# Allen David Broussard
# Catfish Creek Preserve State Park

## APPROVED
## Unit Management Plan

**STATE OF FLORIDA**
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**Division of Recreation and Parks**
**July 7, 2014**

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

RICK SCOTT
GOVERNOR

CARLOS LOPEZ-CANTERA
LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

July 7, 2014

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

**Re: Allen David Broussard Catfish Creek Preserve State Park – Lease # 3962**

Dear Ms. Carver:

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

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

Sincerely,

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

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## INTRODUCTION

Allen David Broussard Catfish Creek Preserve State Park is located in Polk County about fifteen miles east of Lake Wales (see Vicinity Map). Access to the park is from Firetower Road that is located south of Lake Hatchineha Road (State Road 542), east of State Road 27A (see Reference Map). The Vicinity Map also reflects significant land and water resources existing near the park.

Allen David Broussard Catfish Creek Preserve State Park was acquired to conserve, protect and manage the park for outdoor recreation, park historic and related purposes. Acquisition began in 1991, under the Conservation and Recreations Lands program. Currently, the preserve contains approximately 8,157 acres.

On December 20, 1991, the Board of Trustees of the Internal Improvement Trust Fund (Trustees) obtained title to the property. The Trustees conveyed the management authority to the Department of Environmental Protection (DEP), Division of Recreation and Parks (DRP), under Lease No. 3962. The lease expires on August 5, 2042.

At the Allen David Broussard Catfish Creek Preserve State Park, public outdoor recreation and conservation is the designated single use of the property (see Addendum 1). There are no legislative or executive directives that constrain the use of this property.

## PURPOSE AND SIGNIFICANCE OF THE PARK

Allen David Broussard Catfish Creek Preserve State Park was acquired through the CARL land acquisition program, beginning with the original acquisition in of the Preserve in 1991. The purposes of the acquisition were to preserve, for all time, representative examples of the natural and cultural history of the State of Florida. The management goal is to protect, develop, operate and maintain the properties for public outdoor recreation, conservation, historic preservation and related purposes and to support the tourism industry of Florida.

### Park Significance

- The first 1,000 acres of the park was initially acquired by Dr. and Mrs. William Broussard in partnership with The Nature Conservancy in memory of their son, Allen David Broussard, an ecologist with a deep love for the wildlife and natural communities of central Florida. The property was donated to the state in 1992 to become the core of the now 8,000 acre park. A stone monument, commemorating Allen's life and conservation philosophy, is located along one of the park's hiking trails (Sonnenberg, 2009).

- The park provides visitors with a broad range of opportunities to experience unique natural communities along the Lake Wales Ridge through recreational pursuits such as backcountry hiking, equestrian trail riding, fishing, nature study, interpretive programs and picnicking.

- The park contains a mosaic of fifteen unique natural communities, ranging from high and dry scrub to the low floodplains of Lake Pierce, providing critical habitat to imperiled plant species including Lewton's milkwort, Britton's beargrass and Cutthroat grass.

- Allen David Broussard Catfish Creek Preserve State Park defines an area that is over 8,000 acres between Lake Pierce and Lake Hatchineha. Cultural sites range from prehistoric burial mounds to middens from the Seminole culture, dating as far back 3,000 years to Florida's Late Archaic Period.

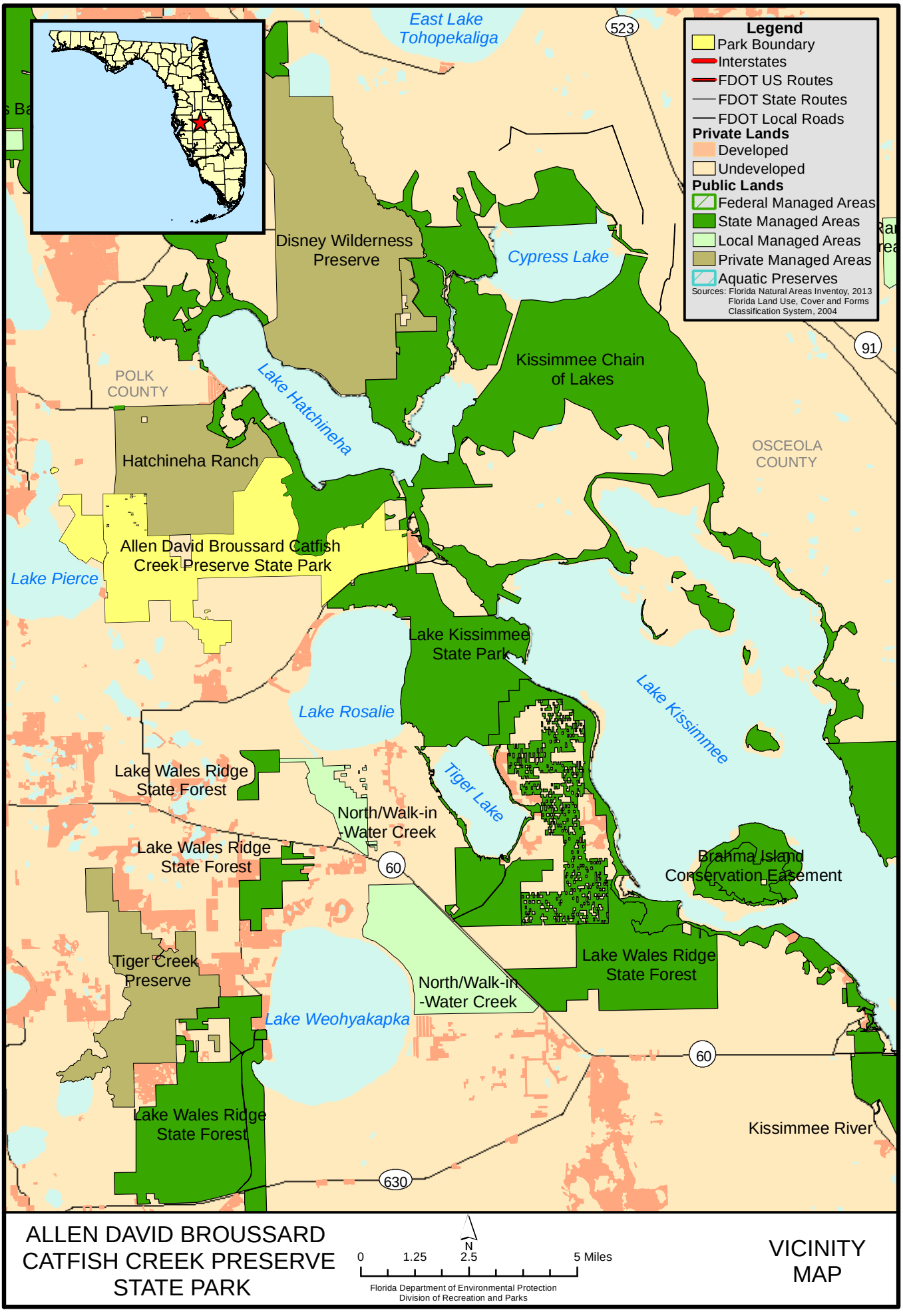
- The preserve protects a portion of the Lake Wales Ridge, a unique scrub ridge in Central Florida, which provides valuable habitat to the imperiled gopher tortoise, Florida scrub jay, and other imperiled species. Catfish Creek and the surrounding wetlands provide important habitat to imperiled bird species, which includes the Snowy Egret, White Ibis and Wood Stork.

In the management of the Allen David Broussard Catfish Creek Preserve State Park, preservation and enhancement of natural conditions is all important. Resource considerations are given priority over user considerations and development is restricted to the minimum necessary for ensuring its protection and maintenance, limited access, user safety and convenience, and appropriate interpretation. Permitted uses are primarily of a passive nature, related to the aesthetic, educational and recreational enjoyment of the preserve, although other compatible uses are permitted in limited amounts. Program emphasis is placed on interpretation of the natural and cultural attributes of the preserve.

## PURPOSE AND SCOPE OF THE PLAN

This plan serves as the basic statement of policy and direction for the management of the Allen David Broussard Catfish Creek Preserve 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. The plan is intended to meet the requirements of Sections 253.034 and 259.032, Florida Statutes, Chapter 18-2, Florida Administrative Code, and is intended to be consistent with the State Lands Management Plan. With approval, this management plan will replace the 2004 approved plan.

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



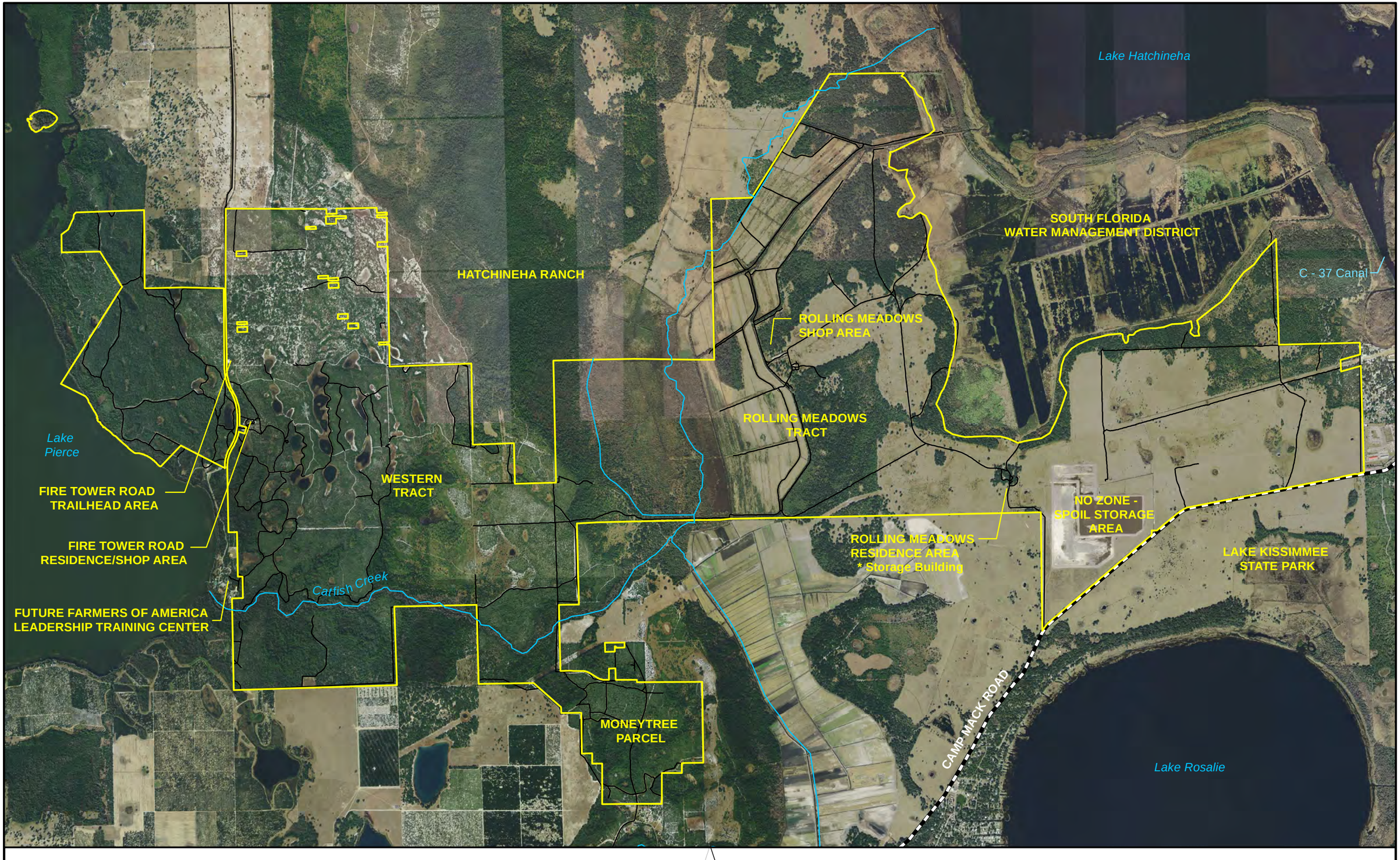

# ALLEN DAVID BROUSSARD CATFISH CREEK PRESERVE STATE PARK

N

0 1.25 2.5 5 Miles

Florida Department of Environmental Protection
Division of Recreation and Parks

## VICINITY MAP




ALLEN DAVID BROUSSARD
CATFISH CREEK PRESERVE STATE PARK

N

0 0.25 0.5 1 Miles

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

REFERENCE MAP

The Land Use Component is the recreational resource allocation plan for the park. Based on considerations such as access, population, adjacent land uses, the natural and cultural resources of the park, current public uses and existing development, measurable objectives are set to achieve the desired allocation of the physical space of the park. These objectives locate use areas and propose the types of facilities and programs and 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 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 the development of this plan, the potential of the park to accommodate secondary management purposes ("multiple uses") was analyzed. These secondary purposes were considered within the context of the DRP's statutory responsibilities and an analysis of the resource needs and values of the park. This analysis considered the park natural and cultural resources, management needs, aesthetic values, visitation and visitor experiences. For this park, it was determined that timber management and cattle grazing could be accommodated in a manner that would be compatible and not interfere with the primary purpose of resource-based outdoor recreation and conservation. These compatible secondary management purposes are addressed in the Resource Management Component of the plan. 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 and should be discouraged.

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 and cattle grazing would be appropriate at this park as additional sources of revenue for land management since they are compatible with the park's primary purpose of resource-based outdoor recreation and conservation.

The use of private land managers to facilitate restoration and management of this unit was also analyzed. Decisions regarding this type of management (such as outsourcing, contracting with the private sector, use of volunteers, etc.) will be made on a case-by-case basis as necessity dictates.

## MANAGEMENT PROGRAM OVERVIEW

### Management Authority and Responsibility

In accordance with Chapter 258, Florida Statutes and Chapter 62D-2, Florida Administrative Code, 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 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 DRP's Operations Manual (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.

**1.** Provide administrative support for all park functions.

2. Protect water quality and quantity in the park, restore hydrology to the extent feasible and maintain the restored condition.
3. Restore and maintain the natural communities/habitats of the park.
4. Maintain, improve or restore imperiled species populations and habitats in the park.
5. Remove exotic and invasive plants and animals from the park and conduct needed maintenance-control.
6. Protect, preserve and maintain the cultural resources of the park.
7. Provide public access and recreational opportunities in the park.
8. 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, FWC aids DRP with wildlife management programs, including imperiled species management and Watchable Wildlife programs. DRP will work in cooperation with the South Florida Water Management District (SFWMD) on wetland restoration projects in the park. The Florida Department of State (FDOS), Division of Historical Resources (DHR) assists staff to ensure protection of archaeological and historical sites.

## Public Participation

The 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 January 29 and 30, 2014, respectively. Meeting notices were published in the Florida Administrative Weekly, January 21, 2014 [VOL 40/13], 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

The Allen David Broussard Catfish Creek Preserve State Park is not within an Area of Critical State Concern as defined in section 380.05, Florida Statutes. Currently it is not under study for such designation. The park is a component of the Florida Greenways and Trails System.

All waters within the unit have been designated as Outstanding Florida Waters, pursuant to Chapter 62-302 Florida Administrative Code. Administered by DEP, the

program was created by Section 403.061, Florida Statutes, to protect lakes, rivers and streams against degradation of existing ambient water quality. Surface waters in this unit are also classified as Class III waters by DEP.

# RESOURCE MANAGEMENT COMPONENT

## INTRODUCTION

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

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

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

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

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

| Table 1: ADB Catfish Creek Preserve State Park Management Zones | | | |
|---|---|---|---|
| **Management Zone** | **Acreage** | **Managed with Prescribed Fire** | **Contains Cultural Resources** |
| CF-01 | 106.31 | Y | N |
| CF-02 | 61.03 | Y | N |
| CF-03 | 70.91 | Y | N |
| CF-04 | 73.60 | Y | N |
| CF-05 | 23.81 | Y | N |
| CF-06 | 55.40 | Y | N |
| CF-07A | 15.80 | Y | N |
| CF-07B | 54.78 | Y | N |
| CF-07C | 21.80 | Y | N |
| CF-07D | 9.22 | Y | N |
| CF-08 | 84.94 | Y | N |
| CF-09 | 40.63 | Y | N |
| CF-10A | 32.67 | Y | N |
| CF-10B | 31.26 | Y | N |
| CF-12A | 82.83 | Y | N |
| CF-12B | 203.23 | Y | N |
| CF-13 | 305.05 | Y | N |
| CF-14 | 202.26 | Y | N |
| CF-15 | 143.90 | Y | N |
| CF-16 | 41.87 | Y | N |
| CF-17 | 83.59 | Y | N |
| CF-18 | 640.27 | Y | N |
| CF-19A | 43.58 | Y | N |
| CF-19B | 170.89 | Y | N |
| CF-20A | 125.18 | Y | N |
| CF-20B | 333.51 | Y | N |
| CF-21A | 156.16 | Y | N |
| CF-21B | 19.37 | Y | Y |
| CF-21C | 44.66 | Y | N |
| CF-22 | 102.51 | Y | N |
| CF-23 | 39.51 | Y | N |
| CF-24 | 60.27 | Y | Y |
| CF-25A | 323.21 | Y | N |
| CF-25B | 5.37 | Y | N |
| CF-26A | 2.41 | Y | N |
| CF-26B | 9.60 | Y | N |
| CF-26C | 2.30 | Y | N |
| CF-26D | 2.15 | Y | N |
| CF-26E | 11.57 | Y | N |
| CF-27 | 82.61 | Y | N |
| CF-28 | 14.19 | Y | N |

| Table 1: ADB Catfish Creek Preserve State Park Management Zones | | | |
|---|---|---|---|
| **Management Zone** | **Acreage** | **Managed with Prescribed Fire** | **Contains Cultural Resources** |
| CF-29 | 103.96 | Y | N |
| CF-30 | 80.21 | Y | N |
| CF-31 | 32.91 | Y | N |
| CF-32 | 74.05 | Y | N |
| CF-33 | 81.66 | Y | N |
| CF-34 | 159.09 | Y | N |
| CF-35 | 309.42 | Y | N |
| CF-36 | 15.15 | Y | N |
| CF-37 | 43.80 | Y | N |
| CF-38 | 226.77 | Y | N |
| CF-39 | 48.24 | Y | N |
| CF-40 | 191.64 | N | N |
| CF-41 | 619.47 | N | N |
| CF-42 | 58.99 | N | N |
| CF-43 | 38.13 | N | Y |
| CF-44 | 294.90 | N | Y |
| CF-45 | 342.80 | Y | Y |
| CF-46 | 434.11 | Y | Y |
| CF-47 | 176.07 | N | Y |
| CF-48 | 388.35 | N | Y |
| CF-49 | 321.12 | N | N |
| CF-50 | 3.37 | Y | N |
| CF-51 | 9.89 | N | Y |
| NO ZONE(CF-52) | 312.18 | N | Y |

## RESOURCE DESCRIPTION AND ASSESSMENT

### Natural Resources

### Topography

The western portion of the unit lies along the Lake Wales Ridge physiographic division located in the southern portion of the Central Lake District (Brooks 1981a). The Lake Wales Ridge is the topographic crest of central Florida. It is made up of residual sand hills, relic beach ridges and paleo sand fields. Within the Lake Wales Ridge, most of the unit lies within the Eastern Complex subdivision of the Central Ridge. This subdivision contains some residual high hills (to 220 feet). Many solution basins, some with large lakes (such as Lake Pierce) occur along the western margin of the subdivision. The Lake Wales Ridge is unique for having some of the highest elevations in the state and containing some of the rarest biota in Florida.

The eastern part of the unit lies along the border of the Kissimmee Valley physiographic division of the Eastern Flatwoods District (Brooks 1981a). This division is characterized by having seasonally flooded lowlands of river swamp and grassland prairies largely underlain by silty sand with elevations usually higher than 50 feet.

There is a great change in elevation at the unit. Elevations at the unit range from around 135 feet in the western portion to less than 55 feet in the eastern portion towards Lake Hatchineha. The northwestern and central sections of the unit contain numerous hills, ridges and lakes and have the highest elevations. The lowest elevations are found along Catfish Creek and the Rolling Meadows addition. Catfish Creek originates at Lake Pierce at about 75 feet in elevation and drops to about 60 feet in elevation as the original creek bed exits the preserve.

### Geology

The unit is underlain by two different geological formations that are both Plio-Pleistocene deposits. The first formation, which is found in most of the unit (eastern section), is characterized as having beach and dune sand deeply weathered, coarse to fine sands with some clay lenses. The second formation located in the eastern portion of the unit is described as preglacial Pleistocene lagoonal and prograded unlithified coastal sand, shelly silty gray to greenish gray sand (Brooks 1981b).

### Soils

The Natural Resources Conservation Service (formerly the U.S. Soil Conservation Service) identified 29 soil types (see Soils Map) in preserve in the soil survey of Polk County (USDA 1990). Addendum 4 contains detailed soil descriptions.

One of the major soil types found in the western portion of the unit is Astatula sand. It is an upland soil with high permeability. Astatula sand tends to sustain sandhill and scrub communities. This soil has low compactibility and thus it has the potential for physical disturbance and is not well suited for heavy vehicular or recreational traffic. Also, found associated with this soil are sections of Tavares fine sand, Duette fine sand, and Archbold sand that have similar characteristics.

Samsula muck or Placid and Myakka depressional sands are found in most of the wetland areas of the preserve. The Samsula soils are usually associated with the baygall communities and the depressional sands usually underlay the wet prairies and marshes. These soils are not suited for recreational use due to their wetness.

Soil erosion is not a major concern on this unit at this time. However, due to the unique topography (some of the highest points in the state) of the site combined with unstable sandy soils, any proposed trails for the site should be planned using existing roads and trails. Any new disturbance while creating trails will be monitored for any negative soil impacts over time. Management activities will follow generally accepted best management practices to prevent soil erosion and conserve soil and water resources on site.


ALLEN DAVID BROUSSARD CATFISH CREEK PRESERVE STATE PARK

N

0 0.25 0.5 1 Mile

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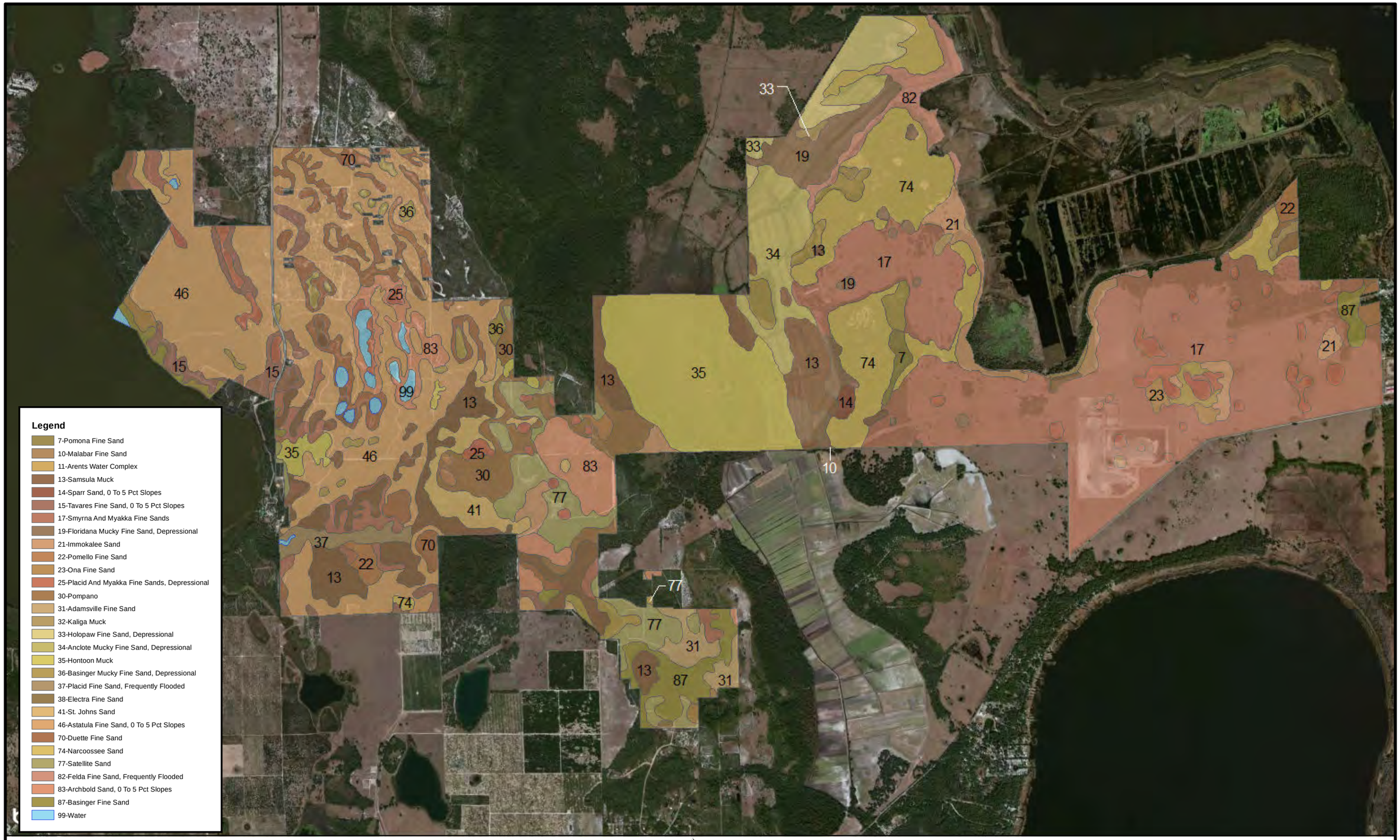
MANAGEMENT ZONES MAP




ALLEN DAVID BROUSSARD CATFISH CREEK PRESERVE STATE PARK

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

SOILS MAP

## Minerals

There are no known deposits of commercial value at the Allen David Broussard Catfish Creek Preserve State Park.

## Hydrology

The preserve is located within the Kissimmee River Basin. Catfish Creek flows (approximately 7 miles) from Lake Pierce just west of the southwest corner of the preserve and drains into Lake Hatchineha, located to the north of the Rolling Meadows addition. Channelization of the creek for agricultural purposes has occurred outside the preserve and within the Rolling Meadows addition where water was managed for past vegetable and sod farms. The channelization and agricultural activities have had an impact on the hydrology of Catfish Creek and the surrounding areas.

Many drainage ditches have been constructed within the large wet flatwoods/ floodplain swamp area (CF-18) where Catfish Creek historically turned north towards Lake Hatchineha. These were used to manage water for a past agricultural operation found there. The former sod farm area just east of this area (part of the Rolling Meadows addition) also has numerous ditches and canals that were in operation for management of the sod there as well as the adjacent former sod farm area managed by the South Florida Water Management District (SFWMD) along Lake Hatchineha. Catfish Creek is also connected to ditches to the south where water is managed as part of a third sod farm area that is privately owned.

Currently water from Catfish Creek flows to the north in two canals along the eastern edge of the DEP abandoned sod area. Along the path water flows through several water control structures which were part of the former sod operation. Most of these structures are in various states of disrepair. After flowing north, the water enters the SFWMD property (north of the Rolling Meadows tract). SFWMD is currently working on a restoration plan for this property. The plan calls for the construction of a 1,670-acre impounded wetland that will be fed by water from Catfish Creek and Lake Hatchineha. The wetland will be managed by the SFWMD to mimic the natural hydroperiod of Lake Hatchineha and will provide enhanced wetland habitat for wildlife (Williams, 2006).

The use and management of a portion of the Rolling Meadows tract, designated as NO ZONE (CF-52) on the Management Zones map, has been granted to the SFWMD through a Memorandum of Understanding (MOU) between the Trustees, DRP and SFWMD that was executed in 2009. This 312-acre site will used for the temporary storage of spoil dredged from Canal C-37 between Lake Hatchineha and Lake Kissimmee. The spoil will be used for Kissimmee River restoration activities including backfilling farm ditches and strengthening levees (Williams, 2006). In exchange for the use of the property, SFWMD has agreed to assist with the restoration of a 450-acre area of floodplain marsh in the northwest corner of Lake Kissimmee State Park. For a period of ten years from the completion of the C-37 dredging, SFWMD can store spoil on the site as the lead managing agency. At the end of the ten year period, the MOU will terminate and DRP will once again become the managing agency for the site.

Many small lakes exist in the northwestern part of the preserve. Some of these are marsh / flatwoods lakes. Runoff from adjoining uplands supplies these lakes but they may also receive water from lateral groundwater seepage. Other lakes are classified as sandhill upland lakes. These lakes are fed by lateral groundwater seepage and/or artesian flow from the underlying aquifer.

The principal aquifer underlying the area of the preserve is the Floridan (Fernald and Patton 1984). Above this aquifer are the Intermediate aquifer, which becomes continuous with the Floridan in the area of the preserve, and the surficial aquifer (Kelly 1993). The preserve's lake and wetland systems are closely linked with these aquifers and thus any changes in the aquifers may have an impact on these systems.

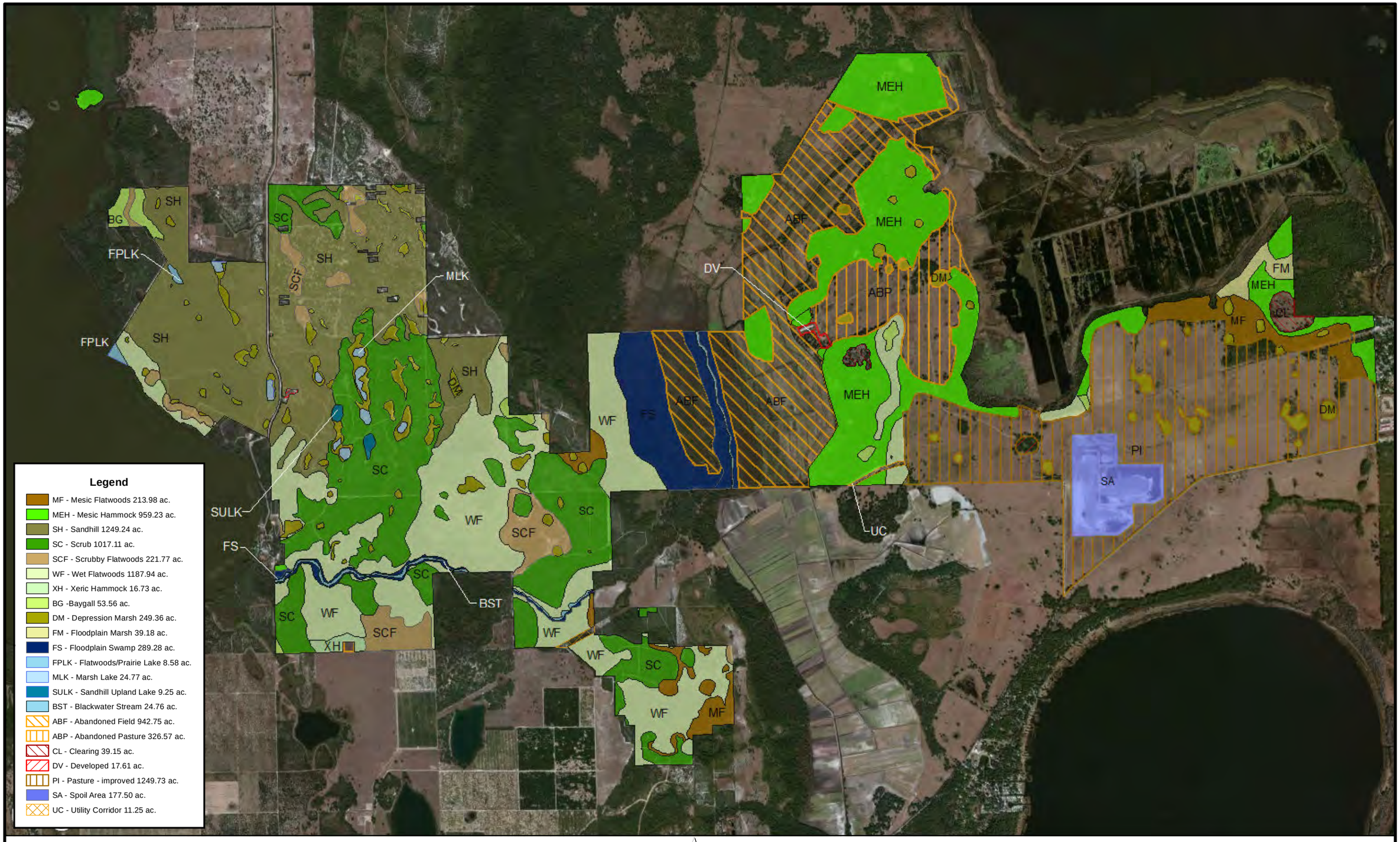
**Natural Communities**

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 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 dependant communities, ongoing control of non-native plant and animal species, maintaining natural hydrological functions (including historic water flows and water quality), preserving a community's biodiversity and vegetative structure, protecting viable populations of plant and animal species (including those that are imperiled or endemic), and preserving intact ecotones linking natural communities across the landscape.

The park contains 15 distinct natural communities as well as six altered landcover types (see Natural Communities – Existing Conditions Map). A list of known plants




# ALLEN DAVID BROUSSARD CATFISH CREEK PRESERVE STATE PARK

N

0 0.25 0.5 1 Mile

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

# NATURAL COMMUNITIES EXISTING CONDITIONS MAP

and animals occurring in the park is contained in Addendum 5.

**MESIC FLATWOODS**

**Desired future condition:** Dominant pines will be longleaf pine (*Pinus palustris*) and/or south Florida slash pine (*Pinus elliottii* var. *densa*). Native herbaceous groundcover should be over at least 50 percent of the area and less than 3 feet in height. Saw palmetto (*Serenoa repens*) will comprise no more than 50 percent of total shrub species cover, and are less than 3 feet in height. Shrub species include saw palmetto, gallberry (*Ilex glabra*), fetterbush (*Lyonia lucida*), runner oak (*Quercus elliottii*), dwarf live oak (*Quercus minima*), shiny blueberry (*Vaccinium myrsinites*), and dwarf huckleberry (*Gaylussacia dumosa*). Shrubs are generally knee-high or less, and there are few if any large trunks of saw palmetto along the ground. The Optimal Fire Return Interval for this community at the preserve is 2-4 years as much of this community are portions adjacent to wet flatwoods and scrub.

**Description and assessment:** There are scattered sections of mesic flatwoods in the central part of the preserve, in the southernmost portion of the preserve known as the Moneytree parcel, and in the Rolling Meadows addition. The portion in the central area of the preserve (CF-17 and 18) is contiguous with flatwoods north of the preserve boundary. It is in relatively good shape and should be burned regularly in order to maintain it. The preserve should work with the adjacent landowner in order to more effectively burn the portion in the preserve as well as to help maintain the habitat as a whole unit.

The mesic flatwoods in the Moneytree parcel (CF-32, 34) occurs in patches between areas of scrub and wet flatwoods. These flatwoods have been minimally disturbed except for some old roads that bisect portions of them. The Moneytree parcel has not been burned since it was acquired by the state, except for a small wildfire. Despite the lack of burning, these flatwoods are still in good condition.

Small portions of flatwoods exist in the Rolling Meadows addition (CF-38, 39, 41). These areas were not directly impacted by agriculture. These areas though are impacted by hydrological changes and are thus judged to be in fair condition. At one time, much of the adjoining pasture areas (CF-40, 41, 42, 43, 44, 45) of this addition were likely flatwoods.

**General management measures:** The maintenance of this community will require regular application of prescribed fire. Some areas need fuel reduction burns to bring this community back to a regular fire rotation (2-4 years). Hydrological restoration (see restoration section) may be needed to aid in achieving desired future conditions for the zones in the Rolling Meadows portion of the preserve. Monitoring and treatment of exotics in the mesic flatwoods should be ongoing.

**MESIC HAMMOCK**

**Desired Future Condition:** A well-developed evergreen hardwood forest with a dense canopy dominated by live oak (*Quercus virginiana*) with cabbage palm (*Sabal palmetto*) mixed into the understory. Southern magnolia (*Magnolia grandiflora*) and pignut hickory (*Carya glabra*) are common components in the subcanopy as well.

The shrubby understory may be dense or open, tall or short, and is typically composed of saw palmetto (*Serenoa repens*), beautyberry (*Callicarpa Americana*), American holly (*Ilex opaca*), gallberry (*Ilex glabra*) and sparkleberry (*Vaccinium arboretum*). 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 occur on live oaks, 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 are rarely inundated and not considered to be fire-adapted communities and are typically shielded from fire.

**Description and assessment:** The Rolling Meadow addition contains portions of mesic hammock within it. The surrounding sod operation and the accompanying ditching have likely had an impact on this community. These hammocks are otherwise in good condition. There are fair amounts of exotic plants that have infested this community including Caesarweed and cogongrass.

**General management measures:** Mesic hammock areas are not considered fire dependent communities although fire will be allowed to manage the ecotones between this community and other communities that are fire dependent. Although the exotic plants are widespread in these communities, an attempt should be made to control these exotics, and keep the conditions from getting worse.

**SANDHILL**

**Desired Future Condition:** Dominant pines will be longleaf pine (*Pinus palustris*) and/or south Florida slash pine (*Pinus elliottii* var. *densa*). Herbaceous cover is 80 percent or greater, typically of wiregrass (*Aristida beyrichiana*), and is less than 3 feet in height. In addition to groundcover and pines characteristics, 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 are commonly 150-200 years old, and some turkey oaks are over 100 years old. The Optimal Fire Return Interval for this community at the preserve is 2-4 years as typical Lake Wales Ridge sandhill lacks the amount of grassy components that usually occur in most other sandhills.

**Description and assessment:** The sandhill community comprises a large part of the western portion of the preserve. A portion of this has been impacted by root raking and the construction of two-trail roads. When the preserve was developed, much of it had succeeded or was succeeding to xeric hammock or turkey oak barrens. Depending on the natural resource management applied to these areas, they are in fair to good condition.

The sandhills in the park don't exhibit the traditional association of wiregrass, turkey oak and longleaf pine (*Pinus palustris*) association that usually typifies this community. They contain some scrub components including scrub oaks and the blue-tailed mole skink (*Eumeces egregius lividus*), usually thought of as a scrub endemic. Due to the lack of fire, many of the turkey oaks (*Quercus laevis*), scrub

hickories (*Carya floridana*) and other oaks (*Quecus* spp.) have attained tree stature in some sandhill areas, creating a canopy that has shaded out most of the wiregrass (*Aristida* spp.). This tree stature has been minimized in a majority of the sandhills through mechanical treatments and fire management. The absence or sparseness of longleaf and south Florida slash pine is due to logging during the first half of the 20th Century. The sparseness of the understory in these sandhill areas can be contributed to lack of fire and cattle grazing. Depending on the fire regime, these areas could return to a sandhill community with scrub oaks and scrub hickory, sparse patches of wiregrass, and scattered either longleaf or south Florida slash pine (*Pinus elliottii* var. *densa*). However, with longer intervals between fires, these sandhills could become more scrub-like and eventually, as it appears today, xeric hammock.

**General management measures:** The sandhills in the park need to be burned every 2-4 years. In management zones where fire has not been re-introduced and there are an over abundance of larger oaks, mechanical removal in combination with prescribed fire should be used to achieve the desired future conditions. Many zones have been mechanically treated followed by prescribed fire. Chainsaw reduction of the oak canopy has been effective. Though time consuming, this technique causes minimal disturbance, especially to the soil. The goal is to use fire alone to maintain these communities.
A few areas of sandhill have relatively small infestations of cogongrass. These have been treated but continual monitoring and retreating is needed to attempt to eliminate this exotic. As burning has opened up areas, staff seems to have noted an increase in the spread of this plant.

There never seems to have been an abundance of longleaf pine on the sandhills at the preserve. The re-introduction of fire to some of the management zones has caused some increased pine mortality. Pine planting should be considered if natural regeneration is inadequate.

**SCRUB**

**Desired Future Condition:** Dominant species over the majority of scrub acres will include scrub oak (*Quercus inopina*), sand live oak (*Quercus maritime*), myrtle oak (*Quercus myrtifolia*), Chapman's oak (*Quercus chapmanii*), saw palmetto (*Serenoa repens*), and rusty staggerbush (*Lyonia ferruginea*). The oak canopy varies in height from 3 – 8 feet. There will be a variety of oak age classes/heights between different scrub patches. There are scattered openings in the canopy with bare patches of sand that support many imperiled or endemic plant species; these species are regularly flowering and replenishing their seed banks. Sand pine (*Pinus clausa*), where present, will usually not be dominant in abundance, percent cover, or height. The Optimal Fire Return Interval for this community is variable. Typically, it is 4-15 years when aiming to achieve a mosaic of burned and unburned areas.

**Description and assessment:** The scrub communities in the park are highly variable in form. A large area of scrub occupies a portion of the western part of the unit (CF- 1, 2, 3, 4, 5). The presence of large turkey oaks, scrub hickories, tree-size scrub oaks (*Quercus inopina*), saw palmetto (*Serenoa repens*), on the ridge tops

and slopes suggest that the scrub community contains some sandhill components and has reached a mature state (Kelly 1993). With longer intervals between prescribed burns, the plant community may retain more of its scrub components such as scrub hickory, scrub oaks and open sandy areas.

Another common form of scrub in the park is located in the central area of the preserve (CF-14, 16, 17, 19B). These are scrub 'islands' surrounded by flatwoods. These islands contain a greater amount of open sandy areas than the previously mentioned scrub habitat.

Other scrub areas at the preserve (CF-17, 19B, 33) have an overstory of sand pine, *Pinus clausa.* The scrub in CF-17 has been treated by fire and mechanical removal of sand pines, thus it currently has little sand pine overstory. The other two zones are dominated by an overstory of sand pine. Due to a lack of fire, the sand pines almost create a closed canopy. These areas have an understory of scrub oaks, scrub hickory, Florida rosemary (*Ceratiola ericoides*), as well as some rarer elements such as scrub plum (*Prunus geniculata*), sand lace (*Polygonella basiramia*) and scrub bay (*Persea humilis*) intermixed with open sandy areas. The scrub community at this unit also contains rare animal species such as Florida scrub-jays (*Aphelocoma coerulescens*), Florida mice (*Podomys floridanus*), and sand skinks (*Neoseps reynoldsi*).

The occurrence of exotic plant species within the scrub is minimal. There are a few cogongrass spots that seem to be under control now. Many of the rare, endemic plants of the Lake Wales Ridge occur in open sandy areas at the preserve. The scrub areas at the preserve are judged to be in fair to good condition.

**General management measures:** Fire should be the main tool in managing the scrub at the preserve. Fire return intervals at the preserve should be from 6 to 15 years. Some areas have and other areas may need some mechanical means to reduce the overstory before fire is applied. Firebreaks around some zones need to be widened and fuel heights adjacent to firebreaks reduced. Surveying, monitoring and treatment of cogongrass infestations should continue.

**SCRUBBY FLATWOODS**

**Desired Future Condition:** Dominant tree species will usually be longleaf pine (*Pinus palustris*) and/or south Florida slash pine (*Pinus elliottii* var *densa*). 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 vary in height from 3 – 8 feet and there will be a variety of oak age classes/heights across the landscape. Dominant shrubs 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 typically be well below 40 percent. The Optimal Fire Return Interval for this community is regionally variable. Typically, the interval is 3-5 years when aiming to achieve a mosaic of burned and unburned areas.

**Description and assessment:** A small amount of this community occurs in the park. The scrubby flatwoods have been disturbed by roadways in some areas, but most are intact. Sand pines occur intermixed with south Florida slash pine as the overstory component where fire has been excluded. The understory consists mainly of scrub oaks and saw palmetto. The scrubby flatwoods are associated with adjacent sandhill or scrub communities. Since the Florida scrub-jay occurs on the preserve and is dependent on this type of plant community, fire should be an integral part of managing these resources. These scrubby flatwoods areas are mostly in good condition.

**General management measures:** Prescribed fire is essential for the management of scrubby flatwoods. They should be burned within a range of every 3 to 5 years. Exotic removal should continue in these areas as needed.

**WET FLATWOODS**

**Desired Future Condition:** Dominant pines will be longleaf pine (*Pinus palustris*), slash pine (*Pinus elliottii*), pond pine (*Pinus serotina*), and/or loblolly pine (*pinus taeda*). Pond cypress (*Taxodium ascendens*) may reach canopy in some locations. The canopy will be open, with pines being widely scattered and of at least three age classes. Native herbaceous cover is at least 80 percent. Pitcherplants (*Sarracenia* spp.) and other plants such as terrestrial orchids may be present and abundant in some areas. Common shrubs will include sweetpepperbush (*Clethra alnifolia*), fetterbush (*Lyonia lucida*), large gallberry (*Ilex coriacea*), titi (*Cyrilla racemiflora*), and wax myrtle (*Myrica cerifera*). The Optimal Fire Return Interval for this community is 2-4 years.

**Description and assessment:** Most of the wet flatwoods community occurs in the central portion of the unit and in the Moneytree parcel. Some of the wet flatwoods are dominated by cutthroatgrass (*Panicum abscissum*). Cutthroatgrass, although a rare plant statewide, is abundant throughout portions of the preserve. The overstory consists of south Florida slash pine, which can be dense, due to a lack of fire, or sparse under a normal fire regime. The dominant shrubs are fetterbush, gallberry (*Ilex glabra*), saw palmetto (*Serenoa repens*), and wax myrtle (*Myrica cerifera*). In some areas the understory is sparse with herbs and grasses due to lack of fire, in others, the ground layer is predominantly cutthroatgrass. With a shorter fire regime, the wet flatwoods tend towards wet prairie, as the overstory is reduced or eliminated. The portions of wet flatwoods in the center of the preserve (CF-14, 19a, 20a) are in good condition.

The wet flatwoods in the Moneytree parcel (CF-32, 33, 34) drains and continues to the east into private property. Water manipulation in this neighboring parcel for sod operations may have an adverse effect on this community. This should be watched and monitored for any detrimental changes. These flatwoods areas are deemed fair to good.

In addition, hooded pitcher plants (*Sarracenia minor*) are common in this community. A single population of pitcher plants was documented by Johnson (2001) during the mapping of the natural communities for the past plan; several

other populations were discovered in the Moneytree parcel. Pitcher plants are fire dependent plants that would also benefit from more frequent burning.

**General management measures:** Prescribed fire should be applied to this community every 3 to 5 years. The wet flatwoods area in the central portion of the preserve has been burned several times and is in rotation. The latest burns have been conducted during the spring/summer seasons and efforts should be made to keep burning during the growing season. The wet flatwoods in the Moneytree parcel and the other parcel south of Catfish Creek have not been burned for a long time and are in need of fuel reduction burns.

**XERIC HAMMOCK**

**Desired Future Condition:** Typically considered a late successional stage of scrub or sandhill that generally occurs in small isolated patches on excessively well drained soils. Vegetation will consist of a low closed canopy dominated by sand live oak (*Quercus geminata*) which provides shady conditions. Typical plant species may also include Chapman's oak (*Quercus chapmanii*), and laurel oak (*Quercus laurifolia*). Sand pine, slash pine or longleaf pine (*Pinus clausa, P. elliottii, P. palustris*, respectively) may also be a minor component. Understory of species will include saw palmetto (*Serenoa repens*), fetterbush (*Lyonia lucida*), myrtle oak (*Quercus myrtifolia*), yaupon holly (*Ilex vomitoria*), Hercules' club (*Zanthoxylum clava-herculis*), and Florida rosemary (*Ceratiola ericoides*). A sparse groundcover layer of wiregrass (*Aristida beyrichiana*) and other herbaceous species may exist but will typically be absent. A continuous leaf litter layer may be present. Overgrown scrub in need of fire and/or mechanical treatment should not be confused with true xeric hammock.

**Description and assessment:** These areas are in fair to good condition. An area in the southwestern corner of the preserve south of Catfish Creek (CF-20b) was mapped as xeric hammock in this plan. Portions of the area were likely scrub and/or sandhill in the past. Fire exclusion probably allowed succession of this area to xeric hammock. The area should be examined to determine with more certainty what management actions are appropriate.

**General management measures:** Although xeric hammock is not a fire dependent community, fire should be applied in the adjacent scrub and flatwoods communities and fire allowed to carry into the hammock as needed for fire management. Exotic species removal and monitoring should be continued as needed.

**BAYGALL**

**Desired Future Condition:** 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*) is typical with

climbing vines such as greenbriar (*Smilax* spp.) and muscadine grape (*Vitis* spp.) is usually abundant. The Optimal Fire Return Interval for this community is 25-100 years. Frequent fires from adjacent communities should be allowed to enter baygall ecotone.

**Description and assessment:** There are a few areas of baygall at this preserve. The baygalls maintain moist soil conditions through seepage flow from uplands and from a water table that occurs close to the surface. The main overstory tree is loblolly bay (*Gordonia lasianthus*) with a mixture of red bay (*Persea borbonia*) and south Florida slash pine. The understory consists mainly of dahoon holly (*Ilex cassine*), fetterbush (*Lyonia lucida*), cinnamon fern (*Osmunda cinnamomea*), Virginia chain fern (W*oodwardia virginica*) and a variety of vines. Most of the baygalls are extremely dense and invading into the adjacent uplands. The reintroduction of fire will reverse this invasion and create a more natural ecotone. The baygall areas are in good condition.

**General management measures:** Baygall areas 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 baygall and careful attention to muck conditions should be evaluated. Exotic plant species removal will continue.

**DEPRESSION MARSH**

**Desired Future Condition:** Emergent herbaceous and low shrub species will be dominant over most of the area with open vistas. Trees are few and if present, will occur primarily in the deeper portions of the community. There is 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 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*). Floodplain marsh dominants also typically include sand cordgrass (*Spartina alterniflora*) and sawgrass (*Cladium jamaicense*). Swales are typically dominated by sawgrass. The Optimal Fire Return Interval for this community is 2-10 years depending on fire frequency of adjacent communities.

**Description and assessment:** There are numerous depression marshes located at this unit. These marshes are fringed by scrub, sandhill, or flatwoods and many have open water in the middle. Others have emergent vegetation throughout. The emergent vegetation is usually in the form of cattail (*Typha latifolia*) and pickerelweed (*Pontedaria cordata*). Fire should be used as an active management tool to prevent hardwood invasion in the outer bands of the community. Many of the depression marshes in the Rolling Meadows portion of the preserve have ditches connecting the marshes speeding the drainage. These ditched areas are determined to be in fair condition. Other depression marshes that are surrounded by natural communities are in good condition.

**General management measures:** The ditches connecting the depression marshes should be filled or blocked if feasible to restore the natural hydrology of the depression marshes. The depression marshes should not be excluded from prescribed fire when the zone they are in is burned if possible. Duff and muck levels and moisture content within them should be assessed prior to burning. Non-ground disturbing mechanical removal of encroaching vegetation should be considered if depression marsh rims are overgrown with vegetation due to altered hydrology or lack of fire. Exotic plant species removal will continue.

**FLOODPLAIN MARSH**

**Desired Future Condition:** Emergent herbaceous and low shrub species are dominant over most of the area, and there is an open vista. Trees are few and if present, will occur primarily in the deeper portions of the community. There is little accumulation of dead grassy fuels due to frequent burning; one can see often see the soil surface through the vegetation when the community is not inundated. Dominant vegetation in floodplain marsh includes maidencane (*Panicum hemitomon*), panicgrasses (*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 coastal plain willow (*Salix caroliniana*). Floodplain marsh dominants will also typically include sand cordgrass (*Spartina alterniflora*) and sawgrass (*Cladium jamaicense*). Swale will typically be dominated by sawgrass. The Optimal Fire Return Interval for this community is 2-10 years depending on fire frequency of adjacent communities.

**Description and assessment:** There are fringes of floodplain marsh (in CF-38) that still exist adjacent to the sod area north of the Rolling Meadows addition. The area has some encroaching hardwoods and an adjacent canal (SFWMD managed). Thus, they are judged to be in fair shape. The sod areas that are mapped as abandoned field in this plan were formerly floodplain marsh and are in need of restoration.

**General management measures:** The floodplain marsh should receive regular application of prescribed fire (2-4 yrs). With the area to the north being restored by the SFWMD, the area should benefit as result a higher water table in the surrounding habitat. The zone contains cogongrass and other exotics and these should be treated and maintained as needed.

**FLOODPLAIN SWAMP**

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

**Description and assessment:** This community is found along Catfish Creek varying in width according to the elevation changes adjacent to the creek. The management of water from Catfish Creek by the farming operations outside of the preserve and now within the Rolling Meadows addition has likely had an impact in the water regime in this community (see hydrology and blackwater stream sections for further discussion). The community is in generally in good condition.

Another section that has been mapped as floodplain swamp in this plan is found in the central area of the park (CF-18). Part of this area borders the creek where the historical main portion of the creek turned north towards Lake Hatchineha (see hydrology section). The area has had past impacts due to adjacent agricultural uses as well as major hydrological alterations. There are several ditches through and around this area that have impacted the hydrology. This area has been judged as being in a fair to poor condition.

**General management measures:** The floodplain swamp will require little direct management. Because this community is primarily maintained by hydrology, hydrologic disturbances affecting Catfish Creek such as flow and level changes will affect this community within the park. Restoration of the historical Catfish Creek flow should be considered in order to facilitate the restoration of the adjoining floodplain swamp habitat (see hydrological restoration section). Monitoring and treatment for exotic plant infestations will continue.

### FLATWOODS/PRAIRIE AND MARSH LAKE

**Desired Future Condition:** These shallow depressions are vegetated with concentric bands of aquatic vegetation. Depending upon the depth and slope of the depression, an open water zone, with or without floating plants, may occur at the center. The open water zone is considered a marsh lake if it is small in comparison to the surrounding marsh. Otherwise, the system is considered a flatwoods lake or a prairie lake, depending upon the surrounding community. The hydrosoil is typically acidic sand with some peat and occasionally a clay lens. Although water levels may fluctuate significantly, water is typically present year-round.

**Description and assessment:** This natural community is usually surrounded by depression marsh systems or wetland species such as pickerelweed. These lakes are permanent water bodies; however, they are susceptible to fluctuations in water levels. They are important feeding, breeding, and watering areas for the preserve's wildlife. They are deemed to be in good condition.

**General management measures:** These communities will generally not require much direct management other than protection from visitor impacts. The ecotones between this community and the surrounding pyric communities will benefit from regular fire management. Exotic species should be monitored and treated as needed.

### SANDHILL UPLAND LAKE

**Desired Future Condition:** Shallow sandy-bottomed lake formed in shallow depressions within sandhill upland communities. Water levels may fluctuate

dramatically, including completely drying up only during extreme droughts. Typical vegetation will include emergent, submerged aquatic plants and transitional species along the shoreline. Species include water lilies, sawgrass (*Cladium jamaicense*), pickerelweed (*Pontederia cordata*), meadow beauty (*Rhexia* spp.), St. John's wort (*Hypericum fasciculatum*), yellowed-eyed grass (*Xyris* spp.), hatpins (*Syngonanthus flavidulus*), and spikerush (*Eleocharis* spp.). The natural hydrology, nutrient loading and water quality of this community must be maintained, with no unnatural disturbances. Impacts such as altered water table or disturbances in adjacent uplands that would cause artificial erosion and an increase in turbidity should be restored.

**Description and assessment:** There are several small sandhill upland lakes at this unit. They are distinguished from the flatwoods/prairie/marsh lakes by having a very narrow fringe of emergent vegetation surrounding the shoreline and by not grading into wet prairie or flatwoods communities. They are usually fed from groundwater seepage or artesian flow from underground aquifers. The nutrient levels in these lakes are usually very poor. They may also serve as important feeding, breeding and watering areas for the preserve's wildlife, especially the gopher frog (*Rana capito aesopus*). A major threat to these systems is the declining groundwater level. These lakes are in good condition.

**General management measures:** These communities will generally not require much direct management other than protection from visitor impacts. The ecotones between this community and the surrounding pyric communities will benefit from regular fire management. Exotic species should be monitored and treated as needed.

**BLACKWATER STREAM**

**Desired Future Condition:** 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 are 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 is one blackwater stream at this unit, Catfish Creek, which flows eastward from Lake Pierce to Lake Hatchineha. Currently, the stream is channelized outside of the preserve's boundary and within the Rolling Meadows addition. Water is manipulated for sod farm operations and the flow of Catfish Creek is affected accordingly. Where the creek turns north toward Lake Hatchineha water was diverted for agricultural operations. The flow north of this point has been dramatically altered. For further discussion, see the Hydrology section. The upper undisturbed portion of Catfish Creek is in good condition but due

to the conditions mentioned above, the downstream portions of the creek is in fair to poor shape.

**General management measures:** This community will generally not require much direct management other than protection from visitor impacts. The historical flow of Catfish Creek has been altered and is in need of possible restoration to bring the flow close to its former condition (see hydrological restoration section) Exotic species should be monitored and treated as needed.

**ABANDONED FIELD**

**Desired future condition:** The long term desired future condition of the abandoned field areas is to restore the altered landcover type to floodplain marsh. Please see the desired future condition statement for that natural community above.

**Description and assessment:** There is a large area of abandoned field mapped within the preserve. CF-48 and 49 were former sod farms that were maintained until October 2008 under a short-term use agreement with the former owner. In 2010, a portion of the former sod areas was added to an existing cattle use agreement. Currently CF-49 and the southwest corner of CF-48 are currently grazed. The sod was primarily St. Augustinegrass (*Stenotaphrum secundatum*) and it still exists in the drier portion of the fields. Other wetter areas have various wetland plant species taking hold. Various exotic plants are found in these areas including cogongrass (*Imperata cylindrica*) and tropical soda apple (*Solanum viarum*). See exotic species section below for futher discussion. The entire area of former sod is divided up into sections by various ditches and canals that were used to maintain the water levels. Catfish Creek was re-routed through this area previous to the farming efforts and most of the flow currently flows through the area (see hydrology section above).

In CF-18 there are two areas that appear to have been former floodplain marsh associated with the original alignment of Catfish Creek. These areas were cleared in the past and possibly used for vegetable farming associated with the former sod areas. It appears that farming in these areas had been abandoned in the 1970's. Pioneering species took root and the areas now have a cover of various hardwoods and other plant species including red maple.

**General Management Measures:** Control of FLEPPC Category I and II invasive plant species in these ruderal areas will be on going. A plan for long-term restoration on the former sod areas back to floodplain marsh habitat is currently being discussed with the South Florida Water Management District (see hydrological restoration section). Cost effectiveness, return on investment, and consideration of other higher priority projects within the preserve will determine the extent of restoration efforts. As mentioned above, the area is currently under a grazing use agreement. This is a interim management measure that will be phased out when restoration occurs.

The areas in CF-18 are currently not very accessible hindering exotic plant monitoring and removal. Restoration of these areas would be a difficult project. As mentioned above, the re-routing of Catfish Creek has altered the hydrology in these areas. Restoration of the original creek would be a critical step in restoring these areas.

**ABANDONED PASTURE**

**Desired future condition:** The long term desired future condition for the abandoned pasture is to restore the altered landcover type to a combination of floodplain marsh, wet and mesic flatwoods. Please see the desired future condition statements for these natural communities above.

**Description and assessment:** These areas located in CF-45 and the southern portion of CF-46 seem to have been a combination of the natural communities mentioned above. Former owners grazed the pastures in the past. This section of the Rolling Meadows property has not been grazed since the property was purchased in 2002. The portion that is comprised of a the southern part of CF-46 and the northern portion of CF-45 appears to have been wetter in the past and appears as if it was floodplain marsh according to historic aerials. The southern portion of CF-45 appears to have been wet to mesic flatwoods. This has a fringe of in tact flatwoods to the west and slash pines are starting to grow in the southwestern portion of this area. In all the abandoned pastures above there are various grasses (both native and non-native) with a number of these being Category I an II invasives (see exotic species section below). Recently a population of giant orchids (*Pteroglossaspis ecristata*), a state threatened species have been documented in the northeastern portion of CF-45.

**General Management Measures:** Control of FLEPPC Category I and II invasive plant species in these ruderal areas will be on going. A plan for long-term restoration on the former sod areas back to the former natural communities should be considered. Cost effectiveness, return on investment, and consideration of other higher priority projects within the preserve will determine the extent of restoration efforts.

**CLEARING**

**Desired future condition:** The long term desired future condition for the clearings is to restore the altered landcover type to mesic flatwoods for the eastern area and possibly floodplain marsh for the western area. Please see the desired future condition statements for these natural communities above.

**Description and assessment:** There are 2 areas mapped as clearings within the preserve. The eastern area was cleared in the past for unknown reasons. The area now has a sparsely vegetated understory with little canopy except for some scattered hardwoods and slash pine. The western appears to have been wetter in the past possibly being a marsh. In the 1941 aerials there is no overstory present. The area is surrounded by a mesic hammock natural community. The area has some wooden fencing remnants that may indicate a former cattle/horse pen area. There is some cogongrass present that has been treated.

**General Management Measures:** Control of FLEPPC Category I and II invasive plant species in these ruderal areas will be on going. A plan for long-term restoration on these clearing areas back to the former natural communities should be considered. Cost effectiveness, return on investment, and consideration of other higher priority projects within the preserve will determine the extent of restoration efforts.

**PASTURE-IMPROVED**

**Desired future condition:** The long term desired future condition for the pasture –improved areas is to restore the altered landcover type to a mix of wet, mesic, and scrubby flatwoods. Please see the desired future condition statements for these natural communities above.

**Description and assessment:** There are several large areas of improved pasture at the preserve. Currently the pasture areas north of Camp Mack Rd and the pasture area west of the residence area (CF-40, 41, 42, 43, 44) are under a cattle grazing use agreement. They are primarily composed of bahiagrass (*Paspalum notatum*) and other pasture grasses with little overstory. There are a few areas with scattered slash pine and some live oaks as well as other hardwoods. The area has several ditches that help drain the area. An area labeled no zone (CF-52) on the management zone map has been temporarily assigned to the SFWMD for management. This area is being used as a spoil storage area as part of the Kissimmee River restoration plan.

**General Management Measures:** Control of FLEPPC Category I and II invasive plant species in these ruderal areas will be on going. Prescribed fire may be applied for vegetative fuel management. The pasture is periodically mowed by the grazing use contractor. The interim management activity of grazing will be continued until measures are developed to restore this altered landscape. A plan for long-term restoration on the former sod areas back to the former natural communities should be considered. Cost effectiveness, return on investment, and consideration of other higher priority projects within the preserve will determine the extent of restoration efforts.

**UTILITY CORRIDOR**

**Desired future condition:** This altered landscape area is to remain as is. The altered landcover areas within the park will be managed to remove priority invasive plant species (FLEPPC Category I and II species).

**Description and assessment:** There are 2 areas of utility corridor within the preserve. Both areas are high voltage power line corridors and are periodically maintained by Progress Energy. The western section has native ground cover with former habitat with a mix of wet flatwoods species. The eastern area has sparse vegetation mostly consisting of pasture grasses. It has been grazed in the past by former owners. The former natural community ranged from flatwoods to mesic hammock.

**General management measures:** Monitoring and control of FLEPPC Category I and II invasive plant species in these areas will be on going. As mentioned above the areas are periodically trimmed by the power company.

**DEVELOPED AREAS**

**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:** There are currently several small areas of developed areas in the preserve. In the western portion of the preserve, there is a staff residence area, shop area, a remnant cabin site, an old homesite, and a trailhead area along Firetower Rd. On the Rolling Meadows portion of the preserve, there is a residence area in an oak hammock just north of Camp Mack Road and a shop area near the old sod farm area.

**General management measures:** Staff will continue to control invasive exotic plant species in developed areas of the preserve. Defensible space will be maintained around all structures in managed areas with prescribed fire or at risk of wildfires.

**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.

A large number of rare plant species that are endemic to the Lake Wales Ridge occur at the Allen David Broussard Catfish Creek State Preserve. Hairy jointweed (*Polygonella basiramia*) and scrub plum have been discovered at the site. Other rare plants known to occur at the preserve are Ashe's savory (*Calamintha ashei*), pygmy fringe tree (*Chionanthus pygmaeus*), paper-like nail-wort (*Paronychia chartacea*), scrub buckwheat (*Eriogonum floridanum*), Small's jointweed (*Polygonella myriophylla*), Britton's bear-grass, scrub morning glory (*Bonamia grandiflora*), and Florida gay-feather (*Liatris ohlingerae*).

Four study plots had been set up by The Nature Conservancy to monitor Lewton’s polygala (*Polygala lewtonii)*. In 1997, two of their plots were destroyed by feral hog rooting. Currently, hog damage has not been seen to be affecting the polygala. For many of these rare plant species, both fire management and exotic removal may be imperative to their survival.

A number of listed animal species occur at the preserve. The blue-tailed mole skink, sand skink, and scrub lizard (*Sceloporus woodi*), occur in the xeric scrub and

sandhills. Gopher tortoises (*Gopherus polyphemus*), gopher frogs, Eastern indigo snakes (*Drymarchon corais couperi*), and Florida mice are also found at the unit. It is generally accepted that fire management will provide suitable habitat for these species. Records of field observations are valuable because they indicate the presence or absence of a species without having to engage in any formal monitoring. The South Florida Multi-Species Recovery Plan (USFWS 1999) should be used as a guide in the management of all the federally listed species found in the preserve.

The Florida scrub-jay occurs in the scrub and scrubby flatwoods at the preserve as well as areas adjacent to the preserve. This species relies on fire to maintain open sandy areas and a two to three meter oak shrub layer. Best management practices to ensure the survival and growth of the Florida scrub-jay will be followed (Fitzpatrick, et. al. 1991).

The Highlands tiger beetle (*Cicindela highlandensis*) is found at the preserve. The preserve has been identified as having the largest population of this beetle (USFWS 2010). Conservation measures that should aid in protecting this species are prescribed burning, exotic species removal, and mechanical restoration. Although prescribed fire should improve or maintain habitat for these beetles, it is unknown whether timing of fires as well as maintaining of firelanes may impact the beetles (USFWS 2010).

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

**Table 2: Imperiled Species Inventory**

| Common and Scientific Name | Imperiled Species Status | | | | Management Actions | Monitoring Level |
|---|---|---|---|---|---|---|
| | FWC | USFWS | FDACS | FNAI | | |
| PLANTS | | | | | | |
| Curtiss' milkweed *Asclepias curtissii* | | | LE | S3 | 1,6,10 | Tier 1 |
| Florida lady's nightcap *Bonamia grandiflora* | | LT | LE | S3 | 1,10 | Tier 1 |
| Ashe's calamint *Calaminthia ashei* | | C | LT | S3 | 1,6,10 | Tier 1 |

| Table 2: Imperiled Species Inventory | | | | | | |
|---|---|---|---|---|---|---|
| Common and Scientific Name | Imperiled Species Status | | | | Management Actions | Monitoring Level |
| | FWC | USFWS | FDACS | FNAI | | |
| Pigmy fringetree *Chionathus pygmaeus* | | LE | LE | S3 | 1,6,10 | Tier 1 |
| Sweetscented pigeonwings *Clitoria fragrans* | | LT | LE | S3 | 1,6,10 | Tier 2 |
| Longleaf wild buckwheat *Eriogonum longifolium var. gnaphalifolium* | | LT | LE | S3 | 1,6,10 | Tier 3 |
| Garberia *Garberia heterophylla* | | | LT | | 1,6,10 | Tier 1 |
| Nodding pinweed *Lechea cernua* | | | LT | S3 | 1,6,10 | Tier 1 |
| Florida gayfeather *Liatris ohlingerae* | | LE | LE | S3 | 1,6,10 | Tier 3 |
| Britton's beargrass *Nolina brittoniana* | | LE | LE | S2 | 1,6,10 | Tier 2 |
| Cutthroatgrass *Panicum abscissum* | | | LE | S2 | 1,6,10 | Tier 1 |
| Papery whitlow-wort *Paronychia chartacea* | | LT | LE | S3 | 1,6,10 | Tier 1 |
| Lewton's milkwort *Polygala lewtonii* | | LE | LE | S2 | 1,6,10 | Tier 2 |
| Woody wireweed *Polygonella myriophylla* | | LE | LE | S3 | 1,6,10 | Tier 2 |
| Florida jointweed *Polygonella basiramia* | | LE | LE | S3 | 1,10 | Tier 1 |
| Scrub plum *Prunus geniculata* | | LE | LE | S2S3 | 1,10 | Tier 3 |
| Hooded pitcherplant *Sarracenia minor* | | | LT | | 10 | Tier 2 |
| Pinescrub bluestem *Schizachyrium niveum* | | | LE | | 1,6,10 | Tier 1 |
| Showy dawnflower *Stylisma abdita* | | | LE | S2S3 | 1,10 | Tier 1 |
| Giant airplant *Tillandsia utriculata* | | | LE | | 10 | Tier 1 |
| INVERTEBRATES | | | | | | |
| Highlands tiger beetle *Cicindela highlandensis* | N | N | | S1S2 | 1,2,6 | Tier 3 |

| Table 2: Imperiled Species Inventory | | | | | | |
|---|---|---|---|---|---|---|
| Common and Scientific Name | Imperiled Species Status | | | | Management Actions | Monitoring Level |
| | FWC | USFWS | FDACS | FNAI | | |
| AMPHIBIANS | | | | | | |
| Gopher frog *Lithobates capito* | SSC | | | S3 | 10 | Tier 2 |
| REPTILES | | | | | | |
| Gopher tortoise *Gopherus polyphemus* | ST | | | S3 | 1,6,10 | Tier1 |
| American alligator *Alligator mississippiensis* | FT(S/A) | LT(S/A) | | S3 | 10,13 | Tier 1 |
| Bluetail mole skink *Eumeces egregius lividus* | FT | LT | | S2 | 10 | Tier 1 |
| Sand skink *Neoseps reynoldsi* | FT | LT | | S2 | 10 | Tier 2 |
| Eastern indigo snake *Drymarchon corais couperi* | FT | LT | | S3 | 1,10 | Tier 1 |
| Florida pine snake *Pituophis melanoleucus mugitus* | SSC | | | S3 | 1,10 | Tier 1 |
| BIRDS | | | | | | |
| Snowy Egret *Egretta thula* | SSC | | | S3 | 10 | Tier 2 |
| Little Blue Heron *Egretta caerulea* | SSC | | | S4 | 10 | Tier 2 |
| Tricolored Heron *Egretta tricolor* | SSC | | | S4 | 10 | Tier 2 |
| White Ibis *Eudocimus albus* | SSC | | | S4 | 10 | Tier 2 |
| Wood Stork *Mycteria americana* | FE | LE | | S2 | 10 | Tier 2 |
| Swallow-tailed Kite *Elanoides forficatus* | N | N | | S2 | 10 | Tier 2 |
| Snail Kite *Rostrhamus sociabilis plumbeus* | FE | LE | | S2 | 10 | Tier 2 |
| Short-tailed Hawk *Buteo brachyurus* | N | N | | S1 | 10 | Tier 2 |
| Audubon's Crested Caracara *Polyborus plancus audubonii* | FT | LT | | S2 | 10 | Tier 2 |

| Table 2: Imperiled Species Inventory | | | | | | |
|---|---|---|---|---|---|---|
| Common and Scientific Name | Imperiled Species Status | | | | Management Actions | Monitoring Level |
| | FWC | USFWS | FDACS | FNAI | | |
| Merlin *Falco columbarius* | N | N | | S2 | 10 | Tier 2 |
| Limpkin *Aramus guarauna* | SSC | | | S3 | 10 | Tier 2 |
| Florida Sandhill Crane *Grus canadensis pratensis* | ST | | | S2S3 | 10 | Tier 2 |
| Whooping Crane *Grus americana* | FXN | XN | | SXC | 3,10 | Tier 4 |
| Florida Scrub-Jay *Aphelocoma coerulescens* | FT | LT | | S2 | 1,6,10,13 | Tier 3 |
| MAMMALS | | | | | | |
| Sherman's fox squirrel *Sciurus niger shermani* | SSC | | | S3 | 1,6,10 | Tier 1 |
| Florida mouse *Podomys floridanus* | SSC | | | S3 | 1,6,10 | Tier 1 |
| Florida black bear *Ursus americanus floridanus* | | | | S2 | 1,10 | Tier 1 |
| Florida panther *Puma [=Felis] concolor coryi* | FE | LE | | S1 | 3,10, 13 | Tier 3 |

**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 Species 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.

**Plants:** Several exotic plant species that are known to occur at the Allen David Broussard Catfish Creek Preserve State Park have the potential to disrupt the integrity of natural communities; these include cogongrass (*Imperata cylindrica*), hydrilla (*Hydrilla verticillata*), and water hyacinth (*Eichhornia crassipes*). With these aforementioned exceptions, the remainders of the exotic plant species at this unit are not species that threaten to form monocultures, but are instead persistent and widespread species that tend to encroach upon, but not exclude, native species. All the exotics are a threat to the integrity of the unit's natural communities and are in conflict with the DRP goal of preserving and maintaining examples of the natural Florida.

Of the exotic plant species that occur at the preserve, cogongrass poses the greatest threat, due to its ability to readily invade and disrupt natural communities. As a result, it has the highest priority for removal. The Rolling Meadows addition contains a considerable amount of this exotic species in the pastures. Efforts should be made to control this species in order to prevent the spread of it especially to

nearby natural communities. Brazilian pepper (*Schinus terebinthifolius*) should be removed whenever it is encountered.

Several tropical soda apple (*Solanum viarum*) plants were discovered within the preserve, adjacent to the Future Farmers of America (FFA) property. These plants should be removed as soon as possible, and the area checked periodically for new plants. In the pastures on the Rolling Meadows addition, there are numerous tropical soda apple plants. A major effort is needed to remove these and prevent their spread to other areas of the preserve.

Several exotics can be found around the Smith Place homesite (PO05448) at the preserve. Some of these plants, namely centipede grass (*Eremochloa ophiuroides*), Natal grass (*Rhynchelytrum repens*), life plant (*Kalanchoe pinnata*), Madagascar periwinkle (*Catharanthus roseus*) and Caesarweed (*Urena lobata*) have the potential to invade into natural communities. These exotics have been treated and are mainly under control in this area.

Natal grass and Caesarweed are two problem species that are persistent in many portions of the preserve.

A recent invader to the area that has moved up from the south is Old world climbing fern (*Lygodium microphyllum*). Another invader that has moved down from the north is Japanese climbing fern *(Lygodium japonicum*). These two exotics have recently been found in the preserve on the Rolling Meadows addition. They also have been found in several protected and unprotected lands in Polk County. These exotics are very invasive and an effort should be made to survey the preserve for this species and control it before it becomes a major problem.

When equipment for general maintenance as well as for ecological restoration projects is used, care must be taken to avoid introducing new exotics as well as spreading existing exotics. Efforts to ensure that the equipment is cleared of any debris and cleaned before use should be taken.

**Animals:** Feral hogs present the greatest known threat to the natural and cultural resources of the preserve from exotic species. Feral hog activity has resulted in significant damage to upland ground cover and rare plants, and has resulted in the destruction of at least one population of a federally listed plant species, Lewton's polygala, at the preserve. Staff needs to continue and increase hog removal activities.

Other exotic animals known to occur in the park include nine-banded armadillos (*Dasypus novemcinctus*), coyotes (*Canis latrans*), and fire ants (*Solenopsis invicta*). Nine-banded armadillos should be removed whenever possible. Coyotes will be removed only in cases where the species is known to significantly impact natural resources or park operations.

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, 2009). 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.

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

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

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

**Table 3: Inventory of FLEPPC Category I and II Exotic Plant Species**

| Common and Scientific Name | FLEPPC Category | Distribution | Management Zone (s) |
|---|---|---|---|
| PLANTS | | | |
| Rosary pea *Abrus precatorius* | I | 2 | CF-27 |
| | | 6 | CF-20B |
| Woman's tongue *Albizia lebbeck* | I | 3 | CF- 20B |
| Wild Taro *Colocasia esculenta* | I | 1,2 | CF-21C |
| Water-hyacinth *Eichhornia crassipes* | I | 6 | CF-21C |
| Hydrilla *Hydrilla verticillata* | I | 2 | CF-21C |
| Cogongrass *Imperata cylindrica* | I | 1 | CF-26A, 26C, 34 |
| | | 2 | CF-12B, 18, 35, 38, 40, 44 |
| | | 3 | CF-07A, 19B, 20B, 25A, 29, 35, 36, 41, 44, 45, 46, 47, 48, 49 |
| | | 4 | CF-13, 16 |
| | | 6 | CF-46 |
| Japanese climbing | I | 2 | CF-20B, 27, 35, 48 |

| Table 3: Inventory of FLEPPC Category I and II Exotic Plant Species | | | |
|---|---|---|---|
| Common and Scientific Name | FLEPPC Category | Distribution | Management Zone (s) |
| fern *Lygodium japonicum* | | 6 | CF-49 |
| Old world climbing fern *Lygodium microphyllum* | I | 2 | CF-30 |
| Natal grass *Melinus repens* | I | 2 | CF-02, 07A, 07C, 10A, 12B, 13, 15, 18, 21A, 21B, 35, 45, 49 |
| | | 3 | CF-07B, 13, 26B |
| | | 6 | CF-04, 06, 10B, 12A, 22, 23, 30, 33, 34 |
| Torpedo grass *Panicum repens* | I | 2 | CF-43, 44, 46 |
| | | 3 | CF-49 |
| | | 6 | CF-45, 46 |
| Castor bean *Ricinus communis* | II | 1 | CF-45 |
| Brazilian pepper *Schinus terebinthifolius* | I | 1 | CF-46 |
| Tropical soda apple *Solanum viarum* | I | 1 | CF-42 |
| | | 2 | CF-37, 40, 41 |
| | | 3 | CF-43 |
| Caeserweed *Urena lobata* | I | 2 | CF-18, 21C, 35, 36, 37, 38, 40, 41, 43, 44, 46, 48, 49 |
| | | 3 | CF-44, 47 |
| | | 6 | CF-18, 24, 49 |
| Paragrass *Urochloa mutica* | I | 2 | CF-46, 49 |

**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

The Allen David Broussard Catfish Creek Preserve State Park contains some of the last intact sandhills and scrub left on the Lake Wales Ridge. Many state and federally listed plant and animal species occur at the preserve. The entire unit is distinguished from other parts of the state and the Lake Wales Ridge system by containing some of the highest and oldest ridges. This unique topography ensured genetic isolation of plant and animal species.

## Cultural Resources

This section addresses the cultural resources present in the park that may include archaeological sites, historic buildings and structures, cultural landscapes and collections. The Florida Department of State (FDOS) maintains the master inventory of such resources through the Florida Master Site File (FMSF). State law requires that all state agencies locate, inventory and evaluate cultural resources that appear to be eligible for listing in the National Register of Historic Places. Addendum 7 contains the FDOS, Division of Historical Resources (DHR) management procedures for archaeological and historical sites and properties on state-owned or controlled properties; the criteria used for evaluating eligibility for listing in the National Register of Historic Places, and the Secretary of Interior's definitions for the various preservation treatments (restoration, rehabilitation, stabilization and preservation). For the purposes of this plan, significant archaeological site, significant structure and significant landscape means those cultural resources listed or eligible for listing in the National Register of Historic Places. The terms archaeological site, historic structure or historic landscape refer to all resources that will become 50 years old during the term of this plan.

### Condition Assessment

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

### Level of Significance

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

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

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

### Pre-Historic and Historic Archaeological Sites

**Desired future condition:** 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:** The Florida Master Site File lists 14 (8PO03866, 8PO05447, 8PO05448, 8PO07251, 8PO07279, 8PO07280, 8PO07281, 8PO07282, 8PO07283, 8PO07284, 8PO07285, 8PO07286, 8PO07289, 8PO07290) within the unit. Three of these sites are located in the western portion of the preserve and the remaining are found in the western portion. Two other sites in the master site file (8PO07252 and 8PO07253) were formerly within the unit. These two sites are now currently the responsibility of the SFWMD as management of the area depicted as NO ZONE (CF-52) on the management zone map has been transferred to them.

Archaeological work done at the preserve indicates that sites at the preserve represent approximately 7,000 years of prehistory, from Middle Archaic through late Bell Glades period. Historically, the preserve was used by the Seminoles. An 1880 report stated that a band of Tallahassee Seminole lived in the Lake Pierce area in the late 19$^{th}$ century, and the Snodgrass Island site has produced Seminole artifacts (Memory and Newman 1998). The preserve shows other uses of the site starting in early 1900's. Herty pots and catface pines with metal gutter remnants are evidence of use of the preserve area for naval stores (Southeastern Archaeological Research, Inc. 2010). Around the 1940's & 1950's the area saw land use changes in two different areas. One area has the remnants of an old home

site (8PO05448) and another area (8PO07289) shows use as an agricultural site. Since then, the land around Lake Pierce and Lake Hatchineha have been utilized by cattle ranchers, farmers, and hunters, and now for outdoor recreation and land conservation (Florida Department of Environmental Protection 1998, Memory and Newman 1998).

The original portion of the preserve contains two archeological sites. One (8PO05447) is evidence of a prehistoric activity area and artifact scatter site located on a sandhill overlooking Lake Pierce. It has been tentatively assigned to the Belle Glade Period (Memory and Newman 1998). The other (8PO05448) is the standing ruins of a historic homestead. The site consists of two separate concrete block structures and related artifact scatter, and probably dates to the WWII era when concrete block construction became common. Park Ranger and local resident Pat Mitchell says the Smith Place burned at some point in the past, and the site shows evidence of fire (Memory and Newman 1998).

Another site found at the preserve is Snodgrass Island (8PO03866). In 2009, the site was officially added to the preserve. Previously the Florida Park Service was assigned as interim managers of this site. Snodgrass Island, is a prehistoric burial mound and Seminole site located on Lake Pierce north of the main portion of the preserve. The site consists of two archaeological components. The first is a low oval habitation and burial mound that dates from the late Archaic through a possible Seminole presence. The second feature is a crescent shaped earthwork with an artificially raised mound at the eastern end. This feature also shows evidence of subsistence activities throughout its length, and produced two undated prehistoric primary burials (Carr 1994). Citrus trees that had been reported by Carr (1994) on the island still exist today. Historically the island had two structures: a cabin built in the early 20$^{th}$ century and a house built later. Former owners of the property have removed these structures.

Other sites have been discovered at the preserve during more recent archeological surveys. These surveys have documented several prehistoric mounds, middens, lithic scatters. They have also documented prehistoric burial mounds, earthworks, and an aboriginal ditch. The four midden sites (8PO07279, 8PO07280, 8PO07281, 8PO07282) are thought to be a prehistoric campsites. Artifacts found at the sites include pottery sherds and lithic flakes that are identified as Pasco, St. John's and Belle Glade. These midden sites also contain faunal bone including turtles, alligator, large mammals, amphibians, and boney fishes.

Another site discovered at the preserve is the mound and earthworks complex (8PO07283). This consists of a prehistoric burial mound and linear earthworks. It dates to the Belle Glade, 700 B.C. to A.D. 1700. The mound is approximately 1.5 to 2 meters high and approximately 25 meters in diameter. Two parallel and ridges extend out from the mound, converge, and then curve around and envelop another side of the mound. Two other prehistoric mound sites (8PO07284, 8PO07285) were also documented. Limited cultural materials were found at the sites although limited testing was done at the sites because of the possibility for disturbing human remains.

An aboriginal ditch site (8PO07290) is also been documented at the preserve. This is prehistoric ditch that may be associated with one of the previously mentioned middens and thus may post-date 500 B.C. The ditch is approximately 313 meters long, 3 to 7 meters in width and 20 to 40 centimeters is depth. It runs southwest to northeast towards the former outlet of Catfish Creek into Lake Hatchineha. It although seems to end at the preserve boundary according to Southeastern Archaeological Research, Inc. (2010). This ditch may have been used to access a marsh area and eventually Lake Hatchineha.

Prehistoric lithic scatter sites (8PO07251, 8PO07286) have also been documented at the preserve. A number of lithic waste fragments and one biface fragment were found at these sites. These artifacts are evidence of flint knapping episodes in the preserve area. The two sites (8PO07252, 8PO07253) that are currently under management of the SFWMD are also lithic scatter sites.

The preserve possesses a network of historical drainage canals and ditches dating back to the 1950's. These landscape features were critical to making the area suitable for agriculture and cattle ranching. Most recently, this drainage system was utilized to control water in order to maintain a sod farm.

The preserve has had several surveys for archeological significance. Snodgrass Island was listed as a site by Steele and Carr (1993) in their Seminole Heritage Survey. Memory and Newman (1998) surveyed a good portion of the original preserve property and found two sites during their assessment. A cultural resource survey was conducted at the preserve in January 2002. A phase I cultural resource survey by New South Associates (2009) was done on and adjacent to the area depicted as NO ZONE on the management zone map that found three sites included above. Management of this area has been currently transferred to SFWMD. Another phase I survey was done by Southeastern Archaeological Research, Inc (2010) on the Rolling Meadows area of the preserve. This survey was done in conjunction with the South Florida Water Management District prior to a restoration project that they are currently working on for the area. An archaeological resource predictive model for the preserve has been completed by the University of South Florida (2010). The majority of the park (77%) was mapped as low sensitivity area due to poor soil quality and inundation. High sensitivity areas account for approximately 6% of the park. These are associated with greater topography and better soil drainage characteristics in proximity to wetland and hydrologic features.

**Condition Assessment:** At the preserve, there are 11 sites that are in good condition and 3 sites that are in fair condition. There are also two sites (in an area currently managed by SFWMD) listed as fair.

The sites that are listed as fair are effected by past road development, access issues, and hog rooting. The area of the Jay Claw site (8PO05447) is located along and in a dirt road that is currently maintained as a firelane. Besides burning and sections of walls having fallen, the Smith Place site (8PO05448) faces increased threat due to unrestricted access from the adjacent FFA camp. The site is just off a dirt access road, and was formerly screened from the FFA camp by a wooded tract

on FFA property. However, the FFA has cut and removed most of the intervening trees, and now the walls of the site are readily visible from the FFA camp, and serve as an attractive nuisance. The condition assessment is fair. Rolling Meadows Workers' Camp (8PO07289) is associated with the historic worker's camp structures discussed in the next section. The site was judged to be in fair condition due to the presence of hogs and major hog rooting found in the area.

Snodgrass Island (8PO03866) is an isolated site that is reached by boat. The site is potentially threatened by erosion and unauthorized access. The site retains intact deposits despite possible looting in the relatively recent past as well as landscape alteration and subsurface disturbance over the millennia. Its condition assessment is fair to good.

Park staff have not located Rolling Meadows Midden 1 (8PO07279) site yet but as it was discovered in 2010 it is thought to be in good condition. The exact locations of Rolling Meadows Midden 2 (8PO07280) and Midden 3 (8PO07281) were also not found. The general area was though located and no known disturbances were detected in the areas thus the sites were judged to be in good condition. The general area of Rolling Meadows lithic scatter (8PO07284) was inspected as it is near the aboriginal ditch site. The exact location though could not be relocated.

The two sites managed in an area currently managed by the SFWMD, Cow pond lithic site (8PO07252) and Old sand ridge lithic scatter (8PO07253), are located within a spoil storage project area. This first site is currently covered with spoil and water on top of that. This second site is west of the spoil storage area and thus has some disturbance during the construction of the spoil storage area. Vehicles for construction were used near the site and likely created some minor disturbance. Thus this site was listed as in fair condition.

**Level of Significance:** The park contains ten archaeological sites that appear to be eligible for the National Register of Historic Places under criterion D for their ability to yield important information about the area's prehistory. The park is located in the transition area between the East-Central and Okeechobee Culture Regions. The types of sites and artifacts recorded in the park reveal the influence of both the St. Johns culture to the north and Belle Glade culture to the south, but particularly hold the potential to better elucidate the northward expansion of the Belle Glade culture and its eventual predominance over regional precursors. Additionally, the park's archaeological resources can provide general information about prehistoric settlement patterns, subsistence, social stratification, ceremonialism, and mortuary practices.

Nine of the park's significant archaeological sites were recorded by a professional consultant as potentially eligible and worthy of preservation. The State Historic Preservation Officer concurred, and indicated that more testing would be needed for a final eligibility determination if preservation was not possible. Five of these sites are middens that contain large and diverse faunal remains representing marsh and woodland species (PO7279 – 82, PO7287), as well as various types of artifacts dating primarily to post-500 A.D. Three of these sites are or possibly are

ceremonial or burial sites, including two sand mounds (PO7284 – 85) and a mound/linear earthworks complex (PO7283) typical of the Belle Glade culture. The final site is a hand excavated ditch (PO7290) that may have connected marsh to lake.

Both a state archaeologist and private consultant have recorded Snodgrass Island (PO3886) as the park's tenth significant site, although the State Historic Preservation Officer has not issued an opinion yet. Unlike the other sites, the archaeological resources at Snodgrass Island represent Archaic through historic period occupation and include a variety of components, including burial mounds constructed atop ancient sand dunes, middens, features such as post molds and fire pits, discrete activity areas, the artificial expansion of the island via fill, and historic structural remains and remnant vegetation.

**General management measures:** All known sites should continue to have their conditions monitored and protection from any vandalism should ensue if needed. The Smith place (8PO05448) may need to have boundary signs in place in order to further protect it from any vandalism. An interpretive sign at the site would explain the cultural significance of the site. Continued monitoring of Snodgrass Island should be conducted in order to protect this significant site. This site is accessible by boat only. Currently there are no boundary signs delineating the property. In an evaluation in 2002 it was decided not to mark the property in order not to attract visitors. Any suspicious or unauthorized visitation and signs of vandalism and looting at Snodgrass Island will be reported to law enforcement, and park management will cooperate with any investigation as needed.

Nine of the archeological sites that were documented by Southeastern Archeological Research, Inc. (2010) are considered important. These sites include five middens, one burial mound and linear earthworks complex, two sand mounds, and one prehistoric ditch and are all recommended for preservation. If preservation is not possible, then Phase II testing is suggested. The burial mound site contains human remains. Any alteration of this site would require consultation with DHR to determine the proper procedures.

Southeastern Archaeological Research, Inc. (2010) recommended no further work or preservation at the one remaining archeological site (8PO07286) that they found at Rolling Meadows. The report by NSA (2009) suggested no further work is needed on three sites (8PO07251, 8PO07252, 8PO07253).

Turpentine-related cultural resources documented at the preserve by Southeastern Archaeological Research, Inc. (2010) are typically not identified as archaeological sites as they are common in pine areas in Florida. If any areas of significant cultural resources of this type be discovered, then they should be documented and preserved. Instances of 3 or more artifacts can qualify as an archaeological site. Staff should work with DHR to ensure any significant finds are recorded with FMSF.

Any new development or restoration work at the Rolling Meadows Section should avoid the archaeological and historic sites that were found in 2010. Currently the

public is not allowed on this portion but as areas are opened up necessary measures need to be taken to avoid impacts to these cultural resources. The predictive model developed by University of South Florida (2010) should be used to guide future development and survey work.

### Historic Structures

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

**Description:** There are five historic structures, two historic bridges and one resource group which includes five of the structures that are currently known to occur at the preserve. All of the structures are located in the Rolling Meadows portion of the preserve that was formerly an agricultural area with crops and later sod grown. All of these structures are documented in a phase I survey done by Southeastern Archaeological Research, Inc. (2010).

The Camp buildings date to the 1940's and 1950's. These five buildings are located in the same vicinity of one another. All of the buildings are no longer in use and have long been abandoned. All of the buildings are frame vernacular with metal roofing. Some of the buildings have concrete block foundations. One of the buildings may have been a caretaker's residence. The other buildings are described as sheds or storage buildings of undetermined agricultural use.

The two historic bridges are located along roads the former agricultural/sod area and were built to cross the various canals that bisect the area. The larger of the structures is a wooden timber stringer vehicle bridge built around 1955. It has a concrete support abutment and round vertical wood piles. The bridge's surface is made of wood planks with wood beam supports. It currently is not in use but was used up until around 2009. This bridge allows access to the northern former marsh area. In the last few years, the bridge has shown signs of deterioration along with other water control structures that were initially installed during the past agricultural usage period, beginning in the 1950's.

The other bridge consists of a culvert with an earthen deck with a wood retaining wall supported by wood beams. It also has a deteriorated metal skeleton structure of undetermined use. The culvert bridge is still in use today to cross the canal/ditch.

Another historical resource at the preserve that may be related to historic cattle use is an old gate. There are also other possible historic structures that are found at the Rolling Meadows shop area. These were related to the agricultural use and they were most recently used by the sod operation.

**Condition Assessment:** The five Rolling Meadows Worker's Camp Buildings (1-5) have all been long abandoned and have various structural issues. Some of these issues are missing windows, doors, and sheet metal siding. Worker's Camp

Building 5 is in ruinous condition. Buildings 1, 2, 4, and 5 are judged to be in poor condition. Building 3 which is in the best condition is deemed to be fair. The area that the resource group is in has had minimal disturbance except for significant hog rooting and is judged to be in fair condition.

The Wooden Bridge is currently in fair condition but will likely be in poor condition soon. Some of the surface wood is deteriorating. It has been closed off and has not been used for vehicle crossing for since 2010. The Culvert Bridge is currently in fair condition. Along the eastern side of the structure is a deteriorating metal structure that likely housed a pump. The earthen bridge is still in occasionally used by staff to cross the canal.

**Level of Significance:** Allen David Broussard Catfish Creek Preserve State Park does not contain any significant historic structures.

**General management measures:** Southeastern Archeological Research, Inc. (2010) located and documented all of these structures in their phase I cultural resource assessment. No further documentation or preservation of these structures was recommended. Currently, park staff is working with SFWMD on restoration planning for the area where the bridges are located. The plan may call for removal or replacement of some of these structures. The DHR should be consulted for guidance on any work done to these structures.

### 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:** No collections are maintained at the preserve.

**Level of significance:** Allen David Broussard Catfish Creek Preserve State Park does not contain any significant collection objects.

**General management measures:** A Scope of Collections should be developed and used should the park acquire any collection items.

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

| Table 4: Cultural Sites Listed in the Florida Master Site File | | | | | |
|---|---|---|---|---|---|
| Site Name and FMSF # | Culture/Period | Description | Significance | Condition | Treatment |
| PO03866 Snodgrass Island | Prehistoric/Unspecified & Seminole | Burial Mound, Unspecified mound, campsite | NR | G | P |
| PO05447 Jay Claw | Prehistoric/ Unspecified | Prehistoric artifact scatter | NE | F | P |
| PO05448 Smith Place | Historic/ American 20th century | Historic Homestead Site | NE | F | P |
| PO07251 Sparse Lithic Scatter | Prehistoric/Unspecified | Prehistoric Lithic Scatter | NS | G | N/A |
| PO07252** Cow pond lithic site | Prehistoric/Unspecified | Prehistoric Lithic Scatter | NS | NA | N/A |
| PO07253** Old sand ridge lithic scatter | Prehistoric/Unspecified | Prehistoric Lithic site | NS | F | N/A |
| PO07271 Rolling Meadows Worker's Camp Building 1 | Historic /1940 & 1950s | Frame Vernacular Structure | NS | P | N/A |
| PO07272 Rolling Meadows Worker's Camp Building 2 | Historic /1940 & 1950s | Frame Vernacular Structure | NS | P | N/A |
| PO07273 Rolling Meadows Worker's Camp Building 3 | Historic /1940 & 1950s | Frame Vernacular Structure | NS | F | N/A |
| PO07274 Rolling Meadows Worker's Camp Building 4 | Historic /1940 & 1950s | Frame Vernacular Structure | NS | P | N/A |
| PO07275 Rolling Meadows Worker's Camp Building 5 | Historic /1940 & 1950s | Frame Vernacular Structure | NS | F | N/A |
| PO07276 Rolling Meadows Resource Group | Historic /1940 & 1950s | Agricultural Worker's Complex | NS | F | N/A |

| Table 4: Cultural Sites Listed in the Florida Master Site File | | | | | |
|---|---|---|---|---|---|
| Site Name and FMSF # | Culture/Period | Description | Significance | Condition | Treatment |
| PO07277 Wooden Bridge | Historic /1940 & 1950s | Bridge | NS | F | N/A |
| PO07278 Culvert Bridge | Historic /1940 & 1950s | Bridge | NS | F | N/A |
| PO07279 Rolling Meadows Midden 1 | Prehistoric / St Johns & Pasco | Prehistoric Midden | NR | NE | P |
| PO07280 Rolling Meadows Midden 2 | Prehistoric / Bell Glade | Prehistoric Midden | NR | NE | P |
| PO07281 Rolling Meadows Midden 3 | Prehistoric / Bell Glade | Prehistoric Midden | NR | NE | P |
| PO07282 Rolling Meadows Midden 4 | Prehistoric / Belle Glade | Prehistoric Midden | NR | G | P |
| PO07283 Rolling Meadows Mound & Earthworks complex | Prehistoric / Bell Glade | Prehistoric Burial Mound & Linear Earthworks | NR | G | P |
| PO07284 Rolling Meadows Mound 1 | Prehistoric / Unspecified | Prehistoric Sand Mound | NR | G | P |
| PO07285 Rolling Meadows Mound 2 | Prehistoric / Unspecified | Prehistoric Sand Mound | NR | G | P |
| PO07286 Rolling Meadows Lithic Scatter | Prehistoric / Unspecified | Prehistoric Lithic Scatter | NS | G | N/A |
| PO07289 Rolling Meadows Workers' Camp | Historic / American 20th century | Historic Artifact Scatter, Structural Remains | NS | F | N/A |
| PO07290 Rolling Meadows Aboriginal Ditch | Prehistoric / Unspecified | Prehistoric Ditch | NR | G | P |

****Under SFWMD Management**

**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 Allen David Broussard Catfish Creek Preserve 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 uses 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 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. The ten-year management plan is based on conditions that exist at the time the plan is developed, and the annual work  provide the flexibility needed to adapt to future conditions as they change during the ten-year management planning cycle. As the park's annual work plans are implemented through the ten-year cycle, it may become necessary to adjust the management plan's priority schedules and cost estimates to reflect these changing conditions.

## Natural Resource Management

### Hydrological Management

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

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

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

Natural drainage of Catfish Creek and the surrounding wetland/upland habitats have been altered by the change in flow of the historical creek to what currently exists. The approximate four terminal miles of creek that flowed into Lake Hatchineha had been re-directed to the east by a series of canals (in CF-47, 48, 49) that were constructed in former floodplain marsh. Water was managed in the marsh for agricultural purposes. Most recently, the former marsh was the site of a major sod operation that ended in 2008. The historical Catfish Creek flow (south to north through CF-18) has essentially been abandoned with little to no water draining through the original course except during high water occasions.

Canals were also constructed in CF-18 associated with agricultural efforts on that parcel. These agricultural activities had been abandoned sometime in the 1970s. The drainage pattern in these ditches is not well known, as access to the area is not easy. As mentioned above the original course of Catfish Creek used to flow through this area.

In the pasture, areas (CF-40, 41, 43, 44, 45, 46) of the Rolling Meadows portion of the preserve there are numerous ditches that have altered the hydrology of this area. Much of this area is currently being grazed but if upland habitat restoration of

these areas occurs, hydrological restoration should be completed before other work is done.

As funds become available, a hydrological study of the preserve's current surface water features including ditches needs to be conducted. Historical sheet flow of the property needs to be investigated. The feasibility of restoration needs to be determined and the impact of the restoration evaluated. Negative impacts, such as flooding should be assessed and mitigated if possible. A sequential and prioritized hydrological restoration plan should be developed and used as a tool to aid preserve staff in the restoration of the preserve's hydrology.

***Objective: Restore natural hydrological conditions and functions to approximately 625 acres of former agricultural area back to flooplain marsh.***

Restoration of the former sod farm areas on the Rolling Meadows addition that were likely floodplain marsh should be pursued. The South Florida Water Management District (SFWMD) will be restoring former floodplain marsh adjacent (northeast) to the preserve's Rolling Meadows addition. The progress of this restoration should be monitored and the information gained should be used to plan restoration of marsh habitat within the preserve. The two areas are tied together as well as areas outside the boundaries of the preserve and the SFWMD property.

Currently a planning study report on the Rolling Meadows property (which was jointly purchased by the SFWMD and the State of Florida) has been developed by the SFWMD (2011). This report includes restoration work done in two phases. Phase 1 of the plan calls for the restoration of the SFWMD managed portion of the property as well as replacing or altering some of the water control structures (approximately 6) within the DEP managed portion of the property. Phase 2 of the plan provides for the possible restoration of the DEP managed property as well as the possibility of restoring the historical alignment of Catfish Creek. The restoration of the DEP managed former sod areas would likely involve diversion of water from the existing re-aligned creek into the former sod areas. It would likely also include filling and/or plugging ditches (approximately 10 miles).

Portions of the DEP's former sod areas have been identified as containing organochlorine pesticides. The SFWMD plan calls for further soil sampling in order to better investigate the ecological risks of restoring this portion. After further sampling and investigations a design for the above mentioned phase 2 restoration will be drafted. The extent of the restoration will depend on the ecological feasibility and the availability of funds for the project.

The Hatchineha Ranch property managers (private entity and the Nature Conservancy) north of the preserve have developed a plan to restore the hydrology of their property. This property contains the historical terminal three miles of Catfish Creek flowing into Lake Hatchineha. Any new restoration plan developed for the preserve should incorporate this existing plan. Further plans should also address potential impacts to other adjacent landowners.

## Natural Communities Management

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

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

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

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

***Objective: Within 10 years, have 3,765 acres of the park maintained within the optimum fire return interval.***

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.

**Table 5: Prescribed Fire Management**

| Natural Community | Acres | Optimal Fire Return Interval (Years) |
|---|---|---|
| Sandhill | 1,249.2 | 2-4 |
| Scrub | 1,017.9 | 6-15 |
| Wet Flatwoods | 1,188.0 | 3-5 |
| Mesic Flatwoods | 214.0 | 2-4 |
| Scrubby Flatwoods | 221.7 | 3-5 |
| Depression Marsh | 252.8 | 3-5 |
| Floodplain Marsh | 39.2 | 2-4 |
| | | |
| Annual Target Acreage* | 775 - 1474 | |

*Annual Target Acreage Range is based on the fire return interval assigned to each burn zone. Each burn zone may include multiple natural communities.

The park is partitioned into management zones including those designated as burn zones (see Management Zones Table and Map). Prescribed fire is planned for each burn zone on the appropriate 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.

The park is divided into zones based on existing firebreaks and roads (see Management Zones Map). Pre-burn preparation is an important consideration when applying fire to areas that have had fire excluded for long periods. Perimeter and internal firebreaks should be maintained and established according to agency policy. They should provide for adequate park protection and safe prescribed fire application. The complexity of the burn unit including the structure and height of the fuel within the zone and the receptiveness of fuels adjacent to the zone should be taken into account when preparing the firebreaks. Fire lines twice as wide as the fuel heights adjacent to the fireline is a general guideline for fire line preparation (10 foot fuel heights adjacent to line = 20 foot wide firebreak). Mechanical treatment of fuels adjacent to the firebreak may be needed to burn the zone safely. Perimeter lines need to be wide enough for defense and to allow a type 6 fire engine to move safely down the line. When widening the firebreaks, the vegetation along the boundary/fence line should be removed first to allow the perimeter break to function as such (the presence of wetlands, large native trees or protected plant species that pose no line defense threat may be an exception). Any additional widening can then be made on the zone side of the firebreak.

Preparation and planning for wildfires or escaped prescribed burns within the park should also be a component of the park's prescribed burn plan. Preferred fire suppression techniques and guidelines should be identified and discussed with the local FFS staff prior to the need for fire suppression within the park. Sensitive resources such as wetlands, imperiled species and cultural sites should be identified and mapped and that information conveyed to FFS prior to any suppression activities.

In developing prescribed burn plans for the fire-adapted communities in the park, every effort should be made to mimic natural fire regimes in both timing and technique. In most natural fires, flank fires and head fires probably burned the majority of acres. Care should be taken during prescribed burns to avoid creating the hot spots that occur when two fire lines rapidly converge. To minimize the intensity of the fire convergence, narrow strip-head fires, point source ignition fires or flanking fires are preferred over a single backing fire that converges with a head fire.

Fire season and fire-return interval are both critical components of a fire regime. In most cases after initial fuel reduction burns have been completed during the non-growing season, all burns should then be conducted during the natural lightning

season, given staffing and weather constraints. However, non-growing season burns are favorable as a last resort to prevent the zone from going into backlog. Despite the apparent prolonged fire exclusion prior to the preserve's establishment at this unit, the scrub communities are in relatively good condition. The scrub that occurs on the ridge tops (CF-1, 2, 3, 4, 6) contains the greatest diversity of rare plants at the preserve. These high ridges are dominated by scrub oaks with a few scattered longleaf pines. These longleaf pines are extremely rare on the preserve and should be protected during burns by various means (i.e. raking around base, etc.). Some mechanical removal of the larger hardwood trees may be necessary prior to or even after burning to facilitate restoration of the community. Roads that run along the ridge tops should not be used as fire breaks. Instead, fires should be allowed to burn up one side of a ridge and down the other side without interruption. Initially, the scrub communities should be burned every 4 to 10 years to establish an earlier successional stage. Eventually, these communities can be returned to an infrequent burn schedule. Currently all the units listed above have been burned at least once by the Florida Park Service.

When the preserve was established, the sandhill communities had mostly succeeded into xeric hammock with little or no wiregrass. Burning should be the main restorative tool along with mechanical removal of large hardwoods and possible planting of wiregrass. A large section of sandhill has been mechanically disturbed (CF-12B, 13). A portion of the sandhill zones (CF-7, 10, 26, and 27) have been burned one or more times and are now regularly managed with prescribed fire. Other sandhill zones (CF-23, 25) are still in need fuel reduction burns. A number of sandhill zones have been had mechanical removal of larger hardwoods, mostly via chainsawing.

The flatwoods areas of the preserve are in fair shape at this unit. Many areas have been regularly maintained by fire (CF-14, 19A, 20a). More emphasis on lightning season burning should be applied to these areas. Areas of flatwoods found in the Moneytree parcel have recently been divided into burn zones and firebreaks have been established. These flatwoods (CF-31, 32, 33, 34) have not burned for a long time and need initial fuel reduction burns in order to re-establish a fire regime. Another area that has long unburned flatwoods is CF-20b. Firebreaks have recently been established in this zone a portion of which is on the annual burn plan.

Since the Florida scrub-jay occurs at this unit, care should be taken when burning. Scrub fires usually burn in a mosaic pattern with areas of unburned vegetation. Florida scrub-jays will use and protect their territory after it burns, and the unburned patches of vegetation will provide cover and forage. Best management practices following the Florida scrub-jay recovery plan (USFWS 1990) should be used as a guide when burning in Florida scrub-jay territories.

It is important that the results of management practices be monitored. Post burn evaluations, that include review of established photo points, should be conducted to determine progress towards restoration goals and if adaptations to management practices are needed.

Based upon the fire return intervals and acreage figures for the natural communities within the park, optimally at least 775 - 1474 acres should be burned each year to maintain the natural communities within their target fire return intervals. Park staffing, funding and weather conditions will influence the ability of the park to keep natural communities within their optimal fire return intervals. Not all zones may always 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 stand allow.

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

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

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

Following are the natural community/habitat restoration and maintenance actions recommended to create the desired future conditions in the former flatwoods areas (See Desired Future Conditions Map).

***Objective: Conduct habitat/natural community restoration activities on 30 acres of pasture to the appropriate flatwoods communities.***

A plan should be created that would cover all of the pasture in the Rolling Meadows portion of the preserve (CF-40, 41, 42, 43, 44, 45, 46). The plan would evaluate all the areas for possible restoration into scrubby, mesic or wet flatwoods. Currently most of these zones are under a cattle grazing use agreement. The cattle grazing are only an interim management tool that is being used until a longer term

restoration plan for the area is carried out. Some of these areas should be considered for restoration providing funding is available for such a project. As mentioned in the hydrological section above several ditches exist in these areas and hydrological restoration should be initiated prior to natural community restoration.

A thorough plan should be developed that would outline the techniques which would include exotic removal, planting/seeding of native species, documentation, evaluation, and maintenance of the project area. Removal of exotic plant species will likely involve a combination of mechanical and herbicide treatments. Once exotic removal is in place, native groundcover will need to be introduced. This can be done by the planting of seedling plugs or the gathering of seeds and spreading the seed in desired areas. Following groundcover restoration would be planting of native tree cover including longleaf and slash pines. Restoration of these areas would be done in small portions over time. Approximately 30 acres will be initially targeted for restoration. Maintenance of the restored areas will require application of prescribed fire within the recommended fire return interval. Long-term monitoring will be accomplished as part of the burn photo point process.

**Natural Communities 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: Conduct natural community/habitat improvement activities on 10 acres of sandhill community.***

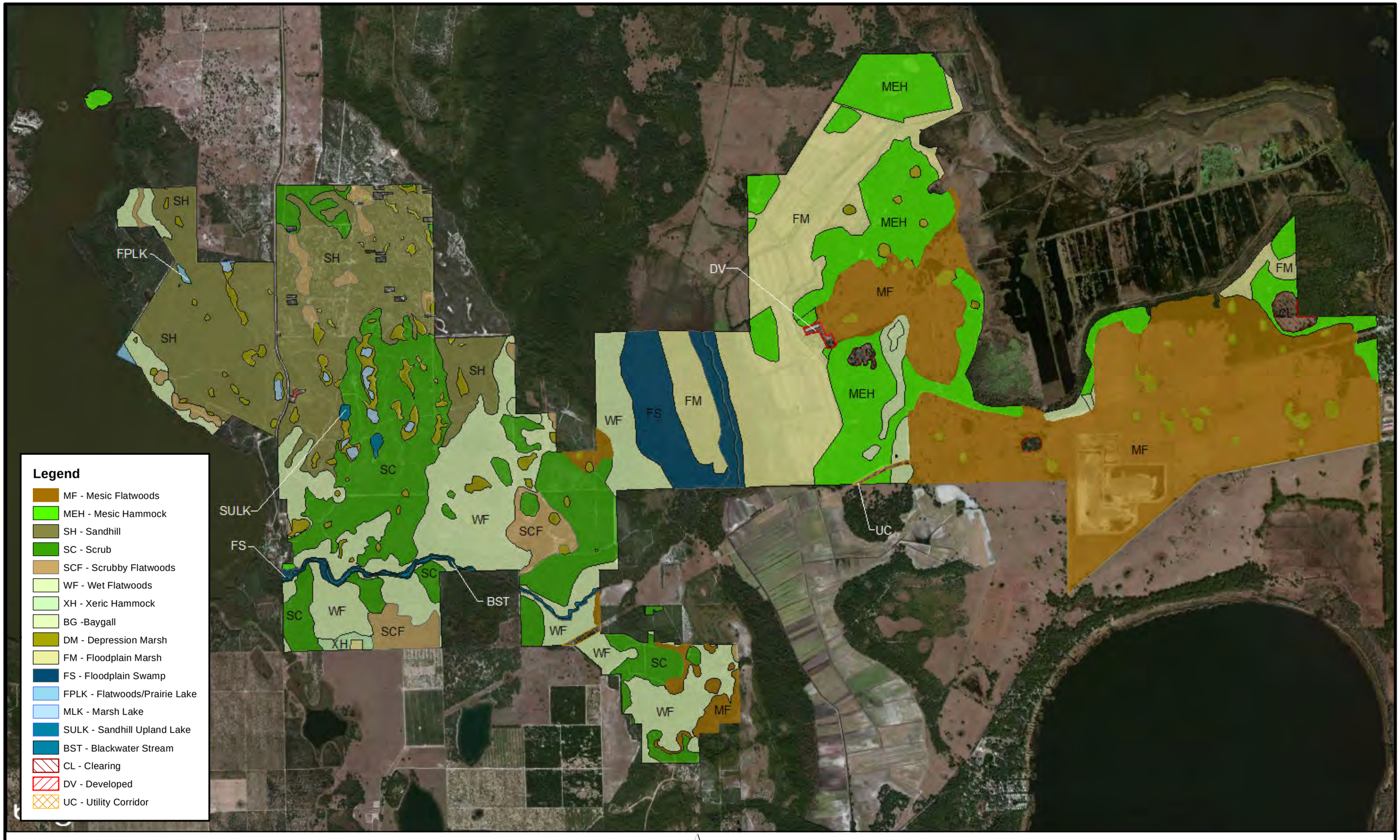
Hardwood reduction should be conducted on a portion of the sandhill at the preserve. The preserve has some long unburned sandhill that may require thinning of hardwoods to help restore natural conditions. Chain sawing of the oaks would be the suggested method followed by prescribed burning. Portions of CF–25a and CF-26 are areas that are priority areas for this treatment. Priority would be on the edges of the management zones to help facilitate mowing along the edges to increase the width of the firebreaks.

**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




ALLEN DAVID BROUSSARD CATFISH CREEK PRESERVE STATE PARK

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

NATURAL COMMUNITIES
DESIRED FUTURE CONDITIONS MAP

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

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

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

***Objective: Monitor and document three selected imperiled animal species in the preserve and one animal species group.***

Park staff and volunteers will continue to survey and monitor the preserve's population of Florida scrub-jays. Currently the jays are surveyed using guidelines developed by the Jay Watch program. This program tracks population trends. A report that includes the preserve's jays is documented by Johnson (2003). Transects have been established and have been carried out for several years. As jays are moving into other areas of the preserve, transects should be expanded to accommodate this. Efforts to color band jays at the preserve should occur. Banding would aid in the current monitoring. It would also provide for information on the movement of jays within and outside of the preserve.

In the past, a year long monthly bird survey was conducted at the western portion of the preserve. There is a need to document bird species that exist on the Rolling Meadows portion of the preserve. Park staff should coordinate with volunteers in order to set up another survey that would encompass this area. The results should document the presence/absence of the listed wading birds and other listed bird species. Specifically areas that are targeted for restoration should be incorporated into this survey.

Surveys for sand skinks should be initiated for the scrub/sandhill areas of the preserve. Numerous signs of this fossorial species have been documented but a formal survey should be done to give information that is more detailed. Staff will develop a list of prioritized management zones for initial surveys.

Gopher frogs have been identified in the park. An initial test survey was conducted with the FWC. It did not detect any gopher frogs. Follow up of this survey should be conducted to further document the presence/absence of this species.

The DRP will continue to depend upon the partnerships with other agencies and academic institutions in the monitoring of imperiled species that have been documented at the park.

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

Park staff will continue to document listed plant species that occur in the preserve. A portion of the listed plants at the preserve has been documented via GPS. This process will continue to expand and efforts to update this periodically will occur as resources allow. Specifically the monitoring will target the seven species: Florida lady's nightcap, Longleaf wild buckwheat, Florida gayfeather, Britton's beargrass, Lewton's polygala, hooded pitcherplants and scrub plum. As mentioned above marking via GPS to some extent is occurring for all these species but complete monitoring protocols needs to be developed.

**Exotic Species Management**

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

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

***Objective: Annually treat 80 gross acres of exotic plant species in the park.***

An exotic plant removal plan is recommended that maps infested areas by management zone and determines priorities for treatment. The plan will provide guidance for subsequent annual work plans. The number of acres of exotic plants treated per year is likely to vary widely depending on the status of current infestations and any new infestations that might arise during the life of this management plan. Cogongrass will continue to be treated promptly and repeatedly. All infestations of old world and Japanese climbing fern must be located and herbicided. Priority should be given to FLEPPC Category I and II species when treating exotic plant species in the park. Non-invasive exotic plants that occur within the park will be removed whenever possible; however, ornamentals that are known to be non-invasive and occur in landscaping around residences may remain. All other scattered invasive exotic plant species will be treated upon detection and mapped for follow-up treatments. Any cut stumps will be treated with appropriate herbicide to prevent resprouting.

A plan and schedule for scouting and mapping invasive exotics in every zone within the park at least two times within 10 years is recommended. Areas that have sources of particularly aggressive species, such as cogongrass, may need to be scouted more frequently. Finding new populations of invasive exotic plants before

they become established will help prevent larger infestations and reduce the cost and effort needed to control them. The focus should be on FLEPPC Category I and II plant species.

Though many of the large cogongrass patches have been reduced by herbicide treatments to smaller more manageable areas, efforts should remain ongoing to retreat known infestations and scout new infestations. All known and newly detected locations of exotic plants should be GPSed and mapped. The park should develop an exotic plant management plan to outline procedures for scouting, marking, treatment scheduling, treatment progress, retreatment, herbicide use procedures, as well as herbicide use and needs. As funds become available, contract herbicide treatments should be considered.

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

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 such as mowers and loggers 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.

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

Control activities will focus on areas where feral hogs and armadillos are causing the most damage. Park staff actively removes hogs from the property. Contractual services to remove feral hogs should be investigated to increase the number of hogs removed. The park also occasionally has to remove feral or stray cats and dogs from the property. These animals should be turned over to the county animal control facility.

## Special Management Considerations

### Timber Management Analysis

Chapters 253 and 259, Florida Statutes, require an assessment of the feasibility of managing timber in land management plans for parcels greater than 1,000 acres if the lead agency determines that timber management is not in conflict with the primary management objectives of the land. The feasibility of harvesting timber at this park during the period covered by this plan was considered in context of the DRP's statutory responsibilities and an analysis of the park's resource needs and values. The long-term management goal for forest communities in the state park system is to maintain or re-establish old-growth characteristics to the degree practicable, with the exception of those communities specifically managed as early successional.

During the development of this plan, an analysis was made regarding the feasibility of timber management activities in the park. It was determined that the primary management objectives of the unit could be met without conducting timber

management activities for this management plan cycle. Timber management will be re-evaluated during the next revision of the management plan.

### Arthropod Control Plan

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

## Cultural Resource Management

### Cultural Resource Management

Cultural resources are individually unique, and collectively, very challenging for the public land manager whose goal is to preserve and protect them in perpetuity. The DRP is implementing the following goals, objectives and actions, as funding becomes available, to preserve the cultural resources found in Allen David Broussard Catfish Creek Preserve 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 and collections care must be submitted to the 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, cultural resource assessment survey by a qualified professional archaeologist, modifications to the proposed project to avoid or mitigate potential adverse effect. In addition, any demolition or substantial alteration to any historic structure or resource must be submitted to DHR for consultation and the DRP must demonstrate that there is no feasible alternative to removal and must provide a strategy for documentation or salvage of the resource. Florida law further requires that the DRP consider the reuse of historic buildings in the park in lieu of new construction and must undertake a cost comparison of new development versus rehabilitation of a building before electing to construct a new or replacement building. This comparison must be accomplished with the assistance of DHR.

***Objective: Assess and evaluate 22 of 22 recorded cultural resources in the park.***

The park intends to have the recorded cultural sites evaluated and condition assessments updated during the plan period. Park staff will attempt to locate sites and provide information to include but not limited to any threats to the site’s

condition such as natural erosion; vehicular damage; horse, bicycle or pedestrian damage; looting; construction including damage from firebreak construction; animal damage; plant or root damage or other factors that might cause deterioration of the site. Site assessments should be documented on appropriate forms and a copy sent to the DHR to be filed in the Florida Master Site Files. A copy of this information should also be maintained at the park and district offices. The park will prioritize preservation projects identified by the assessments/evaluations.

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

The park has had several comprehensive archaeological surveys. Despite this, some areas have not yet been surveyed. The predictive model (USF 2010) that was developed for the preserve should be used as guidance to determine if other areas need further survey work. Any areas that are recommended for future park development or restoration should be priority areas for future surveys. It is recommended that the drainage canals in the Rolling Meadows portion of the preserve be recorded prior to restoration work done there.

A Scope of Collections will need to be developed and used should the park acquire any collection items. An administrative history is needed for the park that will help interpret the history of the park. Oral histories of local historians and park staff need to be done to help document the park's history.

The general objective for the management of the cultural resources of Allen David Broussard Catfish Creek Preserve State Park is to protect, preserve and interpret the prehistoric and historic resources. Any newly discovered or undocumented historic or archaeological sites will be appropriately recorded or updated in the Florida Master Site File. Efforts should be made to insure that there is always at least one staff member who is a certified archaeological monitor. Management should ensure that park personnel are trained in cultural resource management and establish a park library to support the training. Unit staff will ensure that any ground disturbing activities shall be conducted in accordance with DHR guidelines and monitored by appropriately trained personnel. Management should try to develop professional relationships with area university archaeologists, Water Management District land managers and area law enforcement officials to discuss cultural resource management issues and opportunities.

***Objective: Bring 1 of 22 recorded cultural resources into good condition.***

Staff will take measures to bring the Smith house site from fair to good condition. This will be accomplished by signage at the site designating the preserve boundary as well as interpreting the site to the public.

All other sites should be monitored on a regular basis. A cyclical maintenance plan should be developed and implemented to help guide the park with needed preservation of its sites. Park staff should develop and implement a preservation and maintenance plan for all cultural resources. Management measures for cultural resources should include development of a phased plan for managing the currently

identified recorded sites in the context of their surroundings. The plan should outline approved methodologies for executing the plan and training staff and volunteers in managing the cultural resources of the park. Management should arrange for a Level I survey in all areas planned for development and utilize development project funds to accomplish the survey. As funding is available, Level 1 surveys should be conducted for areas identified by a predictive model.

## Resource Management Schedule

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

## Land Management Review

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

Allen David Broussard Catfish Creek Preserve State Park was subject to a land management review on August 24, 2006 and on March 15, 2012**.** 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, through public workshops, and environmental groups. With this approach, 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 described and located 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

Allen David Broussard Catfish Creek Preserve State Park is located within Polk County approximately 8 miles northeast of Lake Wales in the central part of the state. The population of Polk County has grown 24 percent and that of adjacent Osceola County by 56 percent since 2000. Polk County is projected to grow by 19 percent and Osceola County by an additional 33 percent by 2020 (BEBR, University of Florida, 2011). As of 2010, 24 percent of residents in these counties were in the 0-17 age group, 21 percent in the 18-34 age group, 27 percent in the 35-54 age group, 12 percent in the 55-64 age group, and 17 percent were aged 65 and over, which reflects the state average for these groupings (BEBR, University of Florida, 2011).

Over 2.5 million people reside within 50 miles of the park, which includes the cities of Orlando, Kissimmee, Melbourne and Lakeland (BEBR, University of Florida, 2011).

A variety of public and privately managed lands are located in proximity to the park that offer various resource-based recreation opportunities including camping, picnicking, boating, fishing, hiking, biking, horseback riding, and hunting. Adjacent land south of Camp Mack Road is managed by the Division as part of Lake Kissimmee State Park. Other areas include Tiger Creek Preserve, Lake Wales Ridge State Forest, Three Lakes Wildlife Management Area, Upper Lakes Basin Watershed, Lake Wales Ridge National Wildlife Refuge, Babson/Hesperides Tract, Sumica/Lake Walk-in-the-Water Tract, Crooked Lake Preserve, and the Disney Wilderness Preserve. Refer to the Vicinity Map for locations of these properties.

### Existing Use of Adjacent Lands

Adjacent lands include agricultural, low density residential and conservation uses. Private agricultural operations include citrus groves, cattle ranching, dairy farming, and sod farming. Recent acquisitions have nearly doubled the size of the park, extending the boundary eastward toward Lake Kissimmee, and providing a buffer along the northeastern boundary of the park. The latter area is managed by the South Florida Water Management District (WMD) and adds to their Kissimmee Chain of Lakes land holdings. The northwest boundary of the park is shared by Hatchineha Ranch, a 5,134-acre private conservation property co-managed by The Nature Conservancy to protect the headwaters of the Kissimmee River and Everglades Basin. The southeastern boundary is now formed by Camp Mack Road, which also defines the northwestern boundary of Lake Kissimmee State Park. Catfish Creek and Lake Kissimmee State Parks are administered jointly, with management based at the latter unit.

Lake Pierce forms a portion of the western boundary. The Future Farmers of America (FFA) operate the Leadership Training Center on a 126-acre site on Lake Pierce just outside the western boundary of the park. The Center is available for rental for meetings, retreats and conferences. Facilities include a 50-room lodge with conference and meeting space, dining area, swimming pool, pontoon boat cruises, and opportunities for fishing, canoeing, hiking, and biking.

### Planned Use of Adjacent Lands

Lands adjacent to the park are designated Agriculture/Residential-Rural on the Polk County Future Land Use Map (Polk County, 2012). Development is limited to single family homes (1 DU/5 acres) and structures associated with agricultural operations. Lands adjacent to the park are not anticipated to undergo significant change in the near future. Density and use restrictions of existing land use designations have maintained a rural landscape that is compatible with the maintenance of resources and a quality visitor experience at the park. Population pressure from the urbanized Lakeland-Winter Haven area may result in the eventual conversion of adjacent lands to residential uses.

## 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.

### Recreation Resource Elements

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

#### Land Area

The 8,250-acre park is situated within the Lake Wales Ridge, a remnant sand dune system stretching from Lake to Highlands County that contains uniquely high elevations (up to 300 feet) and one of the highest concentrations of rare plant and animal species in the United States. Acquisition of the Rolling Meadows tract to the east significantly increased the size of this unit. This area contains old sod farms and pasturelands that will require extensive restoration work before they reflect natural conditions, provide quality habitat and add to the recreation potential of the park.

#### Water Area

More than two miles of Catfish Creek flow through the southern portion of the preserve. This narrow, winding creek is quite scenic, but its location and associated wetlands makes it difficult to provide visitor access. There are numerous small to medium sized ponds and lakes scattered throughout the property, many of which are concentrated in the western portion of the park among hills and ridges. The park also contains approximately 4,500 feet of heavily vegetated shoreline on Lake Pierce. The park's ponds and lakes provide unique opportunities for wildlife viewing, nature study, fishing, and resting spots for trail users.

#### Natural Scenery

The views afforded from the park's higher elevations (up to 130 feet) are quite scenic and unique in Florida. Views over the small, shallow ponds embedded within the desert-like conditions of the surrounding scrub are particularly appealing.

#### Significant Habitat

The park contains some of the finest remnants of scrub and sandhill habitat found in peninsular Florida. In addition to these natural communities, the park contains other high quality habitats that are considered imperiled, rare or

uncommon in the state, including scrubby flatwoods, clastic upland lake, blackwater stream, flatwoods/prairie lake, and depression marsh.

The park harbors at least 12 plant species listed as endangered or threatened, and is considered a very important site for scrub endemics. The property is also known to support a variety of listed fauna, including numerous reptile species, the Florida mouse, Florida scrub-jay and bald eagles.

### Natural Features

The rare scrub and sandhill habitats are the outstanding natural features of the park. The small sandhill upland lakes scattered through the scrub and sandhill communities are also significant features that serve as important feeding, breeding, and watering areas for the preserve's wildlife.

### Archaeological and Historical Features

Cultural resources are listed in the Florida Master Site File. These include prehistoric middens and artifact scatters, a burial mound, and a 19th century homestead. While the significance of these features is considered secondary to the natural resources of the park, they have the potential to add to park interpretive content.

## 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.

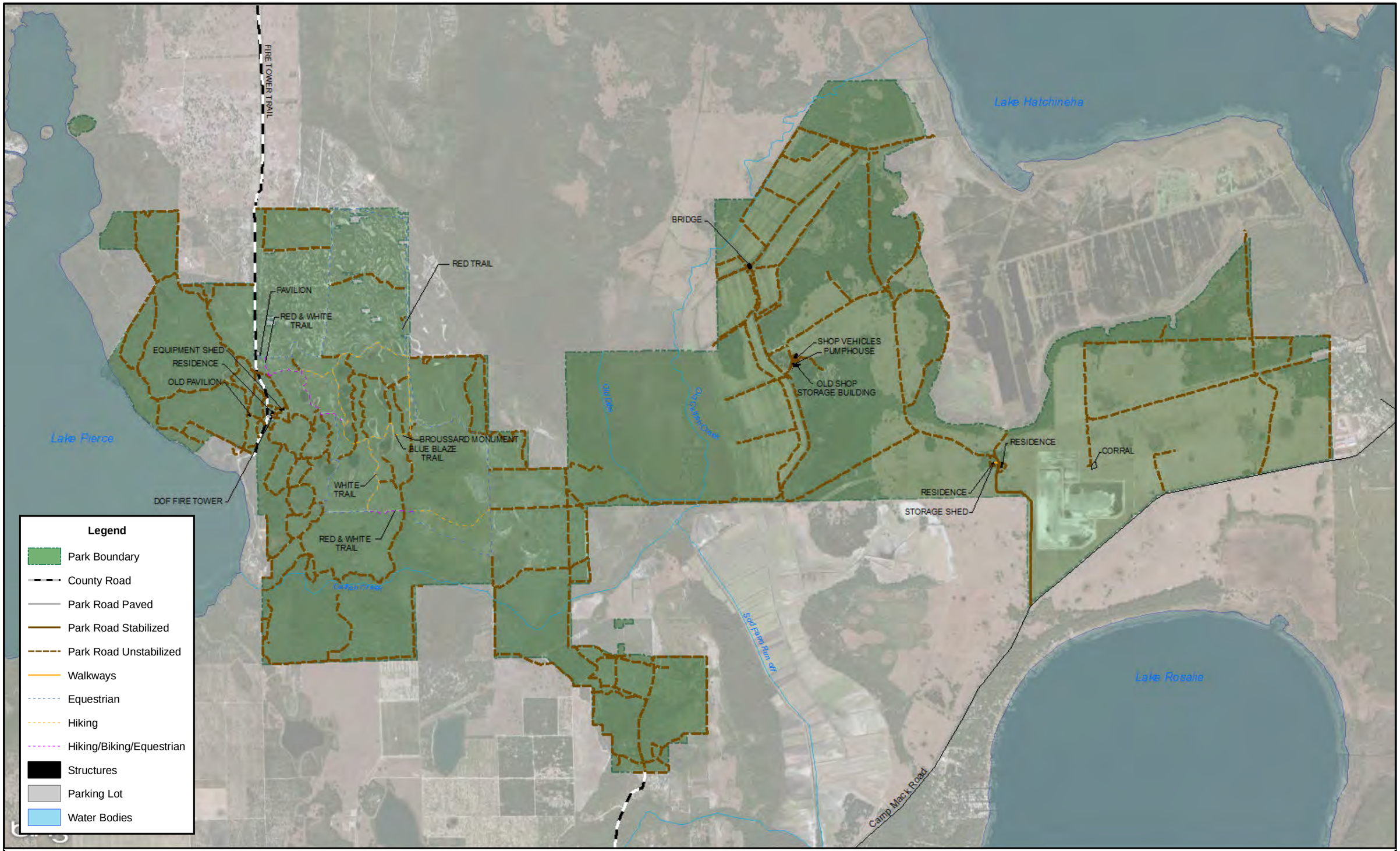
### Past Uses

Prior to acquisition by the state, parklands were used as a private hunting area. Several deteriorating hunt cabins remain from this activity. Cattle ranching and sod farming occurred extensively on the eastern half of the unit. During the late 1800s, the preserve and surrounding lands supported Florida's pioneer cattle industry. An abandoned fire tower is located near the park residence and shop area on Firetower Road.

### Future Land Use and Zoning

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

The current FLU designations for Allen David Broussard Catfish Creek State Park are Agriculture Residential-Rural (A/RR) and Preservation (PRESV). The PRESV designation covers two parcels on the west side of the park adjacent to the FFA property. The PRESV designation covers areas that are publicly accessible and




ALLEN DAVID BROUSSARD CATFISH CREEK PRESERVE STATE PARK

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

BASE MAP

managed primarily for long-term resource protection. This designation is consistent with state park uses and facilities.

A/RR covers the majority of the property. This land use category recognizes the importance of agriculture and provides for its protection by limiting residential development to one dwelling unit per five acres (1 DU/5 AC). Typical park uses and facilities are permissible within this category.

## Current Recreational Use and Visitor Programs

The recreational uses currently available at this time include hiking, horseback riding, and nature observation. Interpretive tours are offered to local students to teach them about the park's unique natural habitats and wildlife. A ranger-guided hike is offered to the general public each winter to interpret the natural history of the park. Recreation and interpretation occurs mostly in the western portion of the park.

Allen David Broussard Catfish Creek State Park recorded 4,006 visitors in FY 2012/2013. By DRP estimates, the FY 2012/2013 visitors contributed $225,559 million in direct economic impact and the equivalent of four jobs to the local economy (Florida Department of Environmental Protection, 2013).

## Other Uses

Currently, there is a cattle lease if effect on 2,000 acres in the Rolling Meadows Tract.

## 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 Allen David Broussard Catfish Creek Preserve State Park scrub, sandhills, wet flatwoods, hydric hammocks, blackwater stream, flatwoods/prairie lakes, depression marshes, bay galls, and wet prairies have been designated as protected zones as delineated on the Conceptual Land Use Plan. The areas around active bald eagle, and Florida scrub-jay nest sites, and known cultural sites are also considered protected zones. The protected zones account for over 61 percent of park acreage.

The lack of other suitable locations has necessitated placement of some proposed facilities within the scrub and sandhill natural communities. Therefore, small portions of these communities have been excluded from the protected zones. However, the conceptual siting of facilities has utilized existing disturbed areas, such as clearings and jeep trails, within these sensitive communities.

## Existing Facilities

### Recreation Facilities

Recreation facilities are limited to a trailhead parking area off Firetower Road with stabilized parking, small picnic shelter and composting restroom. The trailhead provides access to roughly 14 miles of hiking and equestrian trails. A monument to Allen David Broussard is located along the trail system at one of the highest points of elevation. There are two primitive campsites, each with a fire ring and picnic table, accessible from trails in the Western Tract.

### Support Facilities

A park residence and shop compound are located off Firetower Road a short distance south of the trailhead. Firetower Road is a roughly 4.5-mile, county maintained paved road that provides public access to the western tract and the FFA camp. The Rolling Meadows tract has various residence and support structures remaining from sod farm operations. Access to these facilities is from Camp Mack Road. Refer to the Base Map for locations of park facilities.

**Western Tract**

**Firetower Road Trailhead Area**
Stabilized parking
Trail directional signage
Small picnic pavilion
Composting restroom
Hiking trail (approx. 6.5 miles)
Equestrian trail (approx. 7.5 Miles)
Primitive campsites (2)

**Firetower Road Residence/Shop Area**
Park residence (mobile home)
Pole barn
Storage building

**Rolling Meadows Tract**

**Rolling Meadows Residence Area**
Staff residence
Mobile home/bunkhouse

**Rolling Meadows Shop Area**
Sod Farm maintenance & storage area

## 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


ALLEN DAVID BROUSSARD
CATFISH CREEK PRESERVE STATE PARK

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CONCEPTUAL LAND USE PLAN

conceptual land use plan will be reassessed during the next update of the park management plan. As new information is provided regarding the environment of the park, cultural resources, recreational use, and as new land is acquired, the conceptual land use plan may be amended to address the new conditions as needed. A detailed development plan for the park and a site plan for specific facilities will be developed based on this conceptual land use plan, as funding becomes available.

During the development of the conceptual land use plan, DRP assessed the potential impacts of proposed uses or development on the park resources and applied that analysis to decisions for the future physical plan of the park as well as the scale and character of proposed development. Potential impacts are more thoroughly 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 more thoroughly investigated. Municipal sewer connections, advanced wastewater treatment or best available technology systems are applied for on-site sewage disposal. Stormwater management systems are designed to minimize impervious surfaces to the greatest extent feasible, 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, the 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.

Proposed improvements focus on providing new camping opportunities and additional trails. Establishing access to the shores of Lake Pierce for fishing, picnicking and paddling is also addressed. Interpretive programming will be enhanced with the addition of ranger-guided tours. Efforts will be made during this planning period to open the Rolling Meadows Tract for recreational access. If implemented, the potential uses and proposed facilities in this plan will expand primitive camping, introduce equestrian camping, expose more visitors to the pleasures of paddling Lake Pierce and Catfish Creek, diversify the types of trail experiences, and provide expanded opportunities to learn about the resources of the park.

***Objective: Maintain the park's current recreational carrying capacity of 142 users per day.***

The park will continue to provide opportunities for hiking, horseback riding, camping, nature observation, and interpretation.

***Objective: Expand the park's recreational carrying capacity by 536 users per day.***

The park is located in one of Florida's fastest growing regions and only 25 miles from the Disney World complex. Florida's Statewide Comprehensive Outdoor Recreation Plan (SCORP) indicates that additional facilities will be needed through 2020 to maintain the current levels of service for a number of recreational activities including hiking, camping, horseback riding and canoeing/kayaking.

To address these needs, hiking, camping, and equestrian opportunities will be expanded through the addition of hiking trail loops, and primitive campsites in the Western Tract as well as a trailhead, shared-use trails and an equestrain campground in the Rolling Meadows tract. Canoeing, kayaking, fishing and picnicking opportunities will be added with the development of a day-use area on Lake Pierce.

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

Two interpretive programs are currently offered to park visitors. One of these is a guided hike led by the park biologist to teach visitors about the park's natural communities and wildlife. This hike is offered once each winter. Another program, offered to local students affiliated with the Future Farmers of America organization, is a hayride tour of the park. Offered twice yearly, this program teaches students about the Lake Wales ridge and its unique habitats. Information about conservation related careers is also incorporated into this program.

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

Adding a ranger-guided monthly hike during the winter months through the pristine scrub habitats would attract more nature enthusiast to the preserve. Offering monthly hay rides for the general public would help interpret the natural history of the park those visitors that may not be able to hike long distances in rough terrain. The park will also explore the feasibility of offering tram tours, or a similar type of access, to the property.

## 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, renovated and/or new facilities needed to implement the conceptual land use plan for Allen David Broussard Catfish Creek 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 3 existing facilities, 6 miles of trail and 2 miles of road.***

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

**Firetower Road Trailhead Area:** Amenities recommended for the Firetower Road trailhead in the Western Tract include a permanent restroom facility and a potable water source. An interpretive kiosk and an additional small picnic pavilion with two tables should also be provided. An honor box fee collection station and visitor sign in is also recommended for this location. The current use patterns at the trailhead will be evaluated to determine the need for expanding the parking lot versus the impact to the surrounding natural communities.

An extension to the trail system on the east side of Firetower Road is proposed that would provide a two miles shared-use loop on the south side to provide access to Catfish Creek. A rest stop is recommended on one of the scenic interior lakes along this part of the trail system.

Future consideration will be given to establishing hiking trails on the parcel west of Firetower Road. It is recommended that a trail linkage be considered between proposed facilities on Lake Pierce and the existing trailhead. Trails in this area should use firebreaks and service roads to the greatest extent possible, and be developed in coordination with rare plant surveys to avoid affecting sensitive areas. Approximately 4 miles of hiking trail is recommended for this area.

Two additional primitive campsites are recommended along the existing trail system in the Western Tract. Placing these sites near water is desirable but sensitive wetlands should be avoided.

**Support Facilities**: The shop area on the Western Tract needs a new well capable of filling fire trucks and tankers. The soft sandy roads surrounding the residence and shop area should be stabilized. Also proposed for this area is a small office building for document storage and administrative support as well as one volunteer RV site with water and electrical connections.
A small storage building for cleaning and maintenance supplies is proposed for the Rolling Meadows staff residence area. The dirt road providing access to the Rolling Meadows Tract should be improved to facilitate access to proposed public use areas for a variety of vehicle types.

***Objective: Construct 3 new facilities and 25 miles of trails.***

**Lake Pierce Day Use Area:** A small day use area on Lake Pierce is proposed to expand recreational opportunities at the park. The proposed location is a scenic spot that includes a stand of bay trees along the shoreline, and is accessible via an existing dirt road off Firetower Road. A canoe launch and fishing platform are recommended for this site. A boardwalk will be needed to traverse the wetland along the edge of the lake and provide access to the proposed facilities. This site provides paddlers access to Catfish Creek, located approximately one mile away on the southeastern shore of Lake Pierce.

Canoes and kayaks launched from this location can paddle down to the creek along the shoreline of Lake Pierce.

As a main use area at the park, it is recommended that an interpretive kiosk be incorporated into the development of this site. The existing access road should be improved to provide a surface suitable for public access. It may also have to be realigned in certain sections to avoid sensitive wetlands. A medium picnic shelter, restroom with best available technology, honor box fee collection station, and parking area for up to 15 vehicles are also recommended at this location.

**Rolling Meadows Trailhead Area:** A trailhead and picnic area is proposed within the same scenic oak hammock as proposed for the equestrian campground described below. This site is proposed as the jumping off point for a network of proposed shared-use trails for hiking, biking, and equestrian use on the Rolling Meadows tract. The land area could support up to 25 miles of trail but the layout of the system will need to be coordinated with restoration efforts and may be adjusted over time as restoration proceeds. Parking for up to 20 vehicles, a portion of which should accommodate horse trailers, several small picnic pavilions, scattered tables and grills, trail directional signage, interpretive kiosk, restroom and potable water are proposed to support visitor use. The restroom should be located between the trailhead and the proposed equestrian campground to service both user groups. An honor box fee collection

station and a sign in station for visitors are recommended for the entrance on Camp Mack Road.

There is the potential to develop a scenic drive that would provide access to former sod farm areas on the Rolling Meadows tract and the Kissimmee Chain of Lakes Tract (currently managed by the WMD). Once restored, these areas are anticipated to be attractive to wildlife and provide scenic vistas towards Lake Hatchineha. A natural surface road along the perimeter of restored wetland areas, similar to the drives at Ding Darling or Merritt Island National Wildlife Refuges, is envisioned as a means of providing controlled access to more remote areas of the park. It is recommended that the feasibility of this concept be investigated as part of the restoration plan for this area.

**Rolling Meadows Equestrian Camping Area:** A primitive equestrian campground is proposed for the Rolling Meadows Tract within an oak hammock to the north of the staff residence near the trailhead area described above. This facility could be phased in with the installation of primitive sites with tie-ups to start with. Electric hook-ups, potable water and corrals could be added later if warranted by increasing demand. A restroom facility should be provided between the equestrian campground and the trailhead as described above.

**Rolling Meadows Shop Area:** Two volunteer RV sites are proposed for the Rolling Meadows Tract near the existing sod farm structures where water and electrical connections exist.

## Facilities Development

Preliminary cost estimates for these recommended facilities and improvements are provided in the Ten-Year Implementation Schedule and Cost Estimates (Table 6) located in the Implementation Component of this plan. These cost estimates are based on the most cost-effective construction standards available at this time. The preliminary estimates are provided to assist DRP in budgeting future park improvements, and may be revised as more information is collected through the planning and design processes. New facilities and improvements to existing facilities recommended by the plan include:

### Western Tract

**Firetower Road Trailhead Area**
Interpretive kiosk
Small picnic pavilion (2) trailhead and trail rest stop
Restroom
Potable water
Honor box fee collection station
Shared-use trail (approx. 2 mile loop for access to Catfish Creek)
Hiking trail (approx. 4 miles west of Firetower Road)
Primitive campsites (2)

**Lake Pierce Day Use Area**
Canoe/kayak launch
Fishing platform
Interpretive kiosk
Medium picnic pavilion
Picnic tables and grill (5)
Parking (up to 15 vehicles)
Access road
Restroom
Honor box fee collection station

**Firetower Road Residence/Shop Area**
Volunteer RV site
Office building
Access road improvements

**Rolling Meadows Tract**

**Rolling Meadows Trailhead Area**
Parking (20 vehicles)
Small picnic pavilion (5)
Picnic table and grill (5)
Restroom and potable water
Honor box fee collection station
Interpretive Kiosk
Shared-use Trails (25 miles)
Access road improvements/scenic drive

**Rolling Meadows Equestrian Camping Area**
Equestrian camping area (primitive)

**Rolling Meadows Residence Area**
Storage building

**Rolling Meadows Shop Area**
Volunteer RV sites (2)

## 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**

| | Existing Capacity* | | Proposed Additional Capacity | | Future Capacity | |
|---|---|---|---|---|---|---|
| **Activity/Facility** | **One Time** | **Daily** | **One Time** | **Daily** | **One Time** | **Daily** |
| **Trails** | | | | | | |
| Hiking | 33 | 66 | 20 | 40 | 53 | 106 |
| Equestrian | 60 | 60 | | | 60 | 60 |
| Shared Use - Western Tract | | | 20 | 40 | 20 | 40 |
| Shared Use - Rolling Meadows | | | 100 | 200 | 100 | 200 |
| **Picnicking** | | | 60 | 120 | 60 | 120 |
| **Lake Pierce Use Area** | | | 45 | 90 | 45 | 90 |
| **Camping** | | | | | | |
| Primitive Camping | 16 | 16 | 16 | 16 | 32 | 32 |
| Equestrian Camping | | | 30 | 30 | 30 | 30 |
| **TOTAL** | **109** | **142** | **291** | **536** | **400** | **678** |

*Existing capacity revised from approved plan to better DRP guidelines.

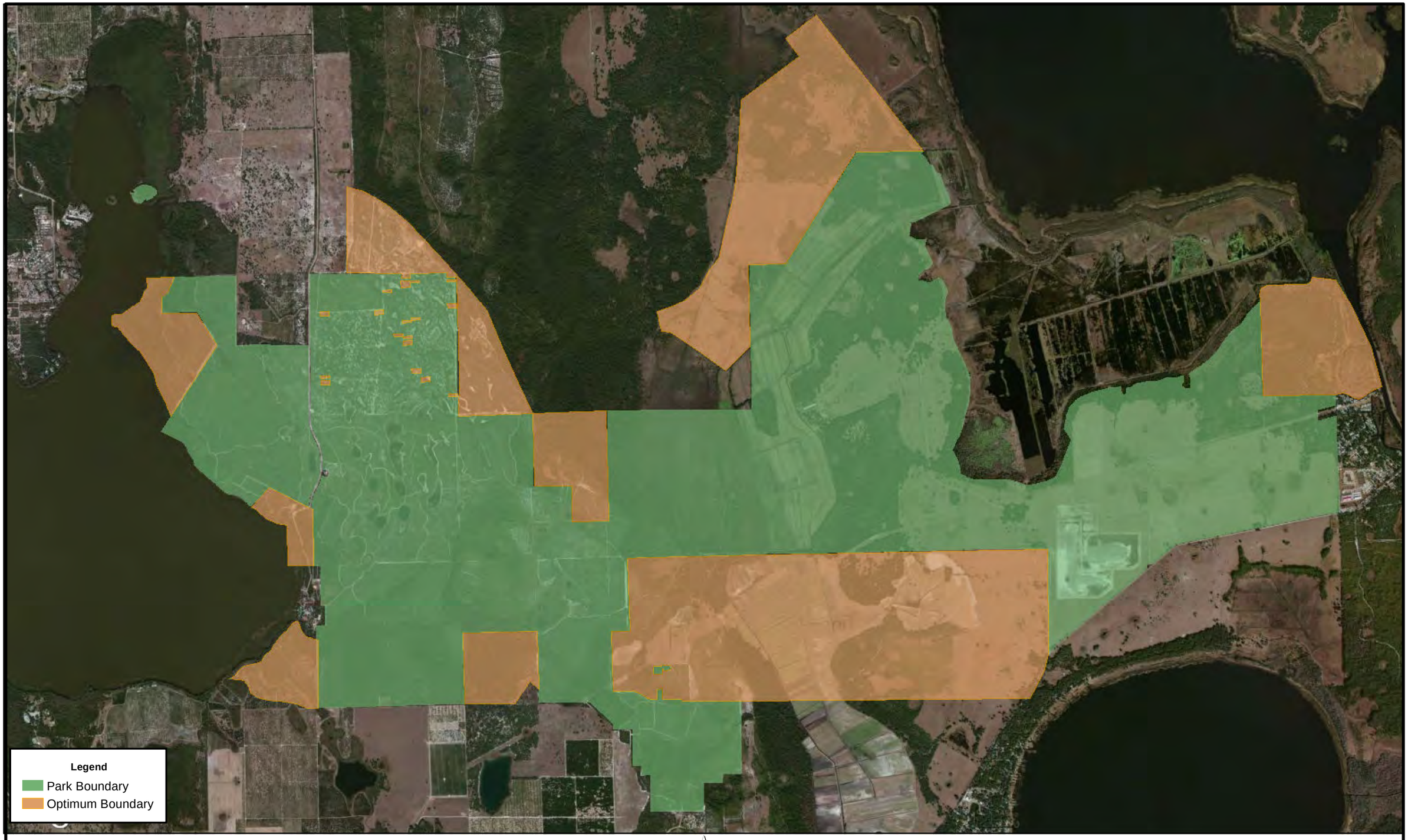
## Optimum Boundary

The optimum boundary map reflects lands that have been identified as desirable for direct management by DRP as part of the state park. These parcels may include public as well as privately owned lands that 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. The map also identifies lands that are potentially surplus to the management needs of DRP. As additional needs are identified through park use, development, or research, and changes to land use on adjacent private property occurs, 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.

Nearly 4,200 acres of land adjacent to the current boundary have been identified as optimum boundary. The proposed lands are needed to protect scrub endemics, provide areas for hydrological restoration, increase protection of Lake Pierce shoreline and Catfish Creek, provide additional uplands for recreation opportunities and a bridged connection between the eastern and western portions of the park. This area includes WMD lands known as the Kissimmee Chain of Lakes Tract that are slated for restoration once the existing sod farm leases are terminated. The Division will consider leasing this area to manage as part of the state park. The optimum boundary also contains multiple outparcels located in the western tract.




ALLEN DAVID BROUSSARD CATFISH CREEK PRESERVE STATE PARK

N

0 0.25 0.5 1 Mile

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

OPTIMUM BOUNDARY MAP

## IMPLEMENTATION COMPONENT

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

### MANAGEMENT PROGRESS

Since the approval of the last management plan for Allen David Broussard Catfish Creek Preserve State Park in 2004, significant work has been accomplished and progress made towards meeting the DRP's management objectives for the park. These accomplishments fall within three of the five general categories that encompass the mission of the park and the DRP.

#### Acquisition

- Acquired 68 acre property from the Nature Conservancy adjacent to the northern boundary west of Firetower Rd (2007).
- Acquired 2 small out parcels totaling 1.2 acres in northern section of the preserve east of Firetower Rd (2007&2008).
- Acquired Snodgrass Island property (10 acres) in 2009 – formerly interim managers.

#### Park Administration and Operations

- Added WAN hook up to Ranger Residence (no office).
- Added computer for WAN at Ranger Residence.
- Administered an Americorp position at the preserve for two years.

#### Resource Management

**Natural Resources**

- Park staff have worked to reduce the occurrence of invasive exotic plants in the park, treating over 1445 gross acres since the approval of the last management plan.
- Park staff obtained and managed two BIPM exotic plant grants at the preserve's Rolling Meadows portion.
- Park staff members have worked to reduce the population of exotic animals in the park, significantly reducing their detrimental impacts to the sensitive natural communities in the park.
- Park staff have conducted over 8,448 acres of prescribed fire at the park since the approval of the last management plan.

- Conducted annual Florida Scrub-jay surveys at the preserve and banding of a portion of the population of jays at the preserve.
- Worked with FFWCC in completing Gopher frog surveys at the preserve.
- Conducted plant surveys and expanded the known locations of populations of the listed plant species at the preserve.
- Maintained participation in the Lake Wales Ridge Ecosystem Working Group.
- Worked with the SFWMD in planning restoration on former wetland areas in the Rolling Meadows portion of the preserve.
- Installed approximately 10 miles of new or significantly improved firelines at the preserve.
- Added cattle use agreement in pasture and some former sod areas at the Rolling Meadows portion of the preserve.

**Cultural Resources**

- An archaeological probability model was completed for the entire parcel.
- Cooperated with SFWMD in conducting a level I archaeological survey for good portion of the Rolling Meadows portion of the preserve resulting in considerable additions to the sites found at the preserve.
- Conducted two DHR compliance reviews for fireline work at the preserve.

### Recreation and Visitor Services

- Marked all trails and fire breaks with new numbering system and repaired/improved trail marking system.
- Worked with local Boy Scouts to add two primitive backpack/horseback camp sites.
- Repaired and resurfaced day use parking area.
- Added new kiosk at parking area.
- Added new interpretive hike on the first of every year (“first day hikes”).
- Continued cooperation with Adjacent FFA facility and youth hay rides and interpretation.
- Added 3 benches to the trail system.

### Park Facilities

- Added and rebuilt ranger residence on Rolling Meadows portion.
- Repair/Remodel of ranger residence off Firetower Road.
- Added and rebuilt mobile home for volunteer bunk house.
- Stabilized main shop entrance with shell rock.
- Stabilized and resurfaced day use parking area.
- Added park volunteer RV site with full hook ups on Rolling Meadows portion.
- Installed approximately 5 miles of new boundary fence.

## 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.** | Administrative support ongoing | C | **$73,000** |
| **Objective B** | **Expand administrative support as new lands are acquired, new facilities are developed, or as other needs arise.** | Administrative support expanded | UFN | **$274,000** |
| **Goal II: Protect water quality and quantity in the park, restore hydrology to the extent feasible, and maintain the restored condition.** | | **Measure** | **Planning Period** | **Estimated Manpower and Expense Cost* (10-years)** |
| **Objective A** | **Conduct/obtain an assessment of the park's hydrological needs.** | Assessment conducted | LT | **$350,000** |
| Action 1 | Conduct a hydrological study of the park's current surface water features including dtiches and canals | Study completed | UFN | $100,000 |
| Action 2 | Conduct a feasibility study of restoring the historical flow of Catfish Creek | Study completed | UFN | $50,000 |
| Action 3 | Develop a sequential and prioritized hydrological restoration plan | Plan completed | UFN | $200,000 |
| **Objective B** | **Restore natural hydrological conditions and function to approximately 625 acres of floodplain marsh community.** | # Acres restored or with restoration underway | UFN | **$350,000** |
| Action 1 | Modify 6 water control structures | # Structures modified | UFN | $250,000 |
| Action 2 | Fill or plug approximately 10 miles of ditches | # Miles filled or plugged | UFN | $100,000 |
| **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 3,000 acres of the park maintained within optimal fire return interval.** | # Acres within fire return interval target | LT | **$718,000** |
| Action 1 | Update annual burn plan. | Plan updated | C | $16,000 |
| Action 2 | Manage fire dependent communities for ecosystem function, structure and processes by burning between 683 - 1404 acres annually, as identified by the annual burn plan. | Average # acres burned annually | C | $702,000 |
| **Objective B** | **Conduct habitat/natural community restoration activities on 30 acres of pasture to the appropriate flatwoods community** | # Acres restored or with restoration underway | LT | **$164,000** |
| Action 1 | Develop site specific restoration plan | Plan developed/updated | LT | $9,000 |
| Action 2 | Implement restoration plan on 30 acres of flatwoods | # Acres with restoration underway | UFN | $155,000 |
| **Objective C** | **Conduct habitat/natural community improvement activities on 10 acres of sandhill community.** | # Acres improved or with improvements underway | LT | **$3,000** |
| Action 1 | Conduct hardwood thinning operations | # Acres treated | LT | $3,000 |
| **Goal IV: Maintain, improve or restore imperiled species populations and habitats in the park.** | | **Measure** | **Planning Period** | **Estimated Manpower and Expense Cost* (10-years)** |
| **Objective A** | **Update baseline imperiled species occurrence inventory lists for plants and animals, as needed.** | List updated | C | **$10,000** |
| **Objective B** | **Monitor and document 3 selected imperiled animal species and 1 animal species group in the park.** | # Species monitored | C | **$22,000** |

* 2013 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.** | | | | |
| Action 1 | Develop monitoring protocols for 1 selected imperiled animal species including sand skink. | # Protocols developed | ST | $500 |
| Action 2 | Implement monitoring protocols for 3 imperiled animal species including those listed in Action 1 above and scrub jays, gopher frogs, and wading birds. | # Species monitored | C | $21,500 |
| **Objective C** | **Monitor and document 7 selected imperiled plant species in the park.** | # Species monitored | C | **$10,000** |
| Action 1 | Develop monitoring protocols for 7 selected imperiled plant species including Florida lady's nightcp, longleaf wild buckwheat, Florida gayfeather, Britton's beargrass, Lewton's polygala, hooded pitcherplants and scrub plum. | # Protocols developed | ST | $1,000 |
| Action 2 | Implement monitoring protocols for 7 selected imperiled plant species including those listed in Action 1 above. | # Species monitored | C | $9,000 |
| **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 80 gross acres of exotic plant species in the park.** | # Acres treated | C | **$116,000** |
| Action 1 | Develop/update exotic plant management work plan. | Plan developed/updated | ST | $16,000 |
| Action 2 | Implement annual work plan by treating 80 gross acres in park, annually, and continuing maintenance and follow-up treatments, as needed. | Plan implemented | C | $100,000 |
| **Objective B** | **Practice preventative measures to avoid accidental introduction and spreading of exotics within the park.** | Measures developed | ST | **$3,000** |
| **Objective C** | **Implement control measures on 2 exotic and nuisance animal species in the park.** | # Species for which control measures implemented | C | **$34,000** |
| Action 1 | Continue control activities on feral hogs and armadillos. | # Removed | C | $33,000 |
| Action 2 | Relocate feral cats and stray dogs to County Animal Control Facility as necessary. | # Relocated | C | $1,000 |
| **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 22 of 22 recorded cultural resources in the park.** | Documentation complete | LT | **$5,000** |
| Action 1 | Complete 16 assessments/evaluations of archaeological sites. Prioritize preservation and stabilization projects. | Assessments complete | LT | $5,000 |
| **Objective B** | **Compile reliable documentation for all recorded historic and archaeological sites.** | Documentation complete | LT | **$23,500** |
| Action 1 | Ensure all known sites are recorded or updated in the Florida Master Site File. | # Sites recorded or updated | ST | $1,000 |
| Action 2 | Conduct Phase 1 archaeological survey for areas planned for development which occur in high and medium sensitivity areas as determined by the predictive model | Survey completed | UFN | $20,000 |
| Action 3 | Develop and adopt a Scope of Collections Statement. | Document completed | ST | $500 |
| Action 4 | Conduct oral history interviews. | Interviews complete | LT | $1,000 |
| Action 5 | Compile a park administrative history. | Report completed | LT | $1,000 |
| **Objective C** | **Bring 1 of 22 recorded cultural resources into good condition.** | # Sites in good condition | LT | **$65,000** |
| Action 1 | Design and implement regular monitoring programs for 22 cultural sites. | # Sites monitored | C | $5,000 |
| Action 2 | Create and implement a cyclical maintenance program for each cultural resource. | Programs implemented | C | $50,000 |
| Action 3 | Bring 1 of 22 recorded cultural resources into good condition. | Projects completed | LT | $10,000 |

* 2013 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.**

| 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 142 users per day.** | # Recreation/visitor | C | **$290,000** |
| **Objective B** | **Expand the park's recreational carrying capacity by 536 users per day.** | # Recreation/visitor | UFN | **$1,097,000** |
| **Objective C** | **Continue to provide the current repertoire of 2 interpretive, educational and recreational programs on a regular basis.** | # Interpretive/education programs | C | **$15,000** |
| **Objective D** | **Develop 2 new interpretive, educational and recreational programs.** | # Interpretive/education programs | UFN | **$20,000** |
| **Goal VIII: Develop and maintain the capital facilities and infrastructure necessary to meet the goals and objectives of this management plan.** | | **Measure** | **Planning Period** | **Estimated Manpower and Expense Cost* (10-years)** |
| **Objective A** | **Maintain all public and support facilities in the park.** | Facilities maintained | C | **$436,000** |
| **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 | **$2,000** |
| **Objective C** | **Improve and/or repair 3 existing facilites, 6 miles of trail and 2 miles of road as identified in the Land Use Component.** | # Facilities/Miles of Trail/Miles of Road | UFN | **$696,000** |
| **Objective D** | Construct **3 new facilites and 25 miles of trails as identified in the Land Use Component.** | # Facilities/Miles of Trail/Miles of Road | UFN | **$2,750,000** |
| **Objective E** | **Expand maintenance activities as existing facilities are improved and new facilities are developed.** | Facilities maintained | UFN | **$250,000** |

* 2013 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.**

**Summary of Estimated Costs**

| Management Categories | | Total Estimated Manpower and Expense Cost* (10-years) |
|---|---|---|
| Resource Management | | **$1,873,500** |
| Administration and Support | | **$347,000** |
| Capital Improvements | | **$3,448,000** |
| Recreation Visitor Services | | **$2,108,000** |
| Law Enforcement Activities[1] | | |
| | **1**Law enforcement activities in Florida State Parks are conducted by the FWC Division of Law Enforcement and by local law enforcement agencies. | |
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* 2013 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

## Sequence of Acquisition

The State acquired Allen David Broussard Catfish Creek Preserve State Park to conserve, protect and manage the property for outdoor recreation, park historic and related purposes. Acquisition began in 1991, under the Conservation and Recreations Lands program.

On December 20, 1991, the Board of Trustees of the Internal Improvement Trust Fund (Trustees) obtained title to the property that became Allen David Broussard Catfish Creek Preserve State Park. The Trustees conveyed the management authority to the Department of Environmental Protection (DEP), Division of Recreation and Parks (DRP), under Lease No. 3962. The lease expires on August 5, 2042.

Since the initial purchase, the Trustees have acquired several additional parcels and added them to Allen David Broussard Catfish Creek Preserve State Park. Currently, the preserve contains 8,157 acres.

There are no legislative or executive directives that constrain the use of this property. According to the lease, DRP will manage the property only for the conservation and protection of natural and historic resources, and for resource-based public outdoor recreation that is compatible with the conservation and protection of the property.

## Title Interest

The Trustees hold fee simple title to Allen David Broussard Catfish Creek Preserve State Park.

## Special Conditions on Use

Allen David Broussard Catfish Creek Preserve State Park is designated single-use to provide resource-based public outdoor recreation and other related uses. Uses such as, water resource development projects, water supply projects, 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.

## Outstanding Reservations

Following is a listing of outstanding rights, reservations and encumbrances that apply to Allen David Broussard Catfish Creek Preserve State Park:

**Instrument**: ..... Memorandum of Understanding
**Instrument Holder**: ..... The Nature Conservancy.
**Beginning Date**: ..... February 1, 1993
**Ending Date**: ..... There is no specific ending date given
**Outstanding Rights, Uses, Etc.**: .... DEP will, at its sole cost and expense: Provide ingress and egress to and from Catfish to employees and agents of the

conservancy for purposes as outlined in the memorandum of agreement.

Permit the conservancy and its agents and assigns to use the cabins that are on the property if deemed necessary by the conservancy during the course of the inventory and management planning process.
Limit land alteration to that deemed necessary by DEP (DNR) for security and fire control purposes until completion of the management plan.

Involve the conservancy in producing a comprehensive management plan for Catfish, the objectives of which will be the preservation and enhancement of native species and their natural habitats, and to provide compatible recreation opportunities for the public.

**Instrument**: ..... Easement
**Instrument Holder**: ..... Bowen Bros., Inc..
**Beginning Date**: ..... December 8, 1993
**Ending Date**: ..... There is no specific ending date given
**Outstanding Rights, Uses, Etc.**: .... A non-exclusive easement for ingress and egress over and upon certain specified premises in Polk County, Florida.

## Addendum 2—Advisory Group Members and Report

# Lake Kissimmee State Park
# Allen David Broussard Catfish Creek Preserve State Park
# Advisory Group Members

**Local Government**

The Honorable Todd Dantzler, Chair
Polk County Board of County Commissioners
Drawer BC01, Post Office Box 9005
330 W. Church Street
Bartow, Florida 33831-9005

**Agency Representatives**

Joel (Andy) Noland, Park Manager
Lake Kissimmee State Park
14248 Camp Mack Road
Lake Wales, Florida 33853

Ken Ford, Chair
Polk Soil and Water
Conservation District
3890 State Road 60 East
Bartow, Florida 33830

Shane Belson
Florida Fish and Wildlife Conservation Commission
3900 Drane Field Rd.
Lakeland, Florida 33811

David Speake, Supervisory Forester
Florida Forest Service
3125 Conner Boulevard
Tallahassee, Florida 32399-1650

Mike Wisenbaker, Archaeology Supervisor
Bureau of Archaeological Research
Florida Division of Historical Resources
1001 DeSoto Park Drive
Tallahassee, Florida 32301

Charles Walter, Director
Orlando Service Center
South Florida Water Management District
1707 Orlando Central Parkway
Suite 200
Orlando, Florida 32809

**Tourism/Economic Development Representative**

Al Snow
Central Florida Visitors & Convention Bureau
2701 Lake Myrtle Park Road
Auburndale, Florida 33823

**Environmental and Conservation Representatives**

Greg Thomas, President
Florida Native Plant Society,
Heartland Chapter
5116 Woodgreen Lane
Lakeland, Florida 33811

Sandy Madden, President
Ridge Audubon Society
200 North Crooked Lake
P.O. Box 148
Babson Park, Florida 33827

Zach Prusak
The Nature Conservancy
Florida Chapter Office
222 S. Westmonte Drive, Suite 300
Altamonte Springs, Florida 32714

**Recreational User Representatives**

David Waldrop, Chair
Florida Trail Association
Heartland Chapter
702 Osceola Avenue
Lake Wales, Florida 33853

Michael Charron, President
Florida Sport Horse Club
2077 West Lake Hamilton Drive
Winter Haven, Florida 33881

Bill Richards, Executive Director
Paddle Florida
P.O. Box 5953
Gainesville, Florida 32627

**Adjacent Landowners**

Bill Drasdo
209 La Casa
Lake Wales, Florida 33898

Gary Bartley
Future Farmers of America Foundation
5000 Firetower Road
Haines City, Florida 33844

**Other Interested Parties**

Dr. William Broussard
502 East New Haven Avenue
Melbourne, Florida 32901

**Lake Kissimmee State Park**

**Allen David Broussard Catfish Creek Preserve State Park**

**Advisory Group Report**

The Advisory Group meeting for Lake Kissimmee and Allen David Broussard Catfish Creek Preserve State Parks was held at the Lake Wales Public Library on January 30, 2014. Gaye Sharpe represented Todd Dantzler; Dave Butcher and Jennifer Navarra represented David Speake; Susan Elfers represented Charles Walter; Jack Madden represented Sandy Madden. David Waldrop, Bill Richards, and William Broussard were not able to attend. Mike Wisenbaker did not attend but sent in written comments. Greg Thomas did not attend but written comments were submitted on his behalf by Anne Cox. All other Advisory Group members were in attendance. Attending staff were Larry Fooks, Robert Yero, Andy Noland, Joshua Herman, Erik Egensteiner and David Copps.

Mr. Copps began the meeting by explaining the purpose of the Advisory Group, reviewing the meeting agenda, and summarizing the comments from public workshop that was held the previous evening at Lake Wales High School. 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**

**Al Snow** (Visit Central Florida) stated that he approves of the updated plans and said that the recreational facilities proposed in the plans are assets for promoting tourism in the region. He offered Visit Florida's assistance in promoting the parks and providing wayfinding services to guide visitors to the parks.

**Jennifer Navarra** (Florida Forest Service (FFS)) asked why the fire return interval for the sandhill and scrub communities on Catfish Creek deviated from Florida Natural Areas Inventory (FNAI) recommendations. She warned not to burn too frequently for the well-being of some imperiled plants. Erik Egensteiner said that FNAI recommendations are generally followed but some adjustments are made due to site specific conditions. Andy Noland said that the goal is to get all fire-dependent communities in rotation. Ms. Navarra asked the park to be careful when maintaining and constructing facilities. She recommended a master planning process to carefully site all facilities to protect resources to the greatest degree possible.

**Dave Butcher** (Florida Forest Service (FFS)) noted a mistake on page 30 of the Lake Kissimmee plan. He recommended that the term "pasture-improved areas" in the Desired Future Condition description for Canal/Ditch be changed to "canal/ditch." In regards to hardwood chain-sawing described on page 52, he recommended that stumps be treated with herbicide to reduce sprouting. Mr. Butcher recommended that a desired number of trees per acre should be provided in the Desired Future Conditions for flatwoods communities to serve as a baseline. He stated that that the term "conserve" on page one, paragraph two in the Catfish Creek plan conflicts with the "preserve" classification.

**Shane Belson** (Florida Fish and Wildlife Conservation Commission (FWC)) noted that the control of coyotes is mentioned in the Catfish Creek plan but not in the Lake Kissimmee plan. Mr. Belson recommended that coyotes should be considered a native animal as stated in a 2007 Fish and Wildlife Research Institute study. Andy Noland said that coyotes are removed only when they get too close to the cows. Mr. Belson agreed that it is acceptable to remove them if they are a nuisance but reiterated that they should be considered a native species. Mr. Belson asked if the park is conducting Tier 3 monitoring of the Florida Panther as indicated in Table 4. Erik Egensteiner said that Tier 3 includes monitoring by other agencies such as FWC. Mr. Belson stated the importance of dense cover for bears and panthers and asked if there were such areas in the parks that could be considered special management zones for these two species. Andy Noland and Erik Egensteiner identified areas in both parks that could be managed for the benefit of bears and panthers. Mr. Belson asked about the status of two FWC spoil islands in Lake Kissimmee. Erik Egensteiner said one has been leveled and spread while the other is still there with a dense growth of exotic plants. Mr. Belson recommended that the park contact the regional FWC fisheries biologist to see if grant money is available for treating the exotic plants and spreading the spoil. Mr. Belson recommended that the word “control” should be used instead of “eradicate” in regards to cogon grass management. Mr. Belson recommended partnering with FWC to install kestrel nesting boxes at the parks. Mr. Belson mentioned that there are some good groundcover restoration plans that have been implemented by other agencies and that the park should borrow from these so as not to reinvent the wheel. He asked for clarification on the term “Wilderness Preserve,” as described in the Land Use Component. David Copps explained that the designation is used to protect a wilderness experience in large, undeveloped areas. Mr. Belson recommended that the FWC statewide protocol be used for gopher tortoise monitoring. Mr. Belson asked why partnerships with South Florida Water Management District (SFWMD) are proposed to document and record cultural resources as stated in the Cultural Resources management objectives. Andy Noland said that SFWMD sponsored a recent study of cultural resources in the area and that they are co-owners of ADB Catfish Creek Preserve State Park. Mr. Belson asked if “single species management” as stated on page 11 in the last sentence of paragraph two (both plans) refers to imperiled species. If so, he recommended that it be stated as such as in the previous sentence. Mr. Belson said that the Lake Kissimmee cost estimates under the hydrologic restoration goals seem low and recommended doubling those figures. Mr. Belson recommended that the spoil storage agreement with SFWMD on Catfish Creek be clarified in the plan. Mr. Belson recommended that cut hardwood stumps in the Catfish Creek sandhill area be treated with herbicide. He said that the proposed 10 acres of sandhill restoration over 10 years is too low. Erik Egensteiner said the 10 acre figure refers to a total area of hardwoods not just one 10 acre block. Mr. Belson asked for clarification on the term “Protected Zone” on page 77 of the Catfish Creek plan regarding scrub jay nesting areas. David Copps said that protected zones designation serves to limit recreational use and facilities in sensitive areas. Mr. Belson said to replace the term “Florida Game and Freshwater

Fish Commission" with "Florida Fish and Wildlife Conservation Commission" in Addendum 6-1. He asked if the SFWMD was part of the land management review team for Lake Kissimmee State Park. Andy Noland answered yes. Mr. Belson asked who monitors Snodgrass Island and if there is a problem with looting. Erik Egensteiner said that the park monitors the property although it is difficult to get out there on a regular basis. He said that looting hasn't been a problem lately. Andy Noland said there are small Florida Park Service boundary signs on the perimeter but no fencing as that may actually attract attention. Mr. Belson asked if the park manages the small inholdings at Catfish Creek. Erik Egensteiner said they are treated just like the rest of the park. Mr. Belson asked if the park tries to contact the landowners about upcoming management activities such as burning. Eric Egensteiner said that the park has assembled a contact list of landowners but has not yet contacted any of them. Zack Prusak explained that The Nature Conservancy (TNC) handles the inholding issue by sending out letters to the owners stating that burning is planned for their property. The letter asks the landowners to contact TNC if they have any objections. If there are no objections, TNC goes ahead and burns. Very seldom do they receive an objection.

**Bill Drasdo** (Adjacent landowner) asked if funding is available to construct the planned facilities. Andy Noland said not at this time. Larry Fooks explained that the funding needs for Lake Kissimmee and Catfish Creek are lumped in with the needs of all state parks each year. Spending is prioritized based on the yearly legislative allocation. Andy Noland said that facilities usually have to be phased in over time based on the limited budget.

**Susan Elfers** (South Florida Water Management District (SFWMD)) said she was not aware that SFWMD assists in managing the Zipprer Canal in Lake Kissimmee State Park as mentioned in the plan. Joshua Herman said that Polk County does the majority of management but SFWMD does some limited work such as vegetation management around the weir. Ms. Elfers said that the park should contact the District's Orlando Service Center to help pave the way for marina improvements. Andy Noland said that marina improvements will help attract more visitors.

**Mike Charron** (Florida Sport Horse Club) said that water bodies are favorite destinations for visitors and recommended that trail access to water bodies in both parks be improved. He recommended that the parking area at the Catfish Creek Fire Tower Road trailhead be configured and expanded to better accommodate horse rigs. Andy Noland explained that the sensitivity of the scrub habitat at that location may limit parking expansion. He said that additional access and facilities are planned for equestrians on the Rolling Meadows Tract. Mr. Charron said that riders don't like trail disking for firebreaks. Mr. Noland said that the park tries to use the Meri-Crusher when possible since it creates a much shallower disturbance than the disk. Mr. Charron said that rocks used to stabilize trails are hard on horse hooves. He recommended using mulch or shell as an alternative. Mr. Charron said that equestrians would like trail access to the Rolling Meadows Tract and asked why

it is not currently accessible. Andy Noland explained that the cattle lease agreement on Rolling Meadows restricts general access but the park will work with equestrians to provide access for special events. Larry Fooks said that the park will start to look at the potential for providing access for hiking and horseback riding on the Rolling Meadows Tract. Mr. Charron expressed support for establishing a tram system to provide more access to the parks as explained by Jack Madden.

**Gary Bartley** (Future Farmers of America Foundation (FFAF)) said that his only issues are trespassing onto The FFAF property from Catfish Creek and hog control. Erik Egensteiner said that the park would look at the possibility of installing better trail and boundary signs to keep park visitors from straying onto the FFAF property. Andy Noland asked if the public could use the FFAF boat ramp on Lake Pierce. Mr. Bartley said that for a $5 fee the public can use the launch from 5:30am to 7pm. Mr. Bartley stated that the FFAF partners with the park to provide hayride events to give kids a chance to experience Catfish Creek Preserve.

**Gaye Sharpe** (Polk County) supports hydrologic restoration projects for both parks including ditch blocks to recreate wetlands. She recommended putting water back into the old bed of Catfish Creek if possible. Ms. Sharpe recommended not burning the Catfish Creek sandhill too much for the health of certain imperiled plant species. Jennifer Navarra said it is important to vary the fire return interval. Ms. Sharpe asked if the park conducts photo-monitoring for invasive plants and fire plots to determine if management objectives are being met. Erik Egensteiner said that some burn zones are photo-monitored but the intent is to do so in every zone. He said that the there is no photo-monitoring for invasive plants but a new data base tracking system has recently been implemented. Ms. Sharpe encouraged the park to use more photo-monitoring as a way to establish a visual history of management and determine long-term trends. She said that a lot of this information resides in the minds of park staff and is lost when those folks retire. Ms. Sharpe asked if the park has water quality education programs. Joshua Herman described two such programs (power point presentation to educate boaters on the spread of exotic plants and a table top watershed/stormwater pollution display). Ms. Sharpe expressed the importance of such programs and encouraged the park to keep it up. Ms. Sharpe stated that the Land Management Review responses for both parks do a good job of explaining why some of the recommendations can't be implemented.

**Jack Madden** (Ridge Audubon Society) stated his approval of the plans' scientific approach. He recommended that the park provide access to Catfish Creek Preserve by way of a tram system (as done at St. Marks Wildlife Refuge). Andy Noland agreed that tram access is desirable and offered to partner with Ridge Audubon to determine how best to implement such a program.

**Zach Prusak** (The Nature Conservancy (TNC)) stated that the reality of fire management dictates that burning needs to be done whenever possible – not just during the growing season. He said that it's important for the public to see smoke

continually during the year so that they become accustomed to it. Mr. Prusak asked what density of wiregrass the park wants for the Catfish Creek sandhill. Erik Egensteiner said that the sandhills on the Lake Wales Ridge typically did not have that much wiregrass and that the density will be less than Wekiwa Springs State Park sandhills. Mr. Prusak recommended that the park establish a small area of wiregrass to serve as a seed source – the seed harvested there could be spread on other areas. Mr. Prusak asked what the impediments are to achieving the 10 year burn goals. Andy Noland said that getting the right weather is the biggest obstacle. Mr. Pruzak asked what the impacts would be to the park if resources from the TNC and the FFS, or if OPS staff, were no longer available. Andy Noland said that loss of these resources would be detrimental to the burn program at the parks. Mr. Prusak said that TNC is trying to anticipate the effect on regional burn programs that may result from reduced staffing levels in the future. He described the concept of Memorandums of Understanding (MOUs) as a way to formalize and strengthen local burning partnerships between various agencies. He said that he will be working to establish Burning MOUs in this region in the near future. Mr. Prusak said that overall the unit management plans do a good job of balancing public access with resource protection.

## Summary of Written Comments

**Mike Wisenbaker** (Florida Division of Historical Resources (DHR)) was not able to attend the meeting. He provided comments by email. Copies of the comments are attached. Concerning Lake Kissimmee State Park, Mr. Wisenbaker stated that site 8PO7250 (the military road) should be classified as a resource group rather than an archaeological site. He stated that all historical and archaeological artifacts and features that have been found in the park should be formally recorded in the Florida Master Site File. For Catfish Creek, he stated that sites 8PO7277 and 8PO7278 should be classified as historic bridges rather than historic structures. He recommended that staff should get accurate GPS coordinates of all sites so they can be relocated for monitoring. For both parks, Mr. Wisenbaker suggested that the archaeological predictive model should be viewed as only one of many tools to determine potential locations for historical and archaeological sites. He reminded the park that any proposed land altering or ground disturbing activities still need to be approved by the Compliance Review Section in the Bureau of Historic Preservation.

**Anne Cox** (Florida Native Plant Society) submitted written comments on behalf of Greg Thomas. She made the following recommendations in regards to Lake Kissimmee State Park: Fill in the Zipprer canal to restore natural hydrology. Restore native groundcover in mesic flatwoods before planting longleaf pines. Allow fire to creep into mesic hammock edges. Apply fire as needed on Buster Island and follow scrub-jay requirements. Increase fire frequency in wet flatwoods and baygall. Continue frequent fire in the floodplain marsh. Eradicate feral hogs and continue to remove exotic plants throughout the park. Don't remove cattle from pasture areas

until the park is ready to prepare the land for restoration. Eradicate bahiagrass from pasture areas before planting native groundcover. Continue to limit use in the protected zones and wilderness area and purchase land in the optimum boundary when possible.

## Summary of Public Comments

**Tom Palmer** stated that the park should be careful about delaying the opening of the Rolling Meadows Tract to public access. He recommended establishing some basic level of access so as to prevent complaints from the public. Mr. Palmer mentioned the plan to construct cabins in the last UMP for Lake Kissimmee and asked about the status of that project. Andy Noland said that a family camping area is planned in lieu of cabins in the UMP update. Mr. Palmer said that the park should consider recruiting volunteers to conduct wildlife inventories on the two properties.

## Staff Recommendations

The staff recommends approval of the proposed management plans for Lake Kissimmee and Allen David Broussard Catfish Creek Preserve State Parks as presented, with the following significant changes.

- Amend the discussion of exotic animals in the Lake Kissimmee plan to match that in the Catfish Creek plan. The DRP will continue to classify coyotes as exotic species but text will be added to both plans stating that “coyotes should be removed only in cases where the species is known to significantly impact natural resources or park operations.”

- Increase the cost estimates for hydrological restoration objectives in the Lake Kissimmee plan.

- Provide language in the “Potential Uses” section in the Land Use Component that the park will explore the feasibility of offering tram tours (or similar access) to Catfish Creek Preserve.

- Provide language stating that the current use patterns at the Fire Tower Road trailhead will be evaluated to determine the need for parking lot expansion vs. the impact to the natural communities.

- Provide language stating that efforts will be made to open the Rolling Meadows Tract for recreational access.

- Change the site classifications for the sites listed in the DHR written comments.

- Add a statement under the second objective in the Cultural Resource Management section in the Catfish Creek plan stating that “all known sites are recorded or updated in the Florida Master Site File.”

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

## Notes on Composition of the Advisory Group

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

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

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

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# Addendum 4—Soil Descriptions

**(7) Pomona fine sand** is a poorly drained soil found in broad areas on flatwoods. Permeability of the Pomona fine sand is moderately slow and the slope of this soil is 0 to 2 percent. The available water capacity is low. The natural vegetation is mostly saw palmetto, slash pine, longleaf pine, South Florida slash pine, pineland threeawn, chalky bluestem, fetterbush lyonia, gallberry and low panicums.

**(10) Malabar fine sand** is a poorly drained soil found in low, narrow to broad sloughs on flatwoods. Slopes are smooth to concave and are 0 to 2 percent. The Malabar soil has a seasonal high water table within 12 inches of the surface for 2 to 4 months during most years. The available water capacity is low and permeability is very slow in the lower parts of the subsoil. The natural vegetation is cabbage palm, scattered longleaf pine, South Florida slash pine, slash pine, ccypress, live oak, water oak, laurel oak, saw palmetto, waxmyrtle, pineland threawn and maidencaine.

**(13) Samsula muck** is a very poorly drained organic soil found in swamps and marshes. Slopes are smooth and less than two percent. This Samsula soil has a seasonal high water table at or above the surface except during extended dry periods. The natural vegetation is mostly loblolly bay, cypress, red maple, blackgum, and other water-tolerant trees.

**(14) Sparr sand, 0 to 5 percent slopes** is a somewhat poorly drained soil found in areas of seasonally wet uplands and knoll on flatwoods. Permeability is moderately slow or slow and the available water capacity is low. The natural vegetation is mostly oak, hickory, magnolia, sweetgum, slash pine, South Florida slash pine and longleaf pine. The understory includes gallberry, waxmyrtle, scattered saw palmetto and pineland threeawn.

**(15) Tavares fine sand, 0 to 5 percent slope** is a moderately well drained soil on broad uplands and knolls on flatwoods. Slopes are smooth to convex. This Tavares soil has a seasonal high water table at a depth of 40 inches to 80 inches for several months in most years. The natural vegetation is mostly South Florida slash pine, slash pine, longleaf pine, turkey oak, bluejack oak, and post oak and an understory of wiregrass, creeping bluestem, lopsided iniangrass, hairy panicums, low panicums and purple lovegrass.

**(17) Smyrna and Myakka fine sands** consist of poorly drained soils in broad areas on flatwoods. The Smyrna and Myakka soils have a seasonal high water table within 12 inches of the surface for one to four months in most years. The natural vegetation is mostly longleaf pine, slash pine, South Florida slash pine, saw palmetto, runner oak, gallberry, wax myrtle, wiregrass and lyonia.

**(19) Floridana muck fine sand, depressional** is a very poorly drained soil that is found in depressional areas mostly on flatwoods with a slope of 0 to 2 percent. The soil has a surface layer that is 15 inches thick. The upper is black mucky fine sand and the lower is black fine sand. Permeability is very slow or slow and the available water capacity is moderate. The natural vegetation is mostly cypress,

blackgum, bay, red maple, myrtle, pickerelweed, sedges, and water tolerant grasses.

**(21) Immokalee sand** is a poorly drained soil in broad areas of flatwoods. This soil has a seasonal high water table within 12 inches of the surface for one to four months in most years. The natural vegetation includes longleaf pine, South Florida slash pine, saw palmetto, gallberry, wax myrtle, oak, lyonia and wiregrass.

**(22) Pomello fine sand** is a moderately well drained soil on low, broad ridges and low knolls on flatwoods. Slopes are smooth to convex and are 0 to 2 percent. This soil has aseasonal high water table at a depth of 24 to 40 inches for 1 to 4 months in most years. The natural vegetation is usually various scrub oaks, longleaf pine, sand pine, South Florida slash pine, slash pine, saw palmetto, lyonia, tarflower and wiregrass.

**(23) Ona fine sand** is a poorly drained soil in broad areas on flatwoods. Slopes are smooth to concave and are 0 to 2 percent. This soil has a seasonal high water table within 12 inches of the surface for 1 to 4 months in most years. The natural vegetation is mostly longleaf pine, slash pine, South Florida slash pine, longleaf pine, saw palmetto, runner oak, gallberry, wax myrtle, wiregrass and lyonia.

**(25) Placid and Myakka fine sands, depressional** consist of very poorly drained soils in depressions in flatwoods. This Placid soil is ponded for at least six months during most years. The Myakka soil has a seasonal high water table that is above the surface for about six months during most years. Most areas of the Placid and Myakka soils are vegetated by bay trees, scattered cypress, blackgum, St. Johnswort, maidencane and other water-tolerant plants.

**(30) Pompano fine sand** is poorly drained soil is on broad, low flatwoods. Slopes are smooth to concave and are 0 to 2 percent. This soil has a seasonal high water table within a depth of 12 inches for 2 to 4 months during most years. The natural vegetation consists of widely spaced cypress, South Florida slash pine, and slash pine with an understory of saw pametto, creeping bluestem, lopsided Indian grass, wiregrass, cordgrass and panicums.

**(31) Adamsville fine sand** is a somewhat poorly drained soil found on low ridges in flatwoods and in low area on uplands. It has a seasonal high water table at a depth of 20 to 40 inches for two to six months during the year. Natural vegetation includes longleaf pine, slash pine, laurel oak, water oak and an understory of saw palmetto, wiregrass, bluestem and panicums.

**(32) Kaliga muck** is a poorly drained soil that is found in marshes and swamps, with a slope that is 0 to 2 percent. The soil has a black muck surface layer about 9 inches thick. Permeability is slow or very slow and the available water capacity is very high. The natural vegetation is mostly sweetbay, cypress, blackgum, Carolina ash and red maple with an understory of saw grass, lilies, reeds, sedges and wax myrtle.

**(33) Holopaw fine sand, depressional** is a very poorly drained soil that is found in wet depressions on flatwoods with a slope that is 0 to 2 percent. Permeability is moderately slow and the available water capacity is low. The natural vegetation is dominantly cypress with a few scattered slash pine and cabbage palm.

**(34) Anclote mucky fine sand, depressional** is a very poorly drained soil that is found in depressions mostly bordering lakes throughout the county with a slope that is 0 to 2 percent. The soil has a surface layer that is black mucky fine sand to a depth of about 8 inches. Permeability is rapid and the available water capacity is very low. The natural vegetation is cypress, bay, Carolina ash, scattered cabbage palm, maple and rushes.

**(35) Hontoon muck** is a very poorly drained soil in swamps and marshes. It has a seasonal high water table that is at or above the surface except during extended dry periods. The natural vegetation is bay trees, red maple, blackgum and cypress with a ground cover of sawgrass, lilies, reeds, ferns, greenbrier and other aquatic plants.

**(36) Basinger mucky fine sand, depressional** is as very poorly drained soil found in wet depressions on flatwoods. This soil is ponded for more than six months during most years. The vegetation includes broomsedge bluestem, chalky bluestem, maidencane, cutgrass, St. Johnswort, wiregrass, cypress and other water-tolerant trees.

**(37) Placid fine sand** is a very poorly drained soil on narrow flood plains. Slopes are smooth to concave and are 0 to 2 percent. This soil has a seasonal high water table within 12 inches of the surface for long periods. Most areas are flooded during rainy season. The available water capacity is low and permeability is rapid. Natural vegetation is mostly scatted bay, sweetgum, water oak, laurel oak, red maple, and cypress, with an understory of waxmyrtle, maidencane, St. Johnswort, and ather water tolerant grasses.

**(38) Electra fine sand** is a somewhat poorly drained soil is on low ridges on flatwoods. This soil has a seasonal high water table at a depth of about 24 to 40 inches for 1 to 4 months during most years. The available water capacity is low. Permeability is slow or very slow in the lower part of the subsoil. The natural vegetation is sand live oak, longleaf pine, slash pine, South Florida slash pine, sand pine, running oak, saw palmetto, chalky bluestem and indiangrass.

**(41) St. Johns sand** is a poorly drained soil found on low, broad flats and in sloughs on flatwoods. It is also on toe slopes in the ridge areas. Slopes are smooth to concave and are 0 to 2 percent. This soil has a seasonal high water table within 12 inches of the surface for 3 to 6 months during most years. The natural vegetation is mostly longleaf pine, slash pine and South Floida slash pine with an understory of saw palmetto, gallberry, wax myrtle, huckleberry, wiregrass, St. Johnswort, maidencane and St. Peterswort. Cutthroat grass is in the seep positions at the base of the slopes.

**(46) Astatula sand, 0 to 8 percent slopes** is an excessively drained soil found on sandy upland ridges. This soil does not have a water table within a depth of 72 inches. Permeability is very rapid. The natural vegetation includes bluejack oak, turkey oak, longleaf pine, sand pine, rosemary, wiregrass, bluestem and paspalum.

**(70) Duette fine sand** is a moderately well drained soil on low ridges in flatwoods. It has a seasonal high water table at a depth of four to six feet for one to four months during most years. The natural vegetation is mostly myrtle oak, Chapman's oak, sand live oak, turkey oak, sand pine and slash pine. The understory includes saw palmetto, runner oak and wiregrass.

**(74) Narcoossee sand** is somewhat poorly drained soil on low hammocks and ridges on flatwoods. The seasonal high water table is at 24 to 40 inches for four to six months during most years. The natural vegetation is mostly water oak, live oak, laurel oak, cabbage palm, scattered pines, greenbrier, saw palmetto, wiregrass, creeping bluestem and panicums.

**(77) Satellite sand** is a somewhat poorly drained soil on low knolls and ridges in flatwoods. Satellite soil has a seasonal high water table within a depth of 12 to 40 inches for two to six months in most years. The natural vegetation is mostly slash pine, saw palmetto, sand live oak and wiregrass.

**(82) Felda fine sand, frequently flooded** is a poorly drained soil that is found on the floodplains of well-defined creeks and streams with a slope that is 0 to 1 percent. Permeability is moderately rapid and the available water capacity is moderate. The natural vegetation is mostly red maple, water oak, cabbage palm, scattered pines and many water tolerant grasses.

**(83) Archbold sand, 0 to 5 percent slopes** is a moderately well drained soil found on uplands and knolls on flatwoods. Slopes are smooth to concave. This soil has a seasonal high water table at a depth of 42 to 60 inches for one to six months in most years and at a depth of 60 to 80 inches for most of the rest of the year. Permeability is very rapid. The natural vegetation is mostly sand pine, Chapman oak, myrtle oak, sand live oak, scrub hickory, saw palmetto, pricklypear and scattered wiregrass.

**(87) Basinger fine sand** is a poorly drained soil found in sloughs or poorly defined drainageways in flatwoods. It has a seasonal high water table within 12 inches of the surface for two to four months in most years. The natural vegetation is mostly wax myrtle, St. Johnswort, wiregrass, and scattered cypress and pines.

# Addendum 5—Plant And Animal List

**Allen David Broussard Catfish Creek Preserve State Park Plants**

| Common Name | *Scientific Name* | Primary Habitat (for designated species) |
|---|---|---|

## LICHENS

| | |
|---|---|
| Deermoss | *Cladonia sp.* |
| Old-man's-beard | *Usnea sp.* |

## PTERIDOPHYTES

| | |
|---|---|
| Toothed midsorus fern; Swamp fern | *Blechnum serrulatum* |
| Southern club-moss | *Lycopodiella appressa* |
| Cinnamon fern | *Osmunda cinnamomea* |
| Royal fern | *Osmunda regalis* |
| Golden polypody | *Phlebodium aureum* |
| Resurrection fern | *Pleopeltis polypodioides var. michauxiana* |
| Bracken fern | *Pteridium aquilinum* |
| Sand spike-moss | *Selaginella arenicola* |
| Shoestring fern | *Vittaria lineate* |
| Netted chain fern | *Woodwardia areolata* |
| Virginia chain fern | *Woodwardia virginica* |

## GYMNOSPERMS

| | |
|---|---|
| Sand pine | *Pinus clausa* |
| South Florida slash pine | *Pinus elliottii var. densa* |
| Longleaf pine | *Pinus palustris* |
| Bald-cypress | *Taxodium distichum* |

## ANGIOSPERMS

### MONOCOTS

| | |
|---|---|
| Chalky bluestem | *Andropogon virginicus var. glaucus* |
| Corkscrew threeawn | *Aristida gyrans* |
| Bottlebrush threeawn | *Aristida spiciformis* |
| Wiregrass | *Aristida stricta var. beyrichiana* |
| Densetuft hairsedge | *Bulbostylis ciliatifolia* |
| Ware's hairsedge | *Bulbostylis warei* |
| Florida scrub roseling | *Callisia ornata* |
| Jamaica swamp sawgrass | *Cladium jamaicense* |
| Dayflower | *Commelina diffusa* |
| Whitemouth dayflower | *Commelina erecta* |
| Pinebarren flatsedge | *Cyperus retrorsus* |
| Common water-hyacinth | *Eichhornia crassipes** |
| Spikerush | *Eleocharis sp.* |
| Florida butterfly orchid | *Encyclia tampensis* |
| Centipedegrass | *Eremochloa ophiuroides** |
| Waterspider false reinorchid | *Habenaria repens* |

* Non-Native Species

| Common Name | *Scientific Name* | Primary Habitat (for designated species) |
|---|---|---|
| Fringed yellow stargrass | *Hypoxis juncea* | |
| Cogongrass | *Imperata cylindrica** | |
| Soft rush | *Juncus effusus* | |
| Carolina redroot | *Lachnanthes caroliniana* | |
| Whitehead bogbutton | *Lacnocaulon anceps* | |
| Small's bogbutton | *Lacnocaulon minus* | |
| Britton's beargrass | *Nolina brittoniana* | SC,SH |
| Woodsgrass; Basketgrass | *Oplismenus hirtellus* | |
| Cutthroatgrass | *Panicum abscissum* | DM,WF |
| Fall panicgrass | *Panicum dichotomiflorum var. bartowense* | |
| Maidencane | *Panicum hemitomon* | |
| Torpedograss | *Panicum repens** | |
| Thin paspalum | *Paspalum setaceum* | |
| Florida needlegrass | *Piptochaetium avenaciodes* | |
| Water-lettuce | *Pistia stratiotes** | |
| Pickerelweed | *Pontederia cordata* | |
| Giant orchid | *Pteroglossaspis ecristata* | MF,WF |
| Natalgrass | *Rhynchelytrum repens** | |
| Starrush whitetop | *Rhynchospora colorata* | |
| Sandyfield beaksedge | *Rhynchospora megalocarpa* | |
| Wright's beaksedge | *Rhynchospora wrightiana* | |
| Scrub palmetto | *Sabal etonia* | |
| Cabbage palm | *Sabal palmetto* | |
| American cupscale | *Sacciolepis striata* | |
| Grassy arrowhead | *Sagittaria graminea* | |
| Bulltongue arrowhead | *Sagittaria lancifolia* | |
| Broadleaf arrowhead; Common arrowhead; Duck potato | *Sagittaria latifolia* | |
| Pinescrub bluestem | *Schizachyrium niveum* | SC,SH |
| Saw palmetto | *Serenoa repens* | |
| Yellow bristlegrass; Yellow foxtail | *Setaria parviflora* | |
| Narrowleaf blueeyed grass | *Sisyrinchium angustifolium* | |
| Jeweled blueyed grass | *Sisyrinchium xerophyllum* | |
| Earleaf greenbrier | *Smilax auriculata* | |
| Saw greenbrier | *Smilax bona-nox* | |
| Coral greenbrier | *Smilax walteri* | |
| Lopsided Indiangrass | *Sorghastrum secundum* | |
| Sand cordgrass | *Spartina bakeri* | |
| Yellow hatpins | *Syngonanthus flavidulus* | |
| Ballmoss | *Tillandsia recurvata* | |
| Southern needleleaf | *Tillandsia setacea* | |
| Spanish moss | *Tillandsia usneoides* | |
| Giant airplant | *Tillandsia utriculata* | |
| Southern cattail | *Typha domingensis* | |

* Non-Native Species

| Common Name | *Scientific Name* | Primary Habitat (for designated species) |
|---|---|---|
| Broadleaf cattail | *Typha latifolia* | |
| Bluejacket; Ohio spiderwort | *Tradescantia ohioensis* | |
| Longleaf spiderwort | *Tradescantia roseolens* | |
| Paragrass | *Urochloa mutica** | |
| Carolina yelloweyed grass | *Xyris caroliniana* | |
| Fringed yelloweyed grass | *Xyris fimbriata* | |
| Tall yelloweyed grass | *Xyris platylepis* | |
| Spanish bayonette | *Yucca aloifolia** | |
| Adam's needle | *Yucca filamentosa* | |
| **DICOTS** | | |
| Red maple | *Acer rubrum* | |
| Woman's tongue | *Albizia lebbeck** | |
| Slim amaranth; Pigweed | *Amaranthus hybridus** | |
| Spiny amaranth | *Amaranthus spinosus** | |
| Common ragweed | *Ambrosia artemisiifolia* | |
| Peppervine | *Ampelopsis arborea* | |
| Coralvine; Queen's jewels | *Antigonon leptopus** | |
| Chaffweed | *Anagallis minima* | |
| Groundnut | *Apios americana* | |
| Cutiss' milkweed | *Asclepias curtissi* | SCF,SC |
| Pinewood milkweed | *Asclepias humistrata* | |
| Fewflower milkweed | *Asclepias lanceolata* | |
| Savannah milkweed | *Asclepias pedicellata* | |
| Butterflyweed; Butterfly milkweed | *Asclepias tuberosa* | |
| Bigflower pawpaw | *Asimina obovata* | |
| Smallflower pawpaw | *Asimina parviflora* | |
| Netted pawpaw | *Asimina reticulata* | |
| Whitetop aster; Dixie aster | *Aster tortifolius* | |
| Whitetop aster; Pinebarren aster | *Aster reticulatus* | |
| Groundsel tree; Sea myrtle | *Baccharis halimifolia* | |
| Coastalplain honeycombhead | *Balduina angustifolia* | |
| Pineland wild indigo | *Baptisia lecontii* | |
| Tarflower | *Bejaria racemosa* | |
| Beggarticks; Romerillo | *Bidens alba* | |
| Florida bonamia | *Bonamia grandiflora* | SC |
| American beautyberry | *Callicarpa americana* | |
| Coastalplain chaffhead; Florida paintbrush | *Carphephorus corymbosus* | |
| Vanillaleaf; Deer's Tongue | *Carphephorus odoratissimus var. odoratissimus* | |
| Pignut hickory | *Carya glabra* | |
| Scrub hickory | *Carya floridana* | |
| Sugarberry; Hackberry | *Celtis laevigata* | |
| Madagascar periwinkle | *Catharanthus roseus** | |

* Non-Native Species

**Allen David Broussard Catfish Creek Preserve State Park Plants**

| Common Name | *Scientific Name* | Primary Habitat (for designated species) |
|---|---|---|
| Common buttonbush | *Cephalanthus occidentalis* | |
| Florida rosemary;Sand heath | *Ceratiola ericoides* | |
| Alicia | *Chapmannia floridana* | |
| Old-man's beard | *Chionathus virginicus* | |
| Pigmy fringetree | *Chionathus pygmaeus* | SC |
| Scrubland goldenaster | *Chrysopsis subulata* | |
| Camphortree | *Cinnamomum camphora** | |
| Yellow thistle | *Cirsium horridulum* | |
| Sour orange; Sweet orange | *Citrus x aurantium** | |
| Citron | *Citrus medica** | |
| Sweetscented pigeonwings | *Clitoria fragrans* | SC |
| Tread-softly | *Cnidoscolus stimulosus* | |
| Dwarf Canadian horseweed | *Conyza canadensis var. pusilla* | |
| Swamp dogwood; Stiff dogwood | *Cornus foemina* | |
| Yellowleaf hawthorn | *Crataegus flava* | |
| Smooth rattlebox | *Crotolaria pallida** | |
| Rabbitbells | *Crotalaria rotundifolia* | |
| Silver croton; Healing croton | *Croton argyranthemus* | |
| Feay's prairieclover | *Dalea feayi* | |
| Summer farewell | *Dalea pinnata var. pinnata* | |
| Ticktrefoil; Zarzabacoa comun | *Desmodium incanum** | |
| Dixie ticktrefoil | *Desmodium tortuosum** | |
| Threeflower ticktrefoil | *Desmodium triflorum** | |
| Poor joe; Rough buttonweed | *Diodia teres* | |
| Common persimmon | *Diospyros virginiana* | |
| Pink sundew | *Drosera capillaris* | |
| Tall elephantsfoot | *Elephantopus elatus* | |
| Fragrent eryngo | *Eryngium aromaticum* | |
| Coral bean;Cheerokee bean | *Erythrina herbacea* | |
| Roundleaf thoroughwort; Dogfennel | *Eupatorium capillifolium* | |
| Mohr's thoroughwort | *Eupatorium mohrii* | |
| False horehound | *Eupatorium rotundifolium* | |
| Lesser Florida spurge | *Euphorbia polyphylla* | |
| Slender goldenrod | *Euthamia caroliniana* | |
| Cottonweed;Plains snakecotton | *Froelichia floridana* | |
| Elliott's milkpea | *Galactia elliottii* | |
| Downy milkpea | *Galactia volubilis* | |
| Garberia | *Garberia heterophylla* | SC,SH |
| Dwarf huckleberry | *Gaylussacia dumosa* | |
| Yellow jessamine; Carolina Jessamine | *Gelsemium sempervirens* | |
| Loblolly bay | *Gordonia lasianthus* | |
| Rough hedgehyssop | *Gratiola hispida* | |

* Non-Native Species

| Common Name | *Scientific Name* | Primary Habitat (for designated species) |
|---|---|---|
| Florida scrub frostweed | *Helianthemum nashii* | |
| Pinebarren frostweed | *Helianthemum corymbosum* | |
| Manyflower marshpennywort | *Hydrocotyle umbellata* | |
| Skyflower | *Hydrolea corymbosa* | |
| Sandweed; Peelbark St. John's-wort | *Hypericum fasciculatum* | |
| St. Andrew's-cross | *Hypericum hypericoides* | |
| Myrtleleaf St. John's-wort | *Hypericum myrtifolium* | |
| Atlantic St. John's-wort | *Hypericum reductum* | |
| Fourpetal St. John's-wort | *Hypericum tetrapetalum* | |
| John Charles | *Hyptis verticillata** | |
| Carolina holly;Sand holly | *Ilex ambigua var. ambigua* | |
| Scrub holly | *Ilex opaca var. arenicola* | SC |
| Dahoon holly | *Ilex cassine var. cassine* | |
| Inkberry; Gallberry | *Ilex glabra* | |
| Carolina indigo | *Indigofera caroliniana* | |
| Hairy indigo | *Indigofera hirsuta** | |
| Tievine | *Ipomoea cordatotriloba* | |
| Juba's bush | *Iresine diffusa* | |
| Virginia willow; Virginia sweetspire | *Itea virginica* | |
| Life plant | *Kalanchoe pinnata** | |
| Sandspur; Ratany | *Krameria lanceolata* | |
| Nodding pinweed | *Lechea cernua* | SC,SH |
| Dickert's pinweed | *Lechea deckertii* | |
| Pineland pinweed | *Lechea sessifolia* | |
| Piedmont pinweed | *Lechea torreyi* | |
| Virginia pepperweed | *Lepidium virginicum* | |
| Shortleaf gayfeather | *Liatris tenuifolia* | |
| Florida gayfeather | *Liatris ohlingerae* | SC |
| Gopher apple | *Licania michauxii* | |
| Canada toadflax | *Linaria canadensis* | |
| Apalachicola toadflax | *Linaria floridana* | |
| Sweetgum | *Liquidambar styraciflua* | |
| Peruvian primrosewillow | *Ludwigia peruviana** | |
| Skyblue lupine | *Lupinus diffusus* | |
| Taperleaf waterhorehound | *Lycopus rubellus* | |
| Rose-rush | *Lygodesmia aphylla* | |
| Rusty staggerbush | *Lyonia ferruginea* | |
| Coastalplain staggerbush | *Lyonia fruticosa* | |
| Fetterbush | *Lyonia lucida* | |
| Maleberry | *Lyonia ligustrina var. foliosiflora* | |
| Sweetbay | *Magnolia virginiana* | |
| Florida keys hempvine | *Mikania cordifolia* | |
| Climbing hempvine | *Mikania scandens* | |
| Sensitive brier | *Mimosa quadrivalvis var.angustata* | |

* Non-Native Species

| Common Name | *Scientific Name* | Primary Habitat (for designated species) |
|---|---|---|
| Florida sensitive brier | *Mimosa quadrivalvis var. floridana* | |
| Southern balsampear | *Momordica balsamina** | |
| Wax myrtle | *Myrica cerifera* | |
| Spatterdock;Yellow pondlily | *Nuphar advena ssp. orbiculata* | |
| American white waterlily | *Nymphaea odorata* | |
| Swamp tupelo | *Nyssa sylvatica var. biflora* | |
| Flattop mille graines | *Oldenlandia corymbosa** | |
| Clustered mille graine | *Oldenlandia uniflora* | |
| Pricklypear | *Opuntia humifusa* | |
| Scrub wild olive | *Osmanthus megacarpus* | |
| Common yellow woodsorrel; Creeping woodsorrel | *Oxalis corniculata* | |
| Coastalplain palafox | *Palafoxia integrifolia* | |
| Feay's palafox | *Palafoxia feayi* | |
| Papery whitlow-wort | *Paronychia chartacea* | SC |
| Coastalplain nailwort | *Paronychia herniariodes* | |
| Virginia creeper | *Parthenocissus quinquefolia* | |
| Purple passionflower | *Passiflora incarnata* | |
| Red bay | *Persea borbonia var. borbonia* | |
| Silk bay, scrub bay | *Persea borbonia var. humilis* | SC |
| Swamp bay | *Persea palustris* | |
| Florida false sunflower | *Phoebanthus grandiflorus* | |
| Oak mistletoe | *Phoradendron leucarpum* | |
| American pokeweed | *Phytolacca americana* | |
| Wild pennyroyal | *Piloblephis rigida* | |
| Pitted stripeseed | *Piriqueta cistoides subsp. caroliniana* | |
| Narrowleaf silkgrass | *Pityopsis graminifolia* | |
| Stinking camphorweed | *Pluchea foetida* | |
| Sweetscent | *Pluchea odorata* | |
| Paintedleaf | *Poinsettia cyathophora* | |
| Baldwin's milkwort | *Polygala balduinii* | |
| Tall pinebarren milkwort | *Polygala cymosa* | |
| Lewton's milkwort | Polygala lewtonii | SC,SH |
| Orange milkwort | *Polygala lutea* | |
| Candyroot | *Polygala nana* | |
| Yellow milkwort | *Polygala rugelii* | |
| Florida jointweed | *Polygonella basiramia* | SC,SH |
| Hairy jointweed | *Polygonella ciliata* | |
| Small's jointweed; Woody wireweed | *Polygonella myriophylla* | SC,SH |
| October flower | *Polygonella polygama var. polygama* | |
| Sandhill wireweed | *Polygonella robusta* | |
| Rustweed | *Polypremum procumbens* | |
| Pink purslane; Kiss-me-quick | *Portulaca pilosa* | |
| Chickasaw plum | *Prunus angustifolia* | |
| Scrub plum | *Prunus geniculata* | SC |

* Non-Native Species

**Allen David Broussard Catfish Creek Preserve State Park Plants**

| Common Name | *Scientific Name* | Primary Habitat (for designated species) |
|---|---|---|
| Black cherry | *Prunus serotina var. serotina* | |
| Sweet everlasting; Rabbit tobacco | *Pseudognaphalium obtusifolium* | |
| Shortleaf wild coffee | *Psychotria sulzneri* | |
| Blackroot | *Pterocaulon pycnostachyum* | |
| Flame vine | *Pyrostegia venusta** | |
| Chapman's oak | *Quercus chapmanii* | |
| Running oak | *Quercus elliottii* | |
| Sand live oak | *Quercus geminata* | |
| Scrub oak | *Quercus inopina* | |
| Turkey oak | *Quercus laevis* | |
| Laurel oak; Diamond oak | *Quercus laurifolia* | |
| Dwarf live oak | *Quercus minima* | |
| Myrtle oak | *Quercus myrtifolia* | |
| Water oak | *Quercus nigra* | |
| Live oak | *Quercus virginiana* | |
| Pale meadowbeauty; Maryland meadowbeauty | *Rhexia mariana* | |
| Maid marian | *Rhexia nashii* | |
| Nuttall's meadowbeauty | *Rhexia nuttallii* | |
| Winged sumac | *Rhus copallinum* | |
| Brownhair snoutbean | *Rhynchosia cinerea* | SC,SH |
| Sand blackberry | *Rubus cunefolius* | |
| Carolina wild petunia | *Ruellia caroliniensis* | |
| Shortleaf rosegentian | *Sabatia brevifolia* | |
| Largeflower rosegentian | *Sabatia grandiflora* | |
| Carolina willow; Coastalplain willow | *Salix caroliniana* | |
| Tropical sage; Blood sage | *Salvia coccinea* | |
| American elder; Elderberry | *Sambucus nigra subsp. canadensis* | |
| Hooded pitcherplant | *Sarracenia minor* | WF |
| Lizard's tail | *Saururus cernuus* | |
| Brazilian pepper | *Schinus terebinthifolius** | |
| Sweetbroom; Licoriceweed | *Scoparia dulcis* | |
| Coffeeweed; Sicklepod | *Senna obtusifolia** | |
| Septicweed | *Senna occidentalis** | |
| Bladderpod; Bagpod | *Sesbania vesicaria* | |
| Piedmont blacksenna | *Seymeria pectinata* | |
| Common wireweed | *Sida acuta* | |
| Llima | *Sida cordifolia** | |
| Tough bully | *Sideroxylon tenax* | |
| Soda apple; Cockroachberry | *Solanum capsicoides* | |
| Pinebarren goldenrod | *Solidago fistulosa* | |
| Chapman's goldenrod | *Solidago odora var. chapmanii* | |
| Seaside goldenrod | *Solidago sempervirens* | |
| Pineland scalypink | *Stipulicida setacea vaar. lacerata* | |

* Non-Native Species

**Allen David Broussard Catfish Creek Preserve State Park Plants**

| Common Name | *Scientific Name* | Primary Habitat (for designated species) |
|---|---|---|
| Showy dawnflower | *Stylisma abdita* | SC |
| Hairy dawnflower | *Stylisma villosa* | |
| Climbing aster | *Symphyotrichum carolinianum* | |
| Scurf hoarypea | *Tephrosia chrysophylla* | |
| Florida hoarypea | *Tephrosia florida* | |
| Goat's rue | *Tephrosia virginiana* | |
| Poison ivy | *Toxicodendron radicans* | |
| Greater marsh St. Johnswort | *Triadenum walteri* | |
| Forked bluecurls | *Trichostema dichotomum* | |
| American elm | *Ulmus americana* | |
| Caesarweed | *Urena lobata** | |
| Eastern purple bladderwort | *Utricularia purpurea* | |
| Highbush blueberry | *Vaccinium corymbosum* | |
| Darrow's blueberry | *Vaccinium darrowii* | |
| Shiny blueberry | *Vaccinium myrsinites* | |
| Deerberry | *Vaccinium stamineum* | |
| Brazilian vervain | *Verbena brasiliensis** | |
| White crownbeard; Frostweed | *Verbesina virginica* | |
| Muscadine grape | *Vitis rotundifolia* | |
| Hog-plum; tallowwood | *Ximenia Americana* | |
| Wild-lime | *Zanthoxylum fagara* | |

* Non-Native Species

| Common Name | *Scientific Name* | Primary Habitat (for all species) |
|---|---|---|

**DRAGONFLIES AND DAMSELFLIES**

| | | |
|---|---|---|
| Variable dancer | *Argia fumipennis* | SC |
| Amanda's pennant | *Celithemis Amanda* | SC |

**GRASSHOPPERS, CRICKETS AND KATYDIDS**

| | | |
|---|---|---|
| Pygmy mole cricket | *Ellipes eisneri* | SC |
| Pygmy mole cricket | *Neotridactylus archbodi* | SC |
| Eastern lubber grasshopper | *Romalea microptera* | MTC |

**STICK INSECTS**

| | | |
|---|---|---|
| Two-striped walkingstick | *Anisomorpha buprestoides* | MTC |

**BEETLES**

| | | |
|---|---|---|
| Delon's aneflomorpha | *Aneflomorpha delongi* | SC |
| Un-named beetle | *Chelyoxenus xerobatis* | SC |
| Highland's tiger beetle | *Cicindela highlandensis* | SC,SH |
| Pleasing fungus beetle | *Ischyrus dunedinensis* | SC |
| Scarab beetle | *Leiopsammodius deyrupi* | SC |
| Firefly | *Lucidota leteicollis* | WF |
| Borer beetle | *Neoclytus cordifer* | SC,SH |
| Dung beetle | *Onthophagus aciculatulus* | SC,SH |
| Dung beetle | *Onthophagus polyphemi* | SC,SH |
| Click beetle | *Selonodon archboldi* | SC,SH |
| Scrub palmetto beetle | *Trigonopeltastes floridana* | SC |

**FLIES**

| | | |
|---|---|---|
| Long-legged fly | *Asyndetus archboldi* | SC |
| Midge | *Culicoides floridensis* | MTC |
| Midge | *Culicoideshinmani* | MTC |
| Midge | *Culicoides insignis* | MTC |
| Bee fly | *Hemipenthes bigradata* | SC |

**BUTTERFLIES AND MOTHS**

Butterflies and skippers

| | | |
|---|---|---|
| White peacock | *Anartia jatrophae guantanamo* | MTC |
| Red-banded hairstreak | *Calycopis cecrops* | MTC |
| Zarucco Duskywing | *Erynnis zarucco* | MTC |
| Little yellow | *Eurema lisa* | MTC |

* Non-Native Species

| Common Name | *Scientific Name* | Primary Habitat (for all species) |
|---|---|---|
| Zebra swallowtail | *Eurytides marcellus floridensis* | MTC |
| Zebra heliconian | *Heliconius charitonius* | MTC |
| Ceraunus blue | *Hemiargus ceraunus* | MTC |
| Eastern tiger swallowtail | *Papilio glaucus australis* | MTC |
| Palamedes swallowtail | *Papilio palamedes* | MTC |
| White M hairstreak | *Parrhasius m-album m-album* | MTC |
| Cloudless sulphur butterfly | *Phoebis sennae eubule* | MTC |
| Whirlabout | *Polites vibex* | MTC |
| Buckeye butterfly | *Precis coenia* | MTC |
| Gray hairstreak | *Strymon melinus melinus* | MTC |
| Northern cloudywing | *Thorybes pylades* | MTC |
| Painted lady | *Vanessa cardui* | MTC |
| **ANTS, BEES AND WASPS** | | |
| Velvet ant | Da*symutilla archboldi* | SC |
| Ant | *Dorymyrmex elegans* | SC |
| Wasp | *Leptochilus krombeini* | SC,SH |
| Ant | *Odontomachus relictus* | SC |
| Velvet ant | *Photomorphus archboldi* | SC,SCF |
| **SPIDERS** | | |
| Burrowing wolf spider | *Geolycosa hubbelli* | SH,SC |
| Burrowing wolf spider | *Geolycosa xera archboldi* | SH,SC |
| **BONY FISHES** | | |
| Brown bullhead | *Ameiurus nebulosus* | BST |
| Grass carp | *Ctenopharyngodon idella** | BST |
| Everglades pygmy sunfish | *Elassoma evergladei* | DM |
| Golden topminnow | *Fundulus chrysotus* | DM |
| Mosquitofish | *Gambusia holbrooki* | DM,MLK,BST |
| Least killifish | *Heterandria Formosa* | DM,MLK,BST |
| Channel catfish | *Ictalurus punctatus* | BST |
| Bluegill | *Lepomis macrochirus* | DM,MLK,BST |
| Redear sunfish | *Lepomis microlophus* | MLK,BST |
| Florida gar | *Lepisosteus platyrhincus* | BST |
| Largemouth bass | *Micropterus salmoides* | MLK,BST |
| Golden shiner | *Notemigonus crysoleucas* | BST |
| **AMPHIBIANS** | | |
| **Frogs and Toads** | | |
| Florida cricket frog | *Acris gryllus dorsalis* | BST |
| Oak toad | *Bufo quercicus* | SCF |

* Non-Native Species

| Common Name | *Scientific Name* | Primary Habitat (for all species) |
|---|---|---|
| Southern toad | *Bufo terrestris* | MF,SCF |
| Greenhouse frog | *Eleutherodactylus planirostris** | MTC |
| Green treefrog | *Hyla cinerea* | MTC |
| Pine woods treefrog | *Hyla femoralis* | MTC |
| Barking treefrog | *Hyla gratiosa* | MTC |
| Cuban tree frog | *Osteopilus septentrionalis* | DV |
| Florida chorus frog | *Pseudacris nigrita verrucosa* | DM,DS |
| Little grass frog | *Pseudacris ocularis* | DM,DS |
| Florida gopher frog | *Rana capito aesopus* | DM,SC,SCF |
| Bullfrog | *Rana catesbeiana* | MTC |
| Pig frog | *Rana grylio* | MTC |
| Florida leopard frog | *Rana sphenocephala sphenocephala* | MTC |
| **REPTILES** | | |
| **Crocodilians** | | |
| American alligator | *Alligator mississippiensis* | MTC |
| **Turtles and tortoises** | | |
| Gopher tortoise | *Gopherus polyphemus* | SC,SCF,SH,MF |
| Florida mud turtle | *Kinosternon subrubrum steindachneri* | DM |
| Peninsula cooter | *Pseudemys floridana peninsularis* | BST |
| Florida red-bellied turtle | *Pseudemys nelsoni* | BST |
| Florida box turtle | *Terrapene carolina bauri* | MF,MEH |
| Florida softshell turtle | *Trionyx ferox* | BST |
| **Lizards** | | |
| Green anole | *Anolis carolinensis* | MTC |
| Brown anole | *Anolis sagrei** | MTC |
| Six-lined racerunner | *Cnemidophorus sexlineatus sexlineatus* | SC,SC,SCF |
| Bluetail mole skink | *Eumeces egregius lividus* | SC,SCF |
| Southeastern five-lined skink | *Eumeces inexpectatus* | MEH,SCF |
| Sand Skink | Neoseps reynoldsi | SC,SH |
| Florida scrub lizard | Sceloporus woodi | SC |
| Ground skink | *Scincella lateralis* | MEH,MF |
| **Snakes** | | |
| Florida cottonmouth | *Agkistrodon piscivorus conanti* | BG,FS |
| Southern black racer | *Coluber constrictor priapus* | MTC |
| Eastern diamondback Rattlesnake | *Crotalus adamanteus* | MTC |
| Eastern indigo snake | *Drymarchon corais couperi* | SCF |
| Corn snake | *Elaphe guttata guttata* | MTC |
| Yellow rat snake | *Elaphe obsoleta quadrivittata* | MTC |
| Eastern hognose snake | *Heterodon platyrhinos* | SC,SCF,SH |
| Eastern coachwhip | *Masticophis flagellum flagellum* | SC,SCF,SH |

* Non-Native Species

| Common Name | *Scientific Name* | Primary Habitat (for all species) |
|---|---|---|
| Eastern coral snake | *Micrurus fulvius fulvius* | MTC |
| Rough green snake | *Opheodrys aestivus* | SC,SCF |
| Florida pine snake | *Pituophis melanoleucus mugitus* | SC,SCF,SH |

## BIRDS

### Ducks

| | | |
|---|---|---|
| Wood duck | *Aix sponsa* | FS,BST |
| Blue-winged teal | *Anas discors* | MLK,SULK |
| Mottled duck | *Anas fulvigula* | MLK,SULK |
| Mallard | *Anas platyrhynchos* | MLK,SULK |
| Lesser scaup | *Aythya affinis* | MLK,SULK |
| Hooded merganser | *Lophodytes cucullatus* | MLK,SULK |

### Grebes

| | | |
|---|---|---|
| Pied-billed grebe | *Podilymbus podiceps* | DM,MLK |

### Cormorants

| | | |
|---|---|---|
| Double-crested cormorant | *Phalacrocorax auritus* | BST |

### Darters

| | | |
|---|---|---|
| Anhinga | *Anhinga anhinga* | BST |

### Bitterns and Herons

| | | |
|---|---|---|
| Great egret | *Ardea alba* | FM,DM,BST |
| Great blue heron | *Ardea herodias herodias* | FM,DM,BST |
| American bittern | *Botaurus lentiginosus* | DM,FM |
| Cattle egret | *Bubulcus ibis* | DM,FM,ABP,PI |
| Green heron | *Butorides virescens* | DM,FS,FM |
| Little blue heron | *Egretta caerulea* | DM,FM |
| Snowy egret | *Egretta thula* | DM,FM |
| Tricolored heron | *Egretta tricolor* | DM,FM |
| Black-crowned night-heron | *Nycticorax nycticorax* | BST,FM,FS |

### Ibises and Spoonbills

| | | |
|---|---|---|
| White ibis | *Eudocimus albus* | ABF,FM,PI |
| Glossy ibis | *Plegadis falcinellus* | ABF,FM,PI |

### Storks

| | | |
|---|---|---|
| Wood stork | *Mycteria americana* | BST,FM,PI |

### Vultures

| | | |
|---|---|---|
| Turkey vulture | *Cathartes aura* | OF |
| Black vulture | *Coragyps atratus* | OF |

### Ospreys

| | | |
|---|---|---|
| Osprey | *Pandion haliaetus* | FS,FM,OF |

* Non-Native Species

| Common Name | *Scientific Name* | Primary Habitat (for all species) |
|---|---|---|
| **Hawks, Eagles and Kites** | | |
| Cooper's hawk | *Accipiter cooperii* | MEH,SCF,SH,WF |
| Sharp-shinned hawk | *Accipiter striatus* | MEH,SCF,SH,WF |
| Short-tailed hawk | *Buteo brachyurus* | FS |
| Red-tailed hawk | *Buteo jamaicensis* | SCF,MF,WF |
| Red-shouldered hawk | *Buteo lineatus* | MEH,MF,SCF,WF |
| Broad-winged hawk | *Buteo platypterus* | SCF,MF |
| Northern harrier | *Circus cyaneus* | DM,ABF |
| Swallow-tailed kite | *Elanoides forficatus* | BST,FS,WF |
| Bald eagle | *Haliaeetus leucocephalus* | FM,MF,WF |
| Snail kite | *Rostrhamus sociabilis plumbeus* | FS,FM,BST |
| **Falcons** | | |
| Crested caracara | *Polyborus plancus audubonii* | ABP,FM,PI |
| Merlin | *Falco columbarius* | PI,ABP |
| American kestrel | *Falco sparverius* | ABP,PI,SCF,SH |
| Southeastern American kestrel | *Falco sparverius paulus* | ABP,PI,SCF,SH |
| **Turkey and Quail** | | |
| Northern bobwhite | *Colinus virginianus* | SCF,MF,WF |
| Wild turkey | *Meleagris gallopavo* | MF,MEH,WF |
| **Rails and Coots** | | |
| American coot | *Fulica americana* | BST |
| Common moorhen | *Gallinula chloropus* | BST |
| **Limpkin** | | |
| Limpkin | *Aramus guarauna* | BST,FS,FM |
| **Cranes** | | |
| Whooping crane | *Grus americana* | ABP,DM, PI |
| Sandhill crane | *Grus canadensis* | DM,FM |
| **Plovers** | | |
| Killdeer | *Charadrius vociferus* | ABP,FM,PI |
| **Snipes and Sandpipers** | | |
| Least sandpiper | *Calidris minutilla* | DM,FM |
| Wilson's snipe | *Gallinago delicata* | DM,FM |
| Lesser yellowlegs | *Tringa flavipes* | DM,FM |
| Greater yellowlegs | *Tringa melanoleuca* | DM,FM |
| Solitary sandpiper | *Tringa solitaria* | DM,FM |
| **Doves** | | |
| Common ground-dove | *Columbina passerina* | SCF,WF,MEH |

* Non-Native Species

| Common Name | *Scientific Name* | Primary Habitat (for all species) |
|---|---|---|
| Mourning dove | *Zenaida macroura* | MF,SCF,WF |
| **Owls** | | |
| Burrowing owl | Athene cunicularia | ABF,ABP |
| Great horned owl | *Bubo virginianus* | SH,FS,WF |
| Eastern screech-owl | *Megascops asio* | SC,SCF,SH,WF |
| Barred owl | *Strix varia* | MEH,FS,WF |
| **Goatsuckers** | | |
| Chuck-will's-widow | *Caprimulgus carolinensis* | MEH,MF,WF |
| Common nighthawk | *Chordeiles minor* | SCF,MF,WF |
| **Swifts** | | |
| Chimney swift | *Chaetura pelagica* | SC,SH,MF,WF |
| **Kingfishers** | | |
| Belted kingfisher | *Megaceryle alcyon* | DM,FM,FS |
| **Woodpeckers** | | |
| Northern flicker | *Colaptes auratus* | SCF,MF,WF |
| Pileated woodpecker | *Dryocopus pileatus* | BG,FS,MF,WF |
| Red-bellied woodpecker | *Melanerpes carolinus* | FS,MF,SCF, |
| Red-headed woodpecker | *Melanerpes erythrocephalus* | SC,SCF,MF |
| Downy woodpecker | *Picoides pubescens* | FS,MEH,MF,SCF,SH |
| Hairy woodpecker | *Picoides villosus* | FS,MF,SCF,SH |
| Yellow-bellied sapsucker | *Sphyrapicus varius* | FS,MF,SCF,SH |
| **Flycatchers and Kingbirds** | | |
| Eastern wood-pewee | *Contopus virens* | MF,SH,WF |
| Yellow-bellied flycatcher | *Empidonax flaviventris* | FS,MEH |
| Acadian flycatcher | *Empidonax virescens* | FS,MEH |
| Great-crested flycatcher | *Myiarchus crinitus* | MEH,MF,SH,WF |
| Eastern phoebe | *Sayornis phoebe* | ABP,MEH,SH |
| Eastern kingbird | *Tyrannus tyrannus* | PI,ABP |
| **Shrikes** | | |
| Loggerhead shrike | *Lanius ludovicianus* | PI,ABP,SC |
| **Vireos** | | |
| Yellow-throated vireo | *Vireo flavifrons* | BG,FS |
| White-eyed vireo | *Vireo griseus* | MTC |
| Red-eyed vireo | *Vireo olivaceus* | BG,FS,WF |
| Blue-headed vireo | *Vireo solitarius* | BG,FS,SH,WF |
| **Jays and Crows** | | |
| Florida scrub-jay | *Aphelocoma coerulescens* | SC,SH |

* Non-Native Species

| Common Name | *Scientific Name* | Primary Habitat (for all species) |
|---|---|---|
| American crow | *Corvus brachyrhynchos* | MTC |
| Fish crow | *Corvus ossifragus* | FS,FM |
| Blue jay | *Cyanocitta cristata* | MEH,MF,SCF,WF |
| **Swallows and Martins** | | |
| Barn swallow | *Hirundo rustica* | DM,FM,ABP |
| Purple martin | *Progne subis* | DM,ABP |
| Tree swallow | *Tachycineta bicolor* | DM,FM,PI,ABP |
| **Titmice** | | |
| Tufted titmouse | *Parus bicolor* | MH,SCF |
| **Wrens** | | |
| Sedge wren | *Cistothorus platensis* | DM,FM |
| Carolina wren | *Thryothorus ludovicianus* | MTC |
| House wren | *Troglodytes aedon* | MEH,WF |
| **Kinglets** | | |
| Ruby-crowned kinglet | *Regulus calendula* | FS,SH,MEH,WF |
| **Gnatcatchers** | | |
| Blue-gray gnatcatcher | *Polioptila caerulea* | FS,MEH,WF |
| **Thrushes** | | |
| Veery | *Catharus fuscescens* | SCF,SH |
| Hermit thrush | *Catharus guttatus* | FS,WF |
| Eastern bluebird | *Sialia sialis* | MF,SCF |
| American robin | *Turdus migratorius* | MTC |
| **Thrashers** | | |
| Gray catbird | *Dumetella carolinensis* | FS,SCF,WF |
| Northern mockingbird | *Mimus polyglottos* | MTC |
| Brown thrasher | *Toxostoma rufum* | SCF,SH,WF |

* Non-Native Species

| Common Name | *Scientific Name* | Primary Habitat (for all species) |
|---|---|---|
| **Starlings** | | |
| European starling | *Sturnus vulgaris** | ABP,PI |
| **Warblers** | | |
| Black-throated blue warbler | *Dendroica caerulescens* | FS,SC,SCF,WF |
| Yellow-rumped warbler | *Dendroica coronata* | FS,MEH,WF |
| Prairie warbler | *Dendroica discolor* | FS,MEH,WF |
| Yellow-throated warbler | *Dendroica dominica* | WF |
| Blackburnian warbler | *Dendroica fusca* | MEH,SCF |
| Palm warbler | *Dendroica palmarum* | FS,MF,MEH,WF |
| Pine warbler | *Dendroica pinus* | FS,MF,WF, |
| Blackpoll warbler | *Dendroica striata* | SCF |
| Cape may warbler | *Dendroica tigrina* | WF |
| Black-throated green warbler | *Dendroica virens* | FS,MEH,WF |
| Common yellowthroat | *Geothlypis trichas* | DM,FM,WF,FS |
| Black-and-white warbler | *Mniotilta varia* | FS,WF |
| Northern parula | *Parula americana* | FS,WF |
| Prothonotary warbler | *Protonotaria citrea* | FS |
| Ovenbird | *Seiurus aurocapilla* | FS,MEH,WF |
| American Redstart | *Setophaga ruticilla* | FS,SC,SH,WF |
| Orange-crowned warbler | *Vermivora celata* | MEH |
| Hooded warbler | *Wilsonia citrina* | FS,WF |
| **Sparrows** | | |
| Bachman's sparrow | *Aimophila aestivalis* | MF,SCF |
| Swamp sparrow | *Melospiza georgiana* | DM,FM |
| Savannah sparrow | *Passerculus sandwichensis* | DM,ABP |
| Eastern towhee | *Pipilo erythrophthalmus* | SC,SCF |
| Chipping sparrow | *Spizella passerina* | ABP,DM |
| **Cardinals, Tanagers, Grosbeaks, and Buntings** | | |
| Northern cardinal | *Cardinalis cardinalis* | MTC |
| Summer tanager | *Piranga rubra* | MF,SH,WF |
| **Meadowlarks, Blackbirds and Orioles** | | |
| Red-winged blackbird | *Agelaius phoeniceus* | DM,FM |
| Baltimore oriole | *Icterus galbula* | MEH,WF |
| Boat-tailed grackle | *Quiscalus major* | ABP,DM,FM |
| Common grackle | *Quiscalus quiscula* | MTC |
| Eastern meadowlark | *Sturnella magna* | ABP,FM,PI, |
| **Finches** | | |
| American goldfinch | *Spinus tristis* | SH,WF |

* Non-Native Species

| Common Name | *Scientific Name* | Primary Habitat (for all species) |
|---|---|---|

## MAMMALS

### Didelphids

| | | |
|---|---|---|
| Virginia opossum | *Didelphis virginiana* | MTC |

### Bats

| | | |
|---|---|---|
| Unidentified bat species | | OF |

### Edentates

| | | |
|---|---|---|
| Nine-banded armadillo | *Dasypus novemcinctus** | MTC |

### Lagomorphs

| | | |
|---|---|---|
| Eastern cottontail | *Sylvilagus floridanus* | MTC |
| Marsh rabbit | *Sylvilagus palustris* | MTC |

### Rodents

| | | |
|---|---|---|
| Southeastern pocket gopher | *Geomys pinetis* | SCF |
| Southern flying squirrel | *Glaucomys volans* | MTC |
| Cotton mouse | *Peromyscus gossypinus* | MTC |
| Florida mouse | *Podomys floridanus* | SCF |
| Eastern gray squirrel | *Sciurus carolinensis* | MTC |
| Sherman's fox squirrel | *Sciurus niger shermani* | MF,WF |
| Hispid cotton rat | *Sigmodon hispidus* | MTC |

### Carnivores

| | | |
|---|---|---|
| Coyote | *Canis latrans** | MTC |
| Feral cat | *Felis catus** | MTC |
| Bobcat | *Felis rufus* | MTC |
| River otter | *Lutra canadensis* | MTC |
| Raccoon | *Procyon lotor* | MTC |
| Florida panther | *Puma* [=Felis] *concolor coryi* | MTC |
| Gray fox | *Urocyon cinereoargenteus* | MTC |
| Florida black bear | *Ursus americanus floridanus* | MTC |

### Artiodactyls

| | | |
|---|---|---|
| White-tailed deer | *Odocoileus virginianus* | MTC |
| Wild Pig | *Sus scrofa** | MTC |

* Non-Native Species

## Allen David Broussard Catfish Creek Preserve State Park Animals

| Common Name | *Scientific Name* | Primary Habitat (for all species) |
|---|---|---|

* Non-Native Species

# Addendum 6—Imperiled Species Ranking Definitions

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

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

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

## FNAI GLOBAL RANK DEFINITIONS

G1 ..... Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or fabricated factor.

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

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

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

G5 ..... demonstrably secure globally

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

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

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

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

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

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

G#Q..... rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q)
G#T#Q..... same as above, but validity as subspecies or variety is questioned.
GU ..... due to lack of information, no rank or range can be assigned (e.g., GUT2).
G?..... Not yet ranked (temporary)
S1..... Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
S2..... Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
S3..... Either very rare or local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.
S4..... apparently secure in Florida (may be rare in parts of range)
S5..... demonstrably secure in Florida
SH ..... of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
SX..... believed to be extinct throughout range
SA..... accidental in Florida, i.e., not part of the established biota
SE..... an exotic species established in Florida may be native elsewhere in North America
SN ..... regularly occurring but widely and unreliably distributed; sites for conservation hard to determine
SU ..... due to lack of information, no rank or range can be assigned (e.g., SUT2).
S?..... Not yet ranked (temporary)
N ..... Not currently listed, nor currently being considered for listing, by state or federal agencies.

## LEGAL STATUS

### FEDERAL

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

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

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

## STATE

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

FE ..... Federally-designated Endangered

FT ..... Federally-designated Threatened

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

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

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

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

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

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

# Addendum 7—Cultural Information

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

## A. General Discussion

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

## B. Agency Responsibilities

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

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

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

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

## C. Statutory Authority

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

## D. Management Implementation

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

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

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

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

## E. Minimum Review Documentation Requirements

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

* * *

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

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

Phone: (850) 245-6425

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

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

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

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

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

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

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

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

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

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

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

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

# Addendum 8 —Land Management Review

Memorandum

Florida Department of
# Environmental Protection

May 11, 2012

TO: Marianne Gengenbach, Program Administrator
Division of State Lands

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

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

SUBJECT: Response to Draft Land Management Review (LMR)
Allen David Broussard Catfish Creek Preserve State Park

The Land Management Review draft report provided to DRP determined that management of Allen David Broussard Catfish Creek Preserve 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 park staff explore opportunities to increase imperiled species monitoring, such as using interns or obtaining grant funding. (VOTE: 6+, 0-)**
*Managing Agency Response: Agree; DRP will continue to pursue alternate funding sources and partnerships to conduct additional monitoring of imperiled species.*

**The team recommends that DRP continue to focus on pressing the SFWMD project engineers on strategies to achieve desired restoration of floodplain marsh and Catfish Creek. (VOTE: 6+, 0-)**
*Managing Agency Response: Agree; DRP is working hand and hand with SFWMD to design, permit, and fund restoration of the floodplain marsh at the park. This is a cooperative effort that will require both agencies to work together toward the common goal.*

**The team is encouraged by park staff efforts to identify and fence boundaries and install firelines in the Money Tree parcel, and recommends that park staff continue to prioritize their efforts to initiate burning in the flatwoods on this site. (VOTE: 6+, 0-)**
*Managing Agency Response: Agree; Care will need to be used when installing these fire lines within the Money Tree parcel. Many of the areas where a fire line is needed are in areas where the protected species cutthroat grass exists. DRP will work with partner agencies for fire line installation to ensure adequate protection of listed species.*

**The team recommends that park staff complete desired boundary fencing and provide improved opportunities for public access in an area west of Fire Tower Rd. (VOTE: 6+, 0-)**
*Managing Agency Response: Agree; During the Unit Management Plan (UMP) development process, DRP will identify potential and future use areas for public access. Public access has been identified for this area and development will be based on available funding. Seeking funding for boundary fencing is ongoing and when funding is secured, fencing will be installed at high priority areas first.*

**The team recommends that park staff explore opportunities to work with FFA to provide public access to Lake Pierce, as opposed to development of permanent road access and launching facility on park property (the Lake Pierce Use Area). (VOTE: 6+, 0-)**
*Managing Agency Response: Disagree; The current management plan was approved by the Acquisition and Restoration Council in 2004 after an extensive public review process. The proposed Lake Pierce access facility identified in the plan is appropriate for the property and will be constructed as funding for that purpose becomes available. If FFA is interested in providing public access to Lake Pierce at their facility, DRP will work with them in every way possible to accomplish that.*

PLAN REVIEW

**Management of natural communities, specifically sandhill and mesic hammock, with documentation in the management plan.**
*Managing Agency Response: Agree; On pages 14 and 22 in the parks UMP, it describes the future desired condition for sandhill and specifics on how to manage this community. However, Mesic hammock is currently not included in the current UMP because the natural community type was not defined by FNAI at the time the UMP was developed. When the new UMP is developed, mesic hammock will be included along with specific management actions if it is found to exist at the park. The next UMP will contain more specific information about each natural community overall goals and objectives for each.*

**Listed species: protection & preservation, specifically skink, with documentation in the management plan.**
*Managing Agency Response: Agree; DRP will add more specific protection and preservation measures for sand skinks in the next UMP for the park.*

**Restoration of ruderal areas, specifically pastures/mesic flatwoods, with documentation in the management plan.**
*Managing Agency Response: Agree. A restoration plan for the Rolling Meadows section of Catfish Creek Preserve needs to be developed in order to define desired future conditions, priorities, methods, and costs. When the UMP was written in 2004, the state had not had the Rolling Meadows portion of the park for very long, the portion of the park containing a majority of the pastures that were historically mesic flatwoods. DRP has been working with the SFWMD to develop a restoration plan for portions of the Rolling Meadows property with focus given to the wetland systems.*

**Non-Native, invasive & problem species, specifically prevention and control of pest/pathogens, with documentation in the management plan.**
*Managing Agency Response: Agree; DRP will include this in the next UMP update.*

**Public access & education, specifically roads, with documentation in the management plan.**
*Managing Agency Response: Disagree; On pages 34-36 of the current UMP for the park outlines the locations for roads to be established and built for public access and education along with facilities needed for those access points. The current plan states that there is a potential for a*

*scenic drive in the Rolling Meadows tract along with picnic areas, trails, a campground, and associated facilities. The plan also shows potential areas for roads and use areas along Lake Pierce.*

FIELD REVIEW

**Increased natural communities, specifically mesic flatwoods, xeric hammock and floodplain marsh, with documentation in the management plan.**

*Managing Agency Response: Agree; During every re-write of the UMP for the park, the natural communities of the park are re-evaluated along with their extent and context. At that time, the above listed communities can be expanded or added to the natural communities map and then described in the plan.*

**Increased protection of listed species, specifically skinks, with documentation in the management plan.**

*Managing Agency Response: Agree; DRP will add more specific protection and preservation measures for sand skinks in the next UMP for the park.*

**Increased restoration of ruderal areas, specifically pastures/mesic flatwoods, with documentation in the management plan.**

*Managing Agency Response: Agree; A restoration plan for the rolling meadows section of Catfish Creek Preserve needs to be developed in order to define future desired conditions, priorities, methods, and costs. When the UMP was written in 2004, the state had not had the Rolling Meadows portion of the park for very long, the portion of the park containing a majority of the pastures that were historically mesic flatwoods. DRP has been working with the SFWMD to develop a restoration plan portions of the Rolling Meadows property with focus given to the wetland systems. Upland pasture restoration is a costly pursuit that takes time, man hours, and follow up to complete. Existing funding has been used to improve existing intact habitats via mechanical treatment, exotic removal, and prescribed fire and to keep all the current staffing and equipment going. DRP will continue to look at funding opportunities as they present themselves for upland groundcover restoration.*

**Hydrologic/Geologic function Hydro-Alteration, specifically hydro-period alteration and water level alteration, with documentation in the management plan.**

*Managing Agency Response: Agree; DRP has been working with the SFWMD for many years to develop a restoration plan for portions of the Rolling Meadows property with focus given to the wetland systems. Many areas of the park have been artificially drained and the hydroperiod severely altered by installing ditches, channelizing existing waterways, and redirecting flow. DRP has been working on the issue for several years, but there are many factors to consider and many partners to work with. There is a private lands surrounding the area that the Division can not impact by flooding or by reducing the amount of water to them. Long term funding needs to be secured before the on the ground restoration can begin. This discussion and process will be added to the next UMP in more detail.*

**The need for management resources maintenance and infrastructure, specifically buildings and funding, with documentation in the management plan.**

*Managing Agency Response: Agree; In Addendum #7 of the current UMP, it mentions some of the infrastructure and building needs for the park along with some cost estimates for each. The updated unit management plan will address additional funding needs. However, Division funding is determined annually by the Florida Legislature and funds are allocated to the 160 state parks according to priority needs.*

Thank you for your attention.

/gk

CC: Larry Fooks, Chief, Bureau of Parks District 3
Robert Yero, Assistant Chief, Bureau of Parks District 3
Andy Noland, Park Manager, Allen David Broussard Catfish Creek Preserve State Park
Jason Depue , Environmental Specialist, Bureau of Parks District 3