealth Boulevard, MS 525  
Tallahassee, Florida 32399-3000

**RE: Faver-Dykes State Park - Lease #3617 and #4445**

Dear Mr. Cutshaw:

On **October 20, 2017**, the Acquisition and Restoration Council recommended approval of the **Faver-Dykes 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 **Faver-Dykes State Park** management plan. The next management plan update is due October 20, 2027.

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,

A handwritten signature in blue ink, appearing to read "Ray Spaulding", is written over the typed name and title.

Raymond V. Spaulding  
Office of Environmental Services  
Division of State Lands  
Department of Environmental Protection



# **Faver-Dykes State Park**

## **APPROVED Unit Management Plan**

**STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**Division of Recreation and Parks  
October 2017**





## **Faver-Dykes State Park**

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**Lead Agency:** Department of Environmental Protection  
Division of Recreation and Parks

**Common Name of Property:** Faver-Dykes State Park

**Location:** St. Johns County

**Acreage:** 6,045.98 Acres

**Acreage Breakdown:**

<b>Natural Communities</b>	<b>Acres</b>
Coastal Berm	1.57
Maritime Hammock	371.78
Mesic Flatwoods	1186.07
Mesic Hammock	216.45
Sandhill	136.14
Scrubby Flatwoods	92.15
Basin Marsh	35.67
Basin Swamp	343.91
Baygall	2.53
Depression Marsh	259.94
Dome Swamp	140.71
Floodplain Swamp	442.21
Salt Marsh	300.46
Wet Prairie	45.57
Blackwater Stream	29.84
Seepage Stream	1.14
Estuarine Unconsolidated Substrate	5.93
Borrow Area	9.66
Canal/Ditch	0.53
Developed	22.03
Pine Plantation	1191.10
Restoration Natural Community	1121.16
Spoil Area	71.23

**Lease/Management Agreement Number:** 3617 and 4445

**Use:** Single Use

### **Management Responsibilities**

**Agency:** Dept. of Environmental Protection, Division of Recreation and Parks

**Responsibility:** Public outdoor recreation and conservation

**Designated Land Use:** Resource-based public outdoor recreation and

## **Faver-Dykes State Park**

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conservation is the designated single use of the property

**Sublease:** None

**Encumbrances:** See Addendum 1 for details

**Type of Acquisition:** Donation. See Addendum 1 for details.

### **Unique Features**

**Overview:** Faver-Dykes State Park is located in St. Johns County south of St. Augustine on U.S Highway 1. The park was initially acquired on December 28, 1950 by donation from Hiram Faver.

**Natural:** Located within the coastal flyway, the park's hardwood hammocks support a significant number of migratory bird species during the spring and fall migration making this an exceptional birding location. The park is an important component of an interconnected system of managed properties that protect more than 13,000 acres of public conservation lands in northeast Florida. The park provides outstanding resource-based recreational opportunities in Florida's highly populated northeast coastal region including paddling and boating on the pristine estuarine tidal marshes of Pellicer Creek.

**Archaeological/Historical:** The park protects significant cultural resources including middens of the Timucuan people and the site of Buena Suerte Plantation, established in the early 1800s by General Jose Hernandez, a Floridian and militia general who commanded troops in this part of Florida during the Second Seminole War.

### **Management Goals, Objectives and Actions**

Measurable objectives and actions have been identified for each of the Division's management goals for Washington Oaks Gardens 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 Division of Recreation and Parks 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 Division 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 Division 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 Division'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 Chapters 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. Since the plan is based on conditions that exist at the time the plan is developed, the annual work plans will 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.**

- *Objective: Conduct/obtain an assessment of the park's hydrological restoration needs.*
- *Objective: Restore natural hydrological conditions and functions to approximately 15 acres of depression marsh natural community.*

#### **Natural Communities Management**

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

- *Objective: Within 10 years, have >2,250 acres of the park maintained within the optimum fire return interval.*
- *Objective: Conduct habitat/natural community restoration activities on 250 to 1000 acres of pine plantation altered land cover community type to restore them to mesic flatwoods restoration natural community.*
- *Objective: Conduct habitat/natural community restoration activities on 200 to 500 acres of restoration natural community altered land cover type to mesic flatwoods and/or sandhill as appropriate.*
- *Objective: Conduct natural community/habitat improvement activities on >40 acres of mesic flatwoods natural community.*
- *Objective: Conduct natural community/habitat improvement activities on >15 acres of sandhill natural community.*

#### **Imperiled Species Management**

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

- *Objective: Develop/update baseline imperiled species occurrence inventory lists for plants and animals.*
- *Objective: Monitor and document 4 selected imperiled animal species in the park.*
- *Objective: Monitor and document 18 imperiled plant species in the park.*

### **Exotic Species Management**

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

- *Objective: Annually treat 3 acres of exotic plant species in the park.*
- *Objective: Implement control measures on 2 exotic animal species in the park.*
- *Objective: Practice preventative measures to avoid accidental introduction and spreading of exotics within the park.*

### **Cultural Resource Management**

**Goal:** Protect, preserve and maintain the cultural resources of the park.

- *Objective: Assess and evaluate 9 of 9 recorded cultural resources in the park.*
- *Objective: Compile reliable documentation for all recorded historic and archaeological resources.*
- *Objective: Maintain 9 of 9 recorded cultural resources into good condition.*

**Ten-Year Implementation Schedule and Cost Estimates:** See Table 7, page 121

**Acquisition Needs/Acreage:** The few small out-parcels within the park boundary should be purchased to complete the existing acquisition boundary. Approximately 300 acres southwest of the park are also on the optimum boundary. This property would allow for the protection and restoration of upland and wetland natural communities and help to protect the Pellicer Creek watershed. It would also provide opportunities for additional recreational activities. Approximately 54 acres along US Highway 1 are also proposed for the optimum boundary. These properties would enhance the boundary for park operations and management.

**Surplus Lands/Acreage:** No lands are considered surplus to the needs of the park.

### **Summary of Significant Changes in this Update**

- **Change in Land Use and Recreation Goals:** New recreational opportunities and facilities have been proposed that are appropriate for this park and consistent with the DRP mission. These include:
  - 30-site standard camping loops (2)
  - Equestrian campground
  - Paddling launch
  - Full service trailhead
  - New park entrance and ranger station



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## **INTRODUCTION**

Faver-Dykes State Park is located in St. Johns County (see Vicinity Map). Access to the park is from U.S. Highway 1 via Faver-Dykes Road in the south end of the county (see Reference Map). The Vicinity Map also reflects significant land and water resources existing near the park.

Faver-Dykes State Park was initially acquired on December 28, 1950 through a donation from Hiram Faver. The Board of Trustees of the Internal Improvement Trust Fund (Trustees) and the St. Johns River Water Management District (SJRWMD) hold fee simple title to the park. On January 12, 1995, the Trustees and SJRWMD purchased a 697-acre parcel, each having fifty percent interest. The DRP manages the Trustees interest under Lease No. 3617 and the SJRWMD interest under a Intergovernmental Management Lease which is coterminous with Lease Number 3617 set to expire on January 22, 2067. On April 14, 2003, SJRWMD and the Trustees acquired a 4,166.12-acre property. This property has been leased to the DRP by both the Trustees and SJRWMD, collectively, under Lease Number 4445. This fifty-year multiple-party lease will expire on February 11, 2058. On July 26, 2005, the DRP leased a 126-acre property from the Town of Marineland. This lease is coterminous with Lease Number 3617. Currently, the park comprises 6,045.98 acres.

At Faver-Dykes State Park, public outdoor recreation and conservation is the designated single-use of the property. 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 Faver-Dykes State Park is to facilitate the conservation, protection, and management the water resources and the extensive area of flatwood, hammock, and marsh communities to the north of Pellicer Creek and around Rootan Branch, as well as, preserve and interpret the numerous pre-historic and historic resources within the park. In addition, access to outstanding public outdoor recreation opportunities in the area is an important component of park management.

### **Park Significance**

- The park protects critical cultural resources including middens of the Timucuan people and the site of Buena Suerte Plantation, established in the early 1800s by General Jose Hernandez, a Floridian and militia general who commanded troops in this part of Florida during the Second Seminole War.

- Located within the coastal flyway, the park's hardwood hammocks support a significant number of migratory bird species during the spring and fall migration making this an exceptional birding location.
- The park is an important component of an interconnected system of managed properties that protect more than 13,000 acres of public conservation lands in northeast Florida.
- The park provides outstanding resource-based recreational opportunities in Florida's highly populated northeast coastal region including paddling and boating on the pristine estuarine tidal marshes of Pellicer Creek.

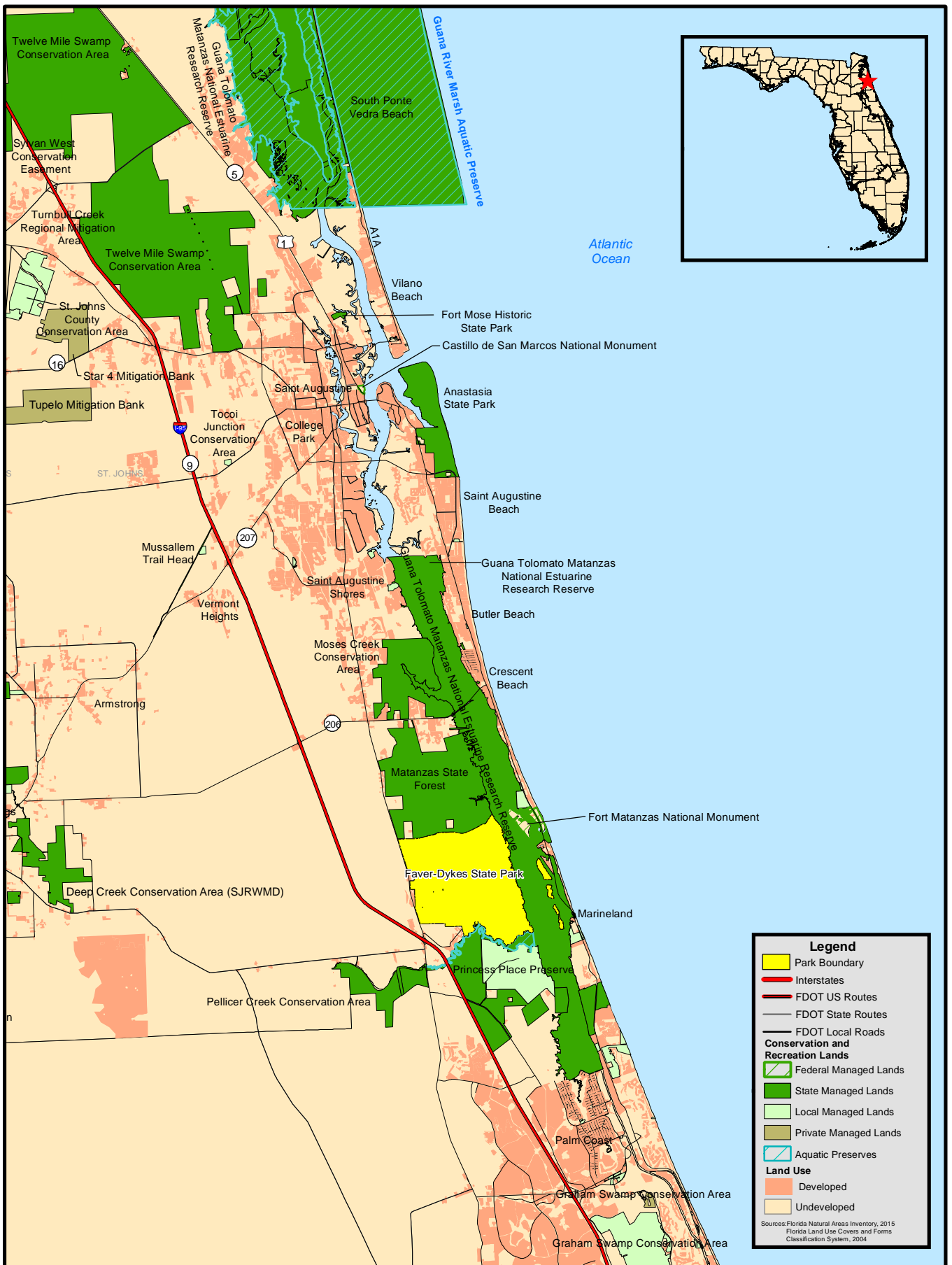
Faver-Dykes State Park is classified as a State Park in the DRP's unit classification system. In the management of a State Park, a balance is sought between the goals of maintaining and enhancing natural conditions and providing various recreational opportunities. Natural resource management activities are aimed at management of natural systems. Development in the park is directed toward providing public access to and within the park, and to providing recreational facilities, in a reasonable balance, that are both convenient and safe. Program emphasis is on interpretation on the park's natural, aesthetic and educational attributes.

### **Purpose and Scope of the Plan**

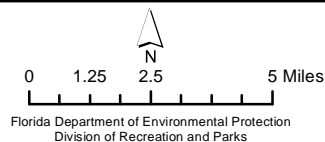
This plan serves as the basic statement of policy and direction for the management of Faver-Dykes State Park as a unit of Florida's state park system. It identifies the goals, objectives, actions and criteria or standards that guide each aspect of park administration, and sets forth the specific measures 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 2005 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



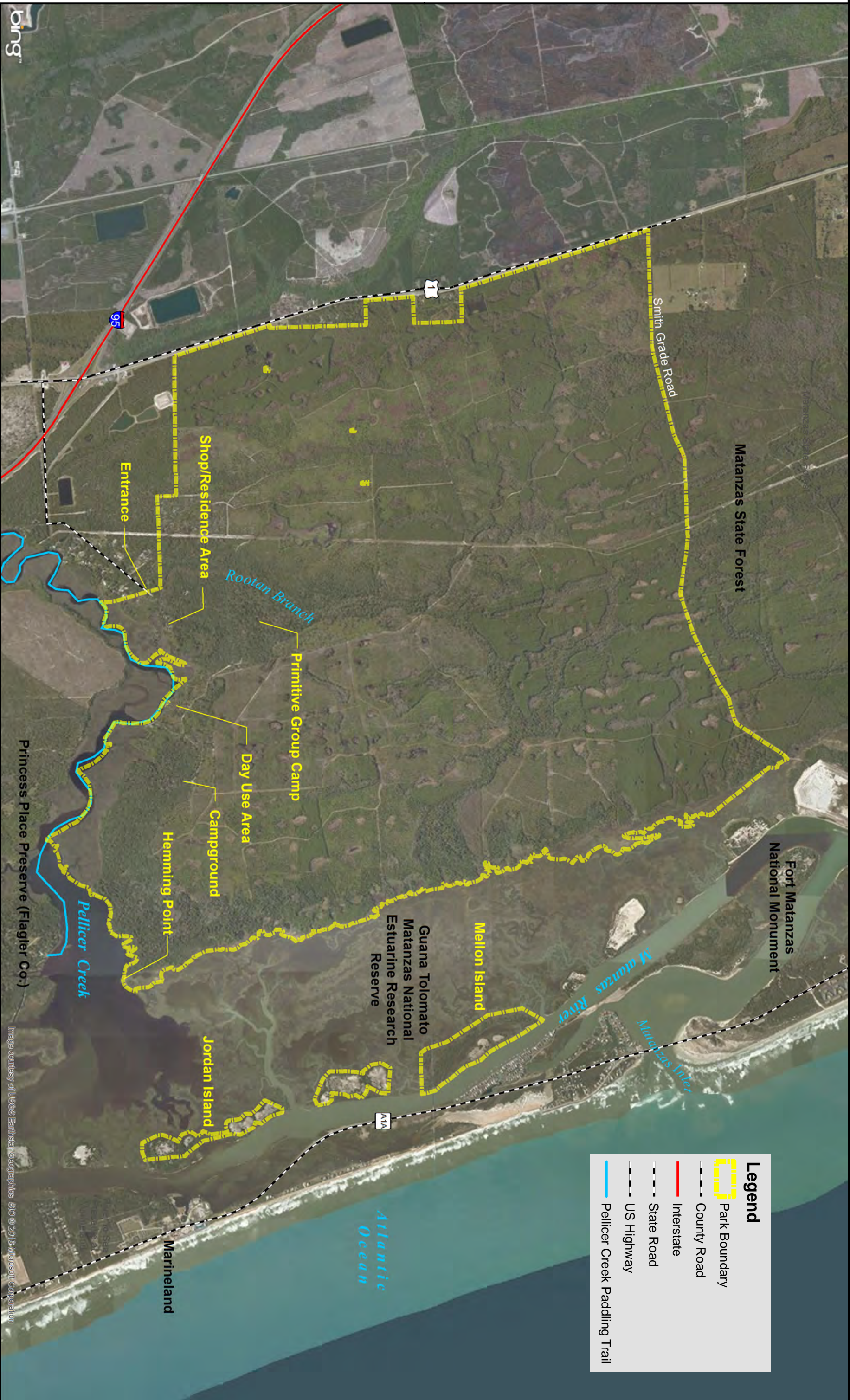
FAVOR-DYKES  
STATE PARK



VICINITY  
MAP







**Legend**

Park Boundary

County Road

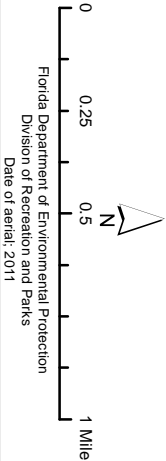
Interstate

State Road

US Highway

Pellicer Creek Paddling Trail

FAVER-DYKES STATE PARK



REFERENCE MAP

Image courtesy of USGS EarthSat Imagery, © 2013 Microsoft Corporation





and cultural resources of the park, current public uses and existing development. Measurable objectives are set to achieve the desired allocation of the physical space of the park. These objectives identify use areas and propose the types of facilities and programs as well as the volume of public use to be provided.

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

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.

In accordance with 253.034(5) F.S., the potential of the park to accommodate secondary management purposes was analyzed. These secondary purposes were considered within the context of DRP's statutory responsibilities and the resource needs and values of the park. This analysis considered the park's natural and cultural resources, management needs, aesthetic values, visitation and visitor experiences. For this park, it was determined that timber management utilized as part of the park's natural community management and restoration activities could be accommodated in a manner that would not interfere with the primary purpose of resource-based outdoor recreation and conservation. This compatible secondary management purpose is addressed in the Resource Management Component of the plan.

DRP has determined that 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 or the management purposes of the park.

In accordance with 253.034(5) F.S., 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 timber management, utilized as part of the park's natural community management and restoration activities, would be appropriate at this park as an additional source of revenue for land management since it is compatible with the park's primary purpose of resource-based outdoor recreation and conservation.

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 concessionaire may provide services to park visitors in order to enhance the visitor experience. For example, a concessionaire could be authorized to sell merchandise and food and to rent recreational equipment for use in the park. A concessionaire 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 concessionaires, 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 St. Johns River Water Management District (SJRWMD) assists the staff in the management of the park's water resources. 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.

Faver-Dykes State Park is within the lands and waters designated as the Guana Tolomato Matanzas National Estuarine Research Reserve (GTM NERR). This non-regulatory designation provides a unique opportunity to enhance research, education and stewardship of natural resources within and adjacent to the managed property. NERR's are established to support natural resource stewardship through research and education. State sovereign submerged lands within GTM NERR along the Matanzas River and the Pellicer Creek Aquatic Preserve are directly managed by the Florida Department of Environmental Protection's Florida Coastal Office (FCO).

The Park Manager, or designee, serves on the Reserve's Management Advisory Group (MAG). Quarterly meetings of the MAG provide an opportunity for the federal, state and county land managers within the Research Reserve to enhance cooperative management through improved information exchange and partnerships. A Memorandum of Understanding (MOU) between the Division of Recreation and Parks and the Florida Coastal Office recognizes the need for continued cooperation in management compatible with the goals and objectives of the NERR system.

### **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 April 12 and 13, respectively. Meeting notices were published in the Florida Administrative Register, March 31, 2017, VOL43/63, 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**

Faver-Dykes 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.

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 except for Pellicer

Creek which is classified as Class II waters. This park is adjacent to the Pellicer Creek 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 DRP's overall mission in natural systems 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 the 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.

<b>Table 1. Faver-Dykes State Park Management Zones</b>			
<b>Management Zone</b>	<b>Acreage</b>	<b>Managed with Prescribed Fire</b>	<b>Contains Known Cultural Resources</b>
FD-01	202.55	Y	N
FD-02	341.93	Y	N
FD-03	253.77	Y	N
FD-04	88.07	Y	N
FD-05	92.08	Y	N
FD-06	79.30	Y	N
FD-07	102.81	Y	N
FD-08	161.38	Y	N
FD-09	362.65	Y	N
FD-10	229.64	Y	Y
FD-11	338.68	Y	N
FD-12	214.73	Y	N
FD-13	191.49	Y	N
FD-14	110.96	Y	N
FD-15	87.01	Y	N
FD-16	102.54	Y	N
FD-17	207.13	Y	N
FD-18	302.89	Y	N
FD-19	106.45	Y	N
FD-20	68.21	Y	N
FD-21	101.91	Y	N
FD-22	83.03	Y	N
FD-23	78.75	Y	N
FD-24	90.50	Y	N
FD-25	46.38	Y	N
FD-26	169.86	Y	N
FD-27	55.62	Y	N
FD-28	44.68	Y	N
FD-29	170.79	Y	Y
FD-30	76.02	Y	Y
FD-31	259.28	Y	N
FD-32	66.62	Y	N
FD-33	64.92	Y	N
FD-34	275.50	Y	Y
FD-35	138.27	Y	N
FD-36	286.05	Y	Y
FD-37	236.63	Y	Y
FD-38	71.05	N	Y
FD-39	31.34	N	N
FD-40	36.15	N	N





FAVER-DYKES STATE PARK

MANAGEMENT ZONES MAP

Images courtesy of USGS State of Michigan





## **Resource Description and Assessment**

### **Natural Resources**

#### **Topography**

Faver-Dykes State Park is located within two physiographic divisions of the Eastern Flatwoods District (Brooks 1981a). The majority of the park lies within the St. Augustine Ridge Sets division. This consists of a complex relic of a barrier island with beach ridge sets of several different ages. The landscape in this area includes swales with forested wetlands and abundant scattered ponds and marshes. Flatwoods, sandhills, and hammocks are found on the subdued ridges.

The easternmost portion of the park, which includes Mellon (formerly Hernandez) and Jordan (formerly Billy's) Islands, is found in the St. Augustine-Edgewater Ridge subdivision of the Central Atlantic Coastal Strip division. This coastal strip was created, or modified, by shoreline processes during the Late Pleistocene when sea levels were at about 18 feet (6-8 feet above present level). Specifically the subdivision is characterized by a coquina ridge that extends from Anastasia Island southward to Cape Canaveral.

Elevation in the park ranges from approximately 27 feet (along portions of the park drive, and in the northern scrubby flatwoods sections) to sea level along Pellicer Creek and the Matanzas River (see Topographic Map). Despite there being only 27 feet of relief across the entire park, there are some impressive topographic features present where some of the high points drop off dramatically along the narrow floodplain of Rootan Branch, creating a bluff-like feature.

#### **Geology**

The park is underlain by three different geologic deposits (Brooks 1981b). The deposits in the marsh areas along the Matanzas River and Pellicer Creek consist of undifferentiated sand, shell, clay, marl, and peat that were laid down during the Holocene, mostly less than 4,500 years before present. This includes Mellon and Jordan Islands. Westward from this area is the Anastasia Formation. This Pleistocene deposit was a high energy beach and bar which consists of shelly sand with some dune sand and loose to very hard shelly coquina. The western part of the park is underlain by the Fort Thompson Group, another Pleistocene formation, which consists of clastic and shell deposits.

#### **Soils**

The United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) identified 30 soil types within Faver-Dykes State Park (see Soils Map). The locations and distributions of these soil types are shown on the Soils Map. Addendum 4 contains detailed descriptions of each of the park's 30 soil types.

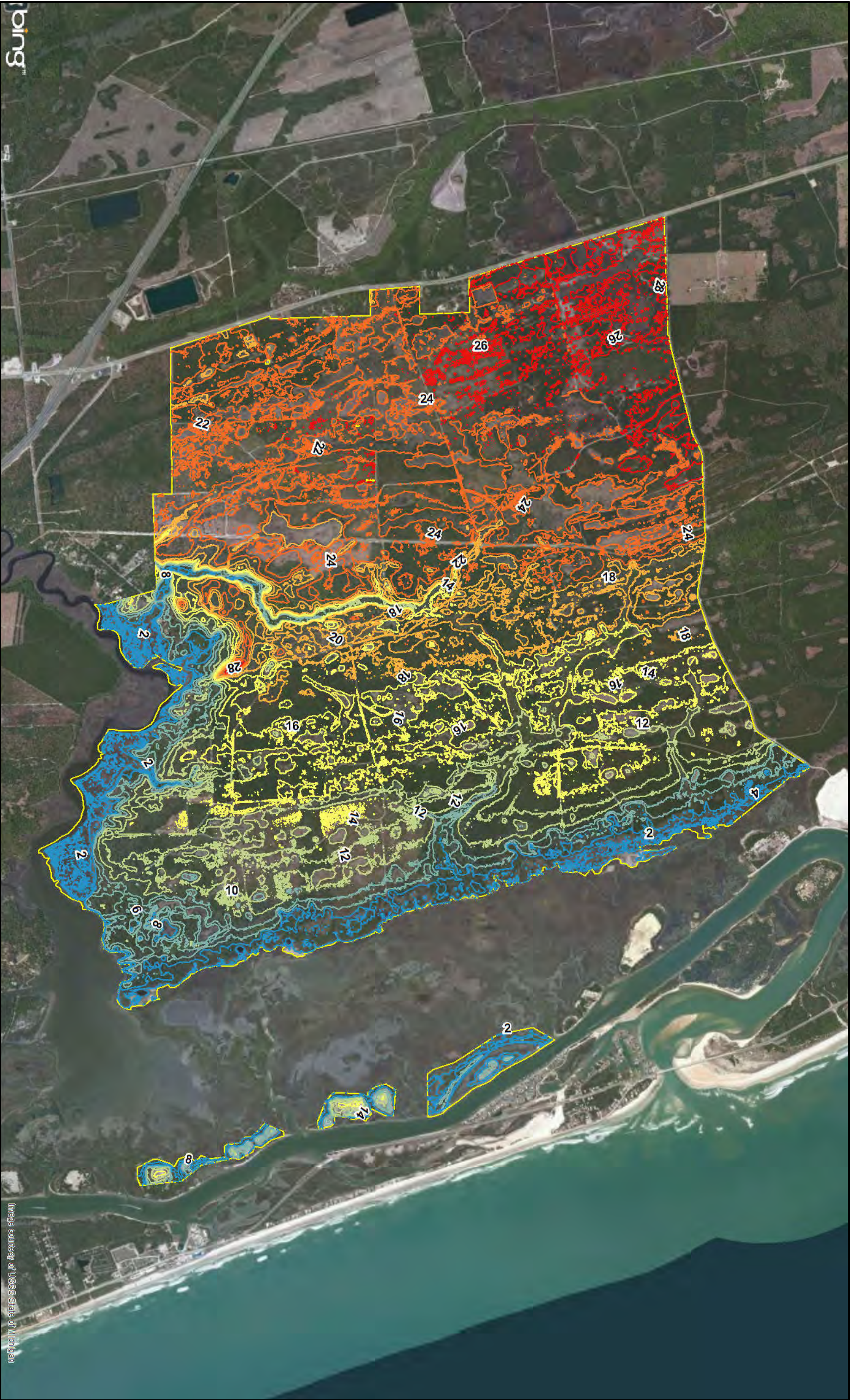
Some minor to moderate soil erosion has occurred in a few areas within the park. The main erosion prone areas have been the park entrance road near the Rootan Branch crossing, the boat ramp area on Pellicer Creek, and the Pellicer Creek shoreline near the day use area and fishing pier. Various measures have been implemented to reduce erosion in these areas.

The Rootan Branch crossing area tends to be prone to erosion during very heavy rain events. This is due in part to the grade of the road, which tapers downward toward the culvert crossing from either side. Heavy rains cannot percolate the earthen roadbed quickly enough to be fully absorbed and runoff flows downhill toward the culvert area, carrying some road base material along with it. The culvert was replaced in approximately 2009 and the road was raised slightly at that time to reduce the volume and velocity of runoff. Additional measures were implemented to divert some of the runoff to either side of the road before it reaches the culvert area. Roadsides were planted with sod to help stabilize the surface and slow the flow of runoff. These improvements have helped reduce the erosion in this area but some erosion still occurs during extreme rain events. A planned project to pave the entrance road will ultimately provide for the necessary stormwater attenuation and treatment and should solve the erosion issue in this area.

The remaining two erosion prone areas occur along the northern shoreline of Pellicer Creek. These areas lie along the outside edge of a bend in the creek, which creates an area prone to natural erosion as creek flows have a tendency to carve away at the outer edges of river bends. The erosion became exacerbated by human factors in areas where there was shoreline foot traffic associated with fishing, cast-netting, and/or canoe/kayak launching, as well as from wave action associated with boat wakes. Park staff installed wooden split rail fencing and signage to prevent foot access to much of the area. This alone solved most of the erosion problem. The main area with a remaining problem is located immediately west of and adjacent to the concrete boat ramp. Park visitors are reluctant to launch canoes and kayaks off of the concrete ramp. Instead, they tend to launch from the earthen shoreline adjacent to the ramp. This has created an eroding area that is trampled of all vegetation. A project is currently in the design and permitting phase that will create an improved canoe/kayak launch in this location while also stabilizing the soil surface and preventing further erosion.

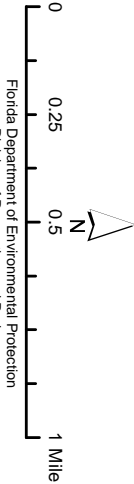
In the past, some minor erosion has occurred at Hemming Point when hurricanes or other large storm systems have impacted the area. This area is normally somewhat buffered from erosion by a fringe of salt marsh along the Pellicer Flats edge. During major storm events that create heavy winds, wave action, and storm surge, the marsh is less effective at protecting the shoreline in this area. There is minimal action that park staff can take to protect Hemming Point during a storm event of this nature. However, given the historical and cultural significance of the site, it should be regularly monitored for erosion, particularly following large storm events, and any possible mitigating measures should be taken to protect the site from erosion if possible. Any erosion control or repair measures will be conducted in consultation with the Department of Historical Resources (DHR).





FAVER-DYKES STATE PARK

TOPOGRAPHIC MAP



Florida Department of Environmental Protection  
Division of Recreation and Parks  
Date of Aerial: 2011













All management activities 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 found in the park.

## **Hydrology**

### Surface Water

Faver-Dykes State Park is found within the Upper East Coast drainage basin (Hand et al. 1996) and is part of the St. Johns River Water Management District's (SJRWMD) Northern Coastal Basin. The SJRWMD further defines this basin into four smaller basins, with the park located in the Pellicer Creek Basin (SJRWMD 1998). The park is bordered to the south by Pellicer Creek which originates west of Interstate 95 as several freshwater branches and flows eastward into the Matanzas River. Pellicer Creek is designated as a State Aquatic Preserve and is thus classified as an Outstanding Florida Water (OFW). Faver-Dykes State Park is adjacent to this Preserve. Pellicer Creek is also designated as a State Canoe Trail. The section of Pellicer Creek in the vicinity of the park tends to be brackish salinity with tannic waters, although the water chemistry, including salinity, varies widely and is heavily dependent upon local rainfall, tides, and other weather factors. Salinity in the lower reach of Pellicer Creek can range from near freshwater to near seawater levels, sometimes with wide salinity swings over a single tide cycle.

The Guana Tolomato Matanzas National Estuarine Research Reserve (GTMNERR) is a partner with Faver-Dykes State Park, through a Memorandum of Understanding. They have installed, operate, and maintain an automated water quality monitoring station at the Faver-Dykes boat ramp on Pellicer Creek. Standard water quality parameters are measured and recorded automatically on 15 minute intervals and the data is transmitted via satellite so that it is possible to view near real-time water quality data on the GTMNERR's website <http://nerrsdata.org>. Nutrient, water clarity, chlorophyll, and bacteria samples are also collected monthly by GTMNERR staff at that location. In addition, the Reserve has established marsh vegetation and sediment elevation monitoring sites across the ICW from Washington Oaks and in the marshes of the Pellicer Creek Aquatic Preserve. The United States Geological Survey (USGS) in conjunction with SJRWMD operates a second automated data recorder on Pellicer Creek located near the park's picnic area. This recorder measures stream flow parameters such as gauge height, discharge, and stream level, and also transmits data collected via satellite, such that near real-time stream flow data can be viewed online via the USGS webpage.

The main freshwater feature in the park is a blackwater stream system known as Rootan Branch. Rootan Branch originates north of the park within a basin swamp on Matanzas State Forest. The branch flows under Smith Grade Road and into the park through a large culvert. From there, additional flows enter the branch from several forested wetlands, sheet flows, and subsurface seepage within the park as the

branch drains southward, ultimately emptying into Pellicer Creek. A second arm of Rootan Branch runs east-west in the northeastern portion of the park. The lower reach of Rootan Branch is somewhat tidal, with water levels staging up and falling in response to tidal fluctuations on Pellicer Creek, however, there is sufficient freshwater input to prevent brackish water from reaching upstream beyond the entrance road culvert. The lower reach of the branch is known to have several small seeps along the stream banks and a near constant freshwater flow (although variable in rate) even during severe drought conditions as were experienced in 2011-2012.

In addition to Rootan Branch and its associated wetlands, the park is dotted with many isolated freshwater wetlands including numerous depression marshes, dome swamps, basin marshes, wet prairies, and basin swamps. Most of these wetlands are relatively intact and in good condition. Some have been impacted by previous silvicultural practices and/or wildfires and are in need of additional restoration activities. The current natural communities and desired future conditions maps reflect the needed wetland restoration.

Most of the park's wetlands have escaped serious human impacts from hydrological alteration such as ditching and draining. There are three known man-made ditches that appear to be historical in nature but their exact purpose and history is unknown. One small shallow ditch lies in the northwest portion of FD-13 and appears to drain toward the southwest onto an adjacent privately owned parcel. Evidence of this ditch appears in aerial photos from the 1940s and 1950s. A second ditch lies in FD-36 and appears to possibly drain a large basin marsh eastward to the salt marsh. The archeological investigations report for the park (Payne and Griffin 2000) indicates some ditching was associated with the Carter Plantation located near Hemming Point. This ditch may be associated with that early plantation, however, apparent barren spoil piles visible in the 1942 aerial photography seems to indicate that the ditch was recently constructed or possibly enlarged around that time. A third man-made ditch runs from near the southeast corner of the large basin marsh in the middle of the park toward the southeast and ends at the edge of the floodplain of Rootan Branch. This ditch may also have been associated with one of the early plantations, however, the 1952 aerial photos appear to show fresh excavation in this area. All three ditches appear to have minimal hydrological impacts at this time and may have some historical significance. Further research is needed to determine the history, importance, and impacts of these ditches. No restoration is prescribed for them at this time, pending the outcome of further research. If it is deemed that they are not historically significant and are indeed negatively impacting the park's hydrology, then restoration actions should be carefully planned and implemented at that time.

Much of the park was formerly silvicultural land that was managed for growing pines. Large areas were bedded with raised soil rows to promote pine establishment and growth. The soil bedding is assumed to have altered sheet flow patterns and hydroperiod of shallow wet prairies and some depression marshes, although the park does not have specific data available to measure the exact level and severity of the suspected impacts. Removal and grading of the soil beds is likely to be

impractical due to funding limitations but it may also be undesirable in some areas where there is desirable groundcover still present. Additional research into the impacts of the soil bedding would help guide future restoration projects. In the interim, timber management projects are beginning to knock down some of the beds and eventually they are expected to erode down naturally, although this process could take decades. Some small depression marshes and other wetlands were bedded and planted through with pines. These areas should take priority for restoration over bedded upland natural communities when possible.

The park's system of service roads and firebreaks include some elevated hauling roads and roadside swales. There are numerous culverts under these roads to allow for natural drainage patterns to continue. Some culverts have been replaced with low water crossings. Where appropriate, low water crossings are preferred and should be installed when possible. Damaged and failing culverts are a constant maintenance issue that must be addressed to protect the natural drainage flows while allowing for necessary park staff access to conduct prescribed fire and other resource management activities.

The park's eastern boundary is formed by the Matanzas River and associated salt marshes. The Matanzas River, which is also part of the Atlantic Intracoastal Waterway, runs along the eastern side of the park flowing north for about 2.5 miles and empties into the Atlantic via Matanzas Inlet. The SJRWMD maintains a surface water monitoring station in the Matanzas River (Intracoastal Waterway) located just a short distance south of the park boundary near Washington Oaks Gardens State Park. SJRWMD staff have sampled this station approximately bimonthly from 1986-1996 and approximately monthly from 1997 to present and the resulting water quality data are available online via the SJRWMD website.

The entire park and its associated wetlands are part of the Guana Tolomato Matanzas National Estuarine Research Reserve (GTMNERR), a joint U.S. Department of Commerce and Florida Department of Environmental Protection program.

### Groundwater

Two aquifers are found in the region of the park (Hyde 1965). The Floridan Aquifer along the east coast is highly mineralized and is thus not an important water source in this area. Recharge to the Floridan in the area is minimal (Fernald and Patton 1984). The shallow aquifer, which is non-artesian, is the major water source in the area. It consists primarily of Pleistocene and more recent deposits of sand and shell, but in some areas it extends down to Miocene or Pliocene deposits. This shallow aquifer recharges mainly from local rainfall.

The SJRWMD installed a groundwater monitoring well near the youth camp area of the park and collected data for a number of years. The monitoring well is currently inactive due to funding cuts within the SJRWMD, however, archived data up to December 2008 are available online and the monitoring well could be reopened if funding levels increase.

## 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 [and population restoration] are discussed in the Resource Management Program section of this component.

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

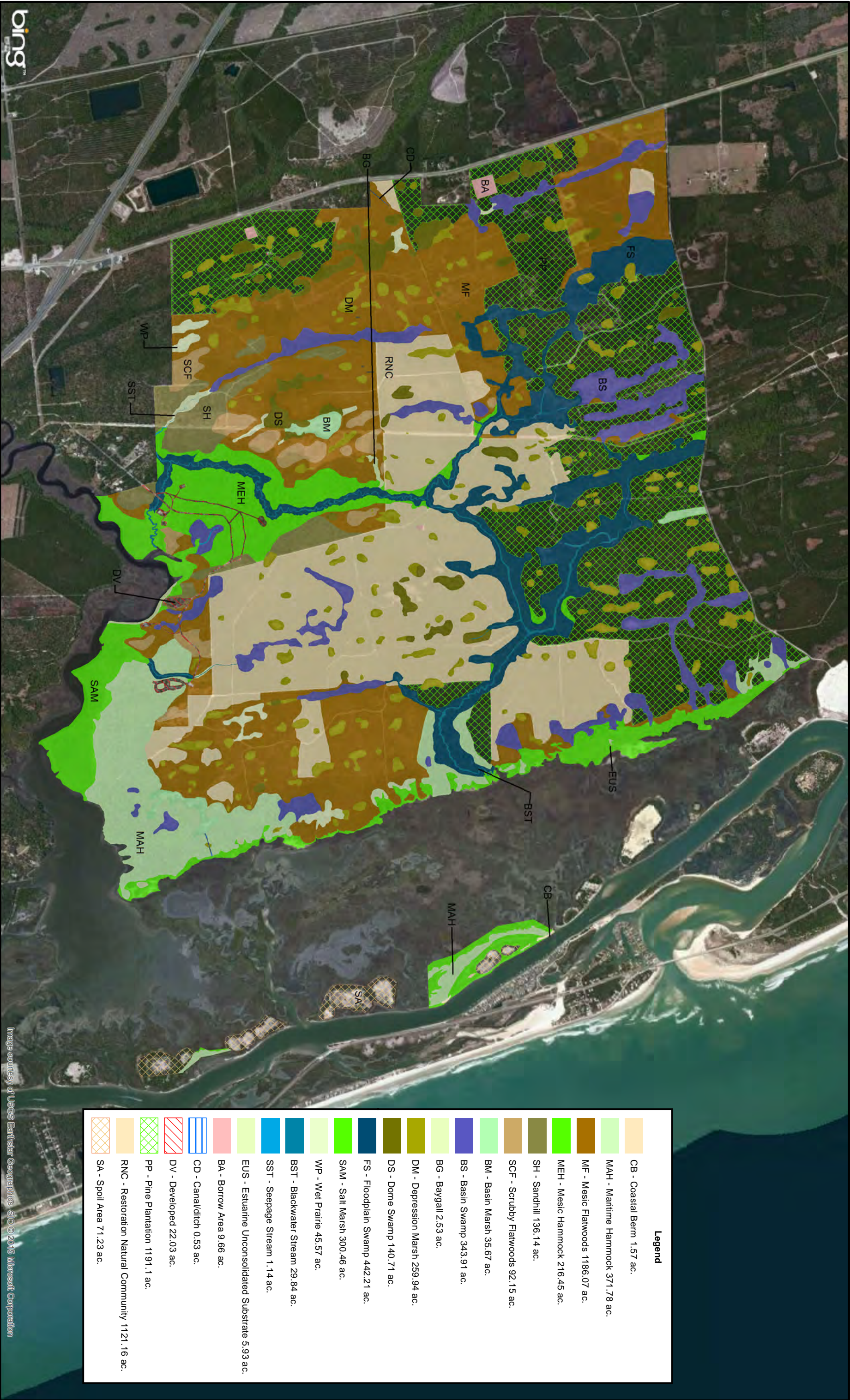
When a natural community within a park reaches the desired future condition, it is considered to be in a "maintenance condition." Required actions for sustaining a community's maintenance condition may include; maintaining optimal fire return intervals for fire dependent communities, ongoing control 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 that link natural communities across the landscape.

The park contains 17 distinct natural communities as well as 6 altered landcover types (see Natural Communities Map). A list of known plants and animals occurring in the park is contained in Addendum 5.

### Coastal Berm

*Desired Future Condition:* Coastal berm habitat will be found on the seaward edge or landward edge of the mangroves or further inland depending on the height of the storm surge that formed them. Structure and composition of the vegetation will be variable depending on height and time since the last storm event. Coastal berm will consist of a mixture of tropical herbs, shrubs and trees and is defined by its substrate of coarse, calcareous, storm-deposited sediment forming long narrow ridges that parallel the shore. South Florida coastal berms support a variety of tropical species that are not present in this region, but could become established during periods when absence of colder temperatures allows population movement

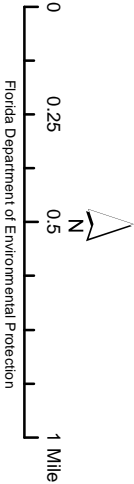




	CB - Coastal Berm 1.57 ac.
	MAH - Maritime Hammock 371.78 ac.
	MF - Mesic Flatwoods 1186.07 ac.
	MEH - Mesic Hammock 216.45 ac.
	SH - Sandhill 136.14 ac.
	SCF - Scrubby Flatwoods 92.15 ac.
	BM - Basin Marsh 35.67 ac.
	BS - Basin Swamp 343.91 ac.
	BG - Baygall 2.53 ac.
	DM - Depression Marsh 259.94 ac.
	DS - Dome Swamp 140.71 ac.
	FS - Floodplain Swamp 442.21 ac.
	SAM - Salt Marsh 300.46 ac.
	WP - Wet Prairie 45.57 ac.
	BST - Blackwater Stream 29.84 ac.
	SST - Seepage Stream 1.14 ac.
	EUS - Estuarine Unconsolidated Substrate 5.93 ac.
	BA - Borrow Area 9.66 ac.
	CD - Canal/ditch 0.53 ac.
	DV - Developed 22.03 ac.
	PP - Pine Plantation 1191.1 ac.
	RNC - Restoration Natural Community 1121.16 ac.
	SA - Spoil Area 71.23 ac.

bing

FAVER-DYKES STATE PARK



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

Image courtesy of USGS Earthstar Geographics, SIO © 2015 Microsoft Corporation

NATURAL COMMUNITIES  
EXISTING CONDITIONS  
MAP







northward. The more northern coastal berms and more southern seaward berms or those more recently affected by storm deposition may support a suite of plants similar to beaches, including shoreline seapurslane (*Sesuvium portulacastrum*), silkgrass (*Distichlis spicata*), and seashore dropseed (*Sporobolus virginicus*), or dense shrub thickets with buttonwood (*Conocarpus erectus*), black, red, and white mangroves (*Vicennia germinans*, *Rhizophora mangle*, and *Laguncularia racemosa*), joewood (*Jacquinia keyensis*), and bushy seaside oxeye (*Borrchia frutescens*).

*Description and Assessment:* The coastal berm community type at Faver-Dykes State Park is restricted to the eastern side of Mellon Island along the shore of the Matanzas River. This natural community is more commonly found in southeastern Florida and only occurs here as small disjunct berms totaling less than two acres. Coastal berm is generally more easily distinguished from neighboring communities by its physical features than by their species composition. On Mellon Island it is distinguished from the adjacent maritime hammock by its lack of continuous canopy and occurrence on primarily shelly rather than sandy substrates. The substrate consists of large amounts of oyster shell and other shelly hash material mixed with some sand. The dominant vegetation consists of salt tolerant species that are subject to frequent over-wash such as scattered small black mangroves, bushy seaside oxeye, saltgrass, and seapurslane. Much of the coastal berm community is sparsely vegetated.

*General Management Measures:* Since this natural community type is so limited in distribution and acreage within the park, very little management actions are needed to maintain it in good condition. Occasional removal of invasive plants, mainly Brazilian Pepper (*Schinus terebinthifolius*) occurs in this community. The main threat is erosion from wave action in the Matanzas River caused by severe storms and boat wakes. There is a fringe of salt marsh protecting most of the coastal berm from all but the most severe waves. The areas where marsh is lacking have experienced some erosion in the past but also tend to accrete some sands and shells at other times. Park staff have installed posts at designated entry points to encourage boaters to land and tie off at specific locations. This has limited the impacts to the protective salt marsh fringe and concentrated human impacts to a small area of the coastal berm community. Staff should continue to monitor for any abnormal levels of erosion and control exotics as needed.

#### Maritime Hammock

*Desired Future Condition:* Maritime hammock is 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 will typically be 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*). Herbaceous groundcover will be very sparse or absent. Variation in species composition exists along the coast - as you head southward, tropical species become more prevalent.

*Description and Assessment:* This natural community type occurs in three main areas at the park. The largest area is located in the southeastern section of the

park and encompasses Hemming Point and the surrounding area. Additional patches of maritime hammock occur further north along the eastern boundary of the mainland portion of the park as well as on the natural (non-dredge spoil) portions of Mellon and Jordan Islands. The dominant canopy species present are live oak, red bay, laurel oak, southern magnolia (*Magnolia grandiflora*), red cedar (*Juniperus virginiana*), and cabbage palm. Pignut hickory (*Carya glabra*) is also present in some portions of the maritime hammock. The midstory and understory consist of saw palmetto, yaupon holly, coontie (*Zamia pumila*), wild coffee (*Psychotria nervosa*), woodoats (*Chasmanthium latifolium*), and other species.

Over the last 75 years, piles of spoil from the dredging of the Intracoastal Waterway have been placed on, and adjacent to, some of the maritime hammock occurring on Jordan and Mellon Islands. Some of the spoil area has been colonized by a few of the hammock species but it is not true maritime hammock. Most of the spoil area remains very sparsely vegetated.

The maritime hammock in the park is in good condition. Maps from the 18<sup>th</sup> and 19<sup>th</sup> centuries suggest that the maritime hammock community may have been more extensive in the park at that time. However, it is hard to determine for sure the historical extent of this community in the park. There were citrus groves and plantation crops in the area and some of the former hammock may have been cleared for planting those crops. There was also an active British Period sawmill located upstream from the park on Pellicer Creek. Based upon these local historic land use activities, it is unlikely that the maritime hammock at the park contains any trees older than 250 years. For the purposes of developing a desired future conditions map and the historical extent of maritime hammock, the best available information was used. In this case, 1942 and 1952 aerial photography provided the most reliable information on the historic extent of maritime hammock in the park. It is reasonable to assume that much of the area cleared for early plantation era agriculture would have likely regrown with hammock species and now resemble a maritime hammock community. Further research may yield more information to allow better refinement of the historic extent of the natural maritime hammock community in the park.

*General Management Measures:* A few of the invasive exotic plant infestations in the park occur in this habitat, particularly where plants have gotten a foothold in disturbed locations within the hammock such as hog rooting. The main exotic species encountered in the maritime hammock is Chinese tallow tree (*Triadica sebifera*). Staff should regularly survey for and remove invasive exotics within the hammock to preserve a maintenance condition. Maritime hammock is a climax community that does not require prescribed burning. Controlling exotic species and protecting hydrology should maintain this natural community in excellent condition.

#### Mesic Flatwoods

*Desired Future Condition:* Mesic flatwoods is characterized by an open canopy of tall pines [typically longleaf pine (*Pinus palustris*) and/or south Florida slash pine *Pinus elliotii*], depending on the region of the state] and a dense, low ground layer of low shrubs, grasses and forbes. Saw palmetto (*Serenoa repens*) will generally be

present but not overly dominant. Other shrub species may include gallberry (*Ilex glabra*), fetterbush (*Lyonia lucida*), runner oak (*Quercus elliotii*), dwarf live oak (*Quercus minima*), shiny blueberry (*Vaccinium myrsinites*), and dwarf huckleberry (*Gaylussacia dumosa*). The herbaceous layer is primarily grasses, including wiregrass (*Aristida stricta* var. *beyrichiana*), dropseeds (*Sporobolus curtissii*, *S. floridanus*), panicgrasses (*Dicanthelium* spp.), and broomsedge (*Andropogon* spp.). This community has minimal topographic relief and the soils contain a hardpan layer within a few feet of the surface which impedes percolation. Due to these factors, water can saturate the sandy surface soils for extended periods during the wet season but lengthy droughts also commonly occur during the dry season. The Optimal Fire Return Interval for this community is 1-3 years in most cases.

*Description and Assessment:* This is the dominant natural community in the park and it ranges from good to poor condition depending upon each particular area's history of silviculture, fire, and other factors. The areas in good condition include portions of the flatwoods that have not been subjected to intensive silvicultural practices and have been maintained with regular repeated prescribed fire management. Some examples of good condition mesic flatwoods occur in zones FD-29, FD-23, and FD-24. Other flatwoods have been subjected to some moderate level of silvicultural disturbance and/or have not received enough fire management to achieve good condition but are fair overall. Some examples occur in FD-34, FD-37, FD-33, and others. The remaining flatwoods areas are in poor condition either due to intensive disturbance from past silvicultural practices (primarily in the form of soil bedding and herbiciding), fire suppression, or a combination of factors. Some examples occur in FD-01, FD-14, FD-13, and others. Good condition mesic flatwoods are grass dominated with saw palmetto occurring in low density and stature. Fair condition flatwoods have herbaceous groundcover that is more sparse in density and diversity and a predominance of saw palmetto relative to good condition sites. Poor condition flatwoods are those that have undergone site preparation for pine plantations and have raised soil beds with a very low diversity groundcover. Some areas have experienced clear-cutting and consist of young regeneration pines with no diversity of age classes or old growth trees. Some of the poor condition flatwoods have experienced a prescribed burn or wildfire in recent years but most have not.

Much of the park's historic mesic flatwoods acreage is currently mapped as either pine plantation or restoration natural community to more accurately reflect the on the ground conditions at this time. Those two altered landcover types are addressed independently below. This section includes only those portions mapped as mesic flatwoods on the current conditions natural communities map.

Longleaf pine is the dominant pine in the natural areas of flatwoods in the park, with slash pine and pond pine (*Pinus serotina*) being less common. Much of the longleaf pine in the park has been logged out over the years and replaced with slash pine when previous landowners replanted. Staff should aim to gradually phase out slash pine through successive timber management activities and any replanting projects should use longleaf pine to help restore the species to its former dominance in the park. Existing stands of longleaf have shown to seed into adjacent

areas naturally as environmental conditions allow. Prescribed burning regimes and other land management activities should be planned to promote the continued growth and establishment of longleaf pine into areas that are currently dominated by slash pine.

In most of the mesic flatwoods that are in less than good condition, the saw palmetto cover has grown quite high. This has led to a net loss of grasses and herbs in some areas. The density of saw palmetto has caused fire intensity to be high with a sometimes subsequent high mortality rate on the overstory pines in some areas. In these areas, this leads to fewer fine fuels to carry a fire, which can lead to longer than desired successful burn intervals. In many of these areas, restoration actions have been taken in order to reduce the density and height of saw palmetto. Mechanical methods such as mowing, roller-chopping, and chainsawing have been implemented. Typically, these mechanical treatments are followed up with a prescribed burn shortly thereafter. Some areas have been supplemented with plantings of wiregrass, lopsided Indiangrass (*Sorghastrum secundum*), and longleaf pine to help speed up the restoration process. This approach has worked very successfully at the park.

*General Management Measures:* The condition of the mesic flatwoods is heavily dependent upon the application of regular prescribed fire at a 2-4 year fire return interval. As more of the flatwoods become good condition and a continuous source of wiregrass and needle-drop becomes readily available, this community should be burned as frequently as fuels will allow, generally a 1-3 year interval, and it should be burned preferentially April through June whenever possible.

Invasive exotic infestations are infrequent in the mesic flatwoods, with most known infestations occurring along roads that traverse the flatwoods. Cogongrass (*Imperata cylindrica*), torpedograss (*Panicum repens*), and Japanese climbing fern (*Lygodium japonicum*) are the main invasive exotics encountered in these areas. Staff should monitor and treat known infestations and search for new ones.

Mechanical treatment methods such as roller-chopping, mowing, and chain-sawing should be used as needed in areas where fire management alone cannot reduce palmetto and shrub density, while increasing native groundcover enough. Continue to pursue opportunities to plant longleaf pine, wiregrass, and other desirable native species in poor or fair condition flatwoods to assist in restoration efforts. As discussed in the Introduction of this management plan, timber management of select forest products to enhance restoration may be appropriate for certain tracts.

#### Mesic Hammock

*Desired Future Condition:* Mesic hammock is a well-developed evergreen hardwood and/or palm forest which can occur, with variation, through much of peninsular Florida. The often dense canopy will typically be dominated by live oak (*Quercus virginiana*) with cabbage palm (*Sabal palmetto*) mixed into the understory. Southern magnolia (*Magnolia grandiflora*) and pignut hickory (*Carya glabra*) can be common components in the subcanopy as well. The shrubby understory may be dense or open, tall or short, and will typically be composed of saw palmetto

(*Serenoa repens*), beautyberry (*Callicarpa americana*), American holly (*Ilex opaca*), gallberry (*Ilex glabra*) and sparkleberry (*Vaccinium arboreum*). The groundcover may be sparse and patchy but generally contains panicgrasses (*Panicum* spp.), switchgrass (*Panicum virgatum*), sedges, as well as various ferns and forbs. Abundant vines and epiphytes will occur on live oaks and cabbage palms and other subcanopy trees. Mesic hammocks will generally contain sandy soils with organic materials and may have a thick layer of leaf litter at the surface. Mesic hammocks will rarely be inundated, are not considered to be fire-adapted communities and will typically be shielded from fire.

*Description and Assessment:* This natural community occurs in a broad band along the southern reach of Rootan Branch and in a few small areas where fire infrequently reaches such as near sharp bends in floodplain swamp or where an upland is surrounded by swamp. In terms of structure and general appearance, this community is very similar to the maritime hammock. The key differences are that the mesic hammock has far fewer red bays and noticeably more southern magnolia and pignut hickory. The understory tends to be slightly more diverse as well. Overall, the park's mesic hammocks are in good condition.

Prescribed burning of the adjacent natural communities have knocked back the edges of some of the mesic hammock but this community is generally impenetrable to fire except during extreme drought conditions.

Much of the mesic hammock along Rootan Branch may have anthropogenic origins. An 1852 map shows a large area labeled as "field" north of the Rootan Branch culverts of the park drive and southeast of Rootan Branch itself. This area may have been cultivated during one or more of the local plantation occupancies and native American evidence also suggests heavy usage of this area. Some of the highest elevation in the park occurs in the mesic hammock, suggesting it was possibly formerly sandhill that regrew as hammock following historic human disturbance. For the purposes of the desired future conditions map, areas that were mesic hammock in 1942 are considered to be historic hammock and will be maintained as such.

An interesting micro-habitat occurs where the mesic hammock meets the floodplain swamp of Rootan Branch. Here there is a dramatic topographic change and there are bluff-like features of 15 or more feet high. The canopy along these bluff features is similar to the surrounding hammock with the unique exception of bluff oak, or bastard white oak (*Quercus austrina*). Given the small size and distribution of this slope forest-like community (true slope forest is restricted to the panhandle) and the difficulty in mapping it, it is included here within the adjacent mesic hammock.

*General Management Measures:* This community type requires very little direct management. Removal of invasive exotic plants should occur as needed and removal of feral hogs (*Sus scrofa*) should be ongoing to protect this natural community. The majority of the mesic hammock forest is mature climax condition with a closed canopy, sparse understory, and well developed humus layer on the

forest floor. These conditions help to reduce moisture loss and maintain a mesic condition. Protect this community from excessive burning during extreme drought conditions when the humus layer may be sufficiently dry to carry fire.

### Sandhill

*Desired Future Condition:* The dominant pine of sandhill in this region of state is longleaf pine. Herbaceous cover will be very dense, typically of wiregrass, and low in stature. Most of the plant diversity is contained in the herbaceous layer including other three-awns (*Aristida* spp.), pineywoods dropseed (*Sporobolus junceus*), lopsided Indian grass, bluestems (*Andropogon* spp.) and little bluestem (*Schizachyrium scoparium*). In addition to groundcover and pines, there will be scattered individual trees, clumps, or ridges of onsite oak species [usually turkey oaks (*Quercus laevis*), sand post oak (*Quercus margaretta*), and blue-jack oak (*Quercus incana*)]. In old growth conditions, sand post oaks will commonly be 150-200 years old, and some turkey oaks will be over 100 years old. The Optimal Fire Return Interval for this community is 1-3 years.

*Description and Assessment:* Overall the sandhill community in the park ranges from good to poor condition. The best quality sandhill occurs in the original portion of the park where regular prescribed fire has been applied for more than 20 years, an example of which occurs in FD-29. Most of the fair condition sandhill community occurs in areas with somewhat sparse herbaceous groundcover and a higher than desired density of hardwoods. An example of this is the sandhill portion of FD-27. Another example of fair condition sandhill occurs in FD-28 where there is a desirable groundcover coverage and density of oaks but the longleaf canopy is mostly lacking. Poor condition sandhills occur in areas where intensive silvicultural site prep occurred and there is poor coverage of desirable groundcover, dominance by offsite pine species, a long history of fire suppression, or a combination of these factors. Some poor condition examples occur in FD-07, FD-19, and FD-13.

The good condition sandhills in the park have an open canopy of mature longleaf pine with a mixture of turkey oak, sand post oak, and bluejack oak in the sub-canopy. The groundcover is dominated by wiregrass with a diversity of other graminoids mixed in. Saw palmetto coverage is sparse and low growing.

The sandhill community in the park is somewhat unique in that it occurs at elevations ranging from approximately 23-27 feet above msl, unlike most Florida sandhills that occur at much higher elevations along ridge systems with deep sands. Because of this, the sandhills in the park have a different character than the rolling sandhills that most people are familiar with. However, the species composition and structure are very similar to more traditional sandhills and fall within the Florida Natural Areas Inventory (FNAI) description for this community type.

To date, some of the sandhill areas in the park have been supplementally planted with longleaf pine and/or wiregrass tubelings as appropriate. In addition, some mowing, roller-chopping, and/or chainsawing has been utilized to reduce the density of offsite oaks in some areas. These projects have targeted primarily sand

live oak and laurel oak that have invaded the sandhills in the absence of fire and established a foothold.

*General Management Measures:* The intact sandhill communities should be burned on a 1-3 year interval. The poorer condition sandhills should be burned as frequently as fuel loads will allow until they reach a condition where it is possible for them to carry fire on a 1-3 year interval. The use of mechanical means to reduce the coverage of offsite oaks should continue as needed and supplemental plantings of longleaf, wiregrass, and other desirable sandhill species should occur as appropriate and as funding allows. Given the relatively small amount of sandhill occurring in the park and its importance to many rare upland plants and animals, this community should be given priority for restoration and resource management activities over more common natural communities such as mesic flatwoods. Invasive plants and animals are infrequent in the sandhills at the park. Cogongrass is the main plant of concern in this community and should be monitored for and treated as needed. Feral hog control in the park will help protect sandhill.

#### Scrubby Flatwoods

*Desired Future Condition:* The dominant tree species of the interior of scrubby flatwoods will usually be longleaf pine and occasionally slash pine in some areas. Mature sand pines (*Pinus clausa*) will typically not be present. There will be a diverse shrubby understory often with patches of bare white sand. A scrub-type oak "canopy" will contain a variety of oak age classes/heights across the landscape. Dominant shrubs will include sand live oak (*Quercus geminata*), myrtle oak (*Quercus myrtifolia*), Chapman's oak (*Quercus chapmanii*), saw palmetto (*Serenoa repens*), rusty staggerbush (*Lyonia ferruginea*), and tarflower (*Bejaria racemosa*). Cover by herbaceous species will often be low to moderately dense. The Optimal Fire Return Interval for this community will be regionally variable; typically, 5-15 years when aiming to achieve a mosaic of burned and unburned areas.

*Description and Assessment:* The scrubby flatwoods in the park occur in several disjunct patches on higher knolls within the mesic flatwoods and range from a few acres to 20 or more acres in size. Their condition varies from good to poor. Most of the scrubby flatwoods areas are scattered along the central ridge of the park that runs north-south along the general route of the powerline corridor. Some patches in the original portion of the park have been managed with prescribed fire for many years and are in good condition. Examples of good condition scrubby flatwoods occur in portions of FD-26, FD-34, and FD-29. Much of the scrubby flatwoods is in fair condition, having a desirable suite of species but somewhat overgrown due to the lack of fire or the lack of fire intensity suitable to control excessive oak growth. Many of these areas have been roller-chopped or mowed and some have been followed up with a prescribed fire while some have not yet been burned post mechanical treatment. Examples occur in portions of FD-26, FD-4, and elsewhere. Poor condition flatwoods are those that have been heavily impacted by site prep for silviculture and subjected to long fire suppression. Some of these areas have been recently thinned of offsite pine and the restoration process has begun. Examples can be found in FD-16, FD-11, and elsewhere. Much of the poor condition scrubby flatwoods are currently mapped as restoration natural community.

The overstory of the park's intact scrubby flatwoods is dominated by sparse longleaf pine and a lesser number of slash pine. The midstory and portions of the understory tends to be dominated by dense patches of sand live oak and myrtle oak as well as rusty lyonia and other woody shrubs. The groundcover varies depending mainly upon the fire history. It is diverse in some areas.

*General Management Measures:* The overall desired fire return interval for this community type at the park is approximately 5-15 years. Because this community is embedded in other fire-type pineland communities, fire should be applied to the scrubby flatwoods on a 2-4 year interval (in most cases), whenever the adjacent natural communities are burned, and if fuel loading and conditions are amenable this community will burn. The goal should be for most of the scrubby flatwoods to successfully burn at least once every 5-15 years.

Many scrubby flatwoods areas in the park have already been mechanically treated to control excessive oak growth and promote the successful application of prescribed fire, and this should continue on other overgrown scrubby flatwoods. Scrubby flatwoods that have been planted in silviculture should be managed appropriately once a timber thinning operation has opened the stand and fire can be safely applied. This natural community should be given restoration priority where possible over mesic flatwoods, given the relatively small amount that occurs in the park. As discussed in the Introduction of this management plan, harvesting of select forest products to enhance restoration may be appropriate for certain tracts.

Invasive exotic plants and animals are scarce in the scrubby flatwoods. Cogongrass is the main plant of concern. Regular surveys and treatments as needed should be conducted to keep a maintenance condition. Feral hog removals in the park will help to protect scrubby flatwoods.

#### Basin Marsh

*Desired Future Condition:* Basin marshes include emergent herbaceous and low shrub species dominating most of the area with an open vista. Trees will be few and if present occur primarily in the deeper portions of the community. There will be little accumulation of dead grassy fuels due to frequent burning; one will be able to see the soil surface through the vegetation when the community is not inundated. Dominant vegetation in basin marsh will include maidencane (*Panicum hemitomon*), cutgrass (*Leersia* sp.), common reed (*Phragmites australis*), pickerelweed (*Pontederia cordata*), arrowheads (*Sagittaria* sp.), buttonbush (*Cephalanthus occidentalis*), St. John's wort (*Hypericum fasciculatum*), and coastalplain willow (*Salix caroliniana*). The Optimal Fire Return Interval for this community is 2-10 years depending on fire frequency of adjacent communities.

*Description and Assessment:* There are three examples of basin marsh community in the park and their condition overall is fair. The largest basin marsh is located on the powerline near the center of the park. This wetland is a large deep feature that holds water in all but the driest years. It is surrounded by some cypress dome community and mesic flatwoods. Another large linear basin marsh feature is located



in FD-09. This marsh is maidencane dominated but much deeper than the depression marshes of the park. It often has a much longer hydroperiod than surrounding marshes. The third basin marsh is located in FD-36. This marsh has had some woody shrub encroachment in the past due to fire suppression and possibly due in part to hydrological alterations from a historic ditch. Recent prescribed burns have impacted the invading shrubs and further investigation into the history and impacts of the ditch is needed.

The basin marsh located along the powerline is one of the best known semi-permanent freshwater features in the park and has been the subject of some restoration activities in the past. This wetland is relatively deep and dominated by floating plants such as fragrant waterlily (*Nymphaea odorata*) and floating bladderworts (*Utricularia* spp.). The margins are dominated by various grasses, rushes, and sedges. Past land uses and the powerline easement that passes through the pond have limited the amount of fire that has been able to burn in the pond basin and margins. As a result, slash pines had significantly encroached into the wetland basin. In 1999-2000, encroaching pines were manually removed and pond cypress were planted in portions of the wetland. Fire is now being allowed to burn into the edges of the basin marsh whenever the adjacent flatwoods are burned and water levels in the basin allow. Conditions have improved but there is still a need for additional fire to achieve a good condition in this basin marsh.

*General Management Measures:* This community should be given the opportunity to burn whenever the adjacent upland community is burned, generally on a 1-4 year interval. In dry years an entire basin may burn. The basin marsh located on the powerline easement may never be able to safely burn given the risks associated with burning under powerlines, but this basin should be allowed to burn whenever safely possible. The basin marsh in FD-09 has been long unburned and is surrounded by young slash pine plantation, and may not be feasible to burn until a timber thinning has occurred. The basin marsh in FD-36 has burned twice in recent years and is improving in condition. Further assessment is needed to determine whether restoration actions may be warranted for the ditch that runs from the east side of this marsh to the salt marsh.

Torpedograss and Chinese tallow tree are the two main invasive exotic plant species of concern in this natural community. However, the basin marshes are in maintenance condition regarding invasive exotic plants. Regular surveys and treatments as needed should continue to provide necessary control. Hog control in basin marshes should continue and these areas should be monitored for hog damage, especially when shallower wetlands in the park have dried and the basin marshes are more likely to draw in feral hogs to remaining water holes.

#### Basin Swamp

*Desired Future Condition:* Basin swamps are forested basin wetlands that are highly variable in size, shape and species composition and will hold water most days of the year. While mixed species canopies are common, the dominant trees will be pond cypress and swamp tupelo. Other canopy species can include slash pine, red maple (*Acer rubrum*), dahoon holly (*Ilex cassine*), sweetbay (*Magnolia virginiana*), loblolly

bay (*Gordonia lasianthus*), and sweetgum (*Liquidambar styraciflua*). Depending upon fire history and hydroperiod, the understory shrub component can be throughout or concentrated around the perimeter. Shrub species can include a variety of species including Virginia willow (*Itea virginica*), swamp dogwood (*Cornus foemina*), wax myrtle, and titi (*Cyrilla racemiflora*). The herbaceous component will also be variable and may include a wide variety of species such as maidencane, ferns, arrowheads (*Sagittaria* spp.), lizard's tail (*Saururus cernuus*), false nettle (*Boehmeria cylindrica*), and sphagnum moss (*Sphagnum* spp.). Soils will be typically acidic, nutrient poor peat often overlying a clay lens or other impervious layer.

*Description and Assessment:* The basin swamp community occurs throughout the park in irregularly shaped forested wetlands embedded mostly within the mesic flatwoods matrix. Most of the basin marshes are somewhat oriented in a north-south fashion, probably having developed within interdunal swale features left behind after sea level fluctuations. Most of the basin swamps in the park are stagnant water features and only discharge water during extreme high water events. The condition of each basin swamp feature varies depending primarily upon the fire history of the adjacent upland communities, but overall, this community exists in good condition in the park.

The park's basin swamps are mostly closed canopied and contain a diverse collection of tree species including black gum (*Nyssa biflora*), sweetbay, loblolly bay, red maple, water oak, pond cypress, and others. A few of the basin swamps have had a history of logging some of their hardwood trees and have a more open canopy. Water stands in basin swamps seasonally and the hydroperiod and levels are heavily dependent upon local rainfall patterns.

*General Management Measures:* Basin swamp requires very little direct management. Protecting their hydrology from unnatural drainage and controlling exotics are the main actions required. Chinese tallow tree and Japanese climbing fern are the two invasive plant species of highest concern in this community type. Swamps should be surveyed thoroughly when water levels are low for access and infestations should be treated as needed to protect the maintenance condition. Feral hogs frequently utilize this community as a cool damp refuge during the hot summer months. Removal efforts should target this community during the time of year that hogs are often concentrated in swamp communities. Prescribed fire in the adjacent upland communities should be allowed to impact the margins of the basin swamps and burn into the edges at times, although this community is not expected to carry fire throughout with any consistency.

### Baygall

*Desired Future Condition:* Baygall consists of a wet densely forested, peat filled depression typically near the base of a slope. Seepage from adjacent uplands will maintain saturated conditions. Medium to tall trees will mainly consist of sweetbay (*Magnolia virginiana*), loblolly bay (*Gordonia lasianthus*), and/or swamp bay (*Persea palustris*). Occasionally sparse pines (*Pinus* spp.) may also exist. A thick understory consisting of gallberry (*Ilex glabra*), fetterbush (*Lyonia lucida*), dahoon

(*Ilex cassine*), titi (*Cyrilla racemiflora*), and red maple (*Acer rubrum*) will be typical with climbing vines such as greenbrier (*Smilax* spp.) and muscadine grape (*Vitis* spp.) will usually be abundant. The dominant baygall species are fire intolerant indicating an infrequent Optimal Fire Return Interval of 25-100 years. Frequent fires from adjacent communities should be allowed to enter baygall ecotone however, being aware of the problems associated with peat fires.

*Description and Assessment:* There is one example of this community type in the park. It occurs in FD-26 and is represented by a somewhat linear baygall feature that connects a depression marsh to the floodplain forest of Rootan Branch. This baygall is dominated by mature sweetbay and loblolly bay trees with a few scattered loblolly pines. The understory is dense with gallberry, fetterbush, and dahoon holly. The groundcover is a dense mat of wet sphagnum with abundant hooded pitcherplants. There appears to be a considerable groundwater seepage component to this area that maintains the community. There is no obvious stream or other flowing water feature but the area tends to stay wet in nearly all seasons.

*General Management Measures:* This community is in essentially a climax condition with mature trees and a well-developed peat substrate. This area contains a significant population of hooded pitcherplants. Prescribed burning into the community margins will promote this species, but should occur when the interior soil and litter is sufficiently damp to prevent excessive burning of accumulated peat. No invasive plant species are currently known from the baygall. Regular surveys and treatments as needed should continue to occur. Feral hog removals in the park will help protect baygall.

#### Depression Marsh

*Desired Future Condition:* Depression marsh is characterized as containing low emergent herbaceous and shrub species which will be dominant over most of the area and include open vistas. Trees will be few and if present, will occur primarily in the deeper portions of the community. There will be little accumulation of dead grassy fuels due to frequent burning; one can often see the soil surface through the vegetation when the community is not inundated. Dominant vegetation in basin marsh and depression marsh may include maidencane (*Panicum hemitomon*), panic grasses (*Panicum* spp.), cutgrass (*Leersia* sp.), common reed (*Phragmites australis*), pickerelweed (*Pontederia cordata*), arrowheads (*Sagittaria* sp.), buttonbush (*Cephalanthus occidentalis*), St. John's wort (*Hypericum fasciculatum*), and coastalplain willow (*Salix caroliniana*). The Optimal Fire Return Interval for this community is 2-10 years depending on fire frequency of adjacent communities.

*Description and Assessment:* This is one of the most common community types in the park with over 200 depression marshes scattered across nearly every zone. They tend to be relatively small, shallow wetlands and generally rounded or oval in shape. Most have concentric bands of vegetation corresponding to water depth and are dominated by grasses, particularly maidencane and in some cases cordgrass. Overall, condition of depression marshes in the park ranges from good to poor. Good condition marshes have been well maintained with regular prescribed fire and encroachment of hardwood trees and shrubs is minimal. Poor condition marshes are

those that have been heavily impacted by silvicultural site prep (in many cases planted through with slash pine on raised soil beds) and undergone many years of fire suppression. Fair condition marshes fall somewhere in between.

*General Management Measures:* Depression marshes should be given the opportunity to burn every time that prescribed fire is applied to the adjacent upland community type, typically on a 1-4 year interval. Water levels and fuel loads in the marshes will dictate how much of the marsh burns and how frequently it occurs, with low levels allowing further fire penetration and control of encroaching broadleaf shrubs and trees. Depending on assessments of potential impact to the marshes, chainsaw felling or timber operations should remove offsite pines from depression marshes that have been planted through. Regular application of fire will help limit additional recruitment in the marsh basins. Most depression marshes are free of invasive exotic plants but a few infestations of torpedograss and Chinese tallow tree are known in depression marshes. Regular surveys and treatment efforts should continue. Feral hogs often damage depression marshes, particularly when water levels are low, and efforts to control them should continue to help protect depression marshes.

#### Dome Swamp

*Desired Future Condition:* Dome swamp is an isolated, forested, depression wetland occurring within a fire maintained matrix such as mesic flatwoods. The characteristic dome appearance will be created by smaller trees that grow on the outer edge (shallower water and less peat) and larger trees that grow in the interior. Pond cypress (*Taxodium ascendens*) will typically dominate, but swamp tupelo (*Nyssa sylvatica* var. *biflora*) may also form a pure stand or occur as a co-dominant. Other subcanopy species may include red maple (*Acer rubrum*), dahoon holly (*Ilex cassine*), swamp bay (*Persea palustris*), sweetbay (*Magnolia virginiana*), and loblolly bay (*Gordonia lasianthus*). Shrubs may be absent to moderate (a function of fire frequency) and can include Virginia willow (*Itea virginica*), fetterbush (*Lyonia lucida*), buttonbush (*Cephalanthus occidentalis*), wax myrtle (*Myrica cerifera*), and titi (*Cyrilla racemiflora*). An herbaceous component may range from absent to dense and include ferns, maidencane (*Panicum hemitomon*), sawgrass (*Cladium jamaicense*), sedges (*Carex* spp.), lizards tail (*Saururus cernuus*), and sphagnum moss (*Sphagnum* spp.). Vines and epiphytes will be commonly found. Maintaining the appropriate hydrology and fire frequency is critical for preserving the structure and species composition of the community. Dome swamps should be allowed to burn on the same frequency as the adjacent fire type community, allowing fires to naturally burn across ecotones. Fires should be appropriately planned to avoid high severity fuel consumption within the dome swamp.

*Description and Assessment:* This community type is frequent in the park with over 40 scattered across the mesic flatwoods matrix. Their condition ranges from good to poor. Good condition examples are those that have been well maintained by regular prescribed fire in their ecotones such as the one in FD-29. Poor condition dome swamps are those that have been logged of their cypress or otherwise heavily impacted by past silvicultural practices. Fair condition dome swamps fall

somewhere in between. Most have intact cypress canopies but have been invaded by excessive amounts of woody shrubs and offsite trees in the absence of frequent enough fire.

*General Management Measures:* Dome swamps should be given the opportunity to burn every time that prescribed fire is applied to the adjacent upland community type, typically on a 1-4 year interval. Water levels and fuel loads in the domes will dictate how much of the community burns and how frequently it occurs. Burning them when the water levels are low will help to control encroaching woody shrubs and trees. Most dome swamps are free of invasive exotic plants but a few infestations of Chinese tallow tree are known in this community. Regular surveys and treatment efforts should continue to keep this community in a maintenance condition. Feral hogs can cause damage to dome swamps, particularly when water levels are low. Staff should continue to control feral hogs to help protect dome swamps.

#### Floodplain Swamp

*Desired Future Condition:* Floodplain swamp will be a frequently or permanently flooded community in low lying areas along streams and rivers. Soils will consist of a mixture of sand, organics, and alluvial materials. The closed canopy will typically be dominated by bald cypress (*Taxodium distichum*) but commonly includes tupelo species (*Nyssa* spp.) as well as water hickory (*Carya aquatica*), red maple (*Acer rubrum*) and overcup oak (*Quercus lyrata*). Trees bases are typically buttressed. Understory and groundcover will typically be sparse.

*Description and Assessment:* This community occurs along the blackwater stream system known as Rootan Branch and its tributaries which form the main freshwater drainage system in the park. Overall, this community is in good to excellent condition in the park. A few areas have been selectively high-grade harvested in the past but remain in good condition. Most of the floodplain swamp is undisturbed and consists of a mature closed canopy that includes bald cypress, sweetgum, swamp tupelo, and others. The understory is sparse but includes some notable species such as Dixie spider lily (*Hymenocallis duvalensis*) and cardinal flower (*Lobelia cardinalis*).

*General Management Measures:* This community requires very little direct management. Protecting hydrology and flows in the associated blackwater streams will protect the floodplain swamps. Exotic plant infestations are low in this community at the park but staff should regularly survey for species such as Japanese climbing fern and Chinese tallow tree which are known to occur in nearby communities, which should be treated as they are found to protect the maintenance condition. Feral hogs frequently utilize this community as a cool damp refuge during the hot summer months. Removal efforts should target this community during the time of year that hogs are often concentrated in swamp communities. Prescribed fire in the adjacent upland communities should be allowed to impact the margins of the floodplain swamps and burn into the edges at times, although this community is not expected to carry fire throughout.

## Salt Marsh

*Desired Future Condition:* Salt marsh is 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 will have distinct zones of vegetation based on water depth and tidal fluctuations. Saltmarsh cordgrass (*Spartina alterniflora*) will dominate the seaward edge; the areas most frequently inundated by tides. Needle rush (*Juncus roemerianus*) will dominate the higher, less frequently flooded areas. Other characteristic species include Carolina sea lavender (*Limonium carolinianum*), perennial saltmarsh aster (*Symphyotrichum tenuifolium*), wand loosestrife (*Lythrum lineare*), 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 will be the two major environmental factors that influence salt marsh vegetation. While there is little data on natural fire frequency in salt marshes, fire probably will occur sporadically and with a mosaic pattern, given the patchiness of the fuels intermixed with creeks, salt flats, etc.

### *Salt Flat (variant of Salt Marsh)*

*Desired Future Condition:* Within a salt marsh, areas of slightly higher elevation, flooded only by storms and extreme high tides and isolated from sources of freshwater become very saline and desiccated due to constant evaporation. These areas are dominated by species that can tolerate the extreme salinity including saltwort (*Batis maritima*), annual glasswort (*Salicornia bigelovii*), perennial glasswort (*Sarcocornia ambigua*) and bushy seaside oxeye (*Borrchia frutescens*) or short grasses, such as saltgrass (*Distichlis spicata*), seashore paspalum (*Paspalum vaginatum*), and shoregrass (*Monanthochloe littoralis*).

*Description and Assessment:* Overall, the salt marsh community in the park is in excellent condition. This community is widespread along Pellicer Creek and the Matanzas River adjacent to the park. However, the formal park boundary includes just a small portion of the salt marsh that occurs in this area. The marshes within the park boundary are variable in structure and species composition. Those located along Pellicer Creek are dominated by black needle rush and those along the eastern side of the park are a patchwork of cordgrass, needle rush, and other salt tolerant species as well as scattered salt flats in the upper fringes of the inter-tidal portions of the marsh. These salt flats are composed of largely unvegetated hypersaline damp sands with patches of halophytes such as saltwort and glasswort. These areas are important habitat for large numbers of fiddler crabs. During high tides, this habitat is utilized as feeding and loafing habitat for a variety of shorebirds, larids, and wading birds.

Within the park, and adjacent to the eastern park boundary, are extensive high quality salt marshes which support breeding populations of Clapper Rail, Willet, and Seaside Sparrow (at least historically; updated surveys are needed). These marshes are all within the Guana Tolomato Matanzas National Estuarine Research

Reserve and have been designated as an Important Bird Area (IBA) by the National Audubon Society.

The salt marshes within the park and surrounding area are a significant natural feature. There are magnificent vistas across expansive salt marsh along both Pellicer Creek and the Matanzas River. The salt marsh is of very high quality, reflected in the variety of fish and wildlife resources that occur at this site. Wildlife viewing, especially birds, is particularly good. Most of the expansive salt marshes in the region were ditched and drained for mosquito control in the 20<sup>th</sup> century but the marshes in the vicinity of the park were spared and are now some of the last remaining large patches of intact salt marsh in the region.

*General Management Measures:* Whenever possible, this community should be given the opportunity to burn when prescribed fire is applied to adjacent upland communities. The salt marsh is unlikely to burn on a frequent interval and may only burn in a patchy mosaic manner. However, the openings and diversity in structure created by such fires will benefit the salt marsh wildlife. There are currently very few invasive exotic plant species that can tolerate the damp soils and saline conditions of this community. Brazilian pepper is the main species of concern that should be regularly surveyed for and treated as it occurs. Feral hogs utilize the salt marsh for foraging and rooting and can cause significant damage if left unchecked. Staff should continue to control feral hogs in the park to protect all of the natural communities. There is potential for erosion to occur along the edges of the salt marsh where it meets the open water of Pellicer Creek and the Matanzas River. Wave action from boat wakes and storms are the main causes. These areas should be monitored closely for excessive erosion and mitigating measures planned and implemented as needed.

#### Wet Prairie

*Desired Future Condition:* Trees will be few or absent. Groundcover will be dense and exceptionally species-rich. Dominant species will be wiregrass (*Aristida stricta* var. *beyrichiana*) and/or sedges (*Carex* spp.). In the peninsula, blue maidencane (*Amphicarpum muhlenbergianum*), cutthroatgrass (*Panicum absissum*), and Curtiss' dropseed (*Sporobolus curtissii*) may also be dominant, with cutthroatgrass occasionally being the dominant species. Pitcherplants (*Sarracenia* spp.), other carnivorous plant species, and terrestrial orchids are present and abundant in some areas. This community requires frequent fire to maintain its grass dominated structure. The optimal fire return interval is 1-3 years.

*Description and Assessment:* This community was likely formerly much more widespread in the park. Much of it may have been lost to the impacts of site prep for silviculture and fire suppression that has allowed the invasion of saw palmetto and woody species into the prairies. Some examples of wet prairie remain in the park in FD-22, FD-25, FD-37, and elsewhere. Conditions range from good to poor depending mostly on the fire history and past land uses. The remaining wet prairies generally have a diverse groundcover that includes wiregrass, numerous sedges, and often many hooded pitcherplants. A small section of wet prairie located along

the powerline easement in FD-27 includes populations of hooded pitcherplants, grasspink (*Calopogon* sp.), and rose pogonia (*Pogonia ophioglossoides*).

*General Management Measures:* This community type requires frequent fire to maintain a good condition. Typically a 1-3 year fire return interval will achieve the desired effect. This community should be provided the opportunity to burn whenever the adjacent upland communities are burned. Frequent fire, particularly in the dry spring season, will help to remove encroaching shrubs and hardwoods and reduce recruitment of offsite trees and shrubs. Invasive exotics in this community are currently minimal but there is potential for species such as torpedograss and Chinese tallow tree to readily invade wet prairie. This community should be surveyed for infestations regularly and treated as needed. Feral hogs can cause extensive damage to the delicate graminoid groundcover of prairies. Staff should continue to control feral hogs in the park.

#### Blackwater Stream

*Desired Future Condition:* Blackwater stream can be characterized as perennial or intermittent watercourses originating in lowlands where extensive wetlands with organic soils collect rainfall and runoff, discharging it slowly to the stream. The stained waters will be laden with tannins, particulates, and dissolved organic matter derived from drainage through adjacent swamps resulting in sandy bottoms overlain by organic matter. Emergent and floating vegetation [including golden club (*Orontium aquaticum*), smartweeds (*Polygonum* spp.), grasses and sedges] may occur but is often limited by steep banks and dramatic seasonal fluctuations in water levels. Desired conditions include minimizing disturbance and alterations and preserving adjacent natural communities.

*Description and Assessment:* There are two blackwater stream systems in the park. Both are in good condition. The first is the freshwater drainage known as Rootan Branch and its associated tributaries. Rootan Branch has a main watercourse that flows for approximately two miles from the heart of the park southward where it discharges into Pellicer Creek. The stream in this area is perennial, gathering flows from surface runoff as well as from numerous seepage areas along the steep banks at the margins of its floodplain. The lower reach is influenced by tidal fluctuations in Pellicer Creek and water levels in the blackwater stream will stage up with the high tides. However, freshwater inflows are sufficient enough, and the topography as such, that the salinity maintains a freshwater chemistry until the confluence of creeks, even during high tide events. The northern portion of Rootan Branch is marked by a prominent fork in FD-16. From here a tributary extends to the east, eventually reaching the salt marsh in zone FD-18. The western side of the fork continues northwest and the stream channel becomes poorly defined as the watercourse reaches a broad swamp in FD-02. It is not uncommon for this portion of the blackwater stream system to run dry. During wet seasons and years, the stream flows will originate from further north, beyond the park boundary, within Matanzas State Forest. A large culvert under Smith Grade Road allows the stream to flow onto the park. Since essentially all of the watershed for this system lies within the park and adjacent state forest, the water quality and flows are well



protected from offsite impacts. Best management practices conducted on both state lands will protect this blackwater stream resource.

The second blackwater stream community is located in the southeastern portion of the park and is also in good condition. It is intermittent in nature and the upper reaches are often dry or stagnant water during dry seasons. The headwaters originate in a basin swamp in FD-31 and flow south through a narrow valley in the flatwoods. The stream passes through a culvert under the park drive located just a short distance to the west of the ranger station and campground. From there it continues to flow in a southerly direction before flowing into the Pellicer Creek marsh in FD-34. There is a narrow floodplain swamp associated with this stream in the lower reach. There may also be some freshwater seepage inflows contributing to the lower reach of the stream. Further investigation is needed to determine if this is indeed the case.

The blackwater streams themselves are largely unvegetated, however, their associated floodplain swamps contain some notable species and are described above. Numerous freshwater fish species, American alligators (*Alligator mississippiensis*), river otters (*Lontra canadensis*), water moccasins (*Agkistrodon piscivorus*), and a variety of Ranid frogs (*Lithobates* spp.) are common in these two blackwater stream systems.

The water quality in both streams has been affected in the past by silvicultural practices including broadcast fertilization and limited sedimentation. These issues have improved under the current management strategies. Fertilization is no longer used and timber harvesting BMPs are closely followed to protect the watersheds. Some limited sedimentation still continues at times associated with large storms producing heavy rain events that cause erosion along the park roads. Staff have implemented mitigating measures to reduce the negative impacts but severe storm events still cause some erosion and material entering the lower reach of Rootan Branch. A planned project to pave the existing entrance road and provide additional stormwater treatment should resolve this problem. This issue is further addressed in the hydrology section.

Pellicer Creek is also a blackwater stream system, although it lies mostly outside of the formal park boundary. Water quality and flows in Pellicer Creek are monitored closely by the GTMNERR, SJRWMD, and USGS, and are in good condition overall, though there are concerns with fecal coliform impairment and locating the source of this impairment. DRP seeks to partner with GTMNERR to investigate the source and type of elevated fecal coliform, through coordinated research opportunities. Pellicer Creek is designated as a State Canoe Trail as well as an Aquatic Preserve. The lower reach of the creek, adjacent to the park, is highly tidal and flows can be in either direction at times when measured at the park's boat ramp. Salinity and other water chemistry variables can swing widely with the tides. At times the lower creek is nearly freshwater and at times nearly equal to seawater.

*General Management Measures:* This community type requires very little direct management. Protection of hydrology and sedimentation are the most important

actions required. Closely following BMPs for timber management and other land management activities in the watersheds will provide much of the required protection. Mitigating measures already in place, as well as planned projects along the entrance road will help to reduce erosion and sediment entering the blackwater streams. Invasive exotic plant infestations are currently minimal in these systems but small patches of torpedograss have been treated in the past along Rootan Branch in the vicinity of the entrance road culvert. Continued monitoring and spot treatments are needed to keep this community in maintenance condition. Feral hog damage in the floodplain can lead to erosion and water quality impacts. Feral hog control across the park will help protect blackwater stream.

### Seepage Stream

*Desired Future Condition:* A seepage stream can be characterized as a narrow, relatively short perennial or intermittent stream formed by percolating water from adjacent uplands. As they are typically sheltered by a dense overstory of broad-leaved hardwoods which block out much of the sunlight, the flora within seepage streams is often depauperate but may include filamentous algae, ferns and liverworts growing in clumps at the streams edge. Water color will be clear to slightly colored, with a fairly slow flow rate and fairly constant temperature. Bottom substrate is typically sandy, but may include gravel or limestone.

*Description and Assessment:* There are two seepage streams in the park that are large enough to map as such and warrant discussion. One originates in a linear basin swamp in zones FD-14 and FD-21 and flows southeasterly through FD-22, FD-25, and FD-27, ultimately spilling into Rootan Branch just above the exit road culvert. The other originates in a deep basin swamp in the heart of FD-30 and flows only a short distance south before spilling into Pellicer Creek. Numerous other small seeps exist within the Rootan Branch drainage but are too small to individually map, and they each spill into the blackwater stream before forming much of a watercourse of their own. These seeps are important natural features but impractical to map individually and outside of the definition of a true seepage stream.

Both of the larger seepage streams are somewhat intermittent and considered to be in good condition. It is not uncommon for them to run completely dry during the drier months of the year. Even at peak flows, they are slow moving streams. The larger of the two streams originates in a basin swamp but then traverses a narrow linear wet prairie feature. This wet prairie supports populations of several rare and unique plants such as hooded pitcherplant, grasspink, and rose pogonia. The moisture provided by the seepage stream feature is important for supporting these plant species in that area.

Some minor impacts have occurred in the past from silvicultural practices in the uplands adjacent to the streams but remain in good condition at the present time.

*General Management Measures:* This community requires little direct management. The most important action required is protection of the watershed. Since both seepage streams at the park originate within the park, the watersheds are well

protected. Best management practices for timber harvesting and other resource management activities should be followed. Currently no invasive exotic plant species are known from this community but staff should regularly survey for them and treat as needed. Feral hogs pose a threat to all communities in the park including this one and should continue to be controlled.

#### Estuarine Unconsolidated Substrate

*Desired Future Condition:* Estuarine unconsolidated substrate will consist of expansive unvegetated, open areas of mineral based substrate composed of shell, coralgall, 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 represented by only a few small areas in the park. The muddy shoreline that is exposed during low tides in Pellicer Creek, and a few small mudflat areas that are scattered in deeper holes within the salt marsh along the eastern side of the park. These areas provide valuable low tide feeding areas for shorebirds. Overall, this community is in good condition.

*General Management Measures:* The community is relatively stable and does not require much management action. Erosion tends to be minimal in this community at the park and to date, invasive exotic plant species have been absent. Feral hogs sometimes cause damage by rooting but tidal waters often quickly help to recover the rooted areas. Feral hogs should be controlled nonetheless and kept out of all natural communities to the greatest extent possible.

### **Altered Landcover Types:**

#### Borrow Area

*Desired Future Condition:* Unless specific restoration actions are prescribed, the developed and other altered landcover type areas within the park will be managed to minimize the effect of the altered areas on adjacent natural areas. Priority invasive plant species (FLEPPC Category I and II species) will be removed from all areas, natural or altered. Other management measures include proper stormwater management and development guidelines that are compatible with prescribed fire management in adjacent natural areas.

*Description and Assessment:* This altered landcover type occurs in a few small areas in the park. Most are small shallow borrow pits where material was excavated for local road fill use in the park. The two largest borrow areas are rectangular features located along the western side of the park. They were constructed to provide road fill for the widening of U.S. Highway 1 and are larger and deeper than any of the others in the park. The northern one located in FD-05 generally holds standing water during all but the most severe droughts.

*General Management Measures:* Since the borrow areas are sources of soil disturbance, they are likely locations for invasive exotic plants to occur. Staff should regularly survey these areas and treat as needed. Currently, there is no intention of

restoring any of the mapped borrow areas in the park. They are all relatively small, isolated, and their impacts on the adjacent natural communities are considered to be minimal. No additional fill material should be excavated from any of these areas and they should be maintained in as natural condition as possible to minimize their impacts on adjacent natural communities.

#### Canal/Ditch

*Desired Future Condition:* Unless specific restoration actions are prescribed, the altered landcover type areas within the park will be managed to minimize the effect of the altered areas on adjacent natural areas. Priority invasive plant species (FLEPPC Category I and II species) will be removed from all areas, natural or altered. Other management measures include proper stormwater management and development guidelines that are compatible with prescribed fire management in adjacent natural areas.

*Description and Assessment:* This landcover type exists in the form of two ditches in the park. One is located in FD-13 and the other in FD-36. Both are relatively small, short, man-made ditches, the exact purpose and history of which is unknown. The FD-13 ditch appears to have been dug with the intent to drain a flatwoods area to the southwest into a wetland on an adjacent private parcel. This feature is evident as early as 1952 on historical aerial imagery. The other ditch in FD-36 appears to have been dug with the intention of draining a basin marsh feature to the east into the salt marsh. This feature is evident as early as 1942 in historic aerial imagery. The archaeological investigations report for the park (Payne and Griffin 2000) references a ditch system in this general area that may have been associated with one of the early plantations and the Hemming Point cultural site. However, the 1942 imagery appears to show fresh excavation work in this same area. It is unclear how the ditch is related, if at all, to the local cultural sites. The drainage effects of both ditches have not been evaluated. Further investigation is needed to determine the history and origins of the ditches, their current impacts, and the feasibility of, or need for, any restoration action. At this point in time, no restoration is prescribed for these two ditches pending further research and assessment.

*General Management Measures:* Staff should regularly survey these areas and treat invasive exotic plants as needed. Currently, there is no intention of restoring any of the mapped canal/ditch areas in the park. Staff should conduct additional research into their history and evaluate their current impacts. If restoration is deemed appropriate and warranted, a plan should be developed and implemented accordingly. Currently, their impacts on the adjacent natural communities are thought to be minimal. No additional material should be excavated from any of the ditches and they should be maintained in as natural condition as possible to minimize their impacts on adjacent natural communities.

#### Developed

*Desired Future Condition:* The developed areas within the park will be managed to minimize the effect of the developed areas on adjacent natural areas. Priority invasive plant species (FLEPPC Category I and II species) will be removed from all

developed areas. Other management measures include proper stormwater management and development guidelines that are compatible with prescribed fire management in adjacent natural areas.

*Description and Assessment:* The developed areas in the park include the main park roads, shop and office area, residences, picnic area, boat ramp area, primitive youth camp, campground, and ranger station. All of these areas are currently unpaved and require regular grading and maintenance. A plan is in place to pave a portion of the park road and provide for additional stormwater treatment and attenuation.

*General Management Measures:* Invasive exotic plants and animals will be surveyed for and controlled in all areas of the park, including developed areas. Erosion control measures will be implemented as needed to protect the park's natural resources as well as the current unpaved roads and facilities. Developed areas should not expand beyond their current footprint unless carefully planned for and approved in the conceptual land use component of this plan.

#### Pine Plantation

*Desired Future Condition:* The long term desired future condition for the park's pine plantations is to restore them to their former natural community types (i.e. mesic flatwoods, sandhill, etc.). In the interim, the pine plantation areas within the park will be managed, to the greatest extent possible, in the same way as a natural system. In most cases, this will be in much the same way as mesic flatwoods. Fire return intervals may not be as frequent as a mesic flatwoods in all stands, but plantations should be burned on a 2-4 year rotation if possible to do so while meeting timber management objectives. This will help to minimize the effect of the pine plantation areas on adjacent natural communities. Priority invasive plant species (FLEPPC Category I and II species) will be removed from all plantation areas. Other management measures include proper stormwater management and best management practices for silviculture and associated activities. All actions in the plantations should be conducted in a manner compatible with prescribed fire management in adjacent natural areas.

*Description and Assessment:* Much of the park was acquired in this condition from the Rayonier Corporation who managed the land for pine production. Many of the pine plantation stands have been thinned and burned and are now mapped as either restoration natural community or as the appropriate natural community, which is in most cases mesic flatwoods. For the purposes of this plan, pine plantation refers only to the remaining areas of plantation that have not yet been thinned and/or burned and the restoration process has not yet begun. Essentially all of the current pine plantation areas have raised soil beds that the pines were row planted on. All of the current plantations consist of slash pine. Stand age is variable from approximately 14 to 25 years old.

*General Management Measures:* Pine plantations should be managed with prescribed fire where and when it is possible to do so in a manner consistent with the timber management objectives for the stand and the overall restoration

objectives for the zone. In many cases, it is not feasible to safely burn some of the pine plantation stands in their current condition. For these areas, a thinning operation will be required before fire is reintroduced. In general, all pine plantation stands should be thinned, burned, and phased out, gradually restoring them to their former natural community types. In the long term, slash pine should be phased out and replaced with longleaf pine. Once an initial thinning occurs and the first prescribed burn is conducted in a pine plantation stand, that stand should then be managed appropriately as if it were a mesic flatwoods, or other appropriate community type, and burned on an appropriate fire return interval. A second thinning operation in the future may be required for some stands in order to achieve the long term desired future condition. Invasive exotic plants and feral hogs should be surveyed for and controlled as needed.

Roughly 1200 acres of pine plantation require additional restoration efforts to reach the desired future condition of their former natural community type. Restoration of this acreage is discussed further in the Resource Management Program section of this component. As discussed in the Introduction of this management plan, harvesting of select forest products to enhance restoration may be appropriate for certain tracts.

#### Restoration Natural Community

*Desired Future Condition:* This altered landcover type has been assigned to those areas that are currently under restoration toward their desired future condition as a natural community type. In most cases, these areas are former pine plantations in the process of being restored to mesic flatwoods, scrubby flatwoods, sandhill, depression marsh, or other appropriate natural community type. Restoration natural community areas are managed with active restoration and will be phased out as they recover to their natural community desired future condition. These areas within the park will be managed to minimize their effect on adjacent natural areas. Priority invasive plant species (FLEPPC Category I and II species) will be removed from all areas. Other management measures include proper stormwater management and best management practices for silviculture and associated activities. All actions in the restoration natural communities should be conducted in a manner compatible with prescribed fire management in adjacent natural areas.

*Description and Assessment:* This altered landcover type has been assigned to those areas of the park that currently have restoration activities underway but have not yet reached the desired future condition natural community type. Nearly all of these areas were formerly pine plantation. Some have been clearcut but most have been thinned to a basal area of approximately 40 square feet per acre and have been burned a single time post-harvest, or are planned to be burned as soon as possible. These areas are not mapped as pine plantation because restoration has begun and most are more like flatwoods than pine plantation. However, they are not mapped as a natural community type yet, because there is still work to be done before they reach the desired future condition.

*General Management Measures:* These areas should be managed with prescribed fire at an interval appropriate for the desired future condition natural community. In

most cases, this is a 1-4 year interval. Supplemental plantings of longleaf pine, wiregrass, and other desirable species should be used as needed to aid restoration efforts. All areas should be regularly surveyed for invasive exotic plants and treated as needed to provide sufficient control. Feral hogs should be removed to protect the restoration efforts as well as all of the park's natural communities.

Nearly 1100 acres of the restoration natural community require additional restoration efforts to reach the desired future condition. Restoration of this acreage is discussed further in the Resource Management Program section of this component. As discussed in the Introduction of this management plan, harvesting of select forest products to enhance restoration may be appropriate for certain tracts.

#### Spoil Area

*Desired Future Condition:* This altered landcover type has been assigned to those areas consisting purely of dredge spoil material. These areas are all islands along the Matanzas River. Spoil areas within the park will be managed to minimize their effect on the adjacent natural areas. Priority invasive plant species (FLEPPC Category I and II species) will be removed from all spoil areas. Spoil areas will be managed as such on an interim basis with the long-term goal of restoring them to the salt marsh community which they were piled on top of.

*Description and Assessment:* All of the spoil areas in the park are located on the three islands along the Matanzas River. The spoil material came from the dredging of the Atlantic Intracoastal Waterway. Some of the spoil piles were present as early as 1942 and are apparent on historic aerial imagery. Piles exist on portions of Mellon Island and Jordan Island, and the unnamed island between them consists entirely of spoil material. These areas should be assessed for restoration and if the opportunity for salt marsh restoration occurs, they should be targeted for removal and restoration.

*General Management Measures:* These areas should be targeted for salt marsh restoration if the funding and resources to do so can be secured. In the interim, they will be managed to remove invasive plants and animals and to prevent excessive erosion into the adjacent waterway. A small picnic area and primitive campsites on Jordan Island are located on spoil areas. Should restoration be possible for the spoil areas on Jordan Island, the picnic and camping areas should be removed or relocated to allow for restoration to occur. Illegal camping and homesteading have occurred in the past on some of the spoil areas. Regular visits and enforcement by park staff and law enforcement officers should continue to enforce park rules and protect resources.

#### **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. Table 2 contains a complete list of all of the imperiled species that have been documented in the park and their listing status.

Faver-Dykes State Park is home to numerous imperiled species. A total of 45 have been documented in the park so far. Of those, 18 are plants and 27 are animals.

The listed plant species at the park include 3 endangered, 10 threatened, 4 commercially exploited, and one that is not state listed but ranked as S2 and tracked by the Florida Natural Areas Inventory. One of the most widespread of the listed plant species in the park is the hooded pitcherplant. This species occurs in many areas in the park and is especially abundant in some of the flatwoods and wet prairies in the southwestern quadrant. There are also persistent colonies along portions of the damp open grassy areas of the powerline easement. In some of the same areas where pitcherplants are, other listed plant species also occur in the same habitat. This includes spoonleaf sundew (*Drosera intermedia*), yellow butterwort (*Pinguicula lutea*), blueflower butterwort (*Pinguicula caerulea*), and others. As more burning and restoration efforts continue in the park, these species are likely to be found in additional areas as well.

The mowed powerline easement is also suitable habitat for a few additional imperiled species including Florida beargrass (*Nolina atopocarpa*), giant orchid (*Pteroglossaspis ecristata*), and rose pogonia (*Pogonia ophioglossoides*). These species are currently unknown from elsewhere in the park, however, they are likely to also occur in adjacent natural communities. It may simply be that their detectability is increased along the powerline easement. However, since several listed species are present along the powerline easement it is important that this area be carefully managed to prevent unnecessary harm to these species. The grassy understory should be managed with prescribed fire whenever possible but burning under the powerlines will always be a challenging safety concern. Mowing the area annually will in many ways mimic a burn and maintain the habitat in an open condition that these species find suitable. A winter or early spring mowing is recommended to reduce impacts to listed plants' flower stalks and seed heads during their most vulnerable times.

The floodplain swamps along Rootan Branch are home to at least 2 imperiled species. Cardinalflower (*Lobelia cardinalis*) is known to occur along the edges of the blackwater stream within the floodplain swamp. Along the bluffs where the floodplain swamps meet the adjacent uplands, comb polypody (*Pecluma ptilodon*) occurs on overhanging banks and limbs.

Catesby's lily (*Lilium catesbaei*) occurs sporadically throughout the fire maintained flatwoods and along damp edges and ecotones. Garberia (*Garberia heterophylla*) is known from a few locations in the scrubby flatwoods of the park. Two threatened species of butterwort occur along damp pond edges and wet prairies in a few locations in the park.

Of the 27 imperiled animal species that have been documented at the park, 3 are reptiles, 2 are amphibians, 3 are mammals, and 19 are birds. The two listed



amphibian species, striped newt (*Notophthalmus perstriatus*) and Florida gopher frog (*Lithobates capito aesopus*), are closely tied to the xeric uplands for most of their life cycle but also require fishless ephemeral ponds for successful breeding. Gopher frogs have been documented breeding in a few of the ponds at the park and may not use the same ponds every year. Striped newts typically exhibit extreme site fidelity and return to their natal pond to breed. Currently, only one known breeding pond exists in the entire park. Adult newts have been found in two additional ponds but no evidence of reproduction exists beyond the known pond. This species is currently a candidate for federal listing as a threatened species and is anticipated to become listed during the life of this plan. The population at Faver-Dykes is one of only two known in all of St. Johns County. This species is more widespread on the central ridges of the peninsula and the red hills region of the panhandle. Coastal populations are rare and the newts from this region may prove to be genetically distinct. The known breeding pond and adjacent upland habitat should be carefully managed to promote the habitat requirements of striped newts while taking great care not to negatively impact the small and potentially vulnerable population in the park. Tier 2 level surveys should continue to target these two imperiled amphibian species and document their presence/absence in various ephemeral wetlands within the park. Park staff have collaborated with researchers from universities and the Florida Fish and Wildlife Conservation Commission to conduct surveys and research at the park, providing genetic samples from both of these species. This collaborative research effort should continue.

Florida pine snakes are an uncommon resident of the xeric upland sandhills and scrubby flatwoods. Continued efforts to apply prescribed fires and reduce hardwood density in these communities will benefit a whole suite of species including the pine snake.

Gopher tortoises are widespread in the park but they tend to be most common in the intact xeric natural communities, particularly sandhill. Much of the upland communities that were converted to pine plantation became too overgrown and close-canopied to support tortoises so they moved out to the edges of roads and into more open habitats. As the habitat management and restoration efforts continue at the park and the plantations begin to transform back into flatwoods habitat that is more suitable to tortoises, they are expected to recolonize much of the area on their own gradually over time. Some additional tier 3 level survey work to assess current population levels in key areas of the park is recommended. Also recommended are pre-restoration surveys in some of the plantation areas to provide background data for comparison in the future after the habitat has been restored.

Three listed mammals are known from the park. West Indian manatees (*Trichechus manatus latirostris*) are occasionally observed in Pellicer Creek, adjacent to the park. Pellicer Creek provides food, a freshwater source, and a resting area to manatees. Sherman's fox squirrels (*Sciurus niger shermani*) are occasionally sighted at the park. Currently, there does not appear to be a self-sustaining population of them but rather occasional transients that stop at the park. As habitat management and restoration efforts continue and expand, more suitable habitat

will become available to Sherman's fox squirrels and the park may be able to support a population. The park records occasional sightings of Florida black bear (*Ursus americanus floridanus*). It is unknown whether the bears are merely traveling through the park, or whether the park is within a bear's home range. Bears are uncommon in this region of the state despite the presence of a lot of suitable habitat. As the statewide bear population continues to grow, bears may become a more common occurrence at the park.

Nineteen imperiled bird species have been documented at the park. Most are resident species that use the park for feeding areas, particularly the salt marsh, salt flats, and tidal creeks. This includes numerous species of wading birds, shorebirds, terns, skimmers, spoonbills, pelicans, and more. A few of the other imperiled birds are migrants that use the park as a temporary stopover site during their spring or fall migrations. This includes species such as Merlin, Peregrine Falcon, Worm-eating Warbler, and American Redstart. There are only two imperiled bird species that have been documented nesting in the park; MacGillivray's Seaside Sparrow (*Ammodramus maritimus macgillivrayi*) and Swallow-tailed Kite (*Elanoides forficatus*). Swallow-tailed Kites have nested in small numbers in the park before, but their nests are often well hidden and difficult to locate. The presence of a few individuals in the park every April and May suggests that they are likely still nesting in the park or somewhere nearby. MacGillivray's Seaside Sparrow formerly nested in salt marsh habitat all through the region of the park. Recent surveys located nesting individuals only in Nassau and Duval Counties, north of St. Johns County and Faver-Dykes State Park. A park service biologist located several singing males on territory in early June during the early 2000's. Given how much suitable nesting habitat exists in the area within and adjacent to the park, it is possible that this species may still nest here in small numbers. Additional tier 2 level surveys are needed to target the presence of singing males in suitable habitat during the nesting season. If detected, tier 3 level monitoring should be conducted to determine how many nesting pairs are present and which portions of the habitat are being utilized.

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		
<b>PLANTS</b>						
Green-fly orchid <i>Epidendrum conopseum</i>			CE		10	Tier 1
Spoonleaf Sundew <i>Drosera intermedia</i>			LT	G5,S3	1,10	Tier 1
Garberia <i>Garberia heterophylla</i>			LT		1,10	Tier 1
Tampa mock vervain <i>Glandularia tampensis</i>			LE	G2,S2	1,10	Tier 1
Catesby's lily; Pine lily <i>Lilium catesbaei</i>			LT		1,2,6,7,10	Tier 1
Cardinalflower <i>Lobelia cardinalis</i>			LT		4,9,10	Tier 1
Pigmy Pipes <i>Monotropis reynoldsiae</i>			LE	G1Q,S1	1,10	Tier 1
Florida beargrass <i>Nolina atopocarpa</i>			LT	G3,S3	1,2,6,7,10	Tier 1
Royal fern <i>Osmunda regalis</i>			CE		10	Tier 1
Gingerbush <i>Pavonia spinifex</i>				G4G5,S2	2,10	Tier 1

Table 2: Imperiled Species Inventory						
Common and Scientific Name	Imperiled Species Status				Management Actions	Monitoring Level
	FWC	USFWS	FDACS	FNAI		
Comb polypody <i>Pecluma ptilodon</i>			LE	G5?,S2	4,10	Tier 1
Blueflower butterwort <i>Pinguicula caerulea</i>			LT		1,2,6,7,10	Tier 1
Yellow butterwort <i>Pinguicula lutea</i>			LT		1,2,6,7,10	Tier 1
Rose pogonia; Snakemouth orchid <i>Pogonia ophioglossoides</i>			LT		1,2,6,7,10	Tier 1
Giant orchid <i>Pteroglossaspis ecristata</i>			LT	G2G3,S2	1,2,6,7,10	Tier 1
Sweet pinxter azalea; Mountain azalea <i>Rhododendron canescens</i>			CE		10	Tier 1
Hooded pitcherplant <i>Sarracenia minor</i>			LT		1,2,6,7,10	Tier 1
Florida arrowroot; Coontie <i>Zamia pumila</i>			CE		1,10	Tier 1

Table 2: Imperiled Species Inventory						
Common and Scientific Name	Imperiled Species Status				Management Actions	Monitoring Level
	FWC	USFWS	FDACS	FNAI		
<b>REPTILES</b>						
American alligator <i>Alligator mississippiensis</i>	FT(S/A)	SAT		G5,S4	4,9,10,13	Tier 1
Gopher tortoise <i>Gopherus polyphemus</i>	ST	CT		G3,S3	1,2,6,7,10,12,13	Tier 1 Tier 3
Florida pine snake <i>Pituophis melanoleucus mugitus</i>	SSC			G4T3,S3	1,2,6,7,10	Tier 1
<b>AMPHIBIANS</b>						
Florida gopher frog <i>Lithobates capito aesopus</i>	SSC			G3,S3	1,2,6,7,10,12	Tier 2
Striped newt <i>Notophthalmus perstriatus</i>		CT		G2G3, S2S3	1,2,6,7,10,12	Tier 2
<b>BIRDS</b>						
MacGillivray's Seaside Sparrow <i>Ammodramus maritimus macgillivrayi</i>				G4T2,S2	1,10	Tier 2 Tier 3
Wilson's Plover <i>Charadrius wilsonia</i>				G5,S2	4,9	Tier 1
Little Blue Heron <i>Egretta caerulea</i>	SSC			G5,S4	4,9	Tier 1



Table 2: Imperiled Species Inventory						
Common and Scientific Name	Imperiled Species Status				Management Actions	Monitoring Level
	FWC	USFWS	FDACS	FNAI		
Reddish Egret <i>Egretta rufescens</i>	SSC			G4,S2	4,9	Tier 1
Snowy Egret <i>Egretta thula</i>	SSC			G5,S3	4,9	Tier 1
Tricolored Heron <i>Egretta tricolor</i>	SSC			G5,S4	4,9	Tier 1
Swallow-tailed Kite <i>Elanoides forficatus</i>				G5,S2	1,2,4,6,7,10,12	Tier 1
White Ibis <i>Eudocimus albus</i>	SSC			G5,S4	4,9	Tier 1
Merlin <i>Falco columbarius</i>				G5,S2	1	Tier 1
Peregrine Falcon <i>Falco peregrinus</i>				G4,S2	1	Tier 1
Worm-eating Warbler <i>Helmitheros vermivorus</i>				G5,S1	1	Tier 1
Caspian Tern <i>Hyprogne caspia</i>				G5,S2	4,9	Tier 1
Wood Stork <i>Mycteria americana</i>	FT	LE		G4,S2	4,9,10	Tier 1
Louisiana Waterthrush <i>Parkesia motacilla</i>				G5,S2	1,4	Tier 1

Table 2: Imperiled Species Inventory						
Common and Scientific Name	Imperiled Species Status				Management Actions	Monitoring Level
	FWC	USFWS	FDACS	FNAI		
Brown Pelican <i>Pelecanus occidentalis</i>	SSC			G4,S3	4,9	Tier 1
Roseate Spoonbill <i>Platalea ajaja</i>	SSC			G5,S2	4,9	Tier 1
Black Skimmer <i>Rynchops niger</i>	SSC			G5,S3	4,9	Tier 1
American Redstart <i>Setophaga ruticilla</i>				G5,S2	1	Tier 1
Least Tern <i>Sterna antillarum</i>	ST			G4,S3	4,9	Tier 1
<b>MAMMALS</b>						
Florida black bear <i>Ursus americanus floridanus</i>				G5T2,S2	1,2,10,13	Tier 1
Sherman's fox squirrel <i>Sciurus niger shermani</i>	SSC			G5T3,S3	1,2,6,7,12	Tier 1
Florida manatee <i>Trichechus manatus</i>	FE	LE		G2,S2	9,10,13	Tier 1

**Management Actions:**

1. Prescribed Fire
2. Exotic Plant Removal
3. Population Translocation/Augmentation/Restocking
4. Hydrological Maintenance/Restoration
5. Nest Boxes/Artificial Cavities
6. Hardwood Removal
7. Mechanical Treatment
8. Predator Control
9. Erosion Control

10. Protection from visitor impacts (establish buffers)/law enforcement
11. Decoys (shorebirds)
12. Vegetation planting
13. Outreach and Education
14. Other

### **Monitoring Level:**

- |         |  |
|---------|--|
| Tier 1. | Non-Targeted Observation/Documentation: includes documentation of species presence through casual/passive observation during routine park activities (i.e. not conducting species-specific searches). Documentation may be in the form of Wildlife Observation Forms, or other district specific methods used to communicate observations. |
| Tier 2. | Targeted Presence/Absence: includes monitoring methods/activities that are specifically intended to document presence/absence of a particular species or suite of species.   |
| Tier 3. | Population Estimate/Index: an approximation of the true population size or population index based on a widely accepted method of sampling.   |
| Tier 4. | Population Census: A complete count of an entire population with demographic analysis, including mortality, reproduction, emigration, and immigration.   |
| Tier 5. | Other: may include habitat assessments for a particular species or suite of species or any other specific methods used as indicators to gather information about a particular species.   |

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

### **Exotic and Nuisance Species**

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

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 venomous snakes or raccoons 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 animals are discussed in the Resource Management Program section of this component.

Several exotic plant species occur, or have occurred, in the park. Priority removal efforts are given to those species which are categorized as Category I or Category II by the Florida Exotic and Pest Plant Council (FLEPPC). Table 3 provides a summary of the current distribution of all known Category I and II invasive exotic plant species within the park.

Park staff have made considerable strides in the control of invasive exotic plants within the park since the last management plan. The entire park is now within a maintenance condition. Over the past 10 fiscal years, over 205 acres of invasive exotic plant treatments have occurred in the park. Much of this has been done by park staff and volunteers. In addition grant funding has been secured to provide approximately 130 acres worth of contractual treatment over the past three years. These funded projects have tremendously supplemented park staff's efforts and delivered the park into its current maintenance condition.

All known areas of exotic plant infestation are recorded in a statewide database and assigned individual infestation IDs. New infestations are mapped and recorded as they are found and known infestations are then resurveyed on a two year or less interval and survey data is updated in the database accordingly. All treatment and removal efforts are also recorded in the same database and reported on a quarterly and annual basis.

Although exotic and nuisance animals are less of a problem than exotic plants at Faver-Dykes State Park, there are a few species that are regularly removed and worthy of discussion.

Feral hogs are the most abundant and problematic exotic animal that occurs in the park. Their rooting damages sensitive habitats, creates erosion issues, disturbs soil and invites exotic plant establishment. Hogs are also known to feed directly upon numerous rare plant and animal species. Staff regularly remove feral hogs from the park following established DRP guidelines and protocols. Over the past 10 year management plan cycle staff have removed over 342 feral hogs from Faver-Dykes State Park.

Nine-banded Armadillos (*Dasypus novemcinctus*) are commonly seen in the park. This species is considered by the Florida Park Service to be an introduced exotic species and is treated as such under division policies. Armadillos are known to create considerable ground disturbance, compete with native wildlife for food and resources, and consume large quantities of native arthropods, herps, and other wildlife. Park staff regularly remove Armadillos using approved methods outlined in DRP policy. Over the past ten fiscal years since the previous management plan adoption, 87 armadillos have been removed from the park by staff.

While uncommon, occasional nuisance animal issues occur in the park. The three most common species involved are American alligator (*Alligator mississippiensis*), water moccasin (*Agkistrodon piscivorus*), and raccoon (*Procyon lotor*). These species occasionally find their way into visitor use areas. This does not always create a problem or safety concern, however, sometimes it does and the nuisance

animal must be removed and relocated or in rare cases, euthanized following approved procedures and guidelines. Every effort is made to avoid relocation when possible and euthanasia is only utilized as a last resort option when there is serious risk to public and staff safety.

Additional management measures are taken to address the introduction and spread of pests and pathogens as well as invasive exotic plants and animals. The USDA, FDACS, and other researchers periodically set traps to collect insects within the park. They are then sent to labs for identification. Monitoring of this type has resulted in the early detection of several serious pest insect species in a few district three state parks in recent years. Any contractors working within the park providing services related to fuels mowing, roller-chopping, etc., or exotic removal are required by contract to clean their equipment prior to entering and exiting the park and are subject to inspection by staff and denial of entry if necessary.

Since adoption of the last management plan, laurel wilt disease has reached St. Johns County and decimated the red bay (*Persea borbonia*) population within the entire area, including the park. Initial attempts to stop the spread by cutting down trees, trapping the beetle vector, and/or inoculating trees largely failed and there was little that could be done to protect the red bays within the park. Nearly all of the mature red bay trees have been killed by this disease. Some are showing signs of resprouting from the root stock but it is too early to determine if any will survive in the long term. Park staff have been working with local researchers and FDACS on this issue and will continue to follow BMPs and suggested recommendations to slow the spread of laurel wilt disease and protect any remaining red bays within the park to the extent feasible.

Table 3 contains a list of the Florida Exotic Pest Plant Council (FLEPPC) Category I and II invasive, exotic plant species found within the park (FLEPPC, 2016). 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.



<b>Table 3: Inventory of FLEPPC Category I and II Exotic Plant Species</b>			
<b>Common and Scientific Name</b>	<b>FLEPPC Category</b>	<b>Distribution</b>	<b>Management Zone (s)</b>
<b>PLANTS</b>			
Mimosa <i>Albizia julibrissin</i>	I	2	FD-33
Sprenger's asparagus-fern <i>Asparagus aethiopicus</i>	I	2	FD-40
Air-potato <i>Dioscorea bulbifera</i>	I	1	FD-07
Cogon grass <i>Imperata cylindrica</i>	I	1	FD-11, FD-13, FD-08, FD-07, FD-04, FD02
		2	FD-10, FD-34, FD-09
Lantana <i>Lantana camara</i>	I	1	FD-39, FD-40
Japanese climbing fern <i>Lygodium japonicum</i>	I	1	FD-14
		2	FD-13
Natal grass <i>Melinis repens</i>	I	1	FD-40
Torpedo grass <i>Panicum repens</i>	I	1	FD-01, FD-28
		6	FD-14, FD-07, FD-08, FD-09, FD-13
Chinese tallow tree <i>Sapium sebiferum</i>	I	1	FD-35, FD-13, FD-05, FD-02, FD-03
		2	FD-01, FD-33
Brazilian pepper <i>Schinus terebinthifolius</i>	I	2	FD-40, FD-39
Chinaberry <i>Melia azedarach</i>	II	1	FD-07

#### **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.

## **Special Natural Features**

This park contains magnificent vistas across expansive salt marsh along both Pellicer Creek and the Matanzas River. The marshes within the park and surrounding area are of an exceptional high quality and are some of the only large tracts of salt marsh remaining in the area that were never ditched and drained for mosquito control purposes. The fish and wildlife resources of the park, and particularly the salt marshes, are exceptional. Wildlife viewing, especially birds, is particularly good. The National Audubon Society has designated the saltmarshes and salt flats in the region as an Important Bird Area (IBA).

The park contains one of only two known populations of striped newt (*Notophthalmus perstriatus*) in all of St. Johns County. This species is currently a candidate for federal listing as a threatened species. Most known populations are from the central ridges of the northern peninsula and from the red hill region of the panhandle. Coastal populations are rare and may be genetically unique. To date, striped newts have been found in only three ponds at the park and are only known to breed in one of them.

## **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 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.

*Description:* Northeast and East Central Florida have a rich cultural prehistory and history. Faver-Dykes State Park falls within the East and Central Lake Archaeological Region, as defined by Drs. Jerald Milanich and Charles Fairbanks (1980). The area around Pellicer Creek was occupied and utilized by Native Americans during the full sequence of Precolumbian cultural periods, beginning with the Paleo Indian, and continuing throughout the Archaic, Mount Taylor, Orange, Transitional, and St. Johns Periods. Technological changes observed in the archaeological record, and evidence of increasing populations, marked each progressive period. The list of Native American cultures also includes the Seminole, although they are descended from Lower Creeks who fled from Georgia and Alabama to north Florida in the 18<sup>th</sup> century (Milanich and Fairbanks 1980, Milanich 1994, Milanich 1995, Stanton 2001).

During the Second Spanish Period (1783-1821), the Spanish made land grants in Northeast Florida to American and British citizens. The availability of large tracts of inexpensive bottomland, immediate access to navigable waterways, and high sugar prices led to the development of the Matanzas-Halifax region as a major sugar production area. Hepworth Carter built the Hemmings Point Plantation on Pellicer Creek, but the Seminoles probably burned the plantation in the raids of 1802. In 1817, Jose Mariano Hernandez was granted the Pellicer Creek plantation he called Buena Suerte, Spanish for "Good Luck." After the Second Seminole War, the Pellicer Creek area was abandoned, except for timbering and turpentine.

During the spring of 1788, Andre Michaux, botanist to the King of France, spent three months in the St Augustine area and along the St Johns River collecting seeds and plants, following roughly the same paths that John and William Bartram had taken in 1766 and William Bartram alone in 1774. Michaux, was a trained botanist who had studied with some of the most famous French botanists of his time, and kept a daily journal that is available today. Among those notes, Michaux writes of finding Carolina silverbell, *Halesia carolina*, (a species no longer known from east of the panhandle and big bend regions in Florida) along the shoreline of Pellicer Creek and spending six days at the home of a Minorcan on Pellicer Creek, which at the time was known as the North West River. Unfortunately, the exact location of Michaux's overnight stay and noteworthy findings along Pellicer Creek are unknown, but they may have been within the present day park (Taylor and Norman 2002).

Currently, there are seven sites within the boundaries of Faver-Dykes State Park recorded by the Florida Master Site File (FMSF). Three sites are composed entirely of prehistoric archaeological remains, one site is a historic artifact site, and two are large multi-component sites that include both prehistoric and historic artifacts. A brief description of each recorded site is below.

8SJ35, the Rootan Branch Site, is a large multi-component site containing both prehistoric and historic artifacts. There are three main components to this site, two prehistoric burial mounds and historic remains believed to be associated with Hernandez's Buena Suerte Plantation, ca. 1817.

The larger of the two burial mounds within 8SJ35 is approximately 3 meters in height, greater than 50 feet in diameter, and constructed entirely of sand material. This site was documented by early archaeologist Andrew E. Douglas as early as 1885 and first recorded with the FMSF in 1952 (Collins et al. 2010). While no artifacts were found on the surface of the mound, artifact scatters along nearby Rootan Branch stream date the site to the St. Johns Period. There is evidence of previous issues with looting at this site. The site's location near a park road makes it more vulnerable than other sites that are more difficult to access. Future park road projects may eliminate the need for the existing exit road in the vicinity of the mound and make the site more difficult to find. In the interim, staff should continue to allow roadside vegetation to grow to help obscure this site from view. Currently, several large trees are growing atop the mound. Staff should consult with DHR to determine the best course of action. Typically, trees would be removed from mounds to prevent potential damage from trees falling and roots pulling materials

out of the ground. In this case, the trees are significantly helping to obscure this site from view of a main park road and are helping to hold the soil surface together and prevent further erosion. Guidance from qualified archeologist staff at DHR and elsewhere should be obtained and a plan developed for long term protection of the mound.

The smaller, 1 meter high burial mound within 8SJ35 is located approximately 150 meters to the south-southwest of the larger mound. Like the larger mound, the site dates to the St. Johns Period. The small mound is not visible from the park road and is difficult to locate. Its remote location affords protection from possible inappropriate human activity.

The 8SJ35 site also includes a historic component. A few artifacts have been found along Rootan Branch in the general vicinity of the burial mounds that are believed to be associated with a structure that was a part of Hernandez's Buena Suerte Plantation. These items include clay bricks and coquina rubble. To date, few other artifacts from this plantation have been found in this area. Further archeological investigations in this area of the park would likely increase our knowledge of the Buena Suerte Plantation. The known artifacts are well hidden within the hammock and in a stable condition.

The other large multi-component site in the park is 8SJ3133, known as the Hemmings Point Site. This site includes an extensive deep oyster shell midden on the north side of Pellicer Creek as well as historic artifacts from the Hepworth Carter Plantation.

The middens within 8SJ3133 have produced Native American artifacts from a full range of cultural periods spanning from the Orange, St. Johns, and San Augustine. Second Spanish Period artifacts from the Carter Plantation also occur at this site. There has been some very minor erosion of material along Pellicer Creek following large storms producing significant wave action, but the site is relatively stable. A pothunter was caught digging in the site in 1996. The holes were backfilled and no additional pothunting is known to have occurred since. Staff should continue to regularly inspect this site for signs of erosion, looting, or other damage and take appropriate action to protect the site as needed.

The Carter Plantation historic component of 8SJ3133 includes several artifacts and structure remains dating to ca. 1792-1803. Remains from structures documented here include a coquina hearth, brick and mortar rubble, and coquina rubble. At least some of the remains are believed to have been associated with plantation slave quarters (Collins et al. 2010). These artifacts are generally located just below the soil surface and/or covered with a heavy layer of leaf detritus from the hammock canopy. This offers the site some protection from human impacts and helps to maintain a stable condition. Tree falls within this area should be inspected for any artifacts exposed by uprooting and if found, they should be carefully buried back where they came from.



8SJ4990, the Old Boundary Site, is composed of brick and mortar rubble. It is believed to have been associated with a British Period (or possibly Spanish Period) structure. This site is located along an old park boundary line but is well hidden in dense palmetto and difficult to locate. The site is on relatively level ground with little threat of erosion. It should remain in stable condition, well protected by dense vegetation.

The remaining four recorded sites at the park are all prehistoric archaeological sites. 8SJ3742, the Campground Nature Trail Site, is located, as the name implies, along the park's campground nature trail. This site consists of low frequency artifact scatter across the high ground overlooking the north bank of Pellicer Creek. Ceramic materials from this site were identified as St. Johns Plain (Collins et al. 2010). It is thought that this site may have been the location of a Native American camp or short term settlement. Since artifact density is low, hikers are unlikely to encounter any of them and foot traffic should have minimal impact on the site condition. Any future development plans within the campground should be carefully planned to avoid potential impacts to this site.

8SJ3152, the Dredge Spoil Site, and 8SJ3153, the Dog Station Site, are both located near the northeast corner of the park in dense hammock and contain shell midden materials. 8SJ3152 has produced ceramic artifacts indicating St. Johns II affiliation. This site was heavily damaged by fire plows during a 1999 wildfire. 8SJ3153 is also a shell midden with ceramic materials. Artifacts from this site were identified as St. Johns checked pottery. This site also suffered damage from plowing fire lines in 1999 and a portion of the site was impacted by past site prep for pine plantation activities (Johnson 1998). Future timber management activities in the vicinity of these two sites should exclude this area if possible, even though portions of the site were planted in pine and already disturbed. Current conditions are stable and should remain that way if prescribed fire is used to manage pine density in the small area surrounding these sites rather than heavy equipment.

The Hernandez Island Site, 8SJ3740, is located on the island now known as Mellon Island. The site consists of exposed midden materials on the surface of the island within the hammock. The site is accessible from a hiking trail but is hidden and stable. Extensive salt marsh bordering Mellon Island and dense hammock in the vicinity of the site offer it good protection from erosion.

The original portion of the park was systematically surveyed for archaeological resources and a detailed report was generated (Payne and Griffin 2000). The newer acquisition property would benefit from additional on-the-ground archaeological survey work. Researchers from the University of South Florida (USF) conducted an archeological resource predictive modeling study for the park that was completed in 2010 (Collins et al. 2010). This study utilized known sites, historical information, maps, and documents, as well as topographic information and other input variables to develop a model and assess the park for the likelihood of the occurrence of additional cultural resources. The model report generated a map of high, medium, and low probability areas within the park and provides a useful tool to help guide management decisions and avoid areas of high cultural resource sensitivity.

*Condition Assessment:* Overall, the current condition of the seven recorded archeological sites is good. Some issues have occurred in the past including minor erosion, some looting, hog rooting, and other disturbances but remedial actions have been taken and conditions have stabilized and improved. The descriptions of each recorded site above provide more detailed information on the condition and threats to each particular site.

*General Management Measures:* Although some of the sites have been previously disturbed to various degrees, all of the recorded archeological sites are currently stable and considered to be in good condition. Preservation is the prescribed treatment for all of the recorded archeological sites. The large mound within the 8SJ35 site should be evaluated with input from DHR and qualified archeologists to determine the best course of action regarding trees growing on the mound. A plan should be developed based on these recommendations and implemented accordingly. The Hemmings Point Site is heavily interpreted through a popular hiking trail with a three-sided interpretive kiosk. Other sites and park history are interpreted by staff during park events.

#### 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:* Today the only surviving historic structures on Faver-Dykes are two park buildings that were constructed in the 1950s. However, the Hemmings Point site contains archaeological evidence of structures dating to Spanish and British occupation. By the end of the 19<sup>th</sup> century, Pellicer Creek had become a sportsman's paradise, known for hunting, fishing, boating, and camping. In 1950 Hiram Faver, St. Johns County Clerk of the Court and an avid outdoorsman, bought 750 acres of his favorite fishing property along the north bank of Pellicer Creek. He then donated the property to the State of Florida, to become the original parcel for Faver-Dykes State Park. The park name came from the combination of his surname and the married name of his sister.

8SJ6491 is the park office. This is a modular structure that was built in 1956 and serves as park office space. It is located in the shop compound area. This building has received numerous repairs and upgrades over the years and it is in good condition.

8SJ6492 is picnic shelter number one. This picnic pavilion was one of the first structures to be built for the use of park visitors after the park opened. It was completed in 1957 and is still used regularly by visitors to the park's picnic area. It has had some repairs and upgrades over the years, mainly to the roof, but remains in good condition.

The park also has three structures that will become 50 years old during the life of this plan. These include the park's shop building, the assistant park manager

residence, and the campground restroom building. All three were constructed at the park in 1969 and are currently in good condition. Staff should record these structures as appropriate with the FMSF as historic structures during the year that they reach the 50 year old threshold.

*Condition Assessment:* Overall, all of the historic structures are in good condition. They are all park facilities and are continually maintained by park staff and volunteers. In addition, all have undergone some level of restoration effort in recent years. It is anticipated that with regular maintenance, all of these structures will remain in good condition for at least the life of this plan. Historic structures are regularly inspected for termite damage and are treated as needed to ensure protection. The only significant threat to their continued existence is damage from a hurricane, fire, flood, or other unavoidable occurrence.

*General Management Measures:* All historic structures should be inspected regularly to identify potential threats or damage, and the need for rehabilitation treatments. Continue to maintain historic structures in an appropriate manner that is consistent with the original style and design. The Division of Historical Resources should be consulted for guidance with any major rehabilitation treatments. Preservation is the prescribed treatment for all historic structures in the park.

#### 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:* Faver-Dykes State Park does not currently hold any formal collections. A few informal collections items are maintained within the park for interpretive purposes such as miscellaneous natural history objects, archival information, etc. These items are maintained for park staff use and for public interpretation and, while not historically significant, they serve as important interpretive tools.

*Condition Assessment:* The park currently holds no formal collections items. Informal collections used for staff information and public interpretation are in good condition.

*General Management Measures:* Since no formal collections are held at the park, there is little management need. Should formal collections be acquired during the life of this plan, staff will need to develop a Scope of Collections Statement. An informal inventory of current informal collections item should be developed to fully assess the current collections.

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.

<b>Table 4. Cultural Sites Listed in the Florida Master Site File</b>					
<b>Site Name and FMSF #</b>	<b>Culture/Period</b>	<b>Description</b>	<b>Significance</b>	<b>Condition</b>	<b>Treatment</b>
8SJ35 Rootan Branch Site	Prehistoric & Historic/Precolumbian through Historic	Multi- component Archaeological and Historic Site	NE	G	P
8SJ3133 Hemming Point Site	Prehistoric & Historic/Precolumbian through Historic	Multi- component Archaeological and Historic Site	NE	G	P
8SJ3152 Dredge Spoil Site	Prehistoric/Unspecified	Archaeological Site	NE	G	P
8SJ3153 Dog Station Site	Prehistoric/Unspecified	Archaeological Site	NE	G	P
8SJ3742 Campground Nature Trail Site	Prehistoric/Unspecified	Archaeological Site	NE	G	P
8SJ4990 Old Boundary Site	Historic/Unspecified	Historic Site	NE	G	P
8SJ3740 Hernandez Island Site	Prehistoric/Unspecified	Archaeological Site	NE	G	P
8SJ6491 Park Office	Historic/Modern	Historic Structure	NE	G	P
8SJ6492 Picnic Shelter #1	Historic/Modern	Historic Structure	NE	G	P

**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 Faver-Dykes 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. The annual work plans provide the flexibility needed to adapt to future conditions as they change during the ten-year management planning cycle. As the park's annual work plans are implemented through the ten-year cycle, it may become necessary to adjust the management plan's priority schedules and cost estimates to reflect these changing conditions.

## **Natural Resource Management**

### **Hydrological Management**

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

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

***Objective A: Conduct/obtain an assessment of the park's hydrological restoration needs.***

- |          |   |
|----------|---|
| Action 1 | Secure funding and implementation resources for assessing park's hydrology by June 2018 |
| Action 2 | Review findings and determine further actions to take                                   |

As described above in the hydrology section, the park has been impacted by various hydrological alterations, including some ditching, as well as soil bedding that is presumed to have affected sheet flows over a large portion of the park. Some raised logging roads have also altered flows in some areas and a large number of culverts and wet crossings exist in the park. A few problem areas are known, such as failing culverts in a few locations, but the park would benefit from a larger assessment of the overall hydrological restoration needs. During the life of the plan, the park and district staff should work together to better determine the alterations that are causing negative hydrologic impacts, the feasibility of and blue print for the restoration of various identified alterations, and a prioritized list of needed projects to improve hydrological conditions. This assessment would include further research into the history of the three known ditches that may have some historical significance and determining if they are causing current impacts that should be addressed. The assessment should also include an evaluation of options for restoration of the soil bedding within pine plantations over the long term as well as an assessment of the feasibility of such a project. If additional hydrological restoration/enhancement projects are possible, the park should pursue the best options to benefit the park's resources following the prioritized list that is developed through this assessment. Examples of projects to benefit hydrological restoration may include such things as replacement/repair of culverts, installation of low-water crossings, removal of soil bedding, erosion control/mitigation measures, ditch plugging/filling, etc.



***Objective B: Restore natural hydrological conditions and functions to approximately 15 acres of depression marsh natural communities through burning and woody encroachment removal.***

- Action 1      Remove woody plants via mechanical methods—felling, chipping and conducting timber management activities in accordance with best management practices.
- Action 2      Include depression marshes within burn zones and burn when fire will impact woody encroachment.

Depression marshes are one of the most widespread wetland features in the park. Over 200 of them dot the uplands and occur in nearly every management zone. Most are in fair to good condition but some have been degraded from impacts associated with past silvicultural activities within or adjacent to the marsh basins. This has resulted in woody plant encroachment into the graminoid-dominated marsh community, primarily due to long-term fire suppression. During the life of the plan, approximately 15 acres or more of the depression marsh natural community should be restored by removing off-site pines and other hardwoods from the marsh basins and reintroducing fire to the natural community on a regular interval appropriate for the surrounding natural community type. In most cases this will be approximately a 1-4 year interval. The marshes may not burn every time fire is applied if the basins are full, but they should be given the opportunity to burn and fire should be allowed to consume vegetation within the marsh basins whenever possible. This will help to reduce woody encroachment and limit further recruitment of undesired species into the depression marsh community. Mechanical means such as chain- sawing should be used to reduce the cover by large woody shrubs and trees that have grown too large to be killed by fire. Prescribed burning on a regular return interval should then be used to limit future recruitment and growth of woody species within the depression marsh community. These actions alone will improve the community health and natural function to achieve this objective.

**Natural Communities Management**

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

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.

***Objective A: Within 10 years, have >2250 acres of the park maintained within the optimum fire return interval.***

- |          |   |
|----------|---|
| Action 1 | Burn at least 900 acres every year.   |
| Action 2 | On optimal years with good soil moisture and wind patterns, burn an additional 1,000 to 1,800 acres above Action 1.   |
| Action 3 | Prepare fireline on an additional 300 acres of zones with marginal or nonexistent fireline to increase burnable and defensible acres.   |
| Action 4 | Thin 300 acres of pine plantations and restoration natural communities to densities that allow re-entry of prescribed fire where fuel loading is currently too high to burn safely. |

Many of the natural communities at Faver-Dykes State Park are fire dependent or at least fire influenced. The sandhill, mesic and scrubby flatwoods, depression and basin marshes, and wet prairies all require relatively frequent burning to maintain their natural diversity and to prevent invasion by non-fire tolerant species. The dome swamp, salt marsh, baygall, and basin swamp communities, although not entirely fire dependent, will benefit from being given the opportunity to burn every time fire is applied to the adjacent coastal strand community and allowing fire to maintain their ecotones with surrounding community types. It is important to have standing water below salt marsh vegetation during these burns. Even non-fire dependent communities such as maritime hammock are affected by fire along their ecotones with fire adapted communities. The maintenance of natural ecotones between communities is an important function of prescribed burning on a regular interval. Most of the area currently mapped as restoration natural community has a desired future condition of a fire dependent natural community type and therefore should be burned on a suitable interval to drive the natural community toward the desired future condition. The optimum fire return interval currently prescribed to the upland areas mapped as Restoration Natural Community is 1-4 years.

Based upon the fire return intervals and acreage figures for the fire dependent natural communities within the park, optimally at least 829-2831 acres should be burned each year (on average) to maintain the natural communities within their optimal fire return intervals. Not all zones may be burned within the maximum recommended fire return intervals, while others may be burned more frequently. Some fire type acres will be unavailable for burning until conditions within the management zone allow (for example, some current pine plantation areas with a desired future condition of mesic flatwoods may not be burned until a timber harvest has occurred). Since the park has fire-type communities (and/or fire-type desired future conditions) in most of its management zones, there will be

prescribed burning occurring at the park very frequently. Weather, tides and fuel conditions will be the dominant factors that dictate when and where burns occur within the park.

The park currently has sufficient fire breaks that should be suitable to meet its burn needs. Staff should maintain existing fire breaks at all times to be prepared for burn windows when weather conditions are favorable. Any new fire break needs should be carefully evaluated and planned to avoid negative impacts to natural communities, important ecotones, and sensitive cultural resources. Some of the park's management zones are very large. It may be difficult to burn some zones as a single unit given their size and current fuel loads. In some cases, making these zones smaller by installing additional fire breaks may benefit the overall natural communities by improving the park's burn program. The need for these type of interior fire breaks will be carefully evaluated on a case by case basis and they will be installed if needed in the most appropriate manner to promote a successful fire program while minimizing impacts to the natural communities. Existing fire breaks that are no longer needed should be abandoned and allowed to recover in desirable vegetation from the adjacent natural communities.

Several of the listed plant and animal species that have been documented at Faver-Dykes State Park are dependent upon or will benefit from regular prescribed burning. This includes species such as the gopher tortoise, Florida pine snake, striped newt, hooded pitcherplant, giant orchid, rose pogonia, blueflower and yellow butterworts, and more. Regular prescribed fire management is the primary tool used to manage the habitat that these species require. Achieving the prescribed burning goals for the park will also help the park to achieve its goals for listed species management.

Table 5 contains a list of all fire-dependent natural communities found within the park, their associated acreage and optimal fire return interval, and the annual average target for acres to be burned.

<b>Table 5: Prescribed Fire Management</b>		
<b>Natural Community</b>	<b>Acres</b>	<b>Optimal Fire Return Interval (Years)</b>
Basin Marsh	36	1-4
Depression Marsh	260	1-4
Mesic Flatwoods	1186	1-3
Restoration Natural Community	1121	1-4
Sandhill	136	1-3
Scrubby Flatwoods	92	2-4
Wet Prairie	46	1-3
Annual Target Acreage	829 - 2831	

Prescribed fire is planned for each burn zone on the appropriate 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.

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 and experience, backlog, 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 Community Restoration:* In some cases, the reintroduction and maintenance of natural processes is not enough to reach the desired future conditions for natural communities 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 community 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.

Following are the natural community/habitat restoration and maintenance actions recommended to create the desired future conditions in the pine plantation and restoration natural community altered land cover types (see Desired Future Conditions Map).

***Objective B: Conduct habitat/natural community restoration activities on 250 to 1000 acres of pine plantation altered land cover community type to restore them to mesic flatwoods restoration natural community.***

- |          |  |
|----------|--|
| Action 1 | Organize and oversee planted pine density reduction on at least 250 acres of un-thinned pine plantation. |
| Action 2 | Implement prescribed burns on the same acres involved in Action 1.                                       |

This objective is intended to move at least 250 acres of pine plantation into restoration natural community designation or the appropriate desired future condition natural community type during the life of this plan. This objective will require timber management activities to thin some of the planted pine stands and begin the restoration process. The next step is generally the application of a prescribed burn on the thinned pine stand followed by surveys and treatments of invasive exotic plants as needed. Once an initial thinning operation and first prescribed burn has occurred in a pine plantation stand, it is generally enough to move that area into a restoration natural community status. Some plantation stands will require more restoration work than others to achieve this objective but the general approach that has thus far proven effective in the park is to thin a stand and burn it shortly thereafter. Then the restoration natural community area is moved into a 1-4 year fire return interval and additional restoration activities are implemented to further restore the area to the desired future condition natural community. When planning for this objective, the oldest (and largest) planted pine stands are generally given first priority for thinning operations. In some cases younger stands may have a high priority if they are in key areas such as adjacent to intact natural communities or already in the burn rotation. Some pine plantation stands may be burned prior to the initial thinning harvest where appropriate to do so.

***Objective C: Conduct habitat/natural community restoration activities on 200 to 500 acres of restoration natural community altered land cover type to mesic flatwoods and/or sandhill as appropriate.***

- |          |   |
|----------|---|
| Action 1 | Assess at least 200 acres of restoration natural community for slash pine thinning, mechanical, fire and tree planting needs.               |
| Action 2 | Thin slash pine based on results of Action 1 assessment.  |
| Action 3 | Implement needed mechanical treatments on those portions assessed in Action 1.  |
| Action 4 | Implement needed prescribed fire on all portions of Action 1 as appropriate.  |
| Action 5 | Plant longleaf pine at 20-50 trees per acre depending on need into areas indicated for supplemental longleaf following Action 1 assessment. |

This objective is intended to move at least 200 acres of areas currently mapped as restoration natural community into the appropriate desired future condition natural community type during the life of this management plan. This can be achieved



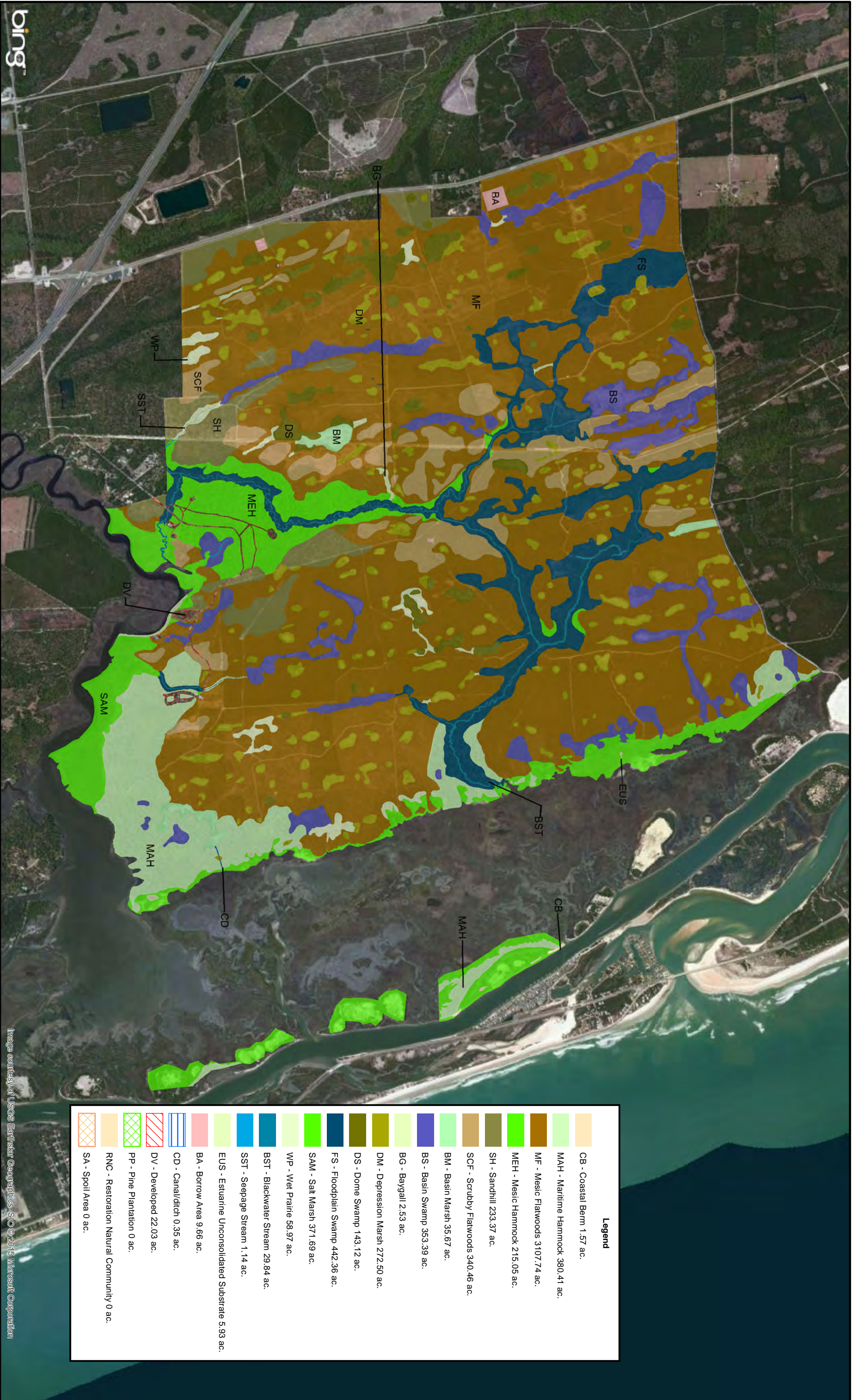


Image courtesy of USGS Earthstar Geographics, SIO © 2015 Microsoft Corporation

NATURAL COMMUNITIES  
DESIRED FUTURE CONDITIONS  
MAP

FAVER-DYKES STATE PARK





through the use of repeated application of prescribed fire coupled with supplemental actions where needed such as selective mechanical treatment of vegetation, invasive exotic species control, and/or plantings of longleaf pine and other desirable native plant species. Additional thinning of planted slash pines may also be utilized in select areas if necessary. Priority for restoration should be given to those areas that are currently in a condition closest to the desired future condition and can be improved with minimal effort. Areas adjacent to intact natural communities should also be given a high priority for restoration actions. Once a restoration natural community area has been restored to a poor or fair condition desired future condition natural community type, that area should be burned on the appropriate interval and natural community improvement actions should continue to push the area into a good condition natural community state.

*Natural Community Improvement:* Improvements are similar to restoration but on a smaller, less intense scale. This typically includes small-scale vegetative management activities or minor habitat manipulation. Following are the natural community/habitat improvement actions recommended at the park.

***Objective D: Conduct natural community/habitat improvement activities on >40 acres of mesic flatwoods natural community.***

- |          |   |
|----------|---|
| Action 1 | Assess the mesic flatwoods natural community for the need for mechanical treatments to implement successful prescribed burns. Determine priority portions of zones needing treatment. |
| Action 2 | Following outcome of Action 1, implement mechanical treatments in preparation for prescribed burns on the acres indicated for treatment in order of priority.                         |

This objective is intended to move >40 acres of poor or fair condition mesic flatwoods into good condition during the life of this management plan. This can be achieved through the use of roller-chopping, mowing, selective chain-sawing, or a combination of treatments coupled with the application of prescribed fire. Supplemental plantings of longleaf pine, wiregrass, or other desirable native species can also be utilized where needed to achieve this objective. Every flatwoods zone in the park is unique and will require its own unique treatment to achieve the desired effect. Park staff should give priority to those areas that are near good condition and can be improved with minimal effort. Once a flatwoods reaches a good condition, it must be maintained with frequent prescribed fire on a 1-3 year interval.

***Objective E: Conduct natural community/habitat improvement activities on >15 acres of sandhill natural community.***

- |          |  |
|----------|--|
| Action 1 | Assess the sandhill natural community for the need for mechanical treatments and herbicide treatment to implement successful prescribed burns. Determine priority portions of zones needing treatment. |
|----------|--|

- Action 2      Following outcome of Action 1, implement mechanical treatments in preparation for prescribed burns on the acres indicated for treatment in order of priority.
- Action 3      Following outcome of Actions 1 and 2, implement necessary herbicide treatments to control any remaining encroaching hardwoods such as cabbage palm, black cherry, persimmon, laurel oak, live oak or over-represented sand live oak.

This objective is intended to move >15 acres of poor condition sandhill into fair or good condition. This can be achieved through the use of roller-chopping, mowing, selective chainsawing, herbicide application, or a combination of treatments coupled with the application of prescribed fire. The main focus of the habitat improvement activities in the sandhill should be the reduction in density of broadleaf tree species that have invaded due to fire suppression/alterd fire regime, mainly laurel oak. Protection and promotion of a diverse graminoid groundcover is also important. Supplemental plantings of longleaf pine, wiregrass, or other desirable native species can also be utilized where needed to achieve this objective. Just like the flatwoods, every sandhill zone in the park is unique and will require its own unique treatment to achieve the desired effect. Park staff should give priority to those sandhill areas that are in the best condition and can be improved with minimal effort. Once a sandhill reaches a good condition, it must be maintained with frequent prescribed fire on a 1-3 year interval.

## **Imperiled Species Management**

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

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

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

Ongoing inventory and monitoring of imperiled species in the state park system is necessary to meet the DRP's mission. Long-term monitoring is also essential to

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

***Objective A: Develop/Update baseline imperiled species occurrence inventory lists for plants and animals.***

- |          |   |
|----------|---|
| Action 1 | Revisit known plant occurrences to verify presence/absence.   |
| Action 2 | Inventory all post-burn sites 1-2 months following fire.  |
| Action 3 | Inventory all similar habitats across the park for each known plant species occurrence to verify presence/absence parkwide. |
| Action 4 | During field time inventorying plants, document passive observations of listed animals.                                     |
| Action 5 | Invite guest researchers to monitor specific listed animals that are not monitored by DRP staff.                            |

The park inventory currently has 45 listed species that have been documented in the park. Of those, 18 are plants and 27 are animals. Due to the high number of imperiled species already documented in the park, it is unlikely that a great number more will be found. However, there could certainly be more out there yet undiscovered and staff should continually be on the lookout for new listed species occurrences and new locations of known listed species within the park. As new species are found they should be properly documented and reported and tracked in the Florida Park Service database. Observations of known listed species should be noted and appropriately reported and/or tracked. As more altered land cover areas are restored in the park listed species are likely to be discovered in areas where they were previously absent or unknown. These observations should be noted and recorded. The park should continue to work closely with local chapters of Audubon, Florida Native Plant Society, and other special interest groups, as well as local researchers, professors, and students to encourage surveys and research to occur in the park that will in turn benefit our knowledge of the park's flora, fauna, and ecosystems. Park and district staff should also continue to report and document interesting sightings as they occur and build on the existing park species list.

***Objective B: Monitor and document 4 selected imperiled animal species in the park.***

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|----------|--|
| Action 1 | Review historic information and park data for four listed animal species.                      |
| Action 2 | Perform monitoring for each species following compatible protocols to gather comparative data. |

All listed animal species observed in the park should at a minimum be recorded at a tier 1 level. Four of the known listed species have been selected for additional level of survey and monitoring: the Florida Gopher Frog, Striped Newt, Gopher Tortoise, and MacGillivray's Seaside Sparrow.

Gopher tortoises are widespread in the park but current population and distribution data are lacking. Tortoises are most common in the intact natural community areas but also occur in some of the altered land cover types. Tier 3 level surveys and monitoring should be implemented to better assess and document the distribution and abundance of gopher tortoises in the park. Priority should be given to key areas where tortoise density is known to be high. A subset of each type of suitable habitat in the park should be surveyed and monitored following the established guidelines provided by the FWC gopher tortoise management plan and the FPS gopher tortoise resource management standard. During the life of this management plan, at least 150 acres of suitable tortoise habitat should be surveyed and assessed.

Striped Newts have been found in three ponds on the park but breeding evidence has only ever been documented from a single pond. Numerous ponds have been surveyed in cooperation with FWC and other researchers but the park would benefit from additional tier 2 level survey work to sample additional ponds as well as to repeat sampling events at ponds that may have only been sampled once or twice before. The known breeding pond should, at a minimum, be sampled annually (when sufficient water levels are present) to document the continued presence of Striped Newts and any evidence of breeding activity. Surveys and monitoring events should be conducted following protocols established and maintained by FWC so that in-park survey efforts can be compared with past surveys as well as data from other locations.

Gopher Frogs are known to breed in some of the same ponds where Striped Newts have occurred and have many similar habitat requirements for appropriate breeding ponds as well as adjacent upland habitat. Tier 2 level survey work for Striped Newts can also provide a perfect opportunity to conduct targeted presence/absence surveys for Gopher Frog tadpoles in the same survey effort. Several breeding sites for this species have been confirmed in the park but additional survey work will likely discover even more. Surveys and data collection should follow established FWC protocols for ephemeral pond breeding amphibian surveys. Surveys for this species should be conducted at least biennially if weather patterns and water levels are conducive for successful Gopher Frog breeding to occur.

MacGillivray's Seaside Sparrow formerly nested in salt marsh habitat along much of the northeast Florida coastline. This species has declined dramatically in Florida and recent surveys by FWC staff have only documented breeding evidence in Nassau and Duval Counties, well north of Faver-Dykes State Park. Because of this decline, FWC has become interested in this species as a candidate for listing and is conducting additional survey work. Singing males of this species were documented within the park's marshes during the breeding season as recently as 10 years ago. Given how much high quality suitable salt marsh habitat is present within and

adjacent to the park, there is a possibility that this species could persist in this area. Tier 2 surveys are needed to target the presence/absence of this species within the park's marshes. An annual survey for singing males should be conducted during the breeding season at a time when all migrant/wintering Seaside Sparrows should have left the area and any resident birds are likely to be singing. The optimal window for this is late May-early June. Surveys should be conducted early in the morning and can be walking transect(s), point counts, or a combination of the two in areas of suitable habitat. Tape play-back of Seaside Sparrow songs may be used to encourage a response since this species can be very difficult to detect. If any individuals are found, additional follow-up surveys should be conducted to investigate for any evidence of breeding behaviors. Any marsh locations where this species is suspected to breed should be carefully managed to avoid negative impacts.

***Objective C: Monitor and document 18 selected imperiled plant species in the park.***

- |          |  |
|----------|--|
| Action 1 | Continue tier 1 species monitoring   |
| Action 2 | Review list and prioritize potential monitoring to those likely to be documented in expanded populations with tier 2 monitoring. |
| Action 3 | Implement tier 2 monitoring to at least 2 species ranked highest through Action 2.   |
| Action 4 | Share findings with FNAI annually.   |

Eighteen listed plant species are currently known from the park. These are all listed within the Imperiled Species Inventory table. Currently, staff document sightings of these species casually at a tier 1 level and no formal survey/monitoring protocol exists for them. Staff should evaluate historic and current distribution records for the park and a more formalized monitoring protocol for a subset of the imperiled plant species should be developed and implemented as resources allow. Staff should continue to document imperiled plant species presence and locations with GPS points whenever possible and share this data with FNAI annually.

**Exotic Species Management**

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

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

**Objective A: Annually treat 3 acres of exotic plant species in the park.**

- |          |  |
|----------|--|
| Action 1 | Continue mapping exotic plant occurrences periodically, focusing on highest priorities for temporary eradication and on new, small infestations first. |
|----------|--|



- Action 2      Treat known occurrences using best practices and most effective chemicals or alternate methods.
- Action 3      Follow up with post-treatment monitoring at least 8 weeks but less than 26 weeks following to determine need for re-treatment.
- Action 4      Re-treat any areas requiring follow-up.
- Action 5      Work as partner with Matanzas State Forest to control Chinese tallow, Caesarweed and cogongrass in State Forest areas near the park to reduce seed sources.

An exotic removal goal for the park is set each fiscal year. Annual goals are based upon the current needs of the park. Park and district staff and volunteers conduct much of the exotic removal work and FWC invasive plant removal funding serves to supplement our program when we are awarded projects. It is difficult to predict how much exotic removal acreage will be needed or possible in a given year because of fluctuations in weather, funding, and staffing, but on average, 3 acres per year of removal effort should be sufficient to maintain the park in its current maintenance condition. Infestations will be mapped and updated in the FPS exotic plant database biennially. Treatment efforts will be reported quarterly.

***Objective B: Implement control measures on 2 exotic animal species in the park.***

- Action 1      Maintain at least 2 firearm training-certified staff to control exotic animals.
- Action 2      At least twice annually search highly impacted areas of the park for feral hogs for direct control.
- Action 3      As funding is available, hire USDA hog control contractors, targeting areas with the most sensitive habitats for listed plants and animals to reduce impacts to these areas.

The only exotic animal species that are commonly problematic at the park are feral hogs and to a lesser degree, nine-banded armadillos. Staff should regularly remove these two species following established humane methods and protocols. Feral hogs pose the biggest threat to sensitive natural and cultural resources and a removal program for this species must be an ongoing priority. Other exotic animal species occasionally found in the park, such as feral cats, should also be removed following established protocols. All nuisance/exotic animal removals should be documented and properly reported following standard FPS procedures.

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

- Action 1      Set up a wash station in a developed and well-mowed location in the park that can serve as a decontamination area for equipment, including pressurized washing and a gravel pad to capture washing.

- Action 2      Train all staff in proper vehicle decontamination and inspection so they are all available to check their own and contractor resources.

Guidelines for clean sod, fill dirt, limerock, mowing, as well as cleaning and inspecting equipment that enters the park are recommended. New infestations of exotics can be prevented by ensuring that contractors and staff clean their equipment before entering the park and do not spread exotics by moving from a contaminated area within the park without cleaning their equipment. Any vendor providing contractual services in the park related to vegetation management shall be required to clean their equipment prior to arrival and departure, and will be subject to inspection by park staff. Contractual language will require these preventative measures to reduce the chances of accidental invasive species introduction.

### **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 will implement the following goals, objectives and actions, as funding becomes available, to preserve the cultural resources found in Faver-Dykes 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 site 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 the 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 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 the DHR.

#### ***Objective A: Assess and evaluate 9 of 9 recorded cultural resources in the park.***

- Action 1      Visit each recorded cultural resource and record condition.  
Action 2      Work with DHR and BNCR to prioritize the sites.

- Action 3      Set up a general schedule that adequately addresses preservation efforts of the highest priority sites versus lower priority sites.

The park intends to have the 9 currently recorded cultural sites/structures evaluated and condition assessments updated during the plan period. Park staff will visit each site and record information on the site's current condition as well as any possible threats to the site's condition. Site assessments should be documented on appropriate forms and a copy sent to the Division of Historical Resources for inclusion in each site's master site file. Copies should also be maintained in the park and district files. The park will prioritize preservation efforts based upon the assessments and evaluations.

As a part of the assessment and FMSF update process, the large mound associated with 8SJ35 should receive special attention. As described in the cultural resource management section, the large trees growing on the mound need to be evaluated with the input from qualified archeologists to determine the best course of action for long-term protection of the site while minimizing visitor impacts that may occur if the site is cleared and becomes visible from the park drive. Park staff should coordinate with DHR, BNCR, and other appropriate offices for guidance on this issue. A plan should be developed and implemented within 5 years.

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

- Action 1      Determine the age of three ditches at the park, and record any that qualify with FMSF.
- Action 2      Record 3 historic structures with the FMSF upon reaching 50 years of age.
- Action        Develop Scope of Collections Statement

All known archaeological and historic resources in the park are currently documented with the Florida Master Site File (FMSF). Any new information that is found regarding any of the known cultural sites should be documented with the appropriate FMSF(s) to expand our knowledge of and reference materials for each site. Materials should be submitted as they are found.

The park's history is fairly well known and documented. However, there are always opportunities to learn more. Park staff should be aware of existing cultural resources and watchful for any new resources that may be discovered within the park. Any new finds will be assessed and appropriately documented as soon as possible following their discovery. The park has had a predictive modeling study conducted which identifies areas of high, medium, and low probability of containing cultural resources. Staff should be especially careful when working in areas identified as high probability and report any possible cultural resources they may discover. The original portion of the park had a thorough phase 1 survey conducted

but the newer acquisitions have only the predictive model. Should funding and resources become available, the newer portions of the park would benefit from a thorough phase 1 survey.

There are three known ditches in the park that may be historic in nature. Additional research and investigation is needed to determine their purpose and history as well as any impacts they may have on natural resources. Staff should pursue opportunities to learn more about the ditches and determine if they are associated with known sites or worthy of being recorded as their own FMSF location.

The park currently does not maintain a formal collection of artifacts and as such, does not have a formal scope of collections statement. If collections items are acquired in the future, the park will develop a scope of collections statement accordingly at that time.

Faver-Dykes State Park contains 3 park structures that will become 50 years old during the life of this plan. These include the park's shop building, the assistant park manager residence, and the campground restroom building. All three were constructed at the park in 1969 and are currently in good condition. Florida statute requires that they be considered historic upon reaching 50 years of age. Staff should record these structures as appropriate with the FMSF as historic structures during the year that they reach the 50 year old threshold. Once they become registered historic structures, regular monitoring and inspections of should commence as well as appropriate regular maintenance and repairs in accordance with DHR guidelines for historic structures.

***Objective C: Maintain 9 of 9 recorded cultural resources in good condition.***

- |          |   |
|----------|---|
| Action 1 | Implement regular monitoring program for 9 sites.                                   |
| Action 2 | Highest priority sites should be maintained following DHR and BNCR recommendations. |

All recorded archeological sites and historic structures are currently in good condition. Most are located in protected areas and the park staff take pride in their condition and regularly maintain them. Regular monitoring and inspections of sites and structures should continue as well as appropriate regular maintenance to keep all 9 sites in good condition. Sites should be visited and visually inspected at least annually. Any necessary repairs and/or stabilization/preservation activities should be conducted in accordance with DHR guidance to maintain the cultural and historical integrity and significance.

**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.

Faver-Dykes has undergone a timber assessment by F4-Tech, a private forestry consultant. Upon submission of the timber assessment by F4-Tech (Addendum 8), timber management recommendations will be implemented as staffing and budgetary resources allow.

### **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, the DRP works with the local mosquito control district to achieve consensus. By policy of DEP since 1987, aerial adulticiding is not allowed, but larviciding and ground adulticiding (truck spraying in public use areas) is typically allowed. The 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.

Faver-Dykes has an adopted arthropod control plan with the local Mosquito Control District. The current approved plan was adopted in 2009, and is up to date with the latest in control options. During the life of this unit management plan, staff should pursue updating the park's arthropod control plan again in cooperation with the local mosquito control district should any new chemicals or other approved control options become available that warrant updating the plan. Otherwise, the current plan should be relevant and appropriate for the duration of this unit management plan cycle.

The current adopted arthropod management plan allows for surveillance activities including landing rate counts, light traps, citizen complaints, and larval dips to monitor levels of saltmarsh and floodwater mosquitos. The approved plan does not allow for the stocking of predacious fish within the park to protect sensitive ephemeral pond habitats and the associated amphibians that require fishless ponds for successful reproduction. The use of control traps and bait stations is allowed if approved by the park manager and district biologist. The plan allows for the use of *Bacillus thuringiensis israelensis* (BTI) as the preferred larvicide. The larvicides Bs and Methoprene may be used selectively but are not allowed in the estuarine marshes or in any tributaries, ditches, or creeks that drain into the estuarine community. Non-petroleum surface films and monomolecular films are not permitted for use in the park. The creation of any physical alterations such as ditches, dikes, impoundments, etc. are prohibited. Larvicides are permitted for ground application or aerial application (Bti only) and applications must be

coordinated with the park manager. Ground application of adulticides is restricted to truck spraying in public use areas and is allowed only upon the request of the park manager after surveillance techniques approved in the plan have indicated a need. Approved adulticides are limited to AquaReslin (Permethrin).

### **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 considered recommendations of the land management review team and updated this plan accordingly.

Faver-Dykes State Park was last subject to a land management review on September 13, 2013 (Addendum 9). 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.

Faver-Dykes State Park is located within St. Johns County about 55 miles south of Jacksonville, 30 miles east of Palatka, and 22 miles south of St. Augustine in the northeastern part of the state. Approximately 350,000 people live within 30 miles of the park (U.S. Census 2010).

According to the U.S. Census Data (2013), approximately 16% of residents in St. Johns County and 26% in Flagler County identify as black, Hispanic or Latino, or another minority group. Half of residents in St. Johns and Flagler can be described as youth or seniors (U.S. Census 2010). 66% of the population in St. Johns County and 60% in Flagler County are of working age (16 to 65) (U.S. Census Bureau 2010). Flagler County's per capita personal income was \$36,753 in 2013. St. Johns County ranked 7<sup>th</sup> statewide in per capita personal income at \$54,082 (above the statewide average of \$41,497) (U.S. Bureau of Economic Analysis 2014).

A significant amount of resource-based recreation opportunities exist within 15 miles of Faver-Dykes State Park. Anastasia State Park, Fort Mose Historic State Park, and Washington Oaks Gardens State Park offer biking, boating, paddling, fishing, hiking, swimming, beach access, and surfing. Guana Tolomato Matanzas National Estuarine Research Reserve, maintained by DEP, includes a variety of preserves, management areas, and conservation lands in the area. Managed by the Florida Forest Service, Matanzas State Forest provides canoeing, fishing, wildlife viewing, hunting, and primitive camping. The National Park Service is responsible for Fort Matanzas National Monument and Castillo de San Marcos National Monument nearby.

Several parks and preserves managed by St. Johns and Flagler County are located in the vicinity of the park. Lehigh Greenway, Varn Park, and Betty Steflik Preserve in Flagler County allow wildlife viewing and hiking. Princess Place Preserve, to the parks immediate south, allows biking, camping, paddling, hiking, and fishing on the Matanzas River. At Southeast Intracoastal Waterway Park visitors can hike, picnic, and fish. Moses Creek Conservation Area, Deep Creek Conservation Area, and the Graham Swamp Conservation Area, all managed by the St. Johns River Water Management District provide hiking, bicycling, wildlife viewing, and fishing. The River to Sea Preserve is along A1A and the Atlantic Intracoastal Waterway providing opportunities for beach access, biking, camping, paddling, fishing, and hiking.

The park is located in the Northeast Vacation Region, which includes Baker, Clay, Duval, Flagler, Nassau, Putnam, and St. Johns counties (Visit Florida 2013). According to the 2013 Florida Visitor Survey, approximately 6.6% of domestic visitors to Florida visited this region. Roughly 86% visitors to the region traveled to the Northeast for leisure purposes. The top activities for domestic visitors were visiting friends or relatives and beach/waterfront. Summer was the most popular travel season, but visitation was generally spread throughout the year. Most visitors traveled by non-air (81%), reporting an average of 3.5 nights and spending an average of \$115 per person per day (Visit Florida 2013).

## **Existing Use of Adjacent Lands**

Adjacent lands fall within St. Johns County and Flagler County. The county line serves as the park's southern boundary. Land in St. Johns County is zoned for open space/recreation in all directions. Matanzas State Forest is just to the north. To the southwest, there is a district of commercial development near the Interstate 95 junction. There are gas stations and typical highway commercial activity at the entrance road of the park. In Flagler County, surrounding lots are owned by the St. Johns River Water Management District (SJRWMD) and zoned for agricultural use. The Princess Place Preserve is just to the south of the park. Pellicer Creek separates the park from Flagler County.

## **Planned Use of Adjacent Lands**

Surrounding property in St. Johns County is designated for rural and silviculture activities. Conservation lands are identified to the east of the park. Park and recreational lands of Matanzas State Forest are to the parks north. Near Interstate 95, there is a mixed-use district serving commercial uses. Agricultural and timberlands are designated in Flagler County. The Princess Place Preserve is specified for recreational activities.

The eastern properties of Faver-Dykes State Park, on the east side of Pellicer Creek, are adjacent to the South Anastasia Overlay District. The South Anastasia district is characterized by Old Florida rural beach communities and special design measures are implemented to maintain the local aesthetics. To the southeast, the Town of Marineland has established a sustainable tourism industry based on their natural and cultural resources, such as the River to Sea Preserve.

St. Johns and Flagler County are members of the Northeast Florida Regional Planning Council. It is expected that the region will increase by 1.6 million people by 2060 (NEFRC 2014) making the regional population exceed 3.1 million residents. St. Johns and Flagler alone are expected to contribute over 800,000 to that total. The region is hoping to attract high-tech industries and increase accessibility to their state universities in order to attract a younger, more educated workforce.

The Flagler County Comprehensive Plan specifies that tree harvesting is prohibited within 150 feet of the mean high water mark of the Matanzas River and 75 feet of the water course bank of Pellicer Creek.

## **Florida Greenways and Trails System (FGTS)**

The Florida Greenways and Trails System (FGTS) is made up of existing, planned and conceptual non-motorized trails and ecological greenways that

form a connected, integrated statewide network. The FGTS serves as a green infrastructure plan for Florida, tying together the greenways and trails plans and planning activities of communities, agencies and non-profit organizations throughout Florida. Trails include paddling, hiking, biking, multi-use and equestrian trails. The Office of Greenways and Trails maintains a priority trails map and gap analysis for the FGTS to focus attention and resources on closing key gaps in the system.

In some cases, existing or planned priority trails run through or are adjacent to state parks, or they may be in close proximity and can be connected by a spur trail. State parks can often serve as trailheads, points-of-interest, and offer amenities such as camping, showers and laundry, providing valuable services for trail users while increasing state park visitation.

The Florida Circumnavigational Saltwater Paddling Trail, or the CT, spans 1,515 miles along Florida's coast, from Pensacola to Fort Clinch. Segment 23, a 48-mile link beginning at Smyrna Dunes Park ends at Faver-Dykes State Park/Mellon Island. Segment 24 begins at the park and runs 35.5 miles ending at Palm Valley Road (Highway 210) near Ponte Vedra Beach.

Pellicer Creek is a designated Florida paddling trail. The East Coast Greenway Trail runs along A1A to the east of the park property.

## **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**

Faver-Dykes State Park has three focus areas. The park as it existed prior to 2003, a large tract of timberland acquired in 2003 from Rayonier, and two islands in the Matanzas River owned by the Town of Marineland and managed by the park. The older parcel, adjacent to Pellicer Creek, has mesic flatwood, sandhill, upland mixed forest, swamps, baygall, blackwater stream and marshes. A full range of public outdoor recreation is offered. The unpaved roads through the park are reminiscent of old country roads, providing an Old Florida type of experience.

The 4,166-acre parcel of timberland was logged extensively before purchase. Park staff will focus on restoring vegetation on this parcel. Opportunities exist for developing an comprehensive trail network to accommodate hiking, biking, and horseback riding. Connecting the trail system to the one on Matanzas State Forest to the north would enable visitors to recreate seamlessly between the two properties.

Two islands in the Matanzas River, Mellon Island and Jordan Island are owned by the town of Marineland but are managed as part of Faver-Dykes. These are natural islands of largely disturbed natural communities. A portion of Jordan Island's north end is maritime hammock. Inactive spoil sites are adjacent to both properties. The views to and from these islands are impressive. Opportunities exist for picnicking, primitive camping, and wildlife viewing on these islands.

## **Water Area**

The southern part of this park has many water focuses. Rootan Branch runs from the north central part of the park and empties into Pellicer Creek. This blackwater stream flows through a diversity in natural communities providing good opportunities for wildlife viewing. Pellicer Creek is protected as part of the Pellicer Creek Aquatic Preserve and the Guana Tolomato Matanzas (GTM) National Estuarine Research Reserve. The canoe launch and dock in the day use area provide creek access. Excellent opportunities exist for fishing, boating, paddling, and wildlife viewing.

## **Shoreline**

Pellicer Creek borders the park on the south and the estuarine tidal marsh and Matanzas River form the eastern boundary. The creek is accessible for paddling and boating but the very shallow nature of the tidal marsh blocks access to the Matanzas River from the park.

## **Natural Scenery**

Much of the natural scenery value lies in the water overlooks. Large expanses of estuarine tidal marsh provide scenic views from hiking trails. The expanse of marsh, the quiet waters of Pellicer Creek and the changing banks of the blackwater stream, Rootan Branch, are all significant features. As restoration progresses on the newly purchased property, additional features will be found and enhanced.

## **Significant Habitat**

The variety of plant communities accounts for the abundant wildlife present. Pellicer Creek is home to waterfowl, alligators, otters and raccoons. Deer, turkey, hawks, owls, squirrels, bobcats, foxes and opossums range throughout the uplands. Ten listed plant species and 26 designated animal species occur at Faver-Dykes. There are excellent opportunities for nature study and wildlife viewing in the park.

## **Archaeological and Historical Features**

There are seven archaeological sites and two historic structures recorded at Faver-Dykes State Park. The primary archaeological feature is the ten-foot high Pellicer Mound. The Carter Plantation that existed from 1792 to 1803 is located along the trail to Hemmings Point. These cultural resources provide important opportunities for interpreting human use of this property through time.

## **Assessment of Use**

All legal boundaries, significant natural features, structures, facilities, roads and trails existing in the unit are delineated on the base map (see Base Map).

Specific uses made of the unit are briefly described in the following sections.

## **Past Uses**

Archaeological sites on the property confirm use by Native Americans. In the late 1700- early 1800, portions of the property were settled through Spanish land grants and put to agricultural use. After the property was abandoned, it was used for timbering, turpentine, hunting, fishing and camping. The original parcel was donated to the state by Hiram Hall Faver, in memory of his parents, with the stipulation that it be kept in as natural a state as possible. The more recent acquisitions were owned by timber companies and portions were used for hunting.



## **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 allow typical state park uses and facilities necessary for the provision of resource-based recreation.

The current future land use designation is Parks and Open Space with land along the creek identified for Conservation. Park and open space land allows active and passive recreation opportunities while conservation lands are identified as environmentally sensitive and allow only low-intensity activities. Resource-oriented uses are permitted while maintaining a minimum percentage of open space on site (St Johns County 2010). The current zoning classification is open space and recreation (St. Johns County 2013). There are no expected conflicts between the future land use or zoning designations and typical state park land uses.

## **Current Recreational Use and Visitor Programs**

Resource-based outdoor recreation in Florida continually increases in popularity. The growth of Florida's resident and tourist populations brings increasing pressure for access that is more widespread and for denser levels of public use in the natural areas available to the public. Consequently, one of the greatest challenges for public land management today is the balancing of reasonable levels of public access with the need to preserve and enhance the natural and cultural resources of the protected landscapes.

The park offers opportunities for standard and group camping, boating, paddling, fishing, picnicking, hiking and nature study. Fishing in Pellicer Creek is considered excellent, with opportunities to catch speckled trout, redfish, sheepshead and flounder. Canoes are available for rent by advanced registration. Nature trails have been established to take in a variety of ecosystems and water overlooks. Pellicer Creek is a popular site for birding and wildlife viewing. The park is listed on the Great Florida Birding and Wildlife Trail.

Faver-Dykes State Park recorded 39,873 visitors in FY 2015/2016. By DRP estimates, the FY 2015/2016 visitors contributed \$3,667,386 in direct economic impact, the equivalent of adding 39 jobs to the local economy (FDEP 2016).

## **Other Uses**

A cell tower is located on an out-parcel in the southeastern section of the property with access rights across park property from U.S. Highway 1.

## **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 Faver-Dykes State Park all wetlands and floodplains as well as known imperiled species habitat have been designated as protected zones. The park's current protected zone is delineated on the Conceptual Land Use Plan.

## **Existing Facilities**

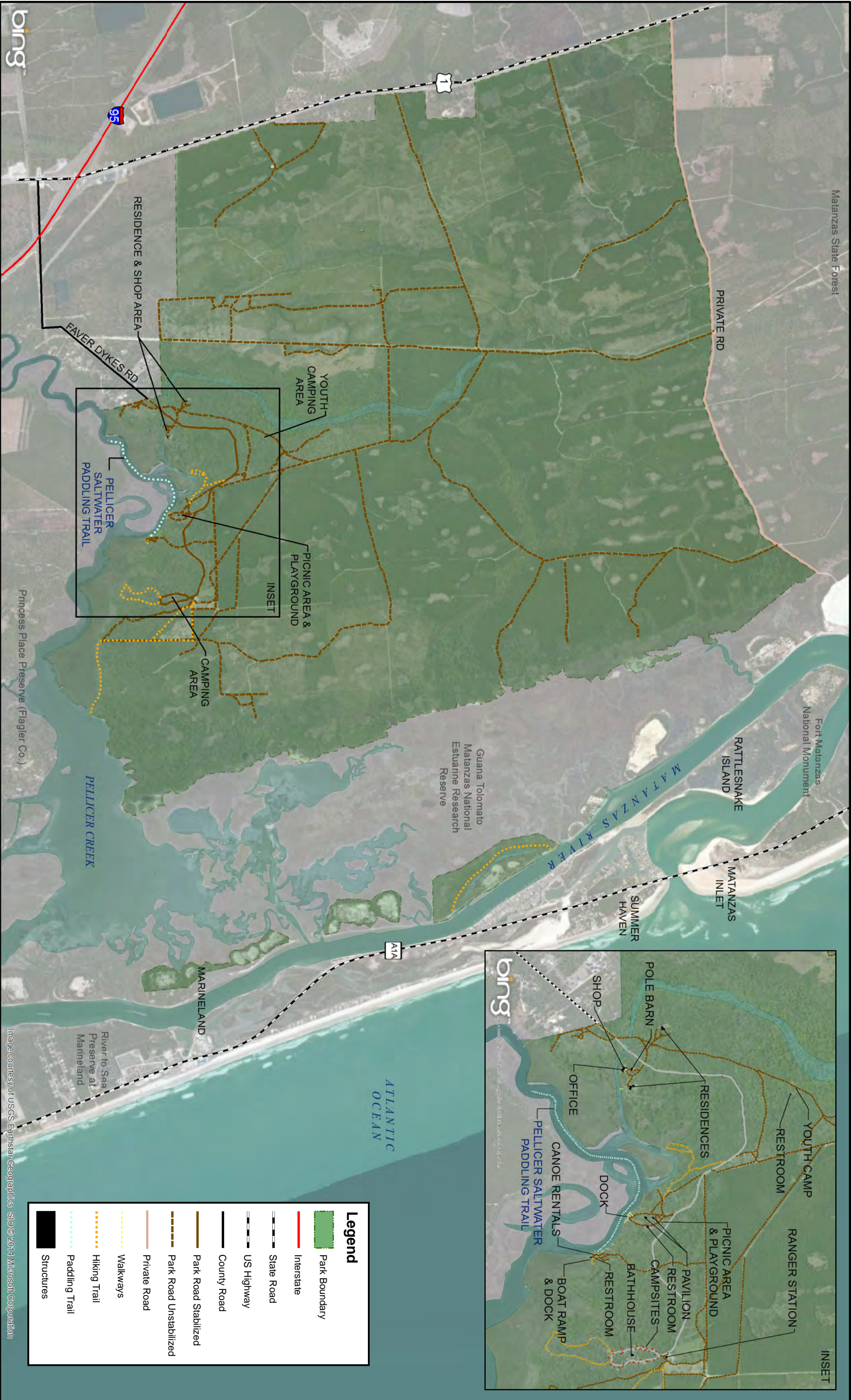
Existing recreation facilities are located on the original parcels. The day use area has a fishing dock, restroom, and a boat ramp providing access to Pellicer Creek. Rental canoes are available and there is a designated State Canoe Trail along the creek. The picnic area has views out across picturesque Pellicer Creek and the salt marshes to Princess Place Preserve, a Flagler County park. Facilities provided for picnicking are two picnic pavilions, a playground and a restroom (see Base Map).

One of the nature trails begins near the picnic area and winds through the pinelands. A second trail begins at the camping area and leads through a mature hardwood hammock to a marsh overlook. North of the camping area, there is a trailhead with parking for 12 cars.

There are two areas for overnight stays, a standard camping area and a group camp. The standard camping area, situated in an upland mixed forest, has 30 sites and a restroom. The dirt roads and shaded setting lends a rustic, old Florida feel valued by visitors. The primitive group camp has the capacity for 50 people. This area, sited on a hill along the banks of Rootan Branch, is also in upland mixed forest. Facilities at the group camp include a pit-toilet, pitcher pump, and fire ring.

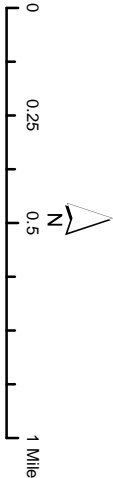
Support facilities include a shop building, 4-bay open pole barn, a ranger residence, and an old trailer that serves as an office. These are all located





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FAVER-DYKES STATE PARK



Princess Place Preserve (Flagler Co.)

PELLICER CREEK

MARINELAND

River to Sea Preserve at Marineland

ATLANTIC OCEAN

Guana Tolomato  
Matanzas National  
Estuarine Research  
Reserve

Fort Matanzas  
National Monument

RATTLESNAKE  
ISLAND  
MATANZAS  
INLET

SUMMER  
HAVEN

A1A

1

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RESIDENCE & SHOP AREA

FAVER DYKES RD

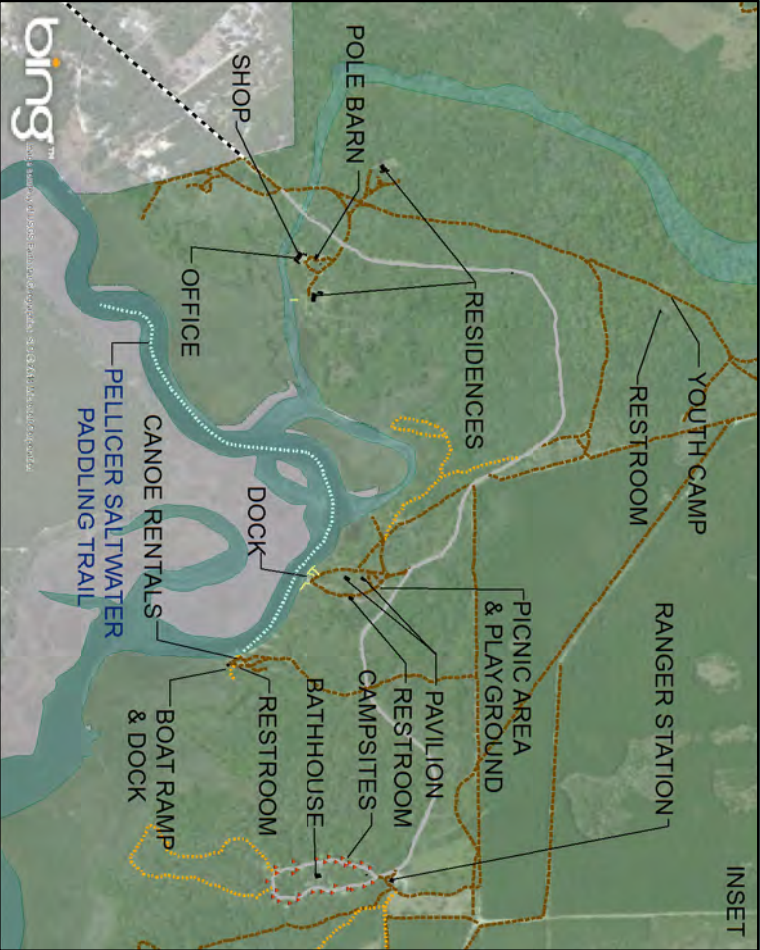
YOUTH  
CAMPING  
AREA

PICNIC AREA &  
PLAYGROUND

INSET

CAMPING  
AREA

PELLICER  
SALTWATER  
PADDLING TRAIL



INSET

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**Legend**

- Park Boundary
- Interstate
- State Road
- US Highway
- County Road
- Park Road Stabilized
- Park Road Unstabilized
- Private Road
- Walkways
- Hiking Trail
- Paddling Trail
- Structures

BASE MAP

Image courtesy of USGS Earthstar Geographics SIO © 2014 Microsoft Corporation





near the entrance off the main road. Park fee collection is handled at the entrance with an iron ranger. The campground host collects campground registration fees. The camping area has a host site and a volunteer site.

## **Recreation Facilities**

### **Campground (30 sites)**

#### **Primitive Group Camp**

Fire circle

Pit toilet

#### **Day Use Area**

Picnic pavilion (2)

Scattered picnic tables and grills

Playground

Boat ramp

Fishing dock

Restroom (2)

#### **Trailhead Area**

Parking (12)

### **Trails**

Nature (1 mi.)

Hiking (5 mi.)

Paddling (.75 mi.)

## **Support Facilities**

### **Shop/Residence Area**

Shop building (4-bay)

Park Office trailer

Equipment shed

Storage shed

Staff residence

Volunteer campsite (2)

## **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 748 users per day.***

The park will continue to provide opportunities for camping, picnicking, fishing, paddling, boating, hiking, bicycling, nature study, and wildlife viewing. Interpretive programs will continue to be offered throughout the year.

***Objective: Expand the park's recreational carrying capacity by 816 users per day.***

Florida's Statewide Comprehensive Outdoor Recreation Plan (SCORP) indicates that participation rates in this region for saltwater beach activities, freshwater fishing, freshwater boat-ramp use, visiting archaeological and historic sites, wildlife viewing, bicycle riding, hiking, and camping are higher than the state average with demand for additional facilities increasing through 2020 (FDEP 2013). To help meet this demand, additional opportunities will be provided at Faver-Dykes State Park for many of these activities including camping, hiking, biking, horseback riding, picnicking, fishing, and wildlife viewing.

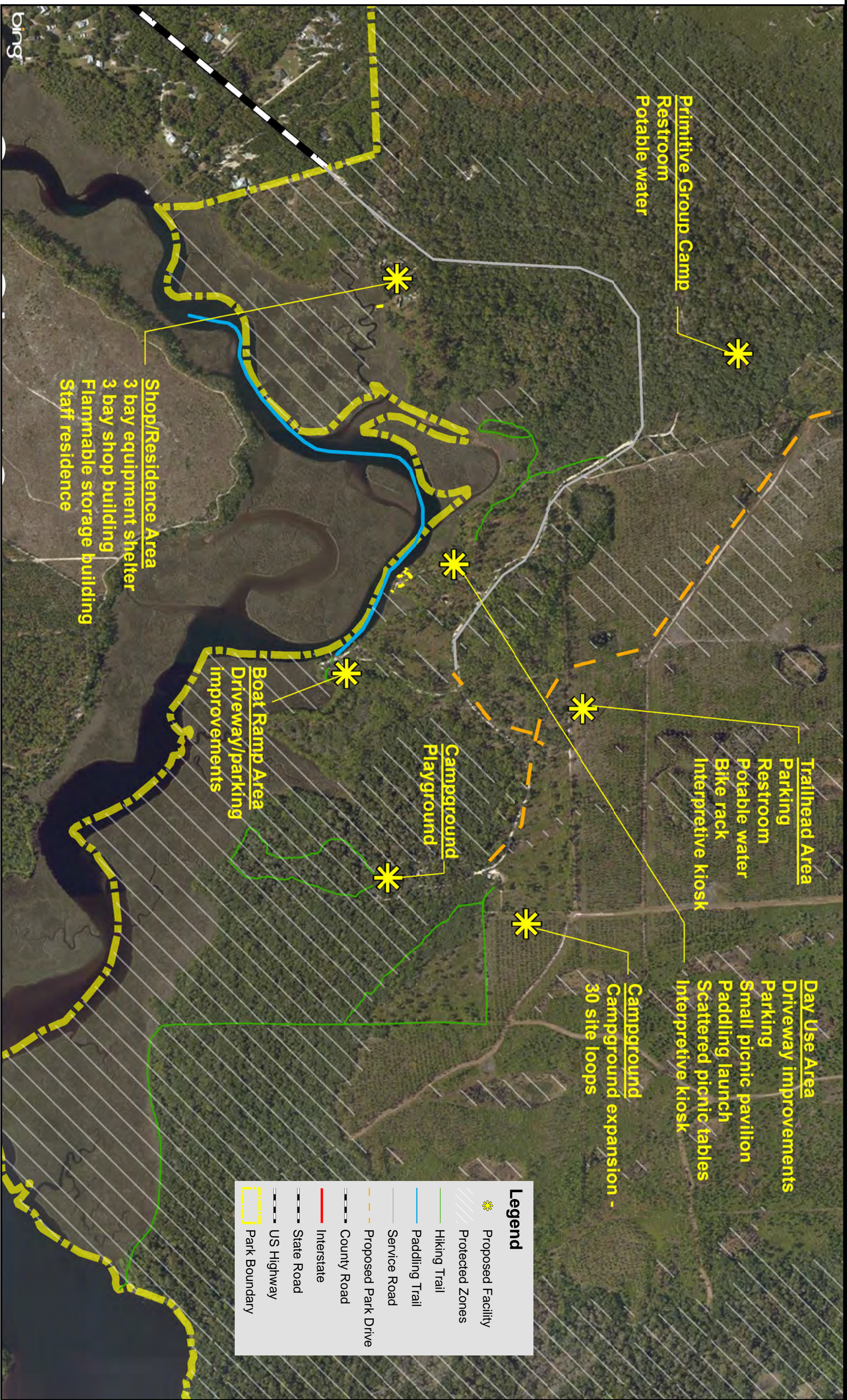
















***Objective: Continue to provide the current repertoire of 5 interpretive, educational and recreational programs on a regular basis.***

Four interpretive programs are currently offered to park visitors on a regular basis. These programs include a History of Faver-Dykes program during which a ranger presents the history of Faver-Dykes in the picnic area. Nature hikes are offered on a monthly basis with rangers leading visitors on a trail to Hemming's point and discussing the park's native flora and fauna. Several times per year, a ranger leads a fishing clinic titled "Fishing the Pellicer", where visitors are given tips and tricks on fishing the Pellicer Creek. A prescribed fire program is typically offered once or twice each year where visitors learn about fire dependent communities. One major event, "A Day in Old Florida," is held annually in the park. This event focuses on Florida history and features live music, food, children's activities, living history demonstrators and reenactors, and canoe/kayak rentals.

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

Improving self-guided interpretation at Faver-Dykes will allow for visitors to better understand the natural and cultural resources of the park when ranger programs are not offered. Rotating the information found in an interpretive kiosk at the picnic area can include topics such as prescribed fire, bats, carnivorous plants, mammals of Faver-Dykes, history of the inhabitants of Faver-Dykes, and others. Offering additional interpretive programs to campers remains a priority for Faver-Dykes. In addition to nature hikes already offered, expanding to include a monthly or weekly "Bike Ride with a Ranger" can promote a recreational option to compliment fishing/boating, and would also allow visitors to explore more of the park with a guide to point out natural communities and unique features.

## **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 and new facilities

needed to implement the conceptual land use plan for Faver-Dykes State Park.

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

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

***Objective: Improve/repair 6 existing facilities and 10 miles of trail.***

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

**Day Use Area:** A stabilized driveway and designated parking area will be provided at the picnic area for the safety and convenience of visitors. The fishing boardwalk will be replaced and one small, accessible picnic pavilion will be provided here. A new paddling launch is proposed for the Day Use Area. The launch at the existing boat ramp is not an ideal location due to safety concerns caused by paddlers and boaters competing for the same space. The former boat ramp area in the Day Use Area is a possible spot for relocating the paddling launch. The addition of a canoe/kayak drop-off at this location would be compatible with the existing trailhead and help alleviate congestion in the picnic area by segregating uses. Recommended improvements and amenities for this area include a stabilized driveway with a designated parking area, scattered picnic tables, and interpretive kiosk.

**Boat Ramp Area:** Improvements for the existing boat ramp area include a stabilized driveway and designated parking.

**Campground:** Camping opportunities will be expanded with the addition of up to two standard camping loops with 30 sites each. The new loops can be accommodated in the flatwoods on the north and east sides of the existing campground. A playground will be provided near the bathhouse in the existing campground.

**Primitive Group Camp:** The primitive group camping area will be improved with the addition of a restroom and potable water.

**Trailhead Area:** The existing trailhead area will be moved to a convenient location between the campground and day use area. This area will be

developed to serve both hikers and bikers. Recommended amenities include stabilized parking, a restroom, potable water, a bike rack, and an interpretive kiosk.

**Trails:** As restoration of the logged property is complete, new trails should be developed for hiking, biking and equestrian use. Trails will be developed in cooperation with volunteers from the respective user groups. All new trail development should be sensitive to wetlands.

**Shop Area:** Additions to the shop area include a 3 bay/office building, a 3 bay equipment shelter, a flammable storage shed, and a staff residence.

***Objective: Construct 3 new facilities and 4 miles of road.***

**Equestrian Campground:** Equestrian camping opportunities will be provided with the addition of an equestrian campground. This will be a primitive facility with a capacity of 10 to 15 rigs. Recommended amenities include a restroom and potable water. An equestrian trailhead will be located in the vicinity of the campground. An interpretive kiosk will be provided at the trailhead.

**Entrance Area:** A new park entrance is proposed along US Highway 1 at the approximate halfway point between the north and south boundaries. A ranger station with a small parking lot for staff and visitors will be provided. The basic entrance package with a sign, fencing, and landscaping will be provided at the highway intersection.

**Parkwide:** A new paved park drive will be constructed from the proposed entrance on US Highway 1 to the campground and day use areas. The DRP will need to coordinate with the Florida Department of Transportation to implement traffic safety improvements at the intersection of the park drive and highway.

### **Facilities Development**

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



**Day use Area:**

Driveway improvements  
Parking  
Small picnic pavilion  
Paddling launch  
Scattered picnic tables (5)  
Interpretive kiosk

**Boat Ramp Area**

Stabilized driveway  
Parking

**Campground:**

Playground  
Standard 30 site loop (up to 2)

**Primitive Group Camp:**

Restroom  
Potable Water

**Equestrian Campground**

Restroom  
Potable Water  
Trailhead interpretive kiosk

**Trailhead Area:**

Parking  
Restroom  
Potable water  
Bike rack  
Interpretive kiosk

**Trails:**

Hiking (5 mi.)  
Biking (10 mi.)  
Equestrian (10 mi.)

**Entrance Area:**

Ranger station  
Parking  
Basic entrance package

**Shop/Residence Area:**

3 bay shop/office building  
3 bay equipment shelter  
Flammable storage shed  
Staff residence

**Parkwide:**

Paved park drive (4 mi.)

**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 6).

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 6.

**Table 6. Recreational Carrying Capacity**

<b>Activity/Facility</b>	<b>Existing Capacity*</b>		<b>Proposed Additional Capacity</b>		<b>Estimated Recreational Capacity</b>	
	<b>One Time</b>	<b>Daily</b>	<b>One Time</b>	<b>Daily</b>	<b>One Time</b>	<b>Daily</b>
<b>Trails</b>						
Hiking	30	60	50	100	80	160
Biking			100	400	100	400
Equestrian			80	160	80	160
<b>Picnicking</b>	120	240	28	56	148	296
<b>Camping</b>						
Standard	240	240	480	480	720	720
Primitive Group	50	50			50	50
Primitive	48	48			48	48
Equestrian			120	120	120	120
<b>Fishing</b>						
Shoreline	5	10			5	10
<b>Boating</b>						
Paddling	40	80			40	80
Power	40	80			40	80
<b>TOTAL</b>	<b>543</b>	<b>748</b>	<b>708</b>	<b>816</b>	<b>1251</b>	<b>1564</b>

\*Existing capacity revised from approved plan according to DRP guide

### **Optimum Boundary**

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

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

restrictive environmental land use or zoning regulations. Identification should not be used as the basis for permit denial or the imposition of permit conditions.

The few small out-parcels within the park boundary should be purchased to complete the existing acquisition boundary. Approximately 300 acres southwest of the park are also on the optimum boundary. This property would allow for the protection and restoration of upland and wetland natural communities and help to protect the Pellicer Creek watershed. It would also provide opportunities for additional recreational activities. Approximately 54 acres along US Highway 1 are also proposed for the optimum boundary. These properties would enhance the boundary for park operations and management. At this time, no lands are considered surplus to the needs of the park.



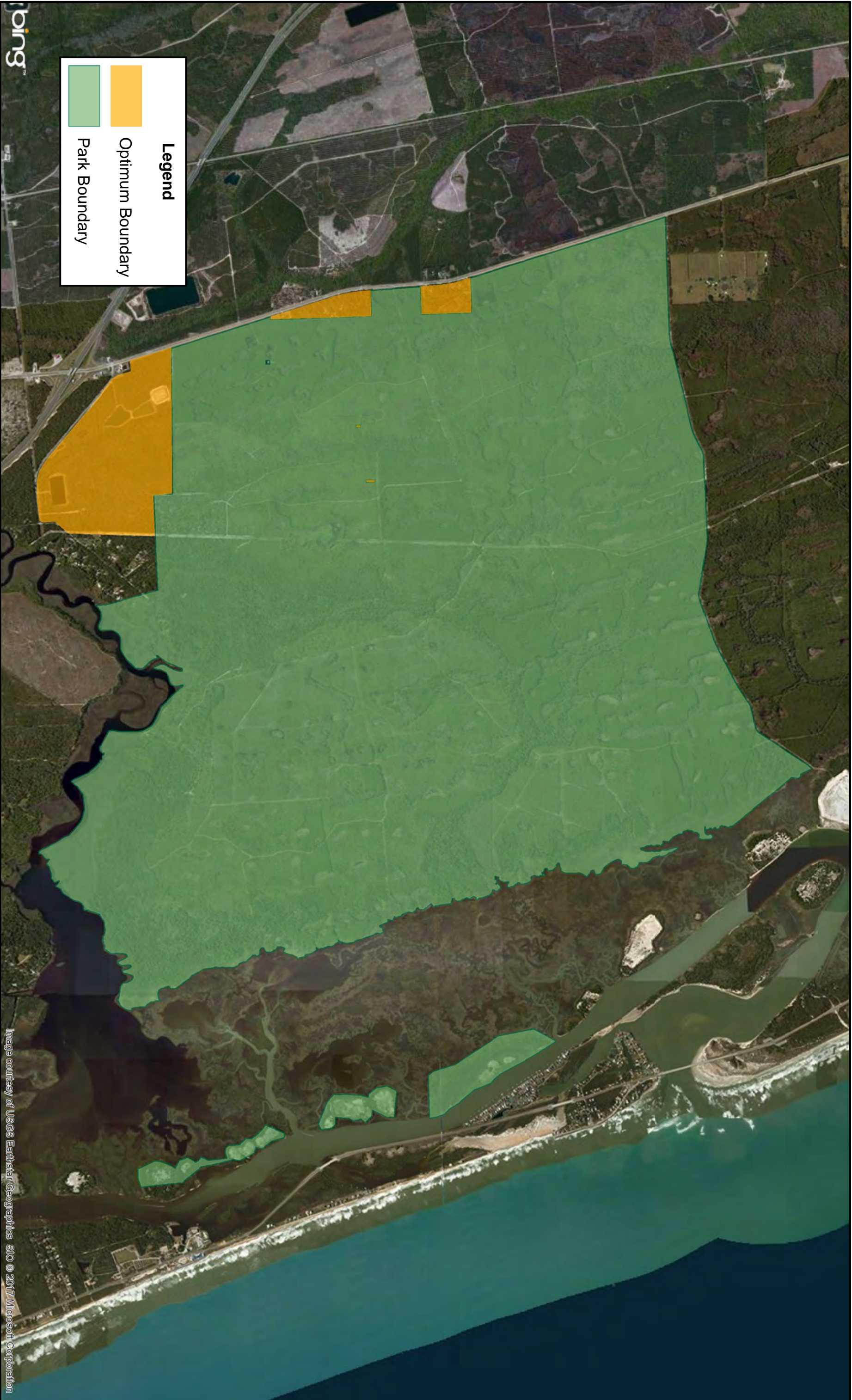


Image courtesy of USGS Earthstar Geographics SIO © 2017 Microsoft Corporation

# FAVER-DYKES STATE PARK

## 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 Faver-Dykes State Park in 2005, significant work has been accomplished and progress made towards meeting the DRP's management objectives for the park. These accomplishments fall within three of the five general categories that encompass the mission of the park and the DRP.

#### **Park Administration and Operations**

- Ranger Station Interior upgraded and refurnished
- Outpost Camp Store added to interior of Ranger Station
- Shop Office interior upgraded and refurnished

#### **Resource Management**

##### **Natural Resources**

- 2,000 wiregrass and 2,000 longleaf pine plugs planted in harvested zones
- Approximately 880 acres of planted pine third row thinned and 200 acres salvage harvest after wildfire
- 7 culverts installed throughout the park to improve natural water flow
- Tidal monitoring station installed at boat ramp through partnership with GTMNERR
- 3,445 acres treated with prescribed fire
- 76 acres exotics treated
- 18 listed plant species documented
- 32 listed animal species documented
- Approximately 30 gallons of lop-sided Indian grass and other native grasses collected and spread throughout the park.
- Approximately 127 acres mechanically treated
- Fire line improved 5.2 mi.
- Approximately 200 hogs and armadillos removed from 2008-2016



## **Cultural Resources**

- Identified new midden site and applied for FMSF site number
- 2 interpretive signs installed at cultural sites
- Erosion control implemented and monitoring conducted at all cultural sites
- Created FMSF booklet for all cultural sites in the park

## **Recreation and Visitor Services**

- Installation of 2 Interpretive Kiosks in the picnic area and primitive youth camp.
- Designed and printed park brochures relating to the boating and hiking trails
- 10 interpretive panels installed and upgraded along trails

## **Park Facilities**

- ADA walkways installed in the picnic area around the pavilions and restroom facility
- Boat ramp walkway widened and resurfaced to meet ADA requirements
- ADA upgrades completed for all park restroom facilities
- 3 ADA parking pads installed in the picnic area
- 2 ADA camping sites installed at campground
- ADA sidewalk installed to access canoe rental equipment
- Picnic area fishing dock resurfaced and upgraded to meet ADA requirements
- Youth camp benches, grills and restroom facilities upgraded
- Main entrance sign and landscaping upgraded
- Installed composting restroom at ranger station
- Main Entrance Gate upgraded to electric to provide better visitor access
- Upgraded all benches along the trails, at the boat ramp, and in the campground
- Installed 2 new trails, primitive campsites and picnic areas on Jordan and Mellon Island
- Installed trailhead at Ranger Station
- Installed campfire circle and movie screen in campground
- Installed .2 mile Pine Loop Trail

## **MANAGEMENT PLAN IMPLEMENTATION**

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

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

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



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.	C	\$203,000
Objective B	Expand administrative support as new lands are acquired, new facilities are developed, or as other needs arise.	C	\$221,000
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.	LT	\$48,000
	Action 1 Secure funding and implementation resources	UFN	\$43,000
	Action 2 Review findings and determine further actions	ST	\$5,000
Objective B	Restore natural hydrological conditions and function to approximately 15 acres of depression marsh natural community.	UFN	\$47,000
	Action 1 Remove woody plants via mechanical methods and conduct timber management activities in accordance with best management practices.	UFN	\$27,000
	Action 2 Burn depression marshes to impact woody encroachment	C	\$20,000
Goal III: Restore and maintain the natural communities/habitats of the park.			
Measure		Planning Period	Estimated Manpower and Expense Cost* (10-years)
Objective A	Within 10 years have >2250 acres of the park maintained within optimal fire return interval.	LT	\$1,061,000
	Action 1 Burn at least 900 acres every year	C	\$750,000
	Action 2 Burn an additional 1,000 to 1,800 acres above Action 1 on optimal years	C	\$190,000
	Action 3 Prepare firelines on an additional 300 acres with marginal or nonexistent firelines	LT	\$110,000
	Action 4 Thin 300 acres of pine plantation to densities that allow prescribed fire re-entry	LT	\$11,000
Objective B	Conduct habitat/natural community restoration activities on 250 to 1,000 acres of pine plantation altered land cover community type to restore them to mesic flatwoods restoration natural community.	UFN	\$40,000
	Action 1 Thin 250 acres of un-thinned pine plantation	LT	\$11,000
	Action 2 Implement prescribed burns on same acres involved in Action 1.	LT	\$29,000

\* 2016 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



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	Conduct habitat/natural community restoration activities on 200 to 500 acres of restoration natural community altered land cover type to mesic flatwoods and/or sandhill as appropriate.	# Acres restored or with restoration underway	UFN	\$39,000
Action 1	Assess at least 200 acres of restoration natural community for slash pine thinning, mechanical, fire and tree planting needs.	Assessment conducted	ST	\$2,000
Action 2	Thin slash pine based on results of Action 1 assessment.	# Acres thinned	UFN	\$7,000
Action 3	Implement needed mechanical treatments on those portions assessed in Action 1.	# Acres treated	UFN	\$21,000
Action 4	Implement needed prescribed fire on all portions of Action 1 as appropriate.	# Acres treated	C	see Obj A, Action 1
Action 5	Plant longleaf pine at 20-50 trees per acre depending on need into areas indicated for supplemental longleaf following Action 1 assessment.	# Acres planted	UFN	\$9,000
Objective D	Conduct natural community/habitat improvement activities on >40 acres of mesic flatwoods natural community.	# Acres improved or with improvements underway	UFN	\$10,000
Action 1	Assess mesic flatwoods and prioritize zones for mechanical treatment.	Assessment conducted	ST	\$4,000
Action 2	Implement mechanical treatment in preparation for prescribed burns for prioritized zones in Action 1 above.	# Acres treated	UFN	\$6,000
Objective E	Conduct natural community/habitat improvement activities on >15 acres of sandhill natural community.	# Acres improved or with improvements underway	UFN	\$17,000
Action 1	Assess sandhill natural community and determine priority zones for mechanical and herbicide treatment to prepare to prescribed fire.	Assessment conducted	ST	\$3,000
Action 2	Implement mechanical treatment on priority sandhill zones to prepare for prescribed fire.	# Acres treated	UFN	\$3,000
Action 3	Implement herbicide treatment on priority sandhill zones to prepare for prescribed fire.	# Acres treated	UFN	\$11,000
Goal IV: Maintain, improve or restore imperiled species populations and habitats in the park.				
Objective A	Update baseline imperiled species occurrence inventory lists for plants and animals, as needed.	List updated	C	\$101,000
Action 1	Revisit known plant occurrences to verify presence/absence.	# Sites monitored	C	\$19,000
Action 2	Inventory post-burn sites 1-2 months following fire.	# Sites monitored	C	\$23,000
Action 3	Inventory all similar habitats across park for each known plant species occurrence to verify presence/absence parkwide.	# Sites monitored	C	\$43,000
Action 4	Document passive observation of listed animals.	Listed animals documented	C	\$4,000
Action 5	Invite guest researchers to monitor specific listed animals that are not monitored by DRP staff.	Researchers invited	C	\$12,000

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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 B	Monitor and document 4 selected imperiled animal species in the park.	# Species monitored	C	\$15,000
Action 1	Review historic information and park data for four listed animal species including the Florida gopher frog, striped newt, gopher tortoise, and MacGillivray's seaside sparrow.	Species information reviewed	ST	\$4,000
Action 2	Perform monitoring for each species following compatible protocols to gather comparative data.	# Species monitored	C	\$11,000
Objective C	Monitor and document 18 selected imperiled plant species in the park.	# Species monitored	C	\$32,000
Action 1	Continue tier 1 species monitoring	# Species monitored	C	\$18,000
Action 2	Prioritize species for tier 2 monitoring	# Species prioritized	ST	\$1,000
Action 3	Implement tier 2 monitoring to at least 2 species ranked highest in Action 2	# Species monitored	C	\$11,000
Action 4	Share findings with FNAI	Findings submitted	C	\$2,000
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 3 acres of exotic plant species in the park.	# Acres treated	C	\$222,000
Action 1	Continue mapping exotic plant occurrences.	# Occurrences mapped	C	\$26,000
Action 2	Treat known occurrences.	# Occurrences treated	C	\$170,000
Action 3	Conduct post treatment monitoring.	Post treatment monitoring conducted	C	\$20,000
Action 4	Retreat areas requiring follow-up	#Acres retreated	C	
Action 5	Partner with Matanzas State Forest to control Chinese tallow, Caesarweed and cogongrass in State Forest areas near the park to reduce seed sources.	Partnership implemented	ST	\$6,000
Objective B	Implement control measures on 2 exotic and nuisance animal species in the park.	# Species for which control measures	C	\$328,000
Action 1	Maintain at least 2 firearm training-certified staff to control exotic animals.	# Staff firearm certified	C	\$7,000
Action 2	At least twice annually search highly impacted areas of the park for feral hogs for direct control.	# Acres surveyed	C	\$16,000
Action 3	Hire hog control contractor	Contractors hired	UFN	\$305,000
Objective C	Practice preventative measures to avoid accidental introduction and spreading of exotics within the park.		C	\$24,000
Action 1	Set up decontamination area	Decontamination area established	ST	\$18,000
Action 2	Train staff in vehicle decontamination	Staff trained	C	\$6,000

\* 2016 Dollars

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NOTE: THE DIVISION'S ABILITY TO COMPLETE THE OBJECTIVES OUTLINED BY THE MANAGEMENT PLAN IS CONTINGENT ON THE AVAILABILITY OF FUNDING AND OTHER RESOURCES FOR THESE PURPOSES.

Goal VI: 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 9 of 9 recorded cultural resources in the park.	Documentation complete	LT	\$13,000
Action 1	Visit each recorded cultural resource and record condition.	Assessments complete	LT	\$10,000
Action 2	Work with DHR and BNCR to prioritize the sites.	Sites prioritized	LT	\$2,000
Action 3	Set up a general schedule that adequately addresses preservation efforts of the highest priority sites versus lower priority sites.	Preservation efforts prioritized	LT	\$1,000
Objective B	Compile reliable documentation for all recorded historic and archaeological sites.	Documentation complete	LT	\$4,000
Action 1	Determine the age of three ditches at the park, and record any that qualify with FMSF.	# Sites recorded or updated	ST	\$3,000
Action 2	Record 3 historic structures with the FMSF upon reaching 50 years of age.	Probabililty Map completed	LT	\$1,000
Objective C	Maintain 9 of 9 recorded cultural resources into good condition.	# Sites in good condition	C	\$48,000
Action 1	Design and implement regular monitoring programs for 9 cultural sites	# Sites monitored	C	\$16,000
Action 2	Highest priority sites should be maintained following DHR and BNCR recommendations.	# Sites maintained	C	\$32,000
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 748 users per day.	# Recreation/visitor	C	\$508,000
Objective B	Expand the park's recreational carrying capacity by 816 users per day.	# Recreation/visitor	UFN	\$555,000
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	UFN	\$14,000

\* 2016 Dollars

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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 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			\$593,000
Objective B	Continue to implement the park's transition plan to ensure facilities are accessible in accordance with the American with Disabilities Act of 1990.	Plan implemented	LT			\$400,000
Objective C	Improve and/or repair 6 existing facilities and 25 miles of trail as identified in the Land Use Component.	# Facilities/Miles of Trail/Miles of Road	UFN			\$7,794,000
Objective D	Construct 3 new facilites and 4 miles of road as identified in the Land Use Component.	# Facilities/Miles of Trail/Miles of Road	UFN			\$3,060,000
Objective E	Expand maintenance activities as existing facilities are improved and new facilities are developed.	Facilities maintained	UFN			\$500,000
Summary of Estimated Costs						
Management Categories						Total Estimated Manpower and Expense Cost* (10-years)
		Resource Management				\$2,049,000
		Administration and Support				\$424,000
		Capital Improvements				\$11,254,000
		Recreation Visitor Services				\$2,195,000
		Law Enforcement Activities				Note: Law enforcement activities in Florida State Parks are conducted by the FWC Division of Law Enforcement and by local law enforcement agencies.

\* 2016 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**



## **Faver-Dykes State Park Acquisition History**

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### **Purpose of Acquisition:**

The Board of Trustees of the Internal Improvement Fund (Trustees) of the State of Florida acquired the initial area of Faver-Dykes State Park for the conservation of natural and cultural resources and to provide public, resource-based recreation.

### **Sequence of Acquisition:**

On December 28, 1950, the State of Florida obtained title to the initial area of Faver-Dykes State Park through a donation from Hiram Faver. Since the initial acquisition, the Trustees acquired more land through land exchange and Preservation 2000/Additions and Inholdings and Florida Forever funding. On January 12, 1995, the St. Johns Water Management District (SJRWMD) and the Trustees purchased a 697-acre parcel from Rayonier Timberlands Operating Company. On April 14, 2003, SJRWMD and the trustees acquired a 4,166-acre property. On July 26, 2005, DRP leased a 126-acre property from the Town of Marineland to manage as part of Faver-Dykes State Park. Presently the park comprises 6,045.98 acres.

### **Title Interest:**

The Trustees and SJRWMD hold fee simple title to Faver-Dykes State Park.

### **Lease Agreement:**

On January 23, 1968, the Trustees transferred its management authority of the park to the Florida Board of Parks and Historic Memorials (FBPHM), predecessor to DRP, under a ninety-nine (99) year lease, Lease No. 2324. In 1988, the Trustees assigned a new lease number, Lease No. 3617, which is set to expire on January 22, 2067. DRP is managing the Trustees and SJRWMD interests under different instruments. The Trustees interest in the 697-acre parcel is managed under Amendment No. 1 to Lease No. 3617 and the SJRWMD interest under Intergovernmental Management Lease dated June 14, 2000, the term of which is coterminous with Lease No. 3617. The 126-acre property lease from the Town of Marineland is coterminous with the main lease for the park, Lease No. 3617.

The 4,166.12-acre property has been leased to DRP by the Trustees and SJRWMD, collectively, under a fifty (50) year multiple-party lease, Lease No. 4445 dated February 12, 2008. It is scheduled to expire on February 11, 2058.

### **Special Conditions on Use:**

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

## Faver-Dykes State Park Acquisition History

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### Outstanding Reservations:

Following is a listing of outstanding encumbrance/restrictions which apply to Faver-Dykes State Park.

**TYPE OF INSTRUMENT:** Indenture  
**GRANTOR:** Jens and Jennies Hansen  
**GRANTEE:** State of Florida  
**BEGINNING DATE:** February 12, 1954  
**ENDING DATE:** Forever

### OUTSTANDING ENCUMBRANCES/RESTRICTIONS ON USE:

The deed states that the land is to be used for public state park purposes, for purposes incidental thereto, but for no other purposes.

**TYPE OF INSTRUMENT:** Deed  
**GRANTOR:** Hiram Faver  
**GRANTEE:** State of Florida  
**BEGINNING DATE:** December 28, 1950  
**ENDING DATE:** Forever

### OUTSTANDING ENCUMBRANCES/RESTRICTIONS:

The deed states that the land is to be used only for public state park and related purposes.

## **Addendum 2—Advisory Group Members and Report**





**Washington Oaks Gardens and Faver-Dykes State Parks  
Advisory Group Members and Report**

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**Local Government Officials**

The Honorable James Johns, Chair St.  
Johns County Board of County  
Commissioners

Tim Telfer  
Representing Flagler County Board of  
County Commissioners

**Agency Representatives**

Renee Paolini, Manager  
Washington Oaks Gar State Park

Michael Shirley, Manager  
Guana Tolomato Matanzas National  
Estuarine Research Reserve

Wade Brenner  
Florida Fish and Wildlife Conservation  
Commission

Chris Wadelton, Chair  
St. Johns Soil and Water  
Conservation District

J.B. Miller  
St. Johns River Water Management  
District

Michael Edwards, Other Public Lands  
Forester  
Florida Forest Service

**Tourist Development Councils**

Matt Dunn, Manager  
Flagler County Tourist Development  
Council

Tera Meeks, Executive Director  
St. Johns County Tourist Development  
Council

**Environmental Representatives**

Alex Farr, President  
Sea Oats Chapter,  
Florida Native Plant Society

Frank Quinn, President  
Flagler Audubon Society

**User Groups**

Victoria Kelsey  
Black Bear Chapter,  
Florida Trail Association

Alex Auton, President  
Florida Trail Blazers

**Citizen Support Organization**

Lucy Crowley, President  
Friends of Washington Oaks Gardens  
State Park

**Local Private Property Owners**

Anne Wilson

William McIntosh

## **Washington Oaks Gardens and Faver-Dykes State Parks Advisory Group Staff Report**

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The Advisory Group meeting for Washington Oaks Gardens and Faver-Dykes State Parks was held at the Guana Tolomato Matanzas Estuarine Research Reserve Marineland Office Classroom on April 13, 2017. Commissioner James Johns, Tim Telfer, Wade Brenner, Chris Wadelton, Matt Dunn, Tera Meeks, Victoria Kelsey, Alex Auton and Anne Wilson were unable to attend. All other Advisory Group members were in attendance. Attending staff were Larry Fooks, Robert Yero, Chris Matson, Renee Paolini, Chris Clauson and David Copps. Michael Shirley submitted written comments before and after the meeting. Michael Edwards submitted written comments after the meeting.

Mr. Copps began the meeting by explaining the purpose of the Advisory Group, reviewing the meeting agenda, and summarizing the comments from the public hearing 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**

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**Michael Edwards** (Florida Forest Service) recommended that park managers coordinate with the regional FFS Wildfire Mitigation Team for assistance in creating fire lanes and prescribed burning. He said that park staff should be involved with the local Cooperative Invasive Species Management Area (CISMA) to coordinate volunteer workdays to treat invasive species and to educate park visitors and neighbors about the threats they pose. Mr. Edwards said that park staff should participate in Archaeological Resource Management (ARM) training and monitor all archaeological sites at least once per year. He recommended that funding be sought for restoration of the depression marsh described in the Faver-Dykes resource management section. Mr. Edwards encouraged FPS to connect all park facilities to municipal sewage treatment as soon as practical. He stated that thinning is needed in the Faver-Dykes pine plantation areas to reduce the basal area. Mr. Edwards recommended that the pine planting beds be allowed to level out through natural erosion. He recommended that the parks work to achieve the recommended fire return interval for each fire-dependent community. For Washington Oaks Gardens State Park, Mr. Edwards recommended that the dense woody vegetation in the scrubby flatwoods be mechanically reduced before burning.

**Michael Shirley** (Guana Tolomato Matanzas NERR) stated that the Faver-Dykes plan should mention the MOU that the FPS has with the NERR and that the park manager has a seat on the NERR Advisory Group. He recommended that the plan recognize the importance of the research that the NERR is conducting in the salt marshes and in Pellicer Creek. He cautioned that prescribed fire should not be allowed to burn into the salt marshes unless there is water below. Mr. Shirley described the pristine nature of Pellicer Creek and its importance as a research site. He said that the Faver-Dykes plan should address the elevated levels of fecal coliform in Pellicer Creek and

## Washington Oaks Gardens and Faver-Dykes State Parks Advisory Group Staff Report

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the need for more research to determine its type. Mr. Shirley said that if the US Highway 1 entrance is established in the future the NERR wants to maintain access at the existing Faver-Dykes Road entrance for convenient access to their monitoring instruments on the south side of the park. He mentioned the recreation activities on Faver-Dykes' Mellon Island and said that the NERR is seeking funding to develop a spoil island management plan for the east coast of Florida. He said that the park plans should describe the NERR's involvement with the local CISMA to treat invasives and to educate the public about the environmental threats they pose. J.B. Miller recommended that the NERR provide a paragraph to David Copps (for insertion into the management plans) to clarify the NERR's role and to describe their activities, research, and collaboration with the parks. A statement was provided that described NERR research, education, and stewardship programs and the collaboration/partnerships with both state parks. The Memorandum of Understanding (MOU) between the NERR and the parks was discussed.

**Frank Quinn** (Flagler Audubon Society) recommended that the green fly orchid be added to the imperiled species list for Washington Oaks Gardens. He stated that Florida scrub-jay habitat should contain Florida scrub oaks and 30% open area. He expressed doubt that the scrub-jay will ever return to the park. Mr. Quinn said that the defunct campground on Washington Oaks northern boundary is for sale and recommended that the state purchase it for an addition to the park. Concerning Faver-Dykes, Mr. Quinn stated that the proposed entrance road be designed with enough culverts so as not to impede surface water flow. He described possible trail conflicts in the future between different trail user groups and recommended that the Faver-Dykes staff work with Flagler Audubon Society and other conservation and recreation groups for optimal trail routing.

**Lucy Crowley** (Friends of Washington Oaks Gardens and Faver Dykes State Parks) expressed her support for the proposed Faver-Dykes entrance on US 1 and the additional camping loops. She said that it is very important that the trail system be expanded and improved. Ms. Crowley said she does not support paving the existing park drive and would like to see the "Old Florida" dirt road experience preserved. For Washington Oaks Gardens, she said the Gardens Area needs additional parking. She said she supports the proposed meeting/reception facility and picnic facilities for the beach access area.

**Alex Farr** (Florida Native Plants Society, Sea Oats Chapter) stated her objection to equestrian uses in Faver-Dykes. She said that she supports the proposed entrance on US 1 and would like for the existing entrance to be maintained for some type of public access. Ms. Farr expressed objection to adding new camping loops to accommodate large camping rigs. She said that adding a few new camping sites is appropriate. Mr. Shirley said that if new camping loops were developed they should use advanced sewage treatment technologies. Ms. Farr asked about the status of the proposed Ocala to

## Washington Oaks Gardens and Faver-Dykes State Parks Advisory Group Staff Report

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Matanzas greenway/wildlife corridor. Mr. Miller said that it is on the Florida Forever acquisition list but not a high priority now. Ms. Farr stated concern that the proposed equestrian campground at Faver-Dykes might conflict with bear movements within the park. She said that the use of the park by bears is more important than equestrian uses.

**Bill McIntosh** (Local Private Property Owner) expressed concern about the estimate that only twenty percent of park visitors pay honor box fees. He recommended that Faver-Dykes install a new electronic fee collection system to accept cash or credit cards. Mr. Shirley said that the NERR installed such a system but a spotty internet connection forced them to go back to the old system. Mr. Yero said the Florida Park Service is currently experimenting with several self-service payment systems to solve the problem of non-paying visitors. Mr. McIntosh said Faver-Dykes needs more and better marketing and promotion. He said there needs to be more effort to educate the public about the park's natural and cultural history and recreational opportunities. He recommended the proposed paddling launch be located well away from the fishing boardwalk to avoid user conflicts. Mr. McIntosh said that the Faver-Dykes Road neighbors are opposed to paving the existing park drive. He said paving would degrade the "Old Florida" dirt road experience. He said that money appropriated for paving the existing drive should go toward developing the proposed entrance and park drive. Mr. McIntosh said the Faver-Dykes road neighbors want the existing park entrance to remain open for pedestrians and golf carts if the proposed US 1 entrance is developed.

**J.B. Miller** (St. Johns River Water Management District) said language should be added on page 9 under the "Management Coordination" section stating that Faver-Dykes is used for water resource management as well as land management. He said there are duplicative statements in Appendix 9 (Land Management Review) that should be rectified. Mr. Miller pointed out a housing development that was included on the Faver-Dykes Optimum Boundary Map (southwest boundary) and recommended its removal. He said the Pellicer Creek Paddling Trail on the Conceptual Land Use Map should be extended from the bridge to the Matanzas River. Mr. Miller recommended advanced sewage treatment for the proposed camping loops. He said that government agencies should serve as role models for such technologies. Mr. Miller said all trails in the system should be designated as shared-use except possibly in some sensitive areas. He said trail users are pretty much self-regulating. Mr. Shirley said that visitor surveys suggest that shared-use trails are preferred by trail users. Mr. Miller recommended against paving the existing park drive. He said that driving on the dirt canopy road is an important contributor to the Faver-Dykes experience. He said the original Faver-Dykes property is classified as an Outstanding Florida Water but the newer part of the park is not. He recommended the seepage area near the powerline gate be regularly burned to promote and maintain wildflowers such as orchids and pitcherplants. He said that Faver-Dykes staff should work with

## **Washington Oaks Gardens and Faver-Dykes State Parks Advisory Group Staff Report**

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Matanzas State Forest staff to open the proposed access points between the two properties now (don't wait until plan approval).

**Renee Paolini** (Washington Oaks Gardens and Faver-Dykes State Parks) said she supports the proposed camping loops at Faver-Dykes and supports the provision of advanced waste water treatment for that facility. She said additional information should be provided in the Faver-Dykes plan concerning the management of the spoil islands. Ms. Paolini said that the recreation opportunities on the islands are adequate and don't need to be expanded. She agreed that gardens parking should be expanded at Washington Oaks by adding a parking area in the old grove on the north side and redesigning the existing lot to achieve more spaces. She stated that visitation at both parks has been steadily increasing. Ms. Paolini asked that the location of the proposed observation platform at the Washington Oaks picnic area be considered for the Fish Island area. Mr. Miller said that the proposed platform would probably receive more use if located closer to the picnic area. Chris Clausen recommended that underground utilities be installed along the proposed entrance drive at Faver-Dykes as overhead lines would impede the burn program.

### **Summary of Written Comments**

**Michael Shirley** (Guana Tolomato Matanzas NERR) submitted written comments after the meeting (see attached) that reiterated what was stated at the meeting. An additional statement was provided for inclusion in the management plan describing NERR research, education, and stewardship programs and the collaboration/partnerships with both state parks.

**Michael Edwards** (Florida Forest Service) submitted written comments after the meeting (see attached) that reiterated what was stated at the meeting. Additional information was provided including a recommended basal area metric for pineland management. He also recommended a hydrological assessment for Faver-Dykes to guide future restoration projects.

### **Staff Recommendations**

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Comments received at the Advisory Group meeting resulted in the following modifications to the draft management plans:

- Language will be added to recognize the role and services of the NERR and its collaboration with the parks. The MOU between the parks and the NERR will be mentioned in both plans.
- Clarification will be made in the Introduction that Faver-Dykes is adjacent to (not within) Pellicer Creek Aquatic Preserve.
- The information describing the water quality monitoring station on Faver-Dykes will be updated.
- Language will be added in the Faver-Dykes plan that mentions the fecal coliform impairment of Pellicer Creek. The TMDL will be



## **Washington Oaks Gardens and Faver-Dykes State Parks Advisory Group Staff Report**

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referenced and a statement made that the NERR and Florida Park Service will coordinate to investigate the source/type of the fecal coliform.

- Language will be added to the Faver-Dykes plan to describe the issues and concerns related to prescribed fire in the salt marsh community.
- The Faver-Dykes Optimum Boundary Map will be revised to delete the housing development on the park's southwestern boundary.
- The Faver-Dykes Conceptual Land Use Plan will be revised to more accurately delineate the Pellicer Creek paddling trail.
- Language will be added in the Faver-Dykes Introduction stating that the park is used for water resource management as well as land management.
- The Outstanding Florida Waters designation will be clarified in the Faver-Dykes Introduction.
- Additional information will be provided in the Faver-Dykes plan to describe management of the spoil islands.

Several Advisory Group members expressed opposition to the planned paving of the Faver-Dykes park drive. The DRP understands the concerns but the decision to pave was made to improve safety for visitors and staff and to reduce the time and costs for maintaining the road in its current condition. Operational issues such as improvements to existing roads are typically not addressed in management plan updates.

With these modifications, DRP staff recommends approval of the proposed management plans for Washington Oaks Gardens and Faver-Dykes State Parks.

### **Notes on Composition of the Advisory Group**

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**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.

**Washington Oaks Gardens and Faver-Dykes State Parks  
Advisory Group Staff Report**

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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.

**Washington Oaks Gardens and Faver-Dykes State Parks  
Advisory Group Staff Report**

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### **Addendum 3 – References Cited**



**Faver-Dykes State Park**  
**References Cited**

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## Faver-Dykes State Park

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## **Addendum 4—Soil Description**



## Faver-Dykes State Park Soil Descriptions

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### **(1) Adamsville fine sand**

This soil is nearly level and somewhat poorly drained; it occurs on broad, flat areas and low knolls. The surface layer is gray fine sand about 8 inches thick; the underlying layers are fine sand, which extends to a depth of 80 inches or more. The soil material is pale brown with light gray mottling to a depth of 30 inches; below 30 inches, it is light gray and white.

In most years the seasonal high water table is at a depth of 20 to 40 inches for 2 to 6 months; in some years, it is at a depth of 10 to 20 inches for up to 2 weeks. The available water capacity is low in the surface layer and upper underlying layers and medium below. Permeability is very rapid in the surface layer and is rapid in the underlying material. Natural fertility and organic matter in this soil type are low.

### **(2) Astatula fine sand, 0 to 8 percent slopes**

This is an excessively drained, nearly level to sloping soil on knolls and narrow to broad ridges; slopes in this soil type are complex. The surface layer is typically a light brownish gray fine sand 5 inches thick. Below that, to a depth of 80 inches or more, is light yellowish brown to yellow fine sand. Permeability is very rapid throughout. Available water capacity is low. Natural fertility and organic matter content in this soil type are very low. The seasonal high water table is at a depth of more than 72 inches under natural conditions.

### **(3) Myakka fine sand**

This is a nearly level, poorly drained soil that occurs in the flatwoods and formed in marine deposits of sandy material; slopes range from 0 to 2 percent. Typically, the surface layer is black and dark gray fine sand about 8 inches thick. The subsurface layer is gray and light gray fine sand about 15 inches thick. The subsoil is about 30 inches thick. It is black fine sand in the upper 7 inches, and it is very dark brown fine sand in the lower 23 inches. The underlying layer to a depth of 80 inches or more is dark brown fine sand with black pockets of fine sand.

The seasonal high water table is at a depth of less than 10 inches for 1 to 4 months in most years. It is at a depth of more than 40 inches during dry seasons. Available water capacity is very low in the surface and subsurface layers, moderate in the subsoil, and very low in the underlying material. Permeability is rapid in the surface and subsurface layers, moderate or moderately rapid in the subsoil, and rapid in the underlying material. The natural fertility and organic matter content of this soil type are low.

### **(4) Myakka fine sand, depressional**

This is a nearly level, very poorly drained sandy soil that is in shallow depressions in the flatwoods. Areas of this soil are covered with standing water for a period of 6 to 9 months or more in most years; slopes are less than 1 percent and are concave. The surface layer is typically composed of dark gray fine sand about 4 inches thick. The subsurface layer is fine sand about 17 inches thick. It is light brownish gray in the upper 10 inches, and it is grayish brown in the lower 7 inches. The subsoil is black and dark reddish

## Faver-Dykes State Park Soil Descriptions

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brown fine sand about 14 inches thick. The underlying layer is dark brown fine sand about 12 inches thick. Below that, to a depth of 80 inches or more, is very pale brown fine sand.

This soil is covered with 4 inches to 2 feet of standing water for 6 to 9 months during most years. Available water capacity is very low in the surface and subsurface layers, moderate in the subsoil, and very low in the underlying material. Permeability is rapid in the surface and subsurface layers, moderate or moderately rapid in the subsoil, and rapid in the underlying material. Organic matter content and natural fertility in this soil type are low.

### **(5) St. Johns fine sand, depressional**

This is a very poorly drained soil found in depressions within flatwoods. Typically, the surface layer is black fine sand down to around 13 inches. The subsurface layer is around 12 inches thick, with the upper portions dark gray and getting lighter downward. The subsoil is compact fine sand with a high organic content and extends to a depth of at least 80 inches.

Typically this soil is covered with standing water from 6 – 12 months of the year. Permeability is rapid in the upper layers and decreasing downward. Available water capacity is moderate in the surface layer and subsoil and lower beneath that. The organic matter content is moderate and the natural fertility is low.

### **(6) Tavares fine sand, 0 to 5 percent slopes**

This is a moderately well drained, nearly level to gently sloping soil on narrow to broad low ridges and knolls; slopes are convex. Typically, this soil has a gray fine sand surface layer about 5 inches thick. It is underlain by about 4 inches of pale brown fine sand. Below that, to a depth of 80 inches or more, is very pale brown to white fine sand. The seasonal high water table is between depths of 40 to 80 inches for 6 to 8 months during most years, but it recedes to a depth greater than 80 inches during periods of lower rainfall. Permeability is very rapid; and available water capacity is very low to low. Natural fertility is low.

### **(7) Immokalee fine sand**

This soil is found on broad flats and low knolls in the flatwoods and is poorly drained and nearly level. The surface layer is typically very dark gray fine sand down to about 8 inches. The subsurface layer is composed of light gray and white sand and is about 32 inches thick. The subsoil is 40 – 64 inches thick and is very dark gray fine sand coated with organic matter. Below that is brown fine sand to about 80 inches.

The seasonal high water table is located at a depth of less than 10 inches for about 2 months of the year. During most of the year it is located at a depth 10 – 40 inches, and can exceed 40 inches during drought conditions. Available water capacity is low in the upper soils and moderate in the subsoil. The permeability is rapid in the upper layers and moderate below. Both organic matter content and natural fertility are low.



### **(8) Zolfo fine sand**

This is a somewhat poorly drained, nearly level soil on broad landscapes that are slightly higher than the adjacent flatwoods. This soil is sandy throughout; slopes range from 0 to 2 percent and are convex. The surface layer of this soil type is typically grayish brown fine sand about 5 inches thick. The subsurface layer is pale brown to light gray fine sand, which extends to a depth of about 66 inches. The subsoil to a depth of 80 inches is fine sand. It is dark brown in the upper 3 inches and black in the lower part. The sand grains in this layer are coated with organic matter.

This soil type has a seasonal high water table at a depth of 24 to 40 inches for 2 to 9 months in most years under natural conditions. Permeability is very rapid or rapid in the surface and subsurface layers and very high in the subsoil. Natural fertility and organic matter content are low or very low.

### **(9) Pomona fine sand**

This soil type is poorly drained, nearly level, and occurs in broad areas in the flatwoods. Typically, the surface layer is black to very dark gray fine sand about 6 inches thick. The subsurface layer, which is about 15 inches thick, is gray and light gray fine sand. The subsoil to a depth of 31 inches is black and dark brown fine sand coated with organic matter. Below this depth is pale brown to gray fine sand, which extends to a depth of 47 inches. Between 47 and 56 inches, the subsoil is light brownish gray loamy material. From 56 to 63 inches, it is light gray fine sandy loam. Below that, to a depth of 80 inches or more, is light brownish gray fine sand.

The water table for this soil type is within a depth of 10 inches for 1 to 3 months and is at a depth of 10 to 40 inches for 6 months or more. During extended dry periods, the water table recedes to a depth of more than 40 inches. Permeability is rapid in the surface and subsurface layers and moderate in the upper part of the subsoil. Available water capacity is very low or low in the surface and subsurface layers, and it is moderate in the upper part of the subsoil. Organic matter content and natural fertility in this soil type are low.

### **(11) Smyrna fine sand**

This is a poorly drained, nearly level soil on broad areas in the flatwoods; slopes range from 0 to 2 percent. The subsurface layer typically consists of black fine sand about 7 inches thick. The subsurface layer is gray fine sand to a depth of 14 inches. The subsoil is loamy fine sand about 7 inches thick. The upper 4 inches is black, and the lower 3 inches is dark brown. Below that is brown sand, about 11 inches thick, that has very dark brown subsoil fragments; dark brown and brown fine sand about 30 inches thick, and grayish brown fine sand that extends to a depth of 80 inches or more.

The seasonal high water table is at a depth of less than 10 inches for 1 to 4 months, and it recedes to a depth of 10 to 40 inches for more than 6 months in most years. During the rainy seasons, the water table rises above the surface briefly. Permeability is rapid in the surface and subsurface layers and

## Faver-Dykes State Park Soil Descriptions

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moderate or moderately rapid in the subsoil. Available water capacity is very low to moderate in the surface and subsurface layers and moderate to very high in the subsoil. Natural fertility is low; organic matter content is moderate or moderately low.

### **(12) Ona fine sand**

This is a sandy soil found in the flatwoods that is fairly level and poorly drained. The surface layer is typically comprised of very dark gray fine sand and is about 8 inches thick. The next 8 inches is a black to dark brown fine sand subsoil. Below that for about 18 inches is a brown fine sand subsoil. The substratum occurs to depths more than 80 inches and is composed of light gray to grayish brown fine sand.

The wet season water table is typically at a depth of less than 10 inches for 1 – 4 months of the year. During most of the year the water table is at a depth of 10 – 40 inches. The water capacity is moderate in the upper soils and very low in the lower soils. Permeability is rapid in the upper soils and moderate in the subsoil. The organic matter content and natural fertility are moderate.

### **(13) St. Johns fine sand**

This is a poorly drained, nearly level soil in broad flatwoods and landscapes adjacent to drainage-ways; slopes range from 0 to 2 percent and are convex. Typically, the surface layer is about 7 inches of black fine sand over 3 inches of very dark gray fine sand. The subsurface layer is gray fine sand that extends to a depth of 15 inches. The upper 4 inches of the subsoil is black loamy fine sand, and the lower 9 inches is black fine sand. The sand grains in the subsoil are well coated with organic matter. Below the subsoil is gray fine sand about 14 inches thick, black fine sand about 24 inches thick, and dark gray fine sand to a depth of 80 inches or more.

The seasonal high water table is at a depth of 0 to 15 inches for 2 to 6 months and at 15 to 30 inches during periods of lower rainfall in most years under natural conditions. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil. Natural fertility is low, and organic matter content is moderate. Available water capacity is moderate in the surface layer and subsoil and very low or low in the other layers.

### **(14) Cassia fine sand**

This is a nearly level, somewhat poorly drained soil that occurs on low ridges that are slightly higher than the adjacent flatwoods; slopes range from 0 to 2 percent and are convex. The surface layer of this soil type is typically gray fine sand, about 3 inches thick. The subsurface layer, about 15 inches thick, consists of light gray fine sand with grayish brown stains along root channels. The subsoil, from 18 to 32 inches, is very dark gray and dark brown, compact fine sand. The material between depths of 32 and 75 inches is light yellowish brown fine sand. Below that, to a depth of 80 inches or more, is very dark gray fine sand.

## Faver-Dykes State Park Soil Descriptions

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In most years the seasonal high water table is at a depth of 15 to 40 inches for about 6 months under natural conditions. Permeability is rapid in the surface and subsurface layers and is moderate or moderately rapid in the subsoil. Available water capacity is very low or low in the surface and subsurface layers and moderate in the subsoil.

### **(15) Pomello fine sand, 0 to 5 percent slopes**

This nearly level or gently sloping moderately well drained soil is on low ridges and knolls in the flatwoods and coastal ridge. Slopes are smooth to convex.

Typically, the surface layer is very dark gray fine sand about 5 inches thick. Typically, the soil is light gray fine sand to a depth of 41 inches or more. The subsoil to a depth of about 66 inches is very dark brown fine sand in the upper part and very dark gray fine sand in the lower part. The underlying material to a depth of about 80 inches is grayish brown fine sand in the upper part and dark gray fine sand in the lower part.

A seasonal high water table is within a depth of 20 to 40 inches of the surface for 1 to 4 months. Permeability is very rapid in the surface and subsurface layers and rapid in the subsoil layer and below. The available water capacity is very low in the surface and subsurface layer, moderate in the subsoil layer and very low below. Natural fertility and organic matter content are low.

### **(16) Orsino fine sand, 0 to 5 percent slopes**

This soil type is a moderately well-drained, nearly level to gently sloping soil on low ridges and knolls and on slopes adjacent to soils on higher positions; slopes are convex. Typically, the surface layer is gray fine sand about 4 inches thick. The subsurface layer, to a depth of 18 inches, is white fine sand. Below that is about 26 inches of brownish yellow fine sand containing dark reddish brown, non-cemented bodies of fine sand. Tongues of white fine sand extend into this layer from the above layer. The material between depths of 44 and 59 inches is yellow fine sand. Below this, to a depth of 80 inches or more, is white fine sand.

The seasonal high water table is at a depth of 40 to 60 inches for more than 6 months during most years, but it recedes to a depth of more than 60 inches during periods of low rainfall. Permeability is very rapid; available water capacity is low. Natural fertility of this soil type is low; organic matter content is moderately low in the surface layer and low or very low below.

### **(18) Floridana fine sand, frequently flooded**

This is a nearly level soil of floodplains and shallow drainage-ways that is very poorly drained. The surface layer is typically black fine sand about 18 inches thick. The subsurface layer is grayish brown fine sand about 10 inches thick and the subsoil is a dark gray fine sandy loam about 17 inches thick. The substrate is a dark gray sandy clay loam that extends to a depth of at least 80 inches.

## Faver-Dykes State Park Soil Descriptions

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The high water table can be above ground surface for 1– 3 months and is typically within 10 inches of the surface for more than 6 months. The upper soils have rapid permeability which decreases with depth. Water capacity is moderate in the upper soils and low in the lower soils. The organic matter content and the natural fertility is moderate.

### **(22) Manatee fine sandy loam, frequently flooded**

This is a very poorly drained, nearly level soil on floodplains and in poorly defined drainage-ways; slopes are less than 2 percent. Typically, the surface layer is very dark gray and black fine sandy loam about 13 inches thick. The subsoil, which extends to a depth of 34 inches, is very dark gray fine sandy loam in the upper 12 inches and dark gray sandy clay loam in the next 9 inches. From 34 to 52 inches, the material is dark gray loamy fine sand. Below that, to a depth of 80 inches or more, is dark gray loamy fine sand and fine sand mottled with yellowish red.

This soil has a water table within 10 inches of the surface for 2 to 4 months in most years. It is subject to flooding for long periods during seasons of high rainfall. Permeability is very rapid to moderately rapid in the surface layer and moderate in the subsoil. Available water capacity is high or very high in the surface layer and high in the subsoil. The organic matter content is very high to moderate in the surface layer and low or very low in the subsoil. The natural fertility is high.

### **(23) Paola fine sand, 0 to 8 percent slopes**

This is an excessively drained, nearly level to sloping soil on narrow to broad ridges and on hillsides adjoining marshes and drainage-ways; slopes are convex. The soil is fine sand throughout. Typically, the surface layer, about 4 inches thick, is gray. The next layer, between depths of 4 and 17 inches, is white. Between depths of 17 and 32 inches is a brownish yellow subsoil that is tongued with white. The substratum to a depth of 80 inches or more is very pale brown.

Under natural conditions, the seasonal high water table is at a depth of more than 72 inches. Permeability is very rapid, and available water capacity is low. Natural fertility is also low, and organic matter content is very low.

### **(24) Pellicer silty clay loam, frequently flooded**

The Pellicer series consists of very poorly drained, nearly level soils that formed in clayey tidal sediments more than 40 inches thick. These soils are along streams and estuaries and in tidal basins near the Atlantic coast. They are flooded daily by high tides. In a representative profile the surface layer is a massive, very dark grayish brown silty clay loam to a depth of 10 inches, with a strong sulfur odor. Many fine and few medium and coarse roots are present. The subsurface layer extends to 55 inches, and is a massive, dark greenish gray clay loam; few very fine, medium, and coarse roots occur in the upper five inches. The next sequence downward (to 70 inches), is a massive,

## Faver-Dykes State Park Soil Descriptions

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dark greenish gray sandy clay, with few fine lenses of light gray fine sand, loamy fine sand, and fine sandy loam. The last layer extends to 80 inches, and is massive, dark greenish gray sandy clay loam, with common coarse pockets of fine sand, loamy fine sand, and sandy clay.

### **(26) Turnbull and Pellicer soils, tidal**

These nearly level and very poorly drained soils are in tidal marsh areas. Slopes are smooth to convex and are less than 1 percent. Typically, the surface layer of the Turnbull soil is very dark gray muck about 8 inches thick. Next is dark grayish brown clay loam to a depth of 34 inches. The underlying layer is dark grayish brown loamy fine sand to a depth of 72 inches.

Typically, the surface layer of the Pellicer soil is very dark grayish brown silty clay loam about 10 inches thick. The next layer to a depth of 45 inches is dark gray clay loam. Below that is a dark gray sandy clay about 5 inches thick and then dark gray fine sandy loam to a depth of 80 inches or more.

Most areas of this unit are flooded twice daily by normal high tide. Some areas are flooded only a few times each year when weather or other conditions cause unusually high tides. The soils of this unit are continuously saturated. Permeability is rapid in the organic surface layer of the Turnbull soil. It is slow or very slow in the clayey layers of both the Turnbull and Pellicer soils. Available water capacity is very high in the organic surface layer of the Turnbull soil and medium in the clayey layers of both the Turnbull and Pellicer soils.

### **(29) Satellite fine sand**

This soil is typically located near the ocean and Intracoastal Waterway and is nearly level and poorly drained. The surface layer is typically about 6 inches of very dark, gray, fine sand. Below that for approximately 28 inches is white fine sand with brown mottles. This soil typically is found to a depth of 80 inches or more. The lower strata is light brownish, gray, fine sand with fine shell fragments and heavy mineral grains.

This soil has a seasonal high water table from 10 – 40 inches from 2 - 6 months/year. Permeability is rapid. The available water capacity is moderate in the upper portions and very low in the underlying portions. The organic content is high in the surface layer and very low below that. The natural fertility is low.

### **(30) Wesconnett fine sand, frequently flooded**

This soil is typically associated with broad drainage-ways in the flatwoods and is nearly level and very poorly drained. The surface layer typically has about 3 inches of decomposed plant material over 8 inches of black fine sand. The subsoil is thick (34 inches) with an upper 10 inches of black fine sand, followed by 6 inches of reddish brown fine, then 10 inches of very dark gray fine sand.

## Faver-Dykes State Park Soil Descriptions

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This soil is subject to flooding during extremely wet seasons, but in a typical year the water table is in the upper 10 inches for a period of 6-12 months. The permeability is rapid in the upper layers and moderately rapid in the subsoil. Available water capacity is moderate throughout. The organic matter content is moderate and the natural fertility is low.

### **(35) Hontoon muck**

This is a very poorly drained, nearly level organic soil in depressional areas; slopes are less than 1 percent. Typically, the muck layer is 55 inches thick. The upper 7 inches of soil material is black, and the next 48 inches is dark reddish brown and black. The material between depths of 55 to 70 inches is black mucky fine sand. Below that, to a depth of 80 inches or more, is very dark gray fine sand.

The seasonal high water table is at or above the soil surface for most of the time under natural conditions. Permeability is rapid throughout, and available water capacity is very high. Organic matter content is also very high, and natural fertility is high.

### **(36) Riviera fine sand, frequently flooded**

This is a soil found in poorly defined drainage-ways and in floodplains which is poorly drained and nearly level. The surface layer is typically gray fine sand about 10 inches thick. The subsurface layer is light gray fine sand to a depth of 23 inches. The subsoil is about 11 inches thick and is comprised of gray fine sandy loam with the upper portions having vertical intrusions from the subsurface layer. Below this is a light gray fine sandy loam which extends to a depth of 55 inches. The substratum extends to a depth of at least 80 inches and is light gray fine sandy loam mixed with shall fragments.

This soil can be flooded during very wet seasons, but typically has a high water table within the upper 10 inches for 2-4 months. During droughts the water table can go to a depth of 40 inches. Permeability is rapid in the upper layer, slow in the subsoil, and moderate in the substratum. Water capacity is low in the upper layers, moderate in the subsoil and low in the substratum. The organic matter content and the natural fertility are both low.

### **(45) St. Augustine fine sand, clayey substratum**

This soil is typically found adjacent to salt marshes and is poorly drained and nearly level. The surface layer is typically 1 inch thick and is comprised of very dark grayish, brown, fine sand. To a depth of approximately 48 inches is fine sand with varying color and amounts of clay and loam. Below that to a depth of 80 inches or more is dark greenish, gray, sandy clay.

The average water table is at a depth of 20 – 30 inches for 2 – 6 months/year. Permeability is high in the sandy portions and low in the clayey and loamy layers. The available water capacity is very low in the surface layer, moderate to high in the middle portions, and low in the bottom layer. The organic matter content and the natural fertility are both low.

## Faver-Dykes State Park Soil Descriptions

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### **(47) Holopaw fine sand, frequently flooded**

This is a very poorly drained, nearly level soil found in broad drainage-ways. The surface layer is typically black fine sand about 6 inches thick. The subsurface layer is comprised of grayish brown and gray fine sand, and is about 44 inches thick. The subsoil is about 18 inches thick and is gray fine sandy loam. The gray loamy fine sand of the substratum is about 12 inches thick.

This soil is typically flooded for about 1 month with the water table being within the top 10 inches for 2-6 months. Permeability is rapid in the upper layers and decreasing some near the lower layers. Water capacity is low in the upper layers and moderate in the subsoil. The organic matter content and natural fertility are both low.

### **(49) Moultrie fine sand, frequently flooded**

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. Individual areas of this soil range from 5 to 60 acres. Slopes range from 0 to 1 percent.

Typically, the surface layer is dark grayish brown fine and 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.

Included in mapping are small areas of Pellicer and Tisonia soils. Also included are small areas of other soils that are similar to this Moultrie soil. Some have a mucky surface layer, some have a thin clayey surface layer, and some do not have a subsoil. The other included soils are on similar positions in the landscape. The included soils make up 10 to 15 percent of any area mapped.

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.

In this Moultrie soil, permeability is very rapid in the surface and subsurface layers and in the substratum. It is rapid or moderately rapid in the subsoil. Available water capacity is very low in the surface and subsurface layers and in the substratum and is moderate in the subsoil. Natural fertility and organic matter content are low.

### **(58) Eau Gallie fine sand**

This is a soil found on low knolls and ridges in the flatwoods and is poorly drained and nearly level. The surface layer is typically 6 inches of black fine sand which contains many uncoated sand grains. The subsurface layer is



## Faver-Dykes State Park Soil Descriptions

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about 11 inches thick and consists of gray and light gray fine sand. The subsoil is 36 inches thick and varies with depth from dark fine sands in the upper portions to gray fine loamy sand at the bottom. The substrate consists of gray fine sand and is about 17 inches thick.

The water table is within 10 inches of the surface for 1-4 months and within 40 inches for more than 6 months. Permeability is rapid in the upper layers, moderate in the middle and moderate to rapid in the bottom layers. The water capacity is low in most of the layers and moderate in the lower subsoil. Both the organic matter content and the natural fertility are low.

### **(63) Placid fine sand**

This is nearly level, very poorly drained soil located on broad, low flat areas. The surface layer is typically black fine sand about 12 inches thick. The subsurface layer is 39 inches thick and is comprised of fine sand that is dark gray in the upper portions and is dark grayish brown loamy fine sand below. The substratum is grayish brown fine sand and is about 29 inches thick.

The seasonal high water table is within 10 inches of the surface for over 6 months of the year. During drought times the water table can recede to a depth of more than 40 inches.

### **(69) Bakersville muck**

This soil is found in depressional areas of the flatwoods and is nearly level and very poorly drained. Typically a 5 inch thick black muck layer is located at the surface. The surface layer is black and very dark grayish brown loamy fine sand which extends to a depth of about 41 inches. The 18 inch thick subsoil is comprised of fine sandy loam which is dark grayish brown in upper portions and dark brown below. The 26 inch thick substrate has 4 inches of brown loamy fine sand over grayish brown loamy fine sand.

This soil is typically saturated for 6 months of the year. Permeability is rapid in the upper layers, moderate in the lower subsoil, and rapid below. Water capacity is very high in the organic layer, moderate to high below, and low to moderate in the substratum. The organic matter content is very high and the natural fertility is moderate.

## **Addendum 5 - Plant And Animal List**



# Faver-Dykes State Park

## Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
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### LICHENS

Lichen	<i>Cladonia sp.</i>
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### BRYOPHYTES

Club Moss	<i>Lycopodiella sp.</i>
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### PTERIDOPHYTES/SEEDLESS VASCULAR PLANTS

Ebony Spleenwort	<i>Asplenium platyneuron</i>
Japanese climbing fern*	<i>Lygodium japonicum</i>
Cinnamon fern	<i>Osmunda cinnamomea</i>
Royal fern	<i>Osmunda regalis</i>
Comb polypody	<i>Pecluma ptilota</i>
Golden polypody	<i>Phlebodium aureum</i>
Resurrection fern	<i>Pleopeltis polypodioides var. michauxi</i>
Bracken fern	<i>Pteridium aquilinum</i>
Virginia chain fern	<i>Woodwardia virginica</i>

### GYMNOSPERMS

Southern red cedar	<i>Juniperus silicicola</i>
Red Cedar	<i>Juniperus virginiana</i>
Sand pine	<i>Pinus clausa</i>
Slash pine	<i>Pinus elliotii</i>
Southern Florida slash pine	<i>Pinus elliotii var. densa</i>
Longleaf pine	<i>Pinus palustris</i>
Pond pine	<i>Pinus serotina</i>
Loblolly pine	<i>Pinus taeda</i>
Pond cypress	<i>Taxodium ascendens</i>
Bald cypress	<i>Taxodium distichum</i>
Coontie	<i>Zamia pumila</i>

### MONOCOTS

Yellow colicroot	<i>Aletris lutea</i>
Bushy bluestem	<i>Andropogon glomeratus var. glaucopsis</i>
Bluestem, broomsedge	<i>Andropogon virginicus var. glaucus</i>
Wiregrass	<i>Aristida berychiana</i>
Bottlebrush threeawn	<i>Aristida spiciformis</i>
Bluethread	<i>Burmattia biflora</i>
Florida scrub roseling	<i>Callisia ornata</i>
Tuberosus grasspink	<i>Calopogon tuberosus</i>
Bandana-of-the-everglades	<i>Canna flaccida</i>
Sedge	<i>Carex sp.</i>
Slender Sandbur	<i>Cenchrus gracillimus</i>
Coast Sandbur	<i>Cenchrus spinifex</i>
Slender woodoats	<i>Chasmanthium laxum</i>
Longleaf Chasmanthium	<i>Chasmanthium laxum var. sessiliflorum</i>

\* Non-native Species

# Faver-Dykes State Park

## Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Sawgrass	<i>Cladium jamaicense</i>	
Whitemouth dayflower	<i>Commelina erecta</i>	
Pampasgrass	<i>Cortaderia selloana</i>	
Seven-sisters	<i>Crinum americanum</i>	
Bermudagrass*	<i>Cynodon dactylon</i>	
Sedge	<i>Cyperus sp.</i>	
Dichanthelium	<i>Dichanthelium sp.</i>	
Air-Potato*	<i>Dioscorea bulbifera</i>	
Saltgrass	<i>Distichlis spicata</i>	
Coast cockspur	<i>Echinochloa walteri</i>	
Green-fly orchid	<i>Epidendrum conopseum</i>	
Lovegrass	<i>Eragrostis sp.</i>	
Pipewort	<i>Eriocaulon compressum</i>	
Waterspider false reinorchid	<i>Habenaria repens</i>	
Spiked crested coralroot	<i>Hexalectris spicata</i>	
Whitesands Spiderlily	<i>Hymenocallis duvalensis</i>	
Cogongrass *	<i>Imperata cylindrical</i>	
Dixie Iris	<i>Iris hexagona</i>	
Needle rush	<i>Juncus roemerianus</i>	
Bloodroot	<i>Lachnanthes caroliniana</i>	
Duckweed	<i>Lemna obscura</i>	
Catesby's lily	<i>Lilium catesbaei</i>	
Frog's bit	<i>Limnobia spongia</i>	
Florida beargrass	<i>Nolina atopocarpa</i>	
American Whitewater Lily	<i>Nymphaea odorata</i>	
Woodsgrass; Basketgrass	<i>Oplismenus setarius</i>	
Beachgrass; Bitter panicum	<i>Panicum amarum</i>	
Maidencane	<i>Panicum hemitomom</i>	
Torpedograss*	<i>Panicum repens</i>	
Redtop panicum	<i>Panicum rigidulum</i>	
Seashore paspalum	<i>Paspalum distichum</i>	
Florida paspalum	<i>Paspalum floridanum</i>	
Bahiagrass*	<i>Paspalum notatum</i>	
Vaseygrass*	<i>Paspalum urvillei</i>	
Common reed	<i>Phragmites australis</i>	
Rose pogonia	<i>Pogonia ophioglossoides</i>	
Pickerel weed	<i>Pontederia cordata</i>	
Giant orchid	<i>Pteroglossaspis ecristata</i>	
Starrush whitetop	<i>Rhynchospora colorata</i>	
Sandyfield beaksedge	<i>Rhynchospora megalocarpa</i>	
Southern beaksedge	<i>Rhynchospora microcarpa</i>	
Dwarf palmetto	<i>Sabal minor</i>	
Cabbage palm	<i>Sabal palmetto</i>	
Sugarcane plumegrass	<i>Saccharum giganteum</i>	
Duck Potato	<i>Sagittaria sp.</i>	
Rush	<i>Scirpus sp.</i>	
Saw palmetto	<i>Serenoa repens</i>	
Knotroot foxtail	<i>Setaria geniculata</i>	
Giant bristlegrass	<i>Setaria magna</i>	
Yellow Bristlegrass; Yellow foxtail	<i>Setaria parvifolia</i>	
Narrowleaf blueeyed grass	<i>Sisyrinchium angustifolium</i>	

\* Non-native Species

## Faver-Dykes State Park

### Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Earleaf greenbrier	<i>Smilax auriculata</i>	
Saw greenbrier	<i>Smilax bona-nox</i>	
Cat greenbrier	<i>Smilax glauca</i>	
Sarsaparilla vine	<i>Smilax pumila</i>	
Lopsided Indiangrass	<i>Sorghastrum secundum</i>	
Saltmarsh cordgrass	<i>Spartina alterniflora</i>	
Sand cordgrass	<i>Spartina bakeri</i>	
Greenvein ladiestresses	<i>Spiranthes praecox</i>	
Spring ladiestresses	<i>Spiranthes vernalis</i>	
St. Augustinegrass	<i>Stenotaphrum secundum</i>	
Alligatorflag	<i>Thalia geniculata</i>	
Spanish moss	<i>Tillandsia usneoides</i>	
Ohio spiderwort	<i>Tradescantia ohiensis</i>	
Broadleaf cattail	<i>Typha latifolia</i>	
Carolina yelloweyed grass	<i>Xyris caroliniana</i>	
Yellow-eyed grass	<i>Xyris fimbriata</i>	
Adam's needle	<i>Yucca filamentosa</i>	
Crowpoison; Osceola's plume	<i>Zigadenus densus</i>	

### DICOTS

Southern red maple	<i>Acer rubrum</i>
Florida hobblebush	<i>Agarista populifolia</i>
Lesser snakeroot	<i>Ageratina aromatic</i>
Mimosa *	<i>Albizia julibrissin</i>
Common ragweed	<i>Ambrosia artemisiifolia</i>
Bastard indigo, false indigo	<i>Amorpha fruticosa</i>
Pepper vine	<i>Ampelopsis arborea</i>
Devil's-walkingstick	<i>Aralia spinosa</i>
Florida Indian plantain	<i>Arnoglossum floridanum</i>
Pinewoods milkweed	<i>Asclepias humistrata</i>
Michaux's milkweed	<i>Asclepias michauxii</i>
Velvetleaf milkweed	<i>Asclepias tomentosa</i>
Butterflyweed	<i>Asclepias tuberosa</i>
Bigflower pawpaw	<i>Asimina obovata</i>
Small-fruited pawpaw	<i>Asimina parviflora</i>
Dwarf pawpaw	<i>Asimina pygmaea</i>
Netted pawpaw	<i>Asimina reticulata</i>
Black Mangrove	<i>Avicennia germinans</i>
Saltwater false willow	<i>Baccharis angustifolia</i>
Salt bush	<i>Baccharis halimifolia</i>
Blue hyssop	<i>Bacopa caroliniana</i>
Coastalplain honeycombhead	<i>Balduina angustifolia</i>
Oneflower honeycombhead	<i>Balduina uniflora</i>
Gopherweed	<i>Baptisia lanceolata</i>
Saltwater; Turtleweed	<i>Batis maritima</i>
Tar flower	<i>Bejaria racemosa</i>

\* Non-native Species

# Faver-Dykes State Park

## Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Soft greeneyes	<i>Berlandiera pumila</i>	
Greeneyes	<i>Berlandiera subacaulis</i>	
Begger-ticks	<i>Bidens alba</i>	
Cross vine	<i>Bignonia capreolata</i>	
Sea Oxeye, Sea daisies	<i>Borrchia frutescens</i>	
Beautyberry	<i>Callicarpa americana</i>	
Trumpet creeper	<i>Campsis radicans</i>	
Florida paintbrush	<i>Carphephorus corymbosus</i>	
Vanillaleaf	<i>Carphephorus odoratissimus</i>	
Ironwood	<i>Carpinus caroliniana</i>	
Pignut hickory	<i>Carya glabra</i>	
Chinquapin	<i>Castanea pumila</i>	
New Jersey tea; Redroot	<i>Ceanothus americanus</i>	
Littleleaf buckbrush	<i>Ceanothus microphyllus</i>	
Hackberry	<i>Celtis laevigata</i>	
Butterfly-pea	<i>Centrosema virginianum</i>	
Buttonbush	<i>Cephalanthus occidentalis</i>	
Partridge Pea	<i>Chamaecrista fasciculata</i>	
Camphortree*	<i>Cinnamomum camphora</i>	
Thistle	<i>Cirsium horridulum</i>	
Atlantic pigeon wings	<i>Clitoria mariana</i>	
Tread softly	<i>Cnidoscolus stimulosus</i>	
Blue Mistflower	<i>Conoclinium coelestinum</i>	
Spring coralroot	<i>Corallorhiza wisteriana</i>	
Tickseed	<i>Coreopsis sp.</i>	
Flowering dogwood	<i>Cornus florida</i>	
Rabbit-bells	<i>Crotalaria rotundifolia</i>	
Showy rattlebox*	<i>Crotalaria spectabilis</i>	
Dodder	<i>Cuscuta sp.</i>	
Roseling	<i>Cuthbertia ornata</i>	
Gulfcoast Swallowwort	<i>Cynanchum angustifolium</i>	
Leatherwood	<i>Cyrilla racemiflora</i>	
Summer farewell	<i>Dalea pinnata</i>	
Beggar's ticks	<i>Desmodium sp.</i>	
Florida balm	<i>Dicerandra densiflora</i>	
Virginia buttonweed	<i>Diodia virginiana</i>	
Persimmon	<i>Diospyros virginiana</i>	
Dwarf sundew	<i>Drosera brevifolia</i>	
Pink sundew	<i>Drosera capillaris</i>	
Water Sundew; Spoonleaf sundew	<i>Drosera intermedia</i>	
Tall elephantsfoot	<i>Elephantopus elatus</i>	
Smooth elephantsfoot	<i>Elephantopus nudatus</i>	
Wild buckwheat	<i>Eriogonum tomentosum</i>	
Rattlesnakemaster	<i>Eryngium aquaticum</i>	
Fragrant eryngium	<i>Eryngium aromaticum</i>	
Baldwin's eryngo	<i>Eryngium baldwinii</i>	
Button eryngo	<i>Eryngium yuccifolium</i>	
Coralbean	<i>Erythrina herbacea</i>	
Dog fennel	<i>Eupatorium capillifolium</i>	
False horehound	<i>Eupatorium rotundifolium</i>	
Flat-topped goldenrod	<i>Euthamia minor</i>	

\* Non-native Species



# Faver-Dykes State Park

## Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Blanket flower	<i>Gaillardia pulchella</i>	
Milk pea	<i>Galactia Elliottii</i>	
Garberia	<i>Garberia heterophylla</i>	
Southern beeblossom	<i>Gaura angustifolia</i>	
Dwarf huckleberry	<i>Gaylussacia dumosa</i>	
Blue huckleberry	<i>Gaylussacia frondosa</i>	
Yellow jessamine	<i>Gelsemium sempervirens</i>	
Tampa mock vervain	<i>Glandularia tampensis</i>	
Loblolly bay	<i>Gordonia lasianthus</i>	
American Witchhazel	<i>Hamamelis virginiana</i>	
Innocence	<i>Hedyotis procumbens</i>	
Southeastern sneezeweed	<i>Helenium pinnatifidum</i>	
Carolina frostweed	<i>Helianthemum carolinianum</i>	
Beach sunflower	<i>Helianthus debilis</i>	
Camphorweed	<i>Heterotheca subaxillaris</i>	
Innocence; Roundleaf bluet	<i>Houstonia procumbens</i>	
Marsh pennywort	<i>Hydrocotyle umbellata</i>	
Skyflower	<i>Hydrolea corymbosa</i>	
Roundpod St. Johns-wort	<i>Hypericum cistifolium</i>	
Bedstraw St. John's-wort	<i>Hypericum galioides</i>	
Fourpetal St. Johns-wort	<i>Hypericum tetrapetalum</i>	
Clustered bushmint	<i>Hyptis alata</i>	
Dahoon Holly	<i>Ilex cassine</i>	
Inkberry, Gallberry	<i>Ilex glabra</i>	
Myrtle Holly	<i>Ilex myrtifolia</i>	
American Holly	<i>Ilex opaca</i>	
Yaupon holly	<i>Ilex vomitoria</i>	
Morning glory	<i>Ipomoea indica</i>	
Morning glory	<i>Ipomoea sagittata</i>	
Standing cypress; Spanish larkspur	<i>Ipomopsis rubra</i>	
Virginia Willow	<i>Itea virginica</i>	
Saltmarsh mallow	<i>Kosteletzkya virginica</i>	
Grassleaf lettuce	<i>Lactuca graminifolia</i>	
Lantana; Shrubverbena*	<i>Lanata camara</i>	
Virginia pepperweed	<i>Lepidium virginicum</i>	
Chapman's gayfeather	<i>Liatris chapmanii</i>	
Dense Gayfeather	<i>Liatris spicata</i>	
Gopher apple	<i>Licania michauxii</i>	
Canada toadflax	<i>Linaria canadensis</i>	
Savannah false pimpernel	<i>Lindernia grandiflora</i>	
Frog-fruit; Carpetweed	<i>Lippia nodiflora</i>	
Sweetgum	<i>Liquidambar styraciflua</i>	
Cardinal flower	<i>Lobelia cardinalis</i>	
Glade lobelia	<i>Lobelia glandulosa</i>	
White lobelia	<i>Lobelia paludosa</i>	
Coral honeysuckle; trumpet honey	<i>Lonicera sempervirens</i>	
Savannah primrosewillow	<i>Ludwigia virgata</i>	
Skyblue lupine	<i>Lupinus diffuses</i>	
Christmasberry; Carolina desert thorn	<i>Lycium carolinianum</i>	
Roserush	<i>Lygodesmia aphylla</i>	
Rusty lyonia	<i>Lyonia ferruginea</i>	

\* Non-native Species

# Faver-Dykes State Park

## Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Staggerbush	<i>Lyonia fruticosa</i>	
Fetterbush	<i>Lyonia lucida</i>	
Southern magnolia	<i>Magnolia grandiflora</i>	
Sweet bay	<i>Magnolia virginiana</i>	
Snow squarestem	<i>Melanthera nivea</i>	
Chinaberrytree *	<i>Melia azedarach</i>	
Climbing hempvine	<i>Mikania scandens</i>	
Sensitive brier	<i>Mimosa quadrivalvis</i>	
Partridgeberry	<i>Mitchella repens</i>	
Spotted beebalm	<i>Monarda punctata</i>	
Indian pipe	<i>Monotropa uniflora</i>	
Pygmypipes	<i>Monotropsis odorata</i>	
Red mulberry	<i>Morus rubra</i>	
Wax myrtle	<i>Myrica cerifera</i>	
Swamp tupelo	<i>Nyssa sylvatica</i> var. <i>biflora</i>	
Pinebarren whitetop	<i>Oclemena reticulata</i>	
Mille Graine	<i>Oldenlandia</i> sp.	
Prickly-pear cactus	<i>Opuntia humifusa</i>	
Cockspur pricklypear	<i>Opuntia pusilla</i>	
Erect Prickly-pear	<i>Opuntia stricta</i>	
Piedmont leatherroot	<i>Orbexilum lupinellus</i>	
Wild olive	<i>Osmanthus americana</i>	
Virginia creeper	<i>Parthenocissus quinquefolia</i>	
Purple Passionflower	<i>Passiflora incarnata</i>	
Corkystem Passionflower	<i>Passiflora suberosa</i>	
Gingerbush	<i>Pavonia spinifex</i>	
Redbay	<i>Persea borbonia</i>	
Silkbay	<i>Persea humilis</i>	
Swampbay	<i>Persea palustris</i>	
Oak Mistletoe	<i>Phoradendron leucarpum</i>	
Turkey tanglefoot fogfruit	<i>Phyla nodiflora</i>	
Walter's groundcherry	<i>Physalis walteri</i>	
Eastern false dragonhead	<i>Physostegia purpurea</i>	
Pokeweed	<i>Phytolacca americana</i>	
Wild pennyroyal	<i>Pilblephis rigida</i>	
Blue butterwort	<i>Pinguicula caerulea</i>	
Yellow butterwort	<i>Pinguicula lutea</i>	
Small butterwort	<i>Pinguicula pumila</i>	
Grass-leafed golden aster	<i>Pityopsis graminifolia</i>	
Stinking camphorweed	<i>Pluchea foetida</i>	
Saltmarsh fleabane	<i>Pluchea odorata</i>	
Tall pinebarren milkwort	<i>Polygala cymosa</i>	
Orange milkwort	<i>Polygala lutea</i>	
Candyroot	<i>Polygala nana</i>	
Coastalplain milkwort	<i>Polygala setacea</i>	
Tall jointweed	<i>Polygonella gracilis</i>	
Rustweed	<i>Polypremum procumbens</i>	
Chicksaw plum	<i>Prunus angustifolia</i>	
Carolina laurel cherry	<i>Prunus caroliniana</i>	
Wild cherry	<i>Prunus serotina</i>	
Hog plum	<i>Prunus umbellata</i>	

\* Non-native Species

# Faver-Dykes State Park

## Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Wild Coffee	<i>Psychotria nervosa</i>	
Blackroot	<i>Pterocaulon pycnostachyum</i>	
White oak	<i>Quercus alba</i>	
Bastard white Oak	<i>Quercus austrina</i>	
Chapman's oak	<i>Quercus chapmanii</i>	
Running Oak	<i>Quercus elliotii</i>	
Sand live oak	<i>Quercus geminata</i>	
Bluejack oak	<i>Quercus incana</i>	
Turkey oak	<i>Quercus laevis</i>	
Laurel oak; Diamond oak	<i>Quercus laurifolia</i>	
Sand post oak	<i>Quercus margaretta</i>	
Myrtle oak	<i>Quercus myrtifolia</i>	
Water oak	<i>Quercus nigra</i>	
Running oak	<i>Quercus pumila</i>	
Bluff oak	<i>Quercus sinuata</i>	
Live oak	<i>Quercus virginiana</i>	
Savanna meadowbeauty	<i>Rhexia alifanus</i>	
Pale meadowbeauty	<i>Rhexia mariana</i>	
Maid Marian	<i>Rhexia nashii</i>	
Nuttall's meadowbeauty	<i>Rhexia nuttalli</i>	
Fringed meadowbeauty	<i>Rhexia petiolate</i>	
Sweet pinxter azalea	<i>Rhododendron canescens</i>	
Winged sumac	<i>Rhus copallinum</i>	
Dollarleaf	<i>Rhynchosia reniformis</i>	
Sand blackberry	<i>Rubus cuneifolius</i>	
Black-eyed susan	<i>Rudbeckia hirta</i>	
Shortleaf Rosegentian	<i>Sabatia brevifolia</i>	
Largeflower Rosegentian	<i>Sabatia grandiflora</i>	
Annual glasswort; dwarf glasswort	<i>Salicornia bigelovii</i>	
Carolina willow	<i>Salix caroliniana</i>	
Tropical sage	<i>Salvia coccinea</i>	
Lyreleaf sage	<i>Salvia lyrata</i>	
Elderberry	<i>Sambucus canadensis</i>	
Hooded pitcher-plant	<i>Sarracenia minor</i>	
Lizard's tail	<i>Saururus cernuus</i>	
Brazilian pepper *	<i>Schinus terebinthifolius</i>	
Helmit skullcap	<i>Scutellaria integrifolia</i>	
Sicklepod; coffeeweed*	<i>Senna obtusifolia</i>	
Bladderpod	<i>Sesbania vesicaria</i>	
Tough bully	<i>Sideroxylon tenax</i>	
Goldenrod	<i>Solidago sp.</i>	
Queen's delight	<i>Stillingia sylvatica</i>	
Coastalplain dawnflower	<i>Stylisma patens</i>	
Perennial saltmarsh aster	<i>Symphyotrichum tenuifolium</i>	
Common dandelion*	<i>Taraxacum officinale</i>	
Wood sage; Canadian germander	<i>Teucrium canadense</i>	
Carolina basswood	<i>Tilia caroliniana</i>	
Poison ivy	<i>Toxicodendron radicans</i>	
Forked blue curls	<i>Trichostema dichotomum</i>	
American elm	<i>Ulmus americana</i>	
Floating bladderwort	<i>Utricularia inflata</i>	

\* Non-native Species

## Faver-Dykes State Park

### Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Eastern Purple Bladderwort	<i>Utricularia purpurea</i>	
Little floating bladderwort	<i>Utricularia radiata</i>	
Zigzag bladderwort	<i>Utricularia subulata</i>	
Sparkleberry	<i>Vaccinium arboreum</i>	
Highbush blueberry	<i>Vaccinium corymbosum</i>	
Blueberry	<i>Vaccinium darrowii</i>	
Elliotts blueberry	<i>Vaccinium elliotii</i>	
Shiny blueberry	<i>Vaccinium myrsinites</i>	
Deerberry	<i>Vaccinium stamineum</i>	
Diverseleaf crownbeard	<i>Verbesina heterophylla</i>	
Bog White violet	<i>Viola lanceolata</i>	
Early blue violet	<i>Viola palmata</i>	
Common blue violet	<i>Viola sororia</i>	
Catbird grape	<i>Vitis palmata</i>	
Muscadine grape	<i>Vitis rotundifolia</i>	
Oriental false hawksbeard *	<i>Youngia japonica</i>	
Hercules-club	<i>Zanthoxylum clava-herculis</i>	

\* Non-native Species

# Faver-Dykes State Park

## Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
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### INVERTEBRATES

Jumping Spider	<i>Phidippus regius</i>	
Round-winged Grasshopper	<i>Melanoplus rotundipennis</i>	
Raccoon chewing louse	<i>Stachiella octomaculatus</i>	

### FISH

American eel	<i>Anguilla rostrata</i>	
Sheepshead	<i>Archosargus probatocephalus</i>	
Sea catfish	<i>Arius felis</i>	
Crevalle jack	<i>Caranx hippos</i>	
Snook	<i>Centropomus undecimalis</i>	
Spotted seatrout	<i>Cynoscion nebulosus</i>	
Mojarra	<i>Eucinostomus spp.</i>	
Golden topminnow	<i>Fundulus chrysotus</i>	
Eastern Mosquitofish	<i>Gambusia holbrooki</i>	
Least killifish	<i>Heterandria formosa</i>	
Spot	<i>Leiostomus xanthurus</i>	
Warmouth	<i>Lepomis gulosus</i>	
Bluegill	<i>Lepomis macrochirus</i>	
Atlantic croaker	<i>Micropogonias undulatus</i>	
Largemouth bass	<i>Micropterus salmoides</i>	
Striped mullet	<i>Mugil cephalus</i>	
White mullet	<i>Mugil curema</i>	
Southern flounder	<i>Paralichthys lethostigma</i>	
Sailfin molly	<i>Poecilia latipinna</i>	
Black drum	<i>Pogonias cromis</i>	
Red drum	<i>Sciaenops ocellatus</i>	

### AMPHIBIANS

Florida cricket frog	<i>Acris gryllus dorsalis</i>	
Southern cricket frog	<i>Acris gryllus gryllus</i>	
Mole salamander	<i>Ambystoma talpoideum</i>	
Two-toed amphiuma	<i>Ampium</i>	
<i>a means</i>		
Oak toad	<i>Bufo quercicus</i>	
Southern toad	<i>Bufo terrestris</i>	
Eastern narrow-mouthed toad	<i>Gastrophryne carolinensis</i>	
Green treefrog	<i>Hyla cinerea</i>	
Pinewoods treefrog	<i>Hyla femoralis</i>	
Barking treefrog	<i>Hyla gratiosa</i>	
Squirrel treefrog	<i>Hyla squirella</i>	
Striped newt	<i>Notophthalmus perstriatus</i>	
Southern spring peeper	<i>Pseudacris crucifer</i>	
Florida chorus frog	<i>Pseudacris nigrita verrucosa</i>	

\* Non-native Species

# Faver-Dykes State Park

## Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Little grass frog	<i>Pseudacris ocularis</i>	
Florida gopher frog	<i>Rana capito aesopus</i>	
Bullfrog	<i>Rana catesbeiana</i>	
Bronze frog	<i>Rana clamitans</i>	
Pig frog	<i>Rana grylio</i>	
Southern leopard frog	<i>Rana sphenoccephala</i>	
Eastern spadefoot toad	<i>Scaphiopus holbrooki holbrooki</i>	
Eastern lesser siren	<i>Siren intermedia intermedia</i>	
Greater Siren	<i>Siren lacertian</i>	

## REPTILES

### Crocodilians

American alligator	<i>Alligator mississippiensis</i>
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### Turtles/Tortoises/Terrapins

Florida softshell turtle	<i>Apalone ferox</i>
Florida Snapping Turtle	<i>Chelydra serpentina</i>
Florida chicken turtle	<i>Deirochelys reticularia chrysea</i>
Gopher tortoise	<i>Gopherus polyphemus</i>
Striped mud turtle	<i>Kinosternon baurii</i>
Diamondback terrapin	<i>Malaclemys terrapin</i>
Peninsula Cooter	<i>Pseudoemys floridana</i>
Florida red-bellied turtle	<i>Pseudoemys nelsoni</i>
Florida box turtle	<i>Terrapene carolina</i>

### Lizards

Green anole	<i>Anolis carolinensis</i>
Brown anole*	<i>Anolis sagrei sagrei</i>
Six-lined racerunner	<i>Cnemidophorus sexlineatus sexlineatus</i>
Southeastern five-lined skink	<i>Eumeces inexpectatus</i>
Broad-headed skink	<i>Eumeces laticeps</i>
Island glass lizard	<i>Ophisaurus compressur</i>
Eastern glass lizard	<i>Ophisaurus ventralis</i>
Southern fence lizard	<i>Sceloporus undulatus undulatus</i>
Ground skink	<i>Scincella lateralis</i>

### Snakes

Florida cottonmouth	<i>Agkistrodon piscivorus conanti</i>
Southern black racer	<i>Coluber constrictor priapus</i>
Eastern diamondback rattlesnake	<i>Crotalus adamanteus</i>
Southern ringneck snake	<i>Diadophis punctatus punctatus</i>
Corn snake	<i>Elaphe guttata guttata</i>
Yellow rat snake	<i>Elaphe obsoleta quadrivittata</i>
Eastern hognose snake	<i>Heterodon platirrhinos</i>
Eastern coachwhip	<i>Masticophis flagellum flagellum</i>
Eastern coral snake	<i>Micrurus fulvius fulvius</i>
Southern water snake	<i>Nerodia fasciata</i>
Brown water snake	<i>Nerodia taxispilota</i>
Rough green snake	<i>Opheodrys aestivus</i>
Florida pine snake	<i>Pituophis melanoleucus mugitus</i>

\* Non-native Species

# Faver-Dykes State Park

## Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Dusky pigmy rattlesnake	<i>Sistrurus miliarius barbouri</i>	
Florida red belly snake	<i>Storeria occipitomaculata obscura</i>	
Eastern ribbon snake	<i>Thamnophis sauritus</i>	
Eastern garter snake	<i>Thamnophis sirtalis sirtalis</i>	

## BIRDS

### Grebes

Horned Grebe	<i>Podilymbus auritus</i>
Pied-billed Grebe	<i>Podilymbus podiceps</i>

### Pelicans

American white pelican	<i>Pelicanus erythrorhynchos</i>
Brown pelican	<i>Pelicanus occidentalis</i>

### Cormorants

Double-crested Cormorant	<i>Phalacrocorax auritus</i>
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### Darters

Anhinga	<i>Anhinga anhinga</i>
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### Herons and Bitterns

Great Egret	<i>Ardea alba</i>
Great Blue Heron	<i>Ardea herodias</i>
Cattle Egret*	<i>Bubulcus ibis</i>
Green Heron	<i>Butorides virescens</i>
Little Blue Heron	<i>Egretta caerulea</i>
Reddish Egret	<i>Egretta rufescens</i>
Snowy Egret	<i>Egretta thula</i>
Tricolored Heron	<i>Egretta tricolor</i>
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>

### Ibises and Spoonbills

Roseate spoonbill	<i>Ajaia ajaja</i>
White Ibis	<i>Eudocimus albus</i>

### Storks and Cranes

Sandhill Crane	<i>Grus canadensis</i>
Wood Stork	<i>Mycteria americana</i>

### Ducks and Geese

Wood Duck	<i>Aix sponsa</i>
Green-winged teal	<i>Anas crecca</i>
Ring-necked duck	<i>Aythya affinis</i>
Red-breasted Merganser	<i>Mergus serrator</i>

### Hawks, Eagles and Kites

Cooper's Hawk	<i>Accipiter cooperii</i>
Sharp-shinned Hawk	<i>Accipiter striatus</i>
Red-tailed Hawk	<i>Buteo jamaicensis</i>
Red-shouldered Hawk	<i>Buteo lineatus</i>
Broad-winged Hawk	<i>Buteo platypterus</i>

\* Non-native Species



# Faver-Dykes State Park

## Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Northern Harrier	<i>Circus cyaneus</i>	
Swallow-tailed Kite	<i>Elanoides forficatus</i>	
Merlin	<i>Falco columbarius</i>	
Peregrine Falcon	<i>Falco peregrinus</i>	
American Kestrel	<i>Falco sparverius</i>	
Bald Eagle	<i>Haliaeetus leucocephalus</i>	
Osprey	<i>Pandion haliaetus</i>	
<b>Vultures</b>		
Turkey Vulture	<i>Cathartes aura</i>	
Black Vulture	<i>Coragyps atratus</i>	
<b>Turkey and Quail</b>		
Northern Bobwhite	<i>Colinus virginianus</i>	
Wild Turkey	<i>Meleagris gallopavo</i>	
<b>Gallinules</b>		
American Coot	<i>Fulica americana</i>	
Common Moorhen	<i>Gallinula chloropus</i>	
Sora	<i>Porzana carolina</i>	
Clapper Rail	<i>Rallus longirostris</i>	
<b>Snipes and Sandpipers</b>		
Spotted Sandpiper	<i>Actitis macularia</i>	
Western Sandpiper	<i>Calidris mauri</i>	
Least Sandpiper	<i>Calidris minutilla</i>	
Semipalmated Sandpiper	<i>Calidris pusilla</i>	
Wilson's Snipe	<i>Gallinago delicata</i>	
Solitary Sandpiper	<i>Tringa solitaria</i>	
<b>Gulls and Terns</b>		
Black Tern	<i>Chlidonias niger</i>	
Herring Gull	<i>Larus argentatus</i>	
Ring-billed Gull	<i>Larus delawarensis</i>	
Laughing Gull	<i>Leucophaeus atricilla</i>	
Caspian Tern	<i>Sterna caspia</i>	
Forster's Tern	<i>Sterna forsteri</i>	
Least Tern	<i>Sternula antillarum</i>	
Royal Tern	<i>Thalasseus maximus</i>	
<b>Doves</b>		
Common Ground-Dove	<i>Columbina passerina</i>	
Mourning Dove	<i>Zenaidura macroura</i>	
<b>Cuckoos</b>		
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	
<b>Owls</b>		
Great Horned Owl	<i>Bubo virginianus</i>	
Eastern Screech Owl	<i>Otus asio</i>	
Barred Owl	<i>Strix varia</i>	

\* Non-native Species

# Faver-Dykes State Park

## Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
<b>Goatsuckers</b>		
Chuck-will's-willow	<i>Caprimulgus carolinensis</i>	
Common Nighthawk	<i>Chordeiles minor</i>	
<b>Swifts</b>		
Chimney Swift	<i>Chaetura pelagica</i>	
<b>Hummingbirds</b>		
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	
<b>Kingfishers</b>		
Belted Kingfisher	<i>Ceryle alcyon</i>	
<b>Woodpeckers</b>		
Northern Flicker	<i>Colaptes auratus</i>	
Pileated Woodpecker	<i>Dryocopus pileatus</i>	
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	
Downy Woodpecker	<i>Picoides pubescens</i>	
Hairy Woodpecker	<i>Picoides villosus</i>	
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	
<b>Flycatchers</b>		
Eastern Wood-Pewee	<i>Contopus virens</i>	
Acadian Flycatcher	<i>Empidonax virescens</i>	
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	
Eastern Phoebe	<i>Sayornis phoebe</i>	
<b>Shrikes</b>		
Loggerhead Shrike	<i>Lanius ludovicianus</i>	
<b>Vireos</b>		
Yellow-throated Vireo	<i>Vireo flavifrons</i>	
White-eyed Vireo	<i>Vireo griseus</i>	
Red-eyed Vireo	<i>Vireo olivaceus</i>	
Philadelphia Vireo	<i>Vireo philadelphicus</i>	
Blue-headed Vireo	<i>Vireo solitarius</i>	
<b>Jays and Crows</b>		
American Crow	<i>Corvus brachyrhynchos</i>	
Fish Crow	<i>Corvus ossifragus</i>	
Blue Jay	<i>Cyanocitta cristata</i>	
<b>Martins</b>		
Purple Martin	<i>Progne subis</i>	
<b>Swallows</b>		
Barn Swallow	<i>Hirundo rustica</i>	
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	
Tree Swallow	<i>Tachycineta bicolor</i>	
<b>Titmice</b>		
Tufted Titmouse	<i>Baeolophus bicolor</i>	
Carolina Chickadee	<i>Poecile carolinensis</i>	
<b>Nuthatches</b>		
Brown-headed Nuthatch	<i>Sitta pusilla</i>	

\* Non-native Species

# Faver-Dykes State Park

## Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
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### Wrens

Marsh Wren	<i>Cistothorus palustris</i>	
Sedge Wren	<i>Cistothorus platensis</i>	
Carolina Wren	<i>Thryothorus ludovicianus</i>	
House Wren	<i>Troglodytes aedon</i>	

### Gnatcatchers and Kinglets

Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>	
Ruby-crowned Kinglet	<i>Regulus calendula</i>	

### Thrushes

Hermit Thrush	<i>Catharus guttatus</i>	
American Robin	<i>Turdus migratorius</i>	

### Thrashers

Gray Catbird	<i>Dumetella carolinensis</i>	
Northern Mockingbird	<i>Mimus polyglottos</i>	
Brown Thrasher	<i>Toxostoma rufum</i>	

### Starlings

European Starling *	<i>Sturnus vulgaris</i>	
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### Waxwings

Cedar Waxwing	<i>Bombycilla cedrorum</i>	
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### Warblers

Black-throated Blue Warbler	<i>Dendroica caerulescens</i>	
Bay-breasted Warbler	<i>Dendroica castanea</i>	
Yellow-rumped Warbler	<i>Dendroica coronata</i>	
Prairie Warbler	<i>Dendroica discolor</i>	
Yellow-throated Warbler	<i>Dendroica dominica</i>	
Magnolia Warbler	<i>Dendroica magnolia</i>	
Palm Warbler	<i>Dendroica palmarum</i>	
Chestnut-sided Warbler	<i>Dendroica pensylvania</i>	
Yellow Warbler	<i>Dendroica petechia</i>	
Pine Warbler	<i>Dendroica pinus</i>	
Blackpoll Warbler	<i>Dendroica striata</i>	
Cape May Warbler	<i>Dendroica tigrina</i>	
Black-throated Green Warbler	<i>Dendroica virens</i>	
Common Yellowthroat	<i>Geothlypis trichas</i>	
Black-and-white Warbler	<i>Mniotilta varia</i>	
Northern Parula	<i>Parula americana</i>	
Prothonotary Warbler	<i>Protonotaria citrea</i>	
Ovenbird	<i>Seiurus aurocapillus</i>	
American Redstart	<i>Setophaga ruticilla</i>	
Orange-crowned Warbler	<i>Vermivora celata</i>	
Tennessee Warbler	<i>Vermivora peregrina</i>	
Blue-winged Warbler	<i>Vermivora pinus</i>	
Hooded Warbler	<i>Wilsonia citrina</i>	

### Tanagers

\* Non-native Species

# Faver-Dykes State Park

## Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
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Scarlet Tanager	<i>Piranga olivacea</i>	
Summer Tanager	<i>Piranga rubra</i>	

### Sparrows

Bachman's Sparrow	<i>Aimophila aestivalis</i>	
Saltmarsh Sharp-tailed Sparrow	<i>Ammodramus caudacutus</i>	
Seaside Sparrow	<i>Ammodramus maritima</i>	
Macgillivray's Seaside Sparrow	<i>Ammodramus maritimus macgillivrayi</i>	
Savannah Sparrow	<i>Passerculus sandwichensis</i>	
Fox Sparrow	<i>Passerculus sandwichensis</i>	
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	
Chipping Sparrow	<i>Spizella passerina</i>	
Field Sparrow	<i>Spizella pusilla</i>	
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	

### Meadowlarks, Blackbirds and Orioles

Red-winged Blackbird	<i>Agelaius phoeniceus</i>	
Baltimore Oriole	<i>Icterus galbula</i>	
Brown-headed Cowbird *	<i>Molothrus ater</i>	
Common Grackle	<i>Quiscalus quiscula</i>	
Eastern Meadowlark	<i>Sturnella magna</i>	

### Cardinals, Grosbeaks, and Buntings

Northern Cardinal	<i>Cardinalis cardinalis</i>	
Indigo Bunting	<i>Passerina cyanea</i>	
Painted Bunting	<i>Passerina ciris</i>	
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	

## MAMMALS

### Didelphids

Opossum	<i>Didelphis virginiana</i>	
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### Moles

Eastern mole	<i>Scalopus aquaticus</i>	
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### Edentates

Nine-banded armadillo *	<i>Dasypus novemcinctus</i>	
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### Lagomorphs

Eastern cottontail	<i>Sylvilagus floridanus</i>	
Marsh rabbit	<i>Sylvilagus palustris</i>	

### Rodents

Southeastern pocket gopher	<i>Geomys pinetis</i>	
Southern flying squirrel	<i>Glaucomys volans</i>	
Eastern woodrat	<i>Neotoma floridana</i>	
Golden mouse	<i>Ochrotomys nuttalli</i>	
Cotton mouse	<i>Peromyscus gossypinus</i>	
Gray squirrel	<i>Sciurus carolinensis</i>	
Fox squirrel	<i>Sciurus niger</i>	

### Carnivores

Bobcat	<i>Felis rufus</i>	
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\* Non-native Species

## Faver-Dykes State Park

### Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
River otter	<i>Lutra canadensis</i>	
Raccoon	<i>Procyon lotor</i>	
Gray fox	<i>Urocyon cinereoargenteus</i>	
Florida black bear	<i>Ursus americanus floridanus</i>	
<b>Sirenia</b>		
West Indian manatee	<i>Trichechus manatus latirostris</i>	
<b>Artiodactyls</b>		
White-tailed deer	<i>Odocoileus virginianus</i>	
Wild pig *	<i>Sus scrofa</i>	

\* Non-native Species

## Natural Community Habitat Codes

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### TERRESTRIAL

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

### PALUSTRINE

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

### LACUSTRINE

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

### RIVERINE

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

### SUBTERRANEAN

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

### ESTUARINE

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

### MARINE

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

### ALTERED LANDCOVER TYPES

Abandoned field .....	ABF
Abandoned pasture.....	ABP
Agriculture .....	AG

## Natural Community Habitat Codes

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*Canal/ditch ..... CD*  
*Clearcut pine plantation ..... CPP*  
*Clearing ..... CL*  
*Developed ..... DV*  
*Impoundment/artificial pond .... IAP*  
*Invasive exotic monoculture ..... IEM*  
*Pasture - improved ..... PI*  
*Pasture - semi-improved ..... PSI*  
*Pine plantation ..... PP*

*Road ..... RD*  
*Spoil area ..... SA*  
*Successional hardwood forest ... SHF*  
*Utility corridor ..... UC*

### MISCELLANEOUS

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



## **Addendum 6—Imperiled Species Ranking Definitions**



## Imperiled Species Ranking Definitions

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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.

### **FNAL 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)

## Imperiled Species Ranking Definitions

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- 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.

## **Imperiled Species Ranking Definitions**

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- 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.

## Imperiled Species Ranking Definitions

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### **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.

## **Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Properties (revised March 2013)**

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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](http://www.flheritage.com/preservation/compliance/docs/minimum_review_documentation_requirements.pdf) .

\* \* \*

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

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

Phone: (850) 245-6425

Toll Free: (800) 847-7278

Fax: (850) 245-6435

## Eligibility Criteria for National Register of Historic Places

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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

## **Eligibility Criteria for National Register of Historic Places**

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- 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.

## Preservation Treatments as Defined by Secretary of Interior's Standards and Guidelines

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**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.

**Preservation Treatments as Defined by Secretary of Interior's Standards and  
Guidelines**

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## **Addendum 8 —Timber Management Analysis**





**Faver-Dykes State Park**  
**Timber Management Analysis**

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**PURPOSE**

This document is intended to fulfill the forestry assessment requirement for Faver-Dykes State Park as required by Section 253.036, Florida Statutes. The goal of this assessment is to evaluate the potential and feasibility of utilizing silvicultural techniques to assist managers in achieving restoration goals at Faver-Dykes State Park.

**METHODOLOGY**

In the young pine plantations, 1/20<sup>th</sup> acre fixed radius plots were used to determine stocking by counting stems per acre. In older pine plantations, the use of a ten factor prism to determine plantation density in square feet per acre was utilized. Core samples were also taken in these areas to determine age and vigor. Following is a description of the property by community type and by the age of pine plantations.

A considerable amount of the park has been impacted by silvicultural activities. At this time, 2,758 ac consists of pine plantations dominated by slash pine of various ages. Two and three year old pine plantations occupy 1,021 ac of the park, having a basal area per acre of approximately 60-70 sq. ft. Ground disturbance is severe with deep rows between trees. Vegetation consists of scattered saw palmetto and grasses. Pine plantations that are 8 years old occupy 340 ac of the park and are fully stocked with 60 to 70 sq. ft. of basal area per acre. Ground disturbance is not as severe with vegetation consisting of gallberry, saw palmetto, and grasses. Wax myrtle is presence in and around areas that have standing water or are near natural wetlands. Pine plantations approximately 10 to 13 years old occupy 1,292 ac of the park and are fully stocked with 70 to 90 sq. ft. of basal area per acre. Vegetation located beneath the pine canopy is scattered, composed of gallberry, bracken fern, and vines. One pine plantation approximately 20 years old occupies 105 ac with approximately 90 – 100 sq. ft. of basal area per acre. Understory plants found here are palmetto, gallberry, and bracken fern. The park also contains approximately 667 ac of a 1 to 3 year old clear cut. The overall condition of the ground cover is moderate with some native vegetation still present. Plants found here are dog fennel, saw palmetto, gallberry, lyonia, and various wetland plants. Natural vegetative communities occupy the remainder of the park; a majority of which are natural wetland and wetland systems.

**SUMMARY**

Faver–Dykes State Park has significant acreage of pine plantation within the flatwoods in which silvicultural treatments may prove beneficial. It is possible to manage this area in such a manner as to restore the plantations to a more natural appearance, meet objectives stated in the Conceptual Management Plan, such as habitat restoration, and produce revenue through timber harvests. The revenue producing potential of the area is average. The most practical application of silviculture on this property is as a tool in achieving restoration objectives and for reducing wildfire hazards.

**Prepared by:**

Timothy S. Worley, Senior Forester  
Florida Division of Forestry  
February 27, 2006

**Faver-Dykes State Park**  
**Timber Management Analysis**

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## **Addendum 9 —Land Management Review**



## Land Management Review

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### FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

MARJORY STONEMAN DOUGLAS BUILDING  
3900 COMMONWEALTH BOULEVARD  
TALLAHASSEE, FLORIDA 32399-3000


RICK SCOTT  
GOVERNOR


CARLOS LOPEZ-CANTERA  
LT. GOVERNOR

HERSCHEL T. VINYARD JR.  
SECRETARY

### MEMORANDUM

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

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

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

**SUBJECT:** Response to Draft Land Management Review (LMR) Faver-Dykes State Park

**DATE:** February 27, 2014

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The Land Management Review draft report provided to DRP determined that management of Faver-Dykes 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 DRP and park staff continue efforts to refine natural communities mapping, especially the scrubby flatwoods and seepage slope areas. (5+, 0-)**

**Managing Agency Response:** Agree. DRP is currently in the process of a unit management plan (UMP) update that will include two detailed natural community maps, one for current conditions and one for desired future conditions.

**The team recommends that DRP and park staff develop a small scale wildlife and plant survey protocol for annual monitoring of protected and significant species. (5+, 0-)**

**Managing Agency Response:** Agree. DRP will follow FWC's recommended survey procedures for listed wildlife and plant species with a focus on those that are directly affected by land management practices. The frequency of these surveys will vary from species to species and due to staffing limitations but will strive to obtain a survey schedule that enables sound land management decisions to be made.

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The team recommends that DRP and park staff expand photopoint monitoring program to document restoration activities, using range poles or other, to measure vegetative structure. (5+, 0-)

*Managing Agency Response: Agree. Photo points are a quick and accurate way to track vegetation changes over time in response to management practices.*

### FIELD REVIEW

The maintenance condition of the Natural Communities, specifically scrubby flatwoods, received a below average score. The review team is asked to evaluate, based on their perspective, what percent of the natural community is in maintenance condition. The scores range from 1 to 5, with 1 being 0-20% in maintenance condition, 2 being 21-40%, 3 being 41-60%, 4 being 61-80% and 5 being 81-100%.

*Managing Agency Response: Agree. Only small habitat islands of scrubby flatwoods have been restored within the more intact portions of the park. Current and future restoration efforts such as timber harvesting and prescribed burning will help restore this community to a more natural state. The largest contiguous area of scrubby flatwoods in the park was mechanically treated in 2013 and is scheduled to burn as soon as weather conditions allow.*

Natural Resources Survey/Monitoring Resources, specifically other non-game species or their habitat, received a below average score. The review team is asked to evaluate, based on information provided by the managing agency, whether survey and monitoring of the resources or their habitats are sufficient.

*Managing Agency Response: Agree. Due to staffing limitations, DRP focuses on imperiled species and those that are indicators for habitat health. Surveys for non-game species will be expanded in the future when funding and staffing permit.*

Hydrologic/Geologic function Hydro-Alteration, specifically soil erosion, received a below average score. The review team is asked to evaluate, based on information provided by the managing agency, whether consideration of past and present hydrologic and geologic functions are sufficient.

*Managing Agency Response: Disagree. The erosion footprint within the park is very small, which includes a small area next to the boat ramp and dock facilities on Pellicer Creek. The park has made improvements to these areas and is currently working on stabilizing the remaining portions. Some minor erosion has occurred along portions of the main park road and a permitted paving project will address this erosion issue as soon as funding is secured.*

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Resources Protection, specifically signage, received a below average score. The review team is asked to evaluate, based on information provided by the managing agency, whether resources are sufficient to protect the property.

*Managing Agency Response: Agree. Signs are currently installed along the perimeter of the park but DRP will inspect these signs to ensure visibility and install additional signage where needed.*

Management Resources, specifically funding, received a below average score. The review team is asked to evaluate, based on information provided by the managing agency, whether management resources are sufficient.

*Managing Agency Response: Agree. The updated unit management plan will address land management funding needs. However, Division funding is determined annually by the Florida Legislature and funds are allocated to the 171 state parks and trails according to priority needs.*

### PLAN REVIEW

Natural Communities, specifically seepage slope, received a below average score. This is an indication that the management plan does not sufficiently address current or desired condition and/or future management actions to protect or restore.

*Managing Agency Response: Agree. When the current UMP was developed, a seepage slope community was not known to exist within the park. This community will be added to the next UMP if this area best fits the FNAI (Florida Natural Areas Inventory) description for seepage slope when new maps are developed for the next UMP.*

Natural Resources Survey and Monitoring Resources, specifically other non-game species or their habitat monitoring, and other habitat management effects monitoring, received below average scores. This is an indication that the management plan does not sufficiently address survey or monitoring.

*Managing Agency Response: Disagree. It is hard to determine what exactly received a low score from this broad description. The current UMP contains a detailed species list, designated species list and a description of the main designated species to be protected and monitored within this park. Specific survey procedures for each species are not contained within the plan but are developed per species according to recommended procedures. The new UMP which is currently in process will contain a more detailed imperiled species section that will outline monitoring levels and protection measures per species and habitat monitoring procedures for restoration areas.*

## Land Management Review

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**Hydrologic/Geologic function, Hydro-Alteration, specifically soil erosion, received a below average score. This is an indication that the management plan does not sufficiently address hydrologic and geologic function.**

*Managing Agency Response: Agree. At the time that the current UMP was developed, soil erosion problems were not described. Soil erosion will be described in the next UMP which is currently being drafted.*

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

*Managing Agency Response: Agree. Discussion of surplus lands will be included in the next UMP.*

**Public Access, specifically roads and boat access, received below average scores. This is an indication that the management plan does not sufficiently address access.**

*Managing Agency Response: Disagree. The current UMP illustrates the current roads and proposed roads within the park along with boating and dockage. DRP will include a more detailed description in the next UMP.*

Thank you for your attention.

/gk

CC: Larry Fooks, Chief, Bureau of Parks District 3  
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