



# FLORIDA DEPARTMENT OF Environmental Protection

Marjory Stoneman Douglas Building  
3900 Commonwealth Boulevard  
Tallahassee, FL 32399

**Ron DeSantis**  
Governor

**Jeanette Nuñez**  
Lt. Governor

**Noah Valenstein**  
Secretary

October 21, 2019

Mr. Keith Rowell  
Florida Forest Service  
Department of Agriculture and Consumer Services  
3125 Conner Boulevard, Room 236  
Tallahassee, Florida 32399-1650

**RE: Ross Prairie State Forest – Lease No. 4158**

Dear Mr. Rowell:

On **October 18, 2019**, the Acquisition and Restoration Council (ARC) recommended approval of the **Ross Prairie State Forest** management plan. Therefore, Division of State Lands, Office of Environmental Services (OES), acting as agent for the Board of Trustees of the Internal Improvement Trust Fund, hereby approves the **Ross Prairie State Forest** management plan. The next management plan update is due October 18, 2029.

Pursuant to s. 253.034(5)(a), F.S., each management plan is required to describe both short-term and long-term management goals and include measurable objectives to achieve those goals. Short-term goals shall be achievable within a 2-year planning period, and long-term goals shall be achievable within a 10-year planning period. Upon completion of short-term goals, please submit a signed letter identifying categories, goals, and results with attached methodology to the Division of State Lands, Office of Environmental Services.

Pursuant to s. 259.032(8)(g), F.S., by July 1 of each year, each governmental agency and each private entity designated to manage lands shall report to the Secretary of Environmental Protection, via the Division of State Lands, on the progress of funding, staffing, and resource management of every project for which the agency or entity is responsible.

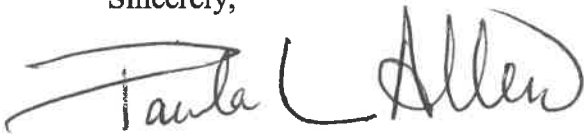
Pursuant to s. 259.036(2), F.S., management areas that exceed 1,000 acres in size, shall be scheduled for a land management review at least every 5 years.

Pursuant to s. 259.032, F.S., and Chapter 18-2.021, F.A.C., management plans for areas less than 160 acres may be handled in accordance with the negative response process. This process requires small management plans and management plan amendments be

submitted to the Division of State Lands for review, and the Acquisition and Restoration Council (ARC) for public notification. The Division of State Lands will approve these plans or plan amendments submitted for review through delegated authority unless three or more ARC members request the division place the item on a future council meeting agenda for review. To create better efficiency, improve customer service, and assist members of the ARC, the Division of State Lands will notice negative response items on Thursdays except for weeks that have State or Federal holidays that fall on Thursday or Friday. The Division of State Lands will contact you on the appropriate Friday to inform you if the item is approved via delegated authority or if it will be placed on a future ARC agenda by request of the ARC members.

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

Sincerely,

A handwritten signature in dark ink, appearing to read "Paula L. Allen". The signature is fluid and cursive, with the first name "Paula" and last name "Allen" clearly distinguishable.

Paula L. Allen  
Office of Environmental Services  
Division of State Lands  
Department of Environmental Protection

**TEN-YEAR LAND MANAGEMENT PLAN**  
**FOR THE**  
**ROSS PRAIRIE STATE FOREST**  
**MARION COUNTY**



**PREPARED BY THE**  
**FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES**  
**FLORIDA FOREST SERVICE**

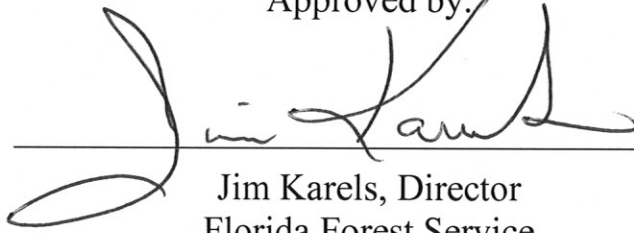
**APPROVED ON**

**October 18, 2019**

TEN-YEAR LAND MANAGEMENT PLAN  
FOR THE  
ROSS PRAIRIE STATE FOREST



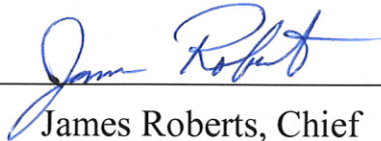
Approved by:



Jim Karels, Director  
Florida Forest Service

10.29.19

Date



James Roberts, Chief  
Forest Management Bureau

10-21-19

Date

**TEN-YEAR LAND MANAGEMENT PLAN  
ROSS PRAIRIE STATE FOREST  
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**TEN-YEAR LAND MANAGEMENT PLAN  
ROSS PRAIRIE STATE FOREST  
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LAND MANAGEMENT PLAN EXECUTIVE SUMMARY

LEAD AGENCY: Florida Department of Agriculture and Consumer Services (FDACS), Florida Forest Service  
COMMON NAME: Ross Prairie State Forest  
LOCATION: Marion County  
ACREAGE TOTAL: 3,531.82 acres (more or less)

| Historic Natural Communities | Approximate Acreage* |
|------------------------------|----------------------|
| Depression Marsh             | 196                  |
| Mesic Hammock                | 232                  |
| Scrubby Flatwoods            | 464                  |

\*Note rounding errors exist

| Historic Natural Communities | Approximate Acreage* |
|------------------------------|----------------------|
| Mesic Flatwoods              | 31                   |
| Sandhill                     | 2,565                |
| Xeric Hammock                | 32                   |

TIITF LEASE AGREEMENT NUMBER: 4158  
USE: Single \_\_\_\_ Multiple X

MANAGEMENT AGENCY

FDACS, Florida Forest Service  
Florida Fish and Wildlife Conservation Commission  
Southwest Florida Water Management District  
Department of State, Division of Historical Resources

RESPONSIBILITY

General Forest Resource Management  
Wildlife Resources & Laws  
Resource Protection & Restoration  
Historical & Archaeological Resource Management

DESIGNATED LAND USE: Multiple-Use State Forest  
SUBLEASES: None  
ENCUMBRANCES: Power Line Right-of-Way  
TYPE ACQUISITION: Conservation and Recreation Lands  
UNIQUE FEATURES: Longleaf Pine/Wiregrass Uplands, Depression Marsh, Scrub  
ARCHAEOLOGICAL / HISTORICAL: 17 known sites  
MANAGEMENT NEEDS: Restoration of native ecosystems, prescribed fire, invasive plant control, FNAI survey for updated historic/current natural communities, property boundary surveys/maintenance, law enforcement  
ACQUISITION NEEDS: Remainder of parcels in Optimal Management Boundary  
SURPLUS ACREAGE: None  
PUBLIC INVOLVEMENT: Land Management Review Team, Management Plan Advisory Group, Management Plan Review Public Hearing & Ross Prairie State Forest Liaison Committee

-----  
**DO NOT WRITE BELOW THIS LINE (FOR DIVISION OF STATE LANDS USE ONLY)**

ARC Approval Date: \_\_\_\_\_ TIITF Approval Date: \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

## **I. Introduction**

Ross Prairie State Forest (RPSF) is comprised of 3,531.82 acres located in southwestern Marion County, approximately 18 miles southwest of Ocala, Florida and about one mile south of the intersection of State Road (SR) 200 and County Road (CR) 484. The northwest tip of RPSF is bounded by SR 200. This property was acquired in 1995 under the Preservation 2000, Conservation and Recreation Lands (CARL) program, specifically, the Longleaf Pine Uplands Project. The forest's diverse ecological communities include upland sandhills, depression marshes, mesic flatwoods, and xeric scrub. RPSF shares a two-mile common boundary to the north with the publicly owned Marjorie Harris Carr Cross Florida Greenway.

The main area of the wetland, known as Ross Prairie, lies to the north of the forest on properties managed by the Florida Department of Environmental Protection's Office of Greenways and Trails. This wetland is a freshwater basin marsh characterized by open areas of wetland grasses surrounded by live oak hammocks. These prairies will contain water in the wet season and become completely dry in the dry season. The 150-acre portion of the prairie located on the forest is made up of marshes varying in size from 1 acre to more than 50 acres. Various species of wading birds are commonly seen here such as anhinga and roseate spoonbill. In addition to the depression marshes, the forest's diverse ecological communities include sandhill, scrubby flatwoods, mesic hammock, mesic flatwoods, and scrub.

Recreational opportunities on the forest include hiking, bird-watching, horseback riding, camping, and hunting. The main access point is from the Ross Prairie Trailhead located along State Road 200 a mile south of County Road 484. This trailhead, managed by the Florida Department of Environmental Protection's Office of Greenways and Trails, has vehicle and equestrian parking, a full-service campground, restrooms, and picnic pavilions. The Holly Hammock Trail is a marked 2.3-mile hiking trail that meanders through mesic hammocks and sandhills, and along depression marshes. This trail provides the visitor with opportunities for nature study, wildlife viewing, and photography.

For equestrian users, RPSF has 15 miles of designated trails along existing service roads and firelines. This is in addition to the numerous miles of equestrian trails throughout the Marjorie Harris Carr Cross Florida Greenway property that borders the forest on the north. RPSF is also incorporated into the Wildlife Management Area system, which is administered by the Florida Fish and Wildlife Conservation Commission (FWC). The Florida Forest Service cooperates with the FWC in the setting of wildlife and hunting regulations on the forest.

### **A. General Mission and Management Plan Direction**

The primary mission of the Florida Forest Service (FFS) is to "protect Florida and its people from the dangers of wildland fire and manage the forest resources through a stewardship ethic to assure they are available for future generations".

Management strategies for RPSF center on the multiple-use concept, as defined in sections 589.04(3) and 253.034(2)(a) F.S. Implementation of this concept will utilize and conserve state forest resources in a harmonious and coordinated combination that will best serve the people of the state of Florida, and that is consistent with the purpose for which the forest

was acquired. Multiple-use management for RPSF will be accomplished with the following strategies:

- Practice sustainable forest management for the efficient generation of revenue and in support of state forest management objectives;
- Provide for resource-based outdoor recreation opportunities for multiple interests;
- Restore and manage healthy forests and native ecosystems ensuring the long-term viability of populations and species listed as endangered, threatened or rare, and other components of biological diversity including game and non-game wildlife and plants;
- Protect known archaeological, historical, and cultural resources;
- Restore, maintain, and protect hydrological functions related water resources and the health of associated wetland and aquatic communities; and
- Provide research and educational opportunities related to natural resource management.

This management plan is provided according to requirements of Sections 253.034, 259.032, and 373, Florida Statutes, and was prepared utilizing guidelines outlined in Section 18-2.021 of the Florida Administrative Code. It is not an annual work plan or detailed operational plan but provides general guidance for the management of RPSF for the next ten-year period and outlines the major concepts that will guide management activities on the forest.

#### **B. Past Accomplishments**

A compilation of management activities and public use on RPSF has been completed monthly and is available from the forest manager. A table has been prepared for this plan that summarizes the accomplishments for each of the past ten years. [Exhibit A] The table does not attempt to account for all activities on the forest but summarizes major activities. It does not list the multitude of daily activities and public interactions involved in managing the forest.

Since the approval of the previous management plan in 2006, there have been many events, developments, and accomplishments. Among the most noteworthy have been the following:

- From 2008-2013, pine straw was harvested from the 255-acre planted pine stand located on the southwest section of RPSF. This pine straw sale generated \$79,050 of revenue and helped reduce unwanted understory to aid in possible future restoration.
- In 2018 – 2019, timber was thinned from the 255-acre planted pine stand located on the southwestern section of RPSF.
- A plan amendment was approved for a new work center to house the Dunnellon tower crew.
- A new work center was finished to house a forest ranger and a senior forest ranger.
- Over 5,000 visitors have come to RPSF in the past 10 years.
- Over 40 visitors have used primitive camping facilities on Ross Prairie's Holly Hammock Hiking Trail.
- Fire was reintroduced to a 280-acre area on the eastern side of Ross Prairie that had been fire suppressed for over 50 years. Some mechanical fuel reduction was utilized to assist in getting fire returned to area that is now surrounded by homes on 2 sides. This area has been burned 3 or more times in the last 10 years.

- 30 additional acres of scrub have been mechanically treated to be added to the 60 acres that were previously treated. All 90 acres of scrub plus an additional 5 (corridor to south) were sloppy chopped in 2016 by the Cooperative Outdoor Burning and Resource Assistance (COBRA) Team.
- A total of over 50 acres treated for non-native invasive species on RPSF.
- Creation of RPSF Geodata model and shapefiles updated annually for state forest attributes.
- FWC has implemented archery and spring turkey quota hunts on RPSF.
- Forest Hydrology section completed field evaluation of dike system (Robin Holland - Diked Wetland Assessment 2017).

### **C. Goals / Objectives for the Next Ten-Year Period**

The following goals and objectives provide direction and focus management resources for the next ten-year planning period. Funding, agency program priorities, and the potential for wildfire during the planning period will determine the degree to which these objectives can be met. Management activities on RPSF during this management period must serve to conserve, protect, utilize and enhance the natural and historical resources and manage resource-based public outdoor recreation, which is compatible with the conservation and protection of this forest. The majority of the management operations will be conducted by the FFS, although appropriate activities will be contracted to private sector vendors or completed with the cooperation of other agencies. All activities will enhance the property's natural resource or public recreational value.

The management activities listed below will be addressed within the ten-year management period and are defined as short-term goals, long-term goals, or ongoing goals. Short-term goals are goals that are achievable within a two-year planning period, and long-term goals are achievable within a ten-year planning period. Objectives are listed in priority order for each goal. Other activities will be completed with minimal overhead expense and existing staff.

#### **➤ GOAL 1: Sustainable Forest Management**

**Objective 1:** Continue to update and implement the Five-Year Silviculture Management Plan including reforestation, harvesting, prescribed burning, restoration, and timber stand improvement activities and goals. (Ongoing Objective)

##### **Performance Measures:**

- Annual updates of the Five-Year Silviculture Management Plan completed.
- Continued implementation of the Five-Year Silviculture Management Plan (acres treated).
- Assessment of natural pine stands in need of a timber harvest on all tracts.

**Objective 2:** Continue to implement the FFS process for conducting stand descriptions and forest inventory including a GIS database containing forest stands, roads, and other attributes (including but not limited to: rare, threatened, and endangered species, archaeological resources, non-native invasive species locations, and historical areas). (Ongoing Objective)

**Performance Measures:**

- Complete GIS database and re-inventory all attributes as required by FFS procedures.
- Number of acres inventoried.

➤ **GOAL 2: Public Access and Recreational Opportunities**

**Objective 1:** Maintain public access and recreational opportunities for all users. (Ongoing Objective)

**Performance Measure:** Number of visitor opportunities per day.

**Objective 2:** Assess additional public access and recreational opportunities. (Short Term Objective)

**Performance Measure:** Number of additional visitor opportunities per day.

**Objective 3:** Continue to safely integrate human use into RPSF, follow the Five-Year Outdoor Recreation Plan and update annually. (Ongoing Objective)

**Performance Measures:**

- Continued implementation of the Five-Year Outdoor Recreation Plan.
- Annual updates of the Five-Year Outdoor Recreation Plan completed.

**Objective 4:** Continue to involve and meet with the liaison panel. The panel consists of a mix of local residents, community leaders and special interest group representatives (canoe vendors, hunters, trail hikers, military, organized equestrian groups, etc.), environmental groups, and other public / private entities to establish communication and seek constructive feedback regarding the management of RPSF. (Ongoing Objective)

**Performance Measures:**

- Liaison group remains organized.
- Meetings continue.

**Objective 5:** Maintain cooperation with Florida Fish and Wildlife Conservation Commission (FWC) to develop specific hunting season quotas; bag limits and address hunting issues to be agreed upon at annual cooperator meeting between FFS and FWC. (Ongoing Objective)

**Performance Measures:**

- Annual letter on agreed hunting issues.
- Updated rules posted and WMA brochures available.

**Objective 6:** Enlist additional volunteers and volunteer organizations to assist with recreation and/or resource management. (Ongoing Objective)

**Performance Measure:**

- Number of volunteer hours.

➤ **GOAL 3: Habitat Restoration and Improvement**

**Objective 1:** Utilize prescribed fire to enhance restoration of native groundcover. Evaluate areas where native groundcover has been eliminated or heavily impacted from historical land use on a case by case basis for alternative methods to address

reestablishment of native groundcover plants. Restore native groundcover where it has been eliminated or heavily impacted from historical land use. (Long Term Objective)

**Performance Measure:**

- Number of acres restored.

**Objective 2:** Sandhill/scrub restoration for enhancing Florida Scrub Jay (FSJ) habitat and continued mechanical treatments applied where necessary to enhance prescribed fire applications. (Ongoing Objective)

**Performance Measures:**

- Monitoring of FSJ families in cooperation with Jay watch volunteers.
- Number of acres restored.
- Number of acres burned within desired fire intervals.

**Objective 3:** Use photo plots and routine observation to compare sites over time. (Ongoing Objective)

**Performance Measures:**

- Number of new photo plots established.
- Percentage of photo plots revisited annually.
- Number of photos taken biannually.

➤ **GOAL 4: Fire Management**

**Objective 1:** The RPSF currently contains approximately 3,400 acres of fire dependent communities. RPSF staff will conduct habitat / natural community improvement on the forest annually. In order to achieve an average fire return interval of two (2) to five (5) years across the forest, approximately 600-1500 acres will be prescribed burned annually. Currently, FFS staff estimates 3,000 acres at RPSF are within the desired fire rotation. (Ongoing Objective)

**Performance Measures:**

- Number of acres burned during the dormant and growing seasons, and number of acres burned within target fire return interval.
- Number of acres with restoration underway. This restoration would include prescribed burning

**Objective 2:** Continue to annually update and implement the Five-Year Prescribed Burning Management Plan and the prescribed burning goals. (Ongoing Objective)

**Performance Measures:**

- Annual updates of the Five-Year Prescribed Burning Management Plan completed.
- Continued implementation of the Five-Year Prescribed Burning Management Plan (acres treated).

**Objective 3:** Reduce the threat of wildfire within the Wildland Urban Interface on RPSF and the surrounding community through a comprehensive mitigation strategy that includes evaluating vegetative fuels near residential areas and identifying potential fuel reduction projects. (Long Term Objective)

**Performance Measures:**

- Evaluation complete.

- Should the evaluation determine that fuel reduction is necessary, number of projects underway.

➤ **GOAL 5: Listed and Rare Species Habitat Maintenance, Enhancement, Restoration, or Population Restoration**

**Objective 1:** In cooperation with the Florida Fish and Wildlife Conservation Commission, develop a Wildlife Management Strategy that addresses fish and wildlife species for RPSF, with emphasis on imperiled species and associated management prescriptions for their habitats. (Long Term Objective)

**Performance Measures:**

- Imperiled species management strategy completed.
- Baseline listed, and rare species list completed for RPSF.

**Objective 2:** In consultation with FWC, implement survey and monitoring protocols, where feasible, for listed and rare species. (Long Term Objective)

**Performance Measure:** Number of species for which monitoring is ongoing.

**Objective 3:** Monitor for populations of federally listed plant species and federally listed lichen species, and conduct searches throughout appropriate habitat within RPSF for new occurrence records. (Ongoing Objective)

**Performance Measures:**

- Number of new occurrence records
- Updated shapes/coverages of listed populations using GPS and GIS

➤ **GOAL 6: Non-Native Invasive Species Maintenance and Control**

**Objective 1:** Continue to follow and annually update the Five-Year Ecological Plan for RPSF, specifically to locate, identify, and control non-native invasive species. (Ongoing Objective)

**Performance Measures:**

- Total number of acres identified and successfully treated.
- Annual updates of the Five-Year Ecological Plan completed.
- Continue to maintain RPSF invasive database for maintaining and updating invasive information annually.

➤ **GOAL 7: Cultural and Historical Resources**

**Objective 1:** Ensure all known sites are recorded in the Department of State, Division of Historical Resources (DHR) Florida Master Site file. (Ongoing Objective)

**Performance Measure:** Number of recorded sites.

**Objective 2:** Monitor recorded sites and send updates to the DHR Florida Master Site File as needed. (Ongoing Objective)

**Performance Measure:** Number of sites monitored. Reports submitted to DHR.

**Objective 3:** Maintain at least one qualified staff member as an archaeological resource monitor. (Ongoing Objective)

**Performance Measure:** Number of local trained staff.

➤ **GOAL 8: Hydrological Preservation and Restoration**

**Objective 1:** Conduct or obtain a site assessment / study to identify potential hydrology restoration needs. (Long Term Objective)

**Performance Measure:**

- Assessment conducted.

**Objective 2:** Protect water resources during management activities through the implementation of Silviculture Best Management Practices (BMPs) that are applicable to RPSF and may include, but not limited to forest roads, construction of pre-suppression firelines, sinkholes, etc. (Ongoing Objective)

**Performance Measure:** Compliance with state lands BMPs.

➤ **GOAL 9: Capital Facilities and Infrastructure**

**Objective 1:** RPSF staff, along with help from volunteers and/or user groups, will continue maintenance of 3 parking areas and 2 trailheads, 20 miles of trails, and 30 miles of primary, secondary, and tertiary roads. (Ongoing Objective)

**Performance Measure:** The number of existing facilities, miles of roads, and miles of trails maintained.

**Objective 2:** Continue to follow the Five-Year Roads and Bridges Management Plan and update annually. (Ongoing Objective)

**Performance Measures:**

- Continued implementation of the Five-Year Roads and Bridges Management Plan.
- Annual updates of the Five-Year Roads and Bridges Management Plan completed.

**Objective 3:** Continue to implement the Five-Year Boundary Survey and Maintenance Management Plan and update annually. The entire boundary will be reworked at minimum every five years including harrowing, reposting signage, and repainting boundary trees. (Ongoing Objective)

**Performance Measures:**

- Continued implementation of the Five-Year Boundary Survey and Maintenance Management Plan.
- Percentage of forest boundary maintained each year.
- Annual updates of the Five-Year Boundary Survey and Maintenance Management Plan completed.

## **II. Administration Section**

### **A. Descriptive Information**

#### **1. Common Name of Property**

The common name of the property is the Ross Prairie State Forest (RPSF).

#### **2. Legal Description and Acreage**

The RPSF is comprised 3,531.82 acres, more or less.

RPSF is located in southwestern Marion County, Florida. It's approximately 18 miles southwest of Ocala, Florida. A complete legal description of RPSF lands owned by the Board of Trustees of the Internal Improvement Trust Fund (TIITF) is on file at the RPSF Headquarters Office, FFS State Office, and Florida Department of Environmental Protection (FDEP) state office.

The boundaries and the major parcels are identified in [Exhibit B]. The RPSF is located in all or parts of Sections 2, 3, 10, 11, 13, 14, 15, and 16 of Township 17 South, Range 20 East, Marion County, Florida.

**Table 1. RPSF Acreage by Funding Source**

|       | Funding Source                   | Acres    |
|-------|----------------------------------|----------|
| P2000 | Preservation 2000                | 3,526.66 |
| FFS   | Additions and Inholdings program | 5.16     |

A complete legal description of lands owned by the Board of Trustees of the Internal Improvement Trust Fund (TIITF) is on record at the RPSF Forestry Station Office, Florida Department of Environmental Protection (DEP), and the FFS State Office in Tallahassee.

### **3. Proximity to Other Public Resources**

RPSF is located in southwestern Marion County and is in close proximity to a number of public natural resource areas including sharing almost two miles of common boundary with the Marjorie Harris Carr Cross Florida Greenway. Lands managed by state, federal, or local government for conservation of natural or cultural resources that are located within approximately 30 miles of the RPSF are included in [Exhibit E as well as in Table 2, below:

**Table 2. Nearby Public Conservation Land and Easements**

| Tract                                       | Agency | Distance              |
|---------------------------------------------|--------|-----------------------|
| Marjorie Harris Carr Cross Florida Greenway | DRP    | Adjacent to the North |
| Halpata Tastanaki Preserve                  | SWFWMD | 1 mile west           |
| Withlacoochee SF - Two Mile Prairie         | FFS    | 5 miles south         |
| Pott's Preserve                             | SWFWMD | 6 miles southwest     |
| Rainbow Springs State Park                  | DRP    | 15 miles west         |
| Goethe State Forest                         | FFS    | 20 miles west         |
| Indian Lake State Forest                    | FFS    | 25 miles northeast    |
| Silver River State Park                     | DRP    | 25 miles northeast    |
| Withlacoochee State Forest                  | FFS    | 30 miles south        |
| Gulf Hammock WMA                            | FWC    | 30 miles west         |
| Ocala National Forest                       | USFS   | 30 miles northeast    |

DRP – Florida Department of Environmental Protection, Division of Recreation and Parks

FWC – Florida Fish and Wildlife Conservation Commission  
SWFWMD – Southwest Florida Water Management District  
USFS – United States Forest Service  
FFS – Florida Forest Service

#### **4. Property Acquisition and Land Use Considerations**

The RPSF was acquired through several different purchases. RPSF was acquired under the Conservation and Recreation Lands (CARL) program as part of the Longleaf Pine Ecosystem Project. The Colen Parcel was the primary acquisition consisting of 3,511.18 acres acquired on December 16, 1994. Three (3) small inholdings have since been acquired. The Mark Reardon Parcel consisting of 5.16 acres was acquired on July 13, 2012. The Marilyn Dixon Parcel consisting of 5.04 acres was acquired on January 10, 2001. The Linda Shelly Parcel consisting of 5.04 acres was acquired on January 10, 2001 the three parcels were originally managed as part of Goethe State Forest but were later reassigned as a separate state forest, Ross Prairie State Forest.

The original objectives for the RPSF property, acquired as part of the Longleaf Pine Ecosystem project, are summarized in the Management Prospectus. These parcels are assigned to the FFS for management under Lease Agreement #4158. [Exhibit R]

**Table 3. Parcel Acquisition**

| Parcel Name | Deed Date  | Lease Date | Acres (County)    |
|-------------|------------|------------|-------------------|
| Colen       | 12/16/1994 | 9/12/2000  | 3,526.66 (Marion) |
| Reardon     | 7/13/2012  | 4/30/2013  | 5.16 (Marion)     |
| Dixon       | 1/10/2001  | 4/10/2002  | 5.04 (Marion)     |
| Shelly      | 1/10/2001  | 4/30/2013  | 5.04 (Marion)     |

#### **B. Management Authority, Purpose and Constraints**

##### **1. Purpose for Acquisition / Management Prospectus**

The primary purpose of acquisition by the State of Florida was to protect sandhills and the plant and animal species dependent on them on RPSF. RPSF is a part of the Longleaf Pine Ecosystem Florida Forever Project. [Exhibit F]. This project will conserve two of the largest and best of these fragments, and in doing so, helping to ensure the survival of several rare animals like the Florida scrub-jay as well as some plants, and giving the public an opportunity to see and enjoy the original, and increasingly rare, natural landscape of Florida's uplands. This project may also help complete the Florida National Scenic Trail, a statewide nonmotorized trail that crosses a number of Florida Forever project sites.

Management is conducted by the Florida Department of Agriculture and Consumer Services, FFS, with assistance, as warranted, from other agencies. FFS is the manager of forest resources, recreation, water resource protection, watershed protection, and land use planning on RPSF.

Revenue derived from timber sales is used to offset incurred expenses, capital improvements, and other personal services (OPS).

Multiple-use management for RPSF will be accomplished through the integration of the following strategies:

- Practice sustainable forest management for the efficient generation of revenue and in support of state forest management objectives;
- Provide for resource-based outdoor recreation opportunities for multiple interests;
- Restore and manage healthy forests and native ecosystems ensuring the long-term viability of populations and species listed as endangered, threatened or rare, and other components of biological diversity including game and non-game wildlife and plants;
- Protect known archaeological, historical, and cultural resources;
- Restore, maintain and protect hydrological functions related water resources and the health of associated wetland and aquatic communities; and
- Provide research and educational opportunities related to natural resource management.

**2. Degree of Title Interest Held by the Board**

The Board of Trustees of the Internal Improvement Trust Fund (TIITF) holds fee simple title.

**3. Designated Single or Multiple-Use Management**

RPSF is managed under a multiple-use concept by the FFS, under the authority of Chapters 253 and 589, Florida Statutes. The FFS is the lead managing agency as stated in TIITF Management Lease Number 4158.

Multiple use is the harmonious and coordinated management of timber, recreation, conservation of fish and wildlife, forage, archaeological and historic sites, habitat and other biological resources, or water resources so that they are utilized in the combination that will best serve the people of the state, making the most judicious use of the land for some or all of these resources and giving consideration to the relative values of the various resources. Local demands, acquisition objectives, and other factors influence the array of uses that are compatible with and allowed on any specific area of the forest. This management approach is believed to provide for the greatest public benefit, by allowing compatible uses while protecting overall forest health, native ecosystems and the functions and values associated with them.

**4. Revenue Producing Activities**

Numerous activities on RPSF provide for multiple-use as well as generate revenue to offset management costs. Revenue producing activities will be considered when they have been determined to be financially feasible and will not adversely impact management of the forest. Current and potential revenue producing activities for the RPSF include, but are not limited to:

- Timber Harvests – Timber harvests on RPSF will be conducted where needed to improve forest health, promote wildlife habitat, restore plant communities, and provide other benefits.
- Recreation Fees – Fees are not currently collected for day use activities.
- Camping Fees – Fees are currently collected according to the fees schedule as outlined in Chapter 5I-4 of the Florida Administrative Code for all camping facilities. In addition to these fees, the Campground Reservation System has been implemented online at: [www.FloridaStateForests.ReserveAmerica.com](http://www.FloridaStateForests.ReserveAmerica.com).

**5. Conformation to State Lands Management Plan**

Management of the forest under the multiple-use concept complies with the State Lands Management Plan and provides optimum balanced public utilization of the property. Specific authority for the FFS's management of public land is derived from Chapters 589, 259, and 253, Florida Statutes.

**6. Legislative or Executive Constraints**

There are no Florida Statutes specifically directed toward RPSF. FFS makes every effort to comply with applicable statutes, rules, and ordinances when managing the forest. For example, when public facilities are developed on state forests, every effort is made to comply with Public Law 101-336, the Americans with Disabilities Act. As new facilities are developed, the universal access requirements of this law are followed in all cases except where the law allows reasonable exceptions (e.g., where handicap access is structurally impractical or where providing such access would change the fundamental character of the facility being provided).

**7. Aquatic Preserve / Area of Critical State Concern**

This area is not within an aquatic preserve or an area of critical state concern, nor is it in an area under study for such designation.

**C. Capital Facilities and Infrastructure**

**1. Property Boundaries Establishment and Preservation**

RPSF boundary lines, 12.5 miles total, are managed by state forest personnel in accordance with the guidelines of the State Forest Handbook. There are 8 gates on RPSF that require periodic maintenance.

**2. Improvements**

Current buildings/facilities present on the RPSF include the new forest ranger work site and office.

**3. On-Site Housing**

Currently, there are no ranger residences on RPSF.

FFS may establish further on-site housing (mobile / manufactured home) on RPSF if deemed necessary to alleviate security and management issues. The need and feasibility specific for the state forest will be evaluated and established if considered appropriate by the Center Manager and approved by the FFS Director. Prior to the

occurrence of any ground disturbing activity for the purpose of establishing on-site housing, a notification will be sent to the DHR and Florida Natural Areas Inventory (FNAI) for review and recommendations. This type of housing will not exceed two homes per location with the possibility of more than one on-site housing location occurring if considered necessary by the Center Manager and approved by the Director.

#### **4. Operations Infrastructure**

##### **a. Operations Budget**

For Fiscal Year 2017-2018, the total annual budget for RPSF was \$201,870. This amount includes salaries, expenses, contractual services, and OPS. A summary budget for RPSF is contained in Exhibit V. Implementation of any of the activities within this management plan is contingent on availability of available funding, other resources, and other statewide priorities.

##### **b. Equipment**

Equipment assigned or immediately available for work on the RPSF to support resource management work, and maintain improvements such as trails, roads, and facilities, include the following:

- 3 – 4x4 pickup trucks
- 1 – 2x4 Chevy S-10 pickup
- 1 – 2x4 Ford F-550 flatbed truck
- 1 – 2x4 Chevy Astro van
- 2 – Type 6 brush trucks
- 1 – Type III military 6x6 engine
- 2 – Type II tractor/plow units with transports
- 1 – Type II overhead tractor
- 1 – Farm tractor
- 1 – John Deere gator UTV
- 2 – Four-wheel drive all-terrain vehicle (ATVs)

See [Exhibit D] for a map of the facilities, recreation, and improvements at RPSF.

##### **c. Staffing**

Staffing consists of a Forester, and two (2) OPS positions. Work project coordination support is provided by a Forest Area Supervisor. Personnel and equipment are utilized from the Indian Lake Forestry Center. The Forest Area Supervisor, three (3) Senior Rangers, and two (2) Forest Rangers have offices at the Indian Lake State Forest headquarters. There are also two (2) Forest Rangers that have offices at RPSF and assist with management activities on the state forest. Additional support from Waccasassa Forestry Center personnel is available as needed.

Resource management activities, such as timber cruising, planning, and sale administration, etc., are the responsibility of the Resource Section under the direction of the Resource Administrator and Center Manager. Forest operations, such as road

maintenance, prescribed burning, etc., are the responsibility of the FFS Waccasassa Forestry Center fire control personnel under the direction of the respective Forest Area Supervisors.

#### **D. Additional Acquisitions and Land Use Considerations**

##### **1. Alternate Uses Considered**

No alternate uses are being considered now. Alternate uses will be considered as requests are made and will be accommodated as appropriate if they are determined to be compatible with existing uses and with the management goals and objectives of the forest. Uses determined as incompatible include but are not limited to: water resource development projects, water supply projects, storm-water management projects, sewage treatment facilities, linear facilities, off highway vehicle use, communication towers and antennas, dumping, mining, and oil well stimulation (e.g. hydraulic fracturing/fracking), or as determined by law, regulation or other incompatible uses as described elsewhere in the management plan.

##### **2. Additional Land Needs**

The acquisition of additional land within the optimal management boundary would facilitate restoration, protection of the natural resources, including threatened and endangered ecosystems such as sandhill, mesic hammock, and depression marsh, that are unique to the Ross Prairie, maintenance, and management of the resources on RPSF. [Exhibit C]

There are only three (3) feasible additions needed for RPSF. The remaining 20 acres of the original 40-acre out parcel located in Section 13, Township 17 South, Range 20 East which consists of three 5-acre parcels and two 2.5-acre parcels. These additions would facilitate resource management on RPSF, especially prescribed burning and boundary management.

##### **3. Surplus Land Assessment**

It is the assessment of FFS staff that, at this time, all of the property within RPSF is suitable and necessary for the management of RPSF and none should be declared surplus.

##### **4. Adjacent Conflicting Uses**

During the development of this management plan, FFS staff identified and evaluated adjacent land uses, reviewed current comprehensive plans, and future land use maps in making a determination and potential adjacent conflicting uses. Additionally, FFS staff have met with adjacent land owners and maintains liaison with those land owners to ensure that any conflicting future land uses may be readily identified and addressed.

The major land uses adjacent to RPSF that represent complications to resource management involve urban development. Major subdivisions now surround RPSF on the west, south, and east sides. A major highway (SR 200) scheduled for expansion to four lanes is on the north side. Smoke management of prescribed burns will be of great concern. Hunting on RPSF, while currently extremely conservative and safe, may need

to be re-evaluated within this ten-year period because of conflicts with the surrounding urban population and the increasing demand of other recreational users.

FFS will cooperate with adjacent property owners, prospective owners, or prospective developers to discuss methods to minimize negative impacts on management, resources, facilities, roads, recreation, etc., and discuss ways to minimize encroachment onto the forest.

**5. Compliance with Comprehensive Plan**

This plan was submitted to the Board of County Commissioners in Marion County for review and compliance with their local comprehensive plans. [Exhibit T]

**6. Utility Corridors and Easements**

The following are reservations or easements on RPSF:

- a. A Progress Energy transmission line which consists of a 295-foot right-of-way running along the entire south boundary of the forest, encompassing 98 acres.
- b. A 10-foot clearance right-of-way for a Progress Energy transmission line running along the south boundary of the eastern most parcel of RPSF. This corridor extends one quarter of a mile on RPSF adjacent to SW 145<sup>th</sup> Street.

FFS does not favor the fragmentation of natural communities with linear facilities. Consequently, easements for such uses will be discouraged to the greatest extent practical. FFS does not consider RPSF suitable for any new linear facilities.

When such encroachments are unavoidable, previously disturbed sites will be the preferred location. The objectives, when identifying possible locations for new linear facilities, will be to minimize damage to sensitive resources (e.g., listed species and archaeological sites), to minimize habitat fragmentation, to limit disruption of management activities, including prescribed burns, and to limit disruption of resource-based multiple use activities such as recreation.

Collocation of new linear facilities with existing corridors will be considered but will be used only where expansion of existing corridors does not increase the level of habitat fragmentation and disruption of management and multiple-use activities. FFS will further encourage the use of underground cable where scenic considerations are desirable. Easements for such utilities are subject to the review and approval of the TIITF, and the Southwest Florida Water Management District (SWFWMD). Requests for linear facility uses will be handled according to the Governor and the Cabinet's linear facilities policy.

**E. Agency & Public Involvement**

**1. Responsibilities of Managing Agencies**

FFS is the lead managing agency, responsible for overall forest management and public recreation activities, as stated in TIITF Management Leases numbered 4158. Pursuant to the management lease, the lead managing agency may enter into further agreements or to subleases on any part of the forest.

The FFS has the primary responsibility for prevention, detection, and suppression of wildfires wherever they may occur. The FFS shall provide leadership and direction in the evaluation, coordination, allocation of resources, and monitoring of wildfire management and protection (Florida Statute 590.01). The FFS also has the responsibility of authorizing prescribed burns (F.S. 590.02 (1i)).

FWC has law enforcement responsibilities, enforces hunting regulations, cooperatively sets hunting season dates with FFS, and conducts other wildlife management activities with input from FFS.

FFS will cooperate with the DHR regarding appropriate management practices on historical or archaeological sites on the property as stated in Section 267.061, Florida Statutes. DHR will be notified prior to the initiation of any ground disturbing activities by the FFS or any other agency involved with the forest.

The SWFWMD will be consulted and involved in matters relating to water resources as appropriate.

## **2. Law Enforcement**

Primary law enforcement responsibilities will be handled by law enforcement officers from FWC. Rules governing the use of RPSF are stated in Chapter 5I-4 of the Florida Administrative Code. FWC will enforce fish and wildlife regulations and provide assistance in enforcing state forest rules. The FWC has an officer dedicated to patrol of and enforcement on the RPSFs.

The Office of Agricultural Law Enforcement (OALE) will assist with open burning and wildfire investigations as needed. Additional assistance is provided by the Marion County Sheriff's Offices as needed. Considering the current statewide budget limitations, FFS feels that law enforcement is adequate on RPSF.

Special rules under Chapter 5I-4 of the Florida Administrative Code were promulgated for Department of Agriculture and Consumer Services, Florida Forest Service, to manage the use of state lands and better control traffic, camping, and other uses in RPSF.

## **3. Public and Local Government Involvement**

This plan has been prepared by FFS and will be carried out primarily by that agency. FFS responds to public involvement through liaison panels, management plan advisory groups, public hearings, and through ongoing direct contact with user groups. Land Management Review Teams as coordinated by the Division of State Lands have conducted three (3) reviews of management plan implementation in 2007, 2012, and 2017. [Exhibit S] The review teams' recommendations were addressed in this plan, as appropriate.

The plan was developed with input from the RPSF Management Plan Advisory Group and was reviewed at a public hearing on June 27, 2019. A summary of the advisory

group's meetings and discussions, as well as written comments received on the plan, are included in Exhibit U. The Acquisition and Restoration Council (ARC) public hearing and meeting serve as an additional forum for public input and review of the plan.

**4. Volunteers**

Volunteers are important assets to RPSF. Depending upon the type of volunteer service needed, volunteer activities may be one-time events or long-term recurring projects and routine maintenance. Additional volunteer recruitment will be encouraged to assist with other activities to further the FFS's mission.

**5. Friends of Florida State Forest**

Friends of Florida State Forests Inc. (FFSF) is a Direct Support Organization (DSO) of the Florida Forest Service. FFSF supports management activities and projects on Florida's state forests. FFSF is an organization established by Florida statute that supports programs within Florida's state forests and is governed by a board of directors representing all areas of the state. Through community support, FFSF assists the Florida Forest Service to expand opportunities for recreation, environmental education, fire prevention, and forest management within Florida's state forests.

The Friends of Florida State Forests program is referenced in Chapter 589.012 of the Florida Statutes. For more information visit: [www.floridastateforests.org](http://www.floridastateforests.org).

**III. Archaeological/Cultural Resources and Protection**

**A. Past Uses**

The original longleaf pine forest in this area was harvested in the early to mid-1900's. As in much of Florida, this resulted in open woodlands with little pine stocking. The area was utilized for cattle grazing and naval stores operations where sufficient pine trees existed. The large, scattered longleaf pines on RPSF today were the small and inferior trees left from the original harvest. They have provided the seed source for the emerging longleaf pine forest of today.

The Colen Foundation purchased this tract of land in the early 1970's for the purpose of potential commercial development. During their ownership, the property was utilized for cattle grazing. Approximately 400 acres were cleared for pasture and crops. Periodic prescribed burns, primarily for cattle grazing, were conducted on the property prior to state ownership.

The three (3) 5-acre additions consisting of the Campbell, Ciolfi, and Dorsch Parcels have similar past activities to the Colen Parcel, except there has not been recent cattle grazing.

**B. Archaeological and Historical Resources**

A review of information contained in the Florida Department of State, Division of Historical Resources, Florida Master Site file has determined there 17 recorded archeological sites found at the designated area for RPSF, Marion County, Florida. There

are no known sites on RPSF identified in the Florida National Register of Historic Places. See Exhibit G for a complete list of all archeological sites on RPSF.

**Table 4. Archaeological & Historical Sites on RPSF**

| Site ID | Site Name       | Type |
|---------|-----------------|------|
| MR01931 | ROSS PRAIRIE 3  | AR   |
| MR01932 | ROSS PRAIRIE 4  | AR   |
| MR01933 | ROSS PRAIRIE 5  | AR   |
| MR01934 | ROSS PRAIRIE 6  | AR   |
| MR01935 | ROSS PRAIRIE 7  | AR   |
| MR01936 | ROSS PRAIRIE 8  | AR   |
| MR01937 | ROSS PRAIRIE 9  | AR   |
| MR01938 | ROSS PRAIRIE 10 | AR   |
| MR01939 | ROSS PRAIRIE 11 | AR   |
| MR01940 | ROSS PRAIRIE 12 | AR   |
| MR01941 | ROSS PRAIRIE 13 | AR   |
| MR01942 | ROSS PRAIRIE 14 | AR   |
| MR01943 | ROSS PRAIRIE 15 | AR   |
| MR01944 | ROSS PRAIRIE 16 | AR   |
| MR01945 | ROSS PRAIRIE 17 | AR   |
| MR01946 | ROSS PRAIRIE 18 | AR   |
| MR02343 | INFERNO         | AR   |

### **C. Ground Disturbing Activities**

Representatives of DHR and Florida Natural Areas Inventory (FNAI) will be consulted prior to the initiation of any proposed significant ground disturbing activity not listed in this plan, by FFS or any other public agency. FFS will make every effort to protect known archaeological and historical resources. FFS will follow the “Management Procedures for Archaeological and Historical Sites and Properties on State Owned or Controlled Lands” [Exhibit H] and will comply with all appropriate provisions of Section 267.061(2) Florida Statutes. Ground disturbing activities not specifically covered by this plan will be conducted under the parameters of the “List of ARC / Division of State Lands Approved Interim Management Activities”.

The FFS recognizes the importance of managing and protecting sensitive resources and will take all necessary steps to ensure that ground disturbing activities will not adversely impact sensitive resources. This includes areas such as archaeological and historical sites, ecotones, wetlands, and areas containing sensitive species.

The construction of new pre-suppression firelines will be limited to the greatest extent practicable. When new pre-suppression firelines, recreational trails, or other low-impact recreational site enhancements are necessary, their placement will be carefully reviewed by state forest staff and will be developed to avoid sensitive areas. For other ground

disturbing activities such as construction of buildings, parking lots, and new roads, the FFS will consult with the DHR and FNAI, as appropriate.

#### **D. Survey and Monitoring**

Currently, four (4) local district FFS staff are trained by DHR as archaeological site monitors. FFS will pursue opportunities for getting additional personnel trained. All archaeological and historical sites within the state forest will be monitored at least annually. FFS field staff will monitor the listed sites to note condition and any existing or potential threats. FFS will consult with public lands archaeologists at DHR to determine any protection measures that may be required for sites with existing or potential threats.

Any known archaeological and historical sites will be identified on maps to aid state forest and law enforcement personnel in patrolling and protecting sites. Applicable surveys will be conducted by FFS staff or others during the process of planning and implementing multiple-use management activities. FFS personnel will remain alert for any environmentally significant resources and protective actions will be taken as necessary. In addition, FFS will seek the advice and recommendations of DHR regarding any additional archaeological survey needs. Trained monitors may oversee limited types of ground disturbing activities in which DHR recommends monitoring. FFS will utilize the services of DHR Public Lands archaeologists, when available, to locate and evaluate unknown resources, and to make recommendations in the management of known resources.

### **IV. Natural Resources and Protection**

One of the primary reasons for the purchase and establishment of RPSF was to protect sandhills unique to RPSF. Efforts will be made to monitor and protect RPSF's waterbodies and their associated water quality, discharge, and native plants and animals. All forest management activities relating to timber harvesting practices will comply with the BMP's for public lands. Management activities will be executed in a manner to minimize soil erosion. If problems arise, corrective action will be implemented by FFS staff under the direction of FFS's Forest Hydrology Section.

Efforts will be made to monitor and protect RPSF's waterbodies and their associated water quality and native plants and animals. All forest management activities relating to timber harvesting practices will comply with the BMPs for public lands within the latest Silviculture BMPs publication.

#### **A. Soils and Geologic Resources**

##### **1. Resources**

Soil information for RPSF was obtained from the United States Department of Agriculture Natural Resources Conservation Service (NRCS). RPSF consists of 12 different soils. The predominant soils listed by the NRCS include: Sparr fine sand, Apopka sand, and Candler sand. Detailed information on all soils present on the state forest may be found in Exhibit I.

##### **2. Soil Protection**

Currently, there are no soil erosion problems at RPSF. Management activities will be executed in a manner to minimize soil erosion. As problems arise, corrective action will be implemented by FFS staff under the direction of the FFS Forest Hydrology Section in conjunction with recommendations as contained in the most current version of the Silviculture Best Management Practices Manual.

**B. Water Resources**

The water resources on RPSF perform essential roles in the protection of water quality, groundwater recharge, flood control, and aquatic habitat preservation. Maintenance and restoration of native ecosystems is a high management priority. Properly managing the soil, water, and watershed resources of this forest are an integral part of accomplishing this objective. In the interest of maintaining these valuable resource functions, state forest management personnel will work with the FFS Hydrology Section to incorporate wetland restoration into the overall resource management program as opportunities arise, particularly where wetland systems have been impaired or negatively impacted by previous management activities or natural disasters. See Exhibit K for map of the water resources at RPSF.

Where applicable, RPSF, with assistance from the FFS Hydrology Section, will pursue funding to develop and implement wetland restoration projects. In addition, cooperative research among the FFS, other state agencies, and the federal government will provide valuable information in determining future management objectives of wetland restoration.

**1. Resources**

There are no navigable water bodies, streams, or ponds on RPSF.

**2. Water Classification**

There are no Outstanding Florida Waters (OFW) located on or adjacent to the site. All of the surface waters on or adjacent to the site are classified as Class III waters, which is the statewide default classification. [Exhibit J]

**3. Water Protection**

The water resources on RPSF perform essential roles in the protection of water quality, groundwater recharge, flood control, and aquatic habitat preservation. Maintenance and restoration of native ecosystems is a high management priority. Properly managing the soil, water, and watershed resources of this forest are an integral part of accomplishing this objective. In the interest of maintaining these valuable resource functions, state forest management personnel will work with the FFS Hydrology Section to incorporate wetland restoration into the overall resource management program as opportunities arise, particularly where wetland systems have been impaired or negatively impacted by previous management activities or natural disasters. All silvicultural activities, including timber harvesting and reforestation, will be conducted in accordance with Florida's Silviculture Best Management Practices publication and/or other appropriate measures as deemed necessary by the FFS's Forest Hydrologist and/or Watershed Specialist.

The RPSF falls within the jurisdiction of the SWFWMD. Water resource protection will be coordinated with the SWFWMD. The FFS, through its Forest Hydrology Section, will work with the SWFWMD to monitor levels and quality of ground and surface water resources. Any activities requiring water management district permits will be handled accordingly. Water resource protection measures, at a minimum, will be accomplished using Best Management Practices (BMPs) as described in the most current version of Silviculture Best Management Practices Manual.

**4. Swamps, Marshes, and Other Wetlands**

RPSF is located on the southern end of a wetland known as Ross Prairie. This wetland is a freshwater depression marsh characterized by numerous open depressions of wetland grasses surrounded by live oak hammocks. RPSF contains the southern extent of Ross Prairie with the main wetland lying to the north on properties of the state managed by DEP. This entire marsh system becomes dry during periods of drought and none of the open areas are considered navigable waterways even in periods of high water.

Maintenance of these wetland communities is a high priority and will be accomplished through prescribed fire and a cautious avoidance of activities that would threaten the natural hydrology of these areas.

**5. Wetlands Restoration**

Wetland restoration objectives on the state forest include erosion control; restoration of hydrology and/or hydroperiod, and restoration of wetland plant and animal communities. To achieve these objectives, restoration activities may involve road and soil stabilization, water level control structure removal or installation, non-native invasive species control, site preparation and re-vegetation with native wetland species, and project monitoring. These activities may be conducted individually or concurrently; implemented by FFS personnel or by non-FFS personnel under mitigation or grant contractual agreements. Wetland restoration projects should be conducted in conjunction with other restoration activities indicated elsewhere in this plan.

Where applicable, RPSF, with assistance from the FFS Forest Management Bureau, RPSF may pursue funding to develop and implement wetland restoration projects. Additionally, cooperative research among FFS, other state agencies, and the federal government will provide valuable information in determining future management objectives of wetland restoration.

**6. Florida Department of Environmental Protection Basin Management Action Plans (BMAP)**

Currently, the RPSF doesn't reside in an active BMAP.

Basin Management Action Plans are a "blueprint" for restoring impaired waters by reducing pollutant loadings to meet the allowable loadings established in a Total

Maximum Daily Load (TMDL). It represents a comprehensive set of strategies, including, but not limited to: permit limits on wastewater facilities, urban and agricultural best management practices, conservation programs, financial assistance, and revenue generating activities, all designed to implement the pollutant reductions established by the TMDL. These broad-based plans are developed with local stakeholders, as they rely on local input and local commitment, and are adopted by Secretarial Order to be enforceable.

The BMAP was developed as part of DEP's TMDL Program and represents the collaborative efforts of stakeholders to identify current and planned management actions to achieve pollutant load reductions required by the TMDL.

The BMAP provides for phased implementation under Subparagraph 403.067(7)(a)1, F.S. The management actions and adaptive management approach will be described the BMAP, and the process will continue until the TMDL is attained. The phased BMAP approach allows for the implementation of projects designed to achieve incremental reductions, while simultaneously monitoring and conducting studies to better understand the water quality dynamics (sources and response variables) in the watershed.

### C. Wildlife Resources

#### 1. Threatened and Endangered Species

The intent of FFS is to manage RPSF in a fashion that will minimize the potential for wildlife species to become imperiled. FFS employees continually monitor the forest for threatened or endangered species while conducting management activities. Specialized management techniques will be used, as necessary, to protect or increase rare, threatened, and endangered species and species of special concern, as applicable for both plants and animals.

**Table 5. Rare, Threatened, or Endangered Species Documented on RPSF**

| Scientific Name                | Common Name          | Federal Status* | State Status* | FNAI Global Rank* | FNAI State Rank* |
|--------------------------------|----------------------|-----------------|---------------|-------------------|------------------|
| <i>Aphelocoma coerulescens</i> | Florida scrub-jay    | LT              | FT            | G2                | S2               |
| <i>Peucaea aestivalis</i>      | Bachman's sparrow    | N               | N             | G3                | S3               |
| <i>Drymarchon couperi</i>      | Eastern indigo snake | LT              | FT            | G3                | S3               |
| <i>Lampropeltis extenuata</i>  | Short-tailed snake   | UR              | ST            | G3                | S3               |
| <i>Podomys floridanus</i>      | Florida mouse        | N               | N             | G3                | S3               |
| <i>Matelea floridana</i>       | Florida spiny pod    | N               | SE            | G2                | S2               |
| <i>Gopherus polyphemus</i>     | Gopher tortoise      | C               | ST            | G3                | S3               |
| <i>Lithobates capito</i>       | Gopher frog          | N               | N             |                   | S3               |
| <i>Stylisma abdita</i>         | Hidden stylisma      | N               | SE            | G3                | S3               |
| <i>Garberia heterophylla</i>   | Garberia             | N               | ST            | G3                | S3               |
| <i>Triphora trianthophoros</i> | Threebirds orchid    | N               | ST            | G3                | S3               |

\* STATUS/RANK KEY

Federal Status (USFWS): LE= Listed Endangered, LT= Listed Threatened, N= Not currently listed, C = Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.

State Status (FWC): Animals: FE = Listed as Endangered Species at the Federal level by the USFWS, FT = Listed as Threatened Species at the Federal level by the USFWS, F(XN) = Federal listed as an experimental population in Florida, FT(S/A) = Federal Threatened due to similarity of appearance, ST = State population listed as Threatened by the FWC, SSC = Listed as Species of Special Concern by the FWC, N = Not currently listed, nor currently being considered for listing.

Plants: LE = Endangered: species of plants native to Florida 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; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act; LT = Threatened: 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 number as to cause them to be Endangered; N = Not currently listed, nor currently being considered for listing.

FNAI Global Rank: G1= Critically Imperiled, G2 = Imperiled, G3= Very Rare, G4= Apparently Secure, G5= Demonstrably Secure, GNR = Element not yet ranked (temporary), G#? = Tentative rank, T#= Taxonomic Subgroup; numbers have same definition as G#'s.

FNAI State Rank: S1= Critically Imperiled, S2= Imperiled, S3= Very Rare, S4= Apparently Secure, S5 = Demonstrably secure in Florida, S#?= Tentative Rank.

## **2. Florida Natural Areas Inventory**

The Florida Natural Areas Inventory (FNAI) is the single most comprehensive source of information available on the locations of rare species and significant ecological resources. FNAI has reported the following:

### **a. Element Occurrences**

The FNAI reports several documented Element Occurrences of rare or endangered species on or near the site based on habitat models and species range models. [Exhibit L]

Documented species are listed in Table 5.

Documented habitat includes: Depression Marsh, Mesic Flatwoods, Mesic Hammock, Sandhill, Scrubby Flatwoods, and Xeric Hammock.

### **b. Likely and Potential Habitat for Rare Species**

In addition to documented occurrences, other rare species and natural communities may be identified on or near the RPSF. [Exhibit L]

### **c. Land Acquisition Projects**

This site is located within the Longleaf Pine Ecosystem Florida Forever project, which is a part of the State of Florida's Conservation and Recreation Lands land acquisition program.

Other Florida Forever Projects within Marion County include: Bear Hammock, Florida's First Magnitude Springs, Mill Creek, Southeastern Bat Maternity Caves, Carr Farm/Price's Scrub, Heather Island/Ocklawaha River Corridor, Etoniah/Cross Florida Greenway, and South Goethe, however, the additional Florida Forever project in Marion County is not within the same Section, Township, and Range as Ross Prairie State Forest.

FNAI recommends that professionals familiar with Florida's flora and fauna conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species before any expansions or alterations are made to any facilities.

An ecological survey for natural communities, rare and exotic plants, and rare species habitat assessment was completed for RPSF by Florida Natural Areas Inventory (FNAI) in 2007. This survey confirmed the presence of four state listed plant species and three animal species. The plant species include scrub stylisma (*Stylisma abdita*),

garberia (*Garberia heterophylla*), sandhill spiny-pod (*Matelea pubiflora*) and three-birds orchid (*Triphora trianthophoros*). The animal species include the state listed gopher tortoise (*Gopherus polyphemus*) and the federally and state listed Florida scrub jay (*Aphelocoma coerulescens*) and eastern indigo snake (*Drymarchon couperi*). Other animal species of concern that have been observed on RPSF include the gopher frog (*Lithobates capito*), short-tailed snake (*Lampropeltis extenuata*), Bachman's sparrow (*Aimophila aestivalis*), and the Florida mouse (*Peromyscus floridanus*). Table 5 lists the rare, threatened, and endangered species that have been observed on RPSF according to FNAI. Habitat management may encourage other important species to populate the forest if they are occurring on other areas relatively close-by.

Garberia is found in the sandhills and scrub areas of RPSF. Restoration of the scrub areas and the continued burning of the sandhills and scrubby flatwoods will provide more suitable habitat for this species.

Sandhill spiny-pod and scrub stylisma are found in the sandhills and scrubby flatwoods of RPSF. The continued burning of these areas will provide more suitable habitat for this species.

Three-birds orchid is located in some of the mesic hammocks surrounding the depression marshes on RPSF. These areas should be left relatively undisturbed and any site improvements should be directed away from this area.

Gopher tortoise is found throughout the sandhills of RPSF. The continued use of prescribed fire to reduce the shrub component and increase the grass and forb component will provide a higher quality gopher tortoise habitat. Continued opportunities to coordinate gopher tortoise monitoring will be sought with FWC.

In 2018, monitoring found two active Florida scrub jay territories. Continued monitoring relies on Jay Watch. The continued use of prescribed fire and roller chopping in the scrubby flatwoods will improve the quality of habitat for the Florida scrub jay.

The gopher frog, short-tailed snake, Bachman's sparrow, and the Florida mouse have been sighted on RPSF at some time in the past. All these species prefer the sandhill and scrub habitats. Restoration of the overgrown scrub and the continued prescribed burning of the sandhills will provide a higher quality habitat for these species.

### **3. Florida Fish and Wildlife Conservation Commission**

The Florida Fish and Wildlife Conservation Commission, Fish and Wildlife Research Institute (FWRI) reports numerous records of listed species occurrences or critical habitats within the confines of the property. This includes state and federally listed endangered or threatened species. [Exhibit M]

Other findings by the FWC include:

- a. The property is located adjacent to and within multiple Strategic Habitat Conservation Areas.
- b. RPSF is located within an area of Species Richness.
- c. Multiple Priority Wetlands are located on and in close proximity to RPSF.
- d. FWC's response includes a map indicating multiple species locations.

These data represent only those occurrences recorded by FWC staff and other affiliated researchers. The database does not necessarily contain records of all listed species that may occur in a given area. Also, data on certain species are not entered into the database on a site-specific basis. Therefore, one should not assume that an absence of occurrences in their database indicates that species of significance do not occur in the area. [Exhibit M]

The FWC recommends the review of management guidelines in the published FWC Gopher Tortoise Species Management Plan to guide management actions for the gopher tortoise (*Gopherus polyphemus*) on the area. The FWC Gopher Tortoise Species Management Plan provides beneficial resource guidelines for habitat management and monitoring of the gopher tortoise. For your reference, the FWC Gopher Tortoise Species Management Plan can be accessed at this web address: <http://myfwc.com/wildlifehabitats/managed/gopher-tortoise/management-plan/>.

The FWC recommends the review of management guidelines in FWC's published Species Action Plans for the management of imperiled, rare, and focal bird species. The FWC Species Action Plans provide beneficial resource guidelines for habitat management and monitoring of the respective species. For your reference, the FWC Species Action Plans can be accessed at this web address: <http://myfwc.com/wildlifehabitats/imperiled/species-action-plans/>.

#### **4. Game Species and Other Wildlife**

Wildlife management will play an important role in the management of resources on RPSF. FWC provides cooperative technical assistance in managing the wildlife populations, setting hunting seasons, establishing bag and season limits, and overall wildlife and fish law enforcement.

RPSF provides habitat for a number of different species of wildlife. More common species include: white tailed deer (*Odocoileus virginianus*), wild turkey (*Meleagris gallopavo*), grey squirrel (*Sciurus carolinensis*), eastern diamondback rattlesnake (*Crotalus adamanteus*), bobcat (*Felis rufus*), and migratory birds in season.

Non-game species will be managed and protected through the restoration and maintenance of native ecosystems found on the forest. The current State Forest Handbook gives additional details for such things as snag management and retention.

#### **5. Survey and Monitoring**

FFS will implement species-specific management plans developed by FWC and other agencies, as appropriate. FFS will cooperate with FWC and other agencies in the

development of new management plans and monitoring protocols, as necessary. Such plans will be consistent with rule and statute promulgated for the management of such species.

**a. Florida Scrub Jay**

A survey of the Florida scrub-jay is being conducted annually on RPSF by Audubon Jay Watch volunteers with the assistance of FFS and FWC staff. Surveys are conducted in known FSJ territory and potential jay habitat. Survey methods for Florida scrub jays at RPSF follow Jay Watch protocols.

**b. Gopher Tortoise**

Surveys for gopher tortoise burrows have been done by FFS staff intermittently, and in cooperation with FWC. Burrow location and activity status are maintained in a GIS database. Future work may include sampling to determine baseline data on population size and monitoring over time. RPSF was ranked by FWC as a high priority on conservation lands for gopher tortoise population surveys. Future surveys will depend on resources and respective agency priorities in a given fiscal year. FFS will consult with FWC prior to any gopher tortoise population surveys to determine the recommended appropriate gopher tortoise survey methodology.

FFS may implement the use of management guidelines in the published FWC Gopher Tortoise Species Management Plan to guide management actions for the gopher tortoise on the area. Staff should make an effort to minimize impacts to known burrows, whether active, inactive, or abandoned. Protecting burrows and tortoises during mechanical treatment is important and staff and mechanical equipment operators should use caution when working in areas where tortoises or burrows occur. Staff should locate burrows prior to any mechanical work and if possible, avoiding mechanical work during September through October when gopher tortoise hatchlings are most abundant (FWC 2012).

**c. Listed Plant Species**

There are four plant species on the RPSF listed as imperiled by the state of Florida (FNAI, FDACS).

Garberia, sandhill spiny-pod, and scrub stylisma are found in the sandhills and scrub areas of RPSF. Appropriate habitats within RPSF are systematically searched for rare plant occurrence, and if found, are mapped with GPS after burns. GIS shapefiles/coverages of listed populations are updated with new occurrence records periodically, including prior rare plant locations. Three-birds orchid is located in some of the mesic hammocks surrounding the depression marshes on RPSF. These areas should be left relatively undisturbed and any site improvements should be directed away from this area.

**d. Other Rare Biota Surveys**

Surveys are done as time and staffing allow. During routine management activities, incidental sightings of rare animals and plants are GIS mapped by FFS staff. High

quality plant communities continue to have ad hoc surveys for both invasive weeds and listed plants. Newly acquired land parcels will be surveyed for listed species.

Species-specific surveys for state or federally listed wildlife species will be developed when necessary, with assistance from FWC. Such plans will be consistent with rule and statute promulgated for the management of such species. Continued biological surveys will be conducted to determine locations of these species. FFS will seek assistance from universities, FWC and other agencies to conduct surveys.

**D. Sustainable Forest Resources**

FFS practices sustainable multiple-use forestry to meet the forest resource needs and values of the present without compromising the similar capability of the future. Sustainable forestry involves practicing a land stewardship ethic that integrates the reforestation, managing, growing, nurturing, and harvesting of trees for useful products with the conservation of soil, air and water quality, wildlife and fish habitat, and aesthetics. This is accomplished by maintaining and updating accurate estimates of standing timber to ensure that the timber resources retain their sustainability. Forest inventories will be updated on a continual basis according to guidelines established by the FFS Forest Management Bureau.

FFS will implement sound silvicultural practices, including harvesting, thinning, prescribed burning, and reforestation, to establish a healthy forest with an age distribution that best duplicates natural conditions. Well timed and executed timber harvests play an integral role in the health of forest ecosystems by removing off-site trees to reestablish native species and thinning dense forest stands to improve understory habitat. This allows for less damaging prescribed burns and improved forest health.

The management of timber resources on the RPSF will not seek to maximize short-term economic revenue but rather to achieve a wide array of long-term public benefits - many of which are intrinsic and not easily quantified. Good stewardship and resource sustainability are essential goals for any proposed silvicultural activity. The health of the forest ecosystem is paramount in importance.

**E. Beaches and Dune Resources**

No beaches or dunes occur on the RPSF.

**F. Mineral Resources**

There are no known commercial mineral deposits on RPSF.

**G. Unique Natural Features and Outstanding Native Landscapes**

The most unique natural features of RPSF are the classic examples of the upland longleaf pine/turkey oak/wiregrass ecosystem. Other natural features include freshwater depression marshes and xeric scrub habitats.

**H. Research Projects / Specimen Collection**

Research projects may be performed on the forest on a temporary or permanent basis for obtaining information that furthers the knowledge of forestry and related fields. FFS cooperates with other governmental agencies, non-profit organizations, and educational institutions, whenever feasible, on this type of research. FFS will consider assisting with research projects when funds and manpower are available.

All research to be considered on RPSF must be considered in accordance with the guidelines stated in the State Forest Handbook. Any requests for research should be submitted in writing to the appropriate field staff to be forwarded to the Forest Management Bureau for approval. Requests must include: a letter outlining the purpose, scope, methodology, and location of the proposed research. Requests are subject to review by FFS Foresters, Biologists, the Forest Health Section, and the Forest Hydrology Section, as appropriate. Authorization to conduct research will require that the investigator provide copies of any reports or studies generated from any research to the FFS and the RPSF staff. Other special conditions may be applicable, and the authorization may be terminated at any point if the study is not in compliance.

Current projects include the University of Florida's study of the population ecology of southeastern pocket gopher (*Geomys pinetis*), and the University of Central Florida's work on gopher tortoise telemetry, mainly on the Halpata Tastanaki Preserve.

Completed projects include "Ecological Impacts of SR 200 on the Ross Prairie Ecosystem" (Daniel Smith, 2005) and "Impacts of Gopher Tortoise Temporary Exclusion and Relocation on Spatial Habitat Use, Survival, Immunity, and Disease" (Jonathan Napier, 2018).

#### **I. Ground Disturbing Activities**

Although the FFS's approach to handling ground disturbing activities is identified in other sections of this plan, the FFS's overall approach to this issue is summarized here. FFS recognizes the importance of managing and protecting sensitive resources and will take steps to ensure that such resources are not adversely impacted by ground disturbing activities. This includes areas such as known sensitive species locations; archaeological, fossil, and historical sites; ecotones, and wetlands.

When new pre-suppression firelines, recreational trails, or other low-impact recreational site enhancements are necessary, their placement will be reviewed by state forest field staff to avoid sensitive areas. For ground disturbing activities such as construction of buildings, parking lots, and new roads, the FFS will consult with FNAI, DHR, SWFWMD and the Acquisition and Restoration Council (ARC), as appropriate.

#### **V. Public Access and Recreation**

The primary recreation objective is to provide the public with dispersed outdoor recreational activities that are dependent on the natural environment. FFS will continue to promote and encourage public access and recreational use by the public while protecting resources and practicing multiple-use management.

Periodic evaluations will be conducted by FFS staff to monitor recreational impacts on resources. Modifications to recreational uses will be implemented should significant negative impacts be identified. New recreation opportunities and facilities, which are compatible with the primary goals and responsibilities of the FFS, will be considered only after FFS determines their compatibility with other forest uses and forest resources. Assessment of visitor impacts, outdoor recreation opportunities and facilities, and proposed changes will all be addressed in the Five-Year Outdoor Recreation Plan updates.

#### **A. Existing**

A wide variety of recreational opportunities are available at RPSF including: hiking, horseback riding, hunting, birding, nature study, and primitive camping. Hiking and horseback riding are expected to be the predominant recreational activities due to the adjacent property (Marjorie Harris Carr Cross Florida Greenway) where these two (2) activities are increasing. RPSF is part of the Florida Trail System (FTA), FFS Trailwalker Program, and the FFS Trailtrotter Program. See Exhibit D for a map of the Facilities and Improvements.

##### **a. Recreational Trails**

The Holly Hammock Trail is a 2.3-mile hiking trail providing the visitor opportunities for nature study, wildlife viewing, and photography. The hiking trail meanders through mesic hammocks, sandhills, and along depression marshes. A primitive campsite is located off this hiking trail near one of the larger depression marshes for the more adventurous recreationist. For equestrian users, the forest has 15 miles of designated trails along existing service roads and firelines. This is in addition to the equestrian trails on the Marjorie Harris Carr Cross Florida Greenway property, which borders the forest.

##### **b. Camping**

RPSF has one primitive campsite located along the Holly Hammock Hiking trail. Access to this site is made from the trailhead located at the Greenways and Trails parking area. It is a 1-mile hike to get to the camp site. The remoteness of the primitive campsite gives a unique camping experience to the public. Reservations for the site are made using the Reserve America website.

##### **c. Hunting and Fishing**

Hunting on these tracts is managed under the FWC as a WMA. Hunting on the forest is scheduled annually through a cooperative effort between the FFS and the FWC. Specific hunting seasons, quotas, and bag limits are agreed upon between the two agencies at the annual meeting held in the state office after input and recommendations from local FFS/FWC staff.

There are two (2) designated parking areas available to the hunter to access RPSF. RPSF is a walk-in only WMA. Presently there are youth supervised small game, archery, and spring turkey hunting opportunities on the forest.

#### **B. Planned**

FFS will continue to assess plans for additional recreational opportunities based on demand, carrying capacity, demographics, and impact to the resources on the forest. All planned improvements may be completed as staff and funding permits. Both terrestrial and aquatic activities will be evaluated. Any specific plans will be incorporated into the Five-Year Outdoor Recreational Plan on file at RPSF.

**1. Public Access and Parking**

Within this ten-year planning cycle, other parking and access points will be evaluated. There are no plans to install any new parking areas on Ross Prairie. We do have one parking area off of SW 145<sup>th</sup> Street in the southeastern area of the forest that could be utilized for public parking and access to the forest if any new trails were to be established on the eastern side of Ross Prairie. Forest staff currently uses this area for staging equipment during prescribed burns.

**2. Recreational Trails**

Suitable locations are being explored for additional hiking trails. With renewed construction taking place in the subdivision east of the forest it may become necessary to create a new hiking trail from an existing parking area which will link up to existing trails. The construction, maintenance, and improvements of nature and hiking trails will be on-going.

**3. Camping**

The need for more primitive campsites/facilities on the RPSF will continue to be evaluated. A few more campsites may be added now that the Campground Reservation System is up and running. Use of the current campsite will be monitored to see if demand increases with the online reservation system.

**4. Environmental Education**

At this time, only self-guided tours are available. If a need is determined in the future, RPSF may implement an environmental education program which may include guided tours, additional self-guided tours, and hands-on events.

**5. Bird Watching**

A birding checklist for RPSF may be developed in the future. The local checklists will be used as guides from TNC and FWC.

**6. Recurring projects**

Volunteers – Continued upkeep and marketing of volunteer programs  
Brochures – Re-prints of RPSF brochures

**7. Equestrian, Hunter, and Hiker Education**

The FFS will continue to inform and educate all forest visitors on the importance of the designation of Multiple-Use State Forest.

**C. Hunter Access**

The Florida Fish and Wildlife Conservation Commission manages hunting on the RPSF. Hunting on the forest is scheduled annually through a cooperative effort between the FFS

and the FWC. Specific hunting seasons, quotas, and bag limits are agreed upon between the two agencies at the annual meeting held in the state office following a meeting and recommendations from local FFS/FWC staff. If the cleared area off SW 145<sup>th</sup> Street is opened for parking public vehicles, it will be added as a designated hunter access point.

#### **D. Education**

The focus for this next ten-year period will be to educate the surrounding communities about prescribed fire and its benefits, the process of conducting prescribed burns, how to prevent wildfires and being firewise communities.

### **VI. Forest Management Practices**

#### **A. Prescribed Fire**

Forest management practices on RPSF are important in the restoration and maintenance of forest ecosystems and provide a variety of socio-economic benefits to Floridians. Management practices on RPSF include a prescribed fire program which is an effective tool in controlling the growth of hardwood trees, stimulating the recovery of native herbaceous groundcover, and promoting the regeneration of native pines.

FFS utilizes a fire management program on state forests that includes wildfire prevention, detection and suppression, and prescribed burning. This program is the responsibility of FFS's Waccasassa Forestry Center and is detailed in the Five-Year Prescribed Burning Management Plan. Emphasis will be placed on prescribed burning, wildfire prevention, and education to help reduce wildfire occurrence on the forest.

A Fire History spreadsheet detailing the recent history of prescribed burns and wildfires at RPSF is available in Exhibit N.

FFS has no fire towers and one tractor / plow units located at RPSF Headquarters. Additional support is available from Indian Lake Forestry Station in eastern Marion County. Personnel and equipment stationed at RPSF will be used for pre-suppression practices, establishment of firebreaks, rehabilitation of existing firelines, construction of new firelines, maintenance of perimeter firebreaks, and prescribed burning.

The annual forest prescribed burning program produces multiple benefits. The purposes of prescribed burning on RPSF are to facilitate forest management operations; enhance wildlife and listed species habitat; decrease fuel loading; enhance public safety; and restore, maintain, and protect all native ecosystems, ecotones, and their ecological processes. FFS personnel are responsible for planning and implementing the annual prescribed burn program for RPSF, which will consist of growing and dormant season burns. An update to the Five-Year Prescribed Burning Management Plan is developed each year by FFS staff. All burns conducted on RPSF are executed by Florida Certified Prescribed Burn Managers in accordance with F.S.-590.125 and F.A.C. 5I-2. The smoke screening system will be used as a smoke management tool to minimize the adverse impact of smoke that may affect residential communities, public roads, schools, and other smoke sensitive areas.

According to FNAI, historic, fire dependent natural communities on RPSF are estimated to have occupied approximately 3,400 acres, and to have burned at approximately two (2)

– five (5) year intervals, depending on the community. Past land uses have left some of these historically fire dependent communities in a condition unable to carry prescribed fire. Based on current conditions and management objectives, RPSF will plan for 600-1500 acres to be prescribed burned annually to keep these communities within the desired intervals. Currently, FFS staff estimates 3,000 acres at RPSF are within the desired fire rotation. Restoration of these areas by removal of the off-site species and reforestation will increase prescribed burn acreage goals over time. Meeting prescribed fire goals will be largely dependent on weather conditions, personnel, and statewide emergency situations such as wildfires, hurricanes, and other natural disaster response and relief.

This portion of the state has an extended growing season for pines and other vegetation. There is also an extended wet season that could limit the frequency of prescribed burns. Therefore, the objective is to encourage year-round prescribed burning whenever possible, with the understanding that prescribed fire will be applied both in the dormant and growing season periods.

Fires caused by lightning at the end of the dry season and through the rainy season (growing season) represent the natural fire regime in central Florida. It is believed that native range present at RPSF has been subjected to this type of fire for many centuries. Numerous groundcover species found in sandhill communities are adapted to and dependent upon growing season fires. However, Florida ranchers have typically burned native range in winter or early spring. Prescribed fires conducted in late spring or summer will create a ground cover mosaic that will promote herbaceous plant species, while also retaining some palmetto cover for game and non-game wildlife species. Inclusion of periodic spring and summer prescribed burns in the typical burn regime will likely benefit native plant communities and wildlife.

Control of wildfires and the proper application of prescribed fire in the Wildland-Urban Interface (WUI) is important for FFS to address. Any current or future encroachment by development near RPSF may present smoke and fire management challenges.

## **1. Fire Management**

FFS will develop a fire management plan that will serve as a working tool and an informational document for RPSF. The plan will provide guidelines regarding wildfire suppression and prescribed fire management. It will specify burn units, burn unit prescriptions, appropriate fire return intervals, and fire suppression planning. The plan may be reviewed and amended as necessary.

The use of prescribed fire in the management of timber, wildlife, and ecological resources on RPSF is necessary if the FFS is to fulfill the goals and objectives stated in this plan including: enhancing and restoring native plant communities, managing protected species, managing timber, recreation, historical, and other resource values. The fire management plan and its objectives shall reflect and incorporate these multiple-resource objectives.

- a. **Prescribed Fire:** Prescribed fire is the most important land management tool, both ecologically and economically, for managing vegetation and natural communities and perpetuating existing wildlife populations in Florida. Forest operation records and staff experience should be combined with the FNAI inventory and assessment (2007) to identify areas that may require mechanical treatments in conjunction with prescribed fire to restore a more natural vegetative structure.
- b. **Burn Unit Plans:** Each prescribed fire will be conducted in accordance with FFS regulations and state law (Rule Chapter 5I-2 F.A.C., Chapter 590 F.S.) and have a burn unit plan (or prescription). Each prescription will contain, at a minimum, the information, as required by Section 590.125(3), F.S., needed to complete the FFS Prescribed Burn Plan Form FDACS 11461.

Aerial ignition may be considered for large burn units where this tactic can be cost effective for higher burn acreages. Consideration should be given to rotating burn units between dormant and growing season burns over time. Fire return intervals for a burn unit are recommended to fall within the natural, historic range for the dominant natural community or communities within a given burn unit.

Based upon available species survey data, burn units within a prescription that have listed wildlife species shall explicitly state their presence and any restrictions or requirements relative to prescribed burning in proximity to these species or habitats. These may include time of year, pre-burn preparation, fire return intervals, and other burn parameters.

## **B. Wildfires, Prevention, Fire / Prescribed Fire Strategies**

FFS utilizes a comprehensive wildfire management approach on state forests that includes an ongoing program of wildfire prevention, detection and suppression, and prescribed burning. Implementation of this program is the responsibility of FFS's Waccasassa Forestry Center. Emphasis will be placed on consistent accomplishment of prescribed burning goals and community outreach to increase public understanding of wildfire prevention and the benefits of prescribed fire.

FFS has three paramount considerations regarding wildfires, and these are listed in priority order:

- 1) Protection of human lives
- 2) Protection of improvements
- 3) Protection of natural resources

All procedures regarding wildfire will follow the State Forest Handbook and the RPSF Fire Management Plan.

## 1. Suppression Strategies

If a wildfire occurs on RPSF there are two (2) alternative suppression strategies as defined below:

- a. **Contain and Control** is defined as a suppression strategy where a fire is restricted to a certain area by using existing natural or constructed barriers that stop the fires spread under the prevailing and forecasted weather until it is out. This strategy allows the use of environmentally sensitive tactics based on fuels, fire behavior and weather condition that keep a wildfire from burning a large area or for a long duration.
- b. **Direct Suppression** is defined as a suppression strategy where aggressive suppression tactics are used to establish firelines around a fire to halt its spread and to extinguish all hotspots. This alternative is used whenever there is a threat to human life, property, private lands, and/or critical natural or cultural resources. This strategy should also be used when the total district fire load dictates that crews not be involved with individual fires for any longer than absolutely necessary.

Appropriate suppression action will be that which provides for the most reasonable probability of minimizing fire suppression cost and critical resource damage, consistent with probable fire behavior, total fire load, potential resource and environmental impacts, safety, and smoke management considerations. The Incident Command System (ICS) will be used for all suppression actions.

## 2. Smoke Management

Caution will be exercised to prevent a public safety or health hazard from the smoke of any prescribed burn or wildfire. Prescribed burns must pass the smoke screening procedure and be conducted by a certified burner. If smoke threatens to cause a safety hazard, then direct immediate suppression action will be taken.

## 3. Fire Breaks and Firelines

A system of permanent fire breaks will be developed and maintained around and within the boundaries of RPSF to guard against fires escaping from and entering the forest. Such fire breaks will consist of natural barriers, roads, trails, permanent grass strips, and where appropriate, well maintained harrowed lines. All pre-suppression fire breaks will meet the established Silvicultural Best Management Practices (BMP) criteria.

During wildfire suppression, the use of water and foam, permanent fire breaks, natural barriers, and existing roads and trails for firelines can be used when human life safety, property, and resource considerations allow. Plowed and/or bulldozed lines will be used for initial installation of firelines in heavy fuels and in cases where it's considered necessary to protect life, property, or resources and/or to minimize threats to firefighters. Plow and bulldozed lines will be rehabilitated and BMPs implemented as soon as practical after the fire is suppressed.

## 4. Sensitive Areas

RPSF has on file in the state forest headquarters an Environmentally Sensitive Area Map that identifies protected sites such as critical wetlands and archaeological and

historical sites known to occur on the state forest. FFS personnel are aware of these areas in the event of a wildfire. Special precautions will be followed when prescribed burning in sensitive areas on RPSF. When possible, fire staff will avoid line construction in wetland ecotones throughout the forest.

**5. Firewise Communities**

Communities in wildfire prone areas must work together to be fully prepared for wildfire. A “Fire Adapted Community” incorporates people, buildings, businesses, infrastructure, cultural resources, and natural areas to prepare for the effects of wildfire. The Fire Adapted Community concept serves as an umbrella to the various programs that help communities become more fire adapted. The FFS has implemented the Fire Adapted Community concept for prevention statewide. Specifically, in the area adjacent to or nearby RPSF, efforts have included identifying Communities at Risk through the web-based South WRAP (Southern Area Wildfire Risk Assessment Portal) and working with communities to become Firewise.

**6. Adjacent Neighbor Contacts**

The staff at RPSF maintains a list of neighbors that have requested they be notified in advance of prescribed burns. These individuals are contacted by telephone or email with potential sites and dates of anticipated prescribed burns.

**7. Post-Burn Evaluations**

A post-burn evaluation is required for each wildfire and prescribed burn on the state forests to assess impacts on timber and habitat. Based on the evaluations, decisions will be made on timber salvage operations. A historical fire record for all fires and prescribed burns will be maintained. This will be accomplished using the burn plans in the Forester’s files and through the maintenance of GIS data. These records are intended to provide data for future management decisions.

**C. Sustainable Forestry & Silviculture**

Timber is a valuable economic and ecological resource, and timber harvesting for the purposes of generating revenue, improving stand viability, forest health, wildlife, and ecological restoration and maintenance is critical to the silvicultural objectives on the state forest.

**1. Strategies**

The following silvicultural strategies will apply to silvicultural practices on RPSF:

- a. To restore and maintain forest health and vigor through timber harvesting, prescribed burning, and reforestation, both naturally and artificially, with species native to the site.
- b. To create, through natural regeneration, uneven-aged, and even-aged management, a forest with both young and old growth components that yields sustainable economic, ecological, and social benefits.

**2. Silvicultural Operations**

Silvicultural operations on RPSF will be directed toward improving forest health, wildlife habitat, ecological and economical sustainability, as well as toward recovery

from past management practices that are not in accordance with the objectives of this plan. Stands of off-site species with merchantable volume will be scheduled for harvest, followed by reforestation with the appropriate tree species. Herbicide applications may be necessary to control woody competition and to re-establish desired natural species of both overstory and groundcover. Site preparation methods may include prescribed fire, mechanical vegetation control, and/or herbicide applications. Herbicides used will be registered for forestry use by the U.S. Environmental Protection Agency (EPA) and will not adversely affect water resources.

Prescribed fire is the most desirable method of vegetation control in fire dependent ecosystems. However, due to the existence of areas where fuel loads have reached dangerous levels or urban interface dictates prescribed fire is not suitable, mechanical or chemical vegetation control may be used. Mechanical and / or chemical vegetation control will be utilized where appropriate as determined by FFS staff for wildlife enhancement, fuel mitigation, and reforestation.

Maintenance and restoration of timber stands and natural communities through timber harvesting will include thinning for maintenance, regeneration harvests applicable to the species present, and clear-cutting to remove off-site species.

All silvicultural activities, including timber harvesting and reforestation, will meet or exceed the standards in FFS's Silviculture Best Management Practices (BMPs) and the State Forest Handbook, and will follow the Five-Year Silviculture Management Plan.

The goal on RPSF is to promote and achieve natural regeneration on all the natural stands of longleaf through the use of prescribed fire. Artificial regeneration will be utilized if the natural means does not yield the necessary results. In addition, if mechanical or chemical treatments are used to aid in the establishment of longleaf pine, treatments will be selected that result in the desired effects on all site species. Chemically treated sites will leave residual oaks to benefit wildlife.

The natural longleaf pine timber stands at RPSF are currently in the development phase of stand structure (three age classes) needed to utilize uneven-aged timber management. Therefore, uneven-aged management will be the preferred method. There is no target rotation age for un-even aged managed timber stands. Stand dynamics is based upon maintaining stand basal area between 60-80 square feet per acre. Individual tree selection and group tree selection are the preferred timber harvest methods to use in order to maintain this basal area range.

Planted longleaf pine stands will utilize the even-aged management system to eventually achieve the natural looking stand characteristics. Row thinnings, selective tree thinnings, group selection, shelterwood, and clearcuts may all be required to introduce a natural look to these pine plantations. Mechanical and chemical treatments may be required to impact the bahiagrass ground cover and allow natural regeneration and the reintroduction of native groundcover.

One of the goals of RPSF is to practice sustainable forest management. In order to achieve this goal, an accurate timber inventory must be completed, and timber harvests carefully selected to achieve true even and uneven aged management. Because of the limited commercial volumes there has been only one timber harvest on RPSF since the State acquired the property. As the large class of non-commercial size trees move into the commercial size class in the next ten years, initial timber harvests on RPSF may continue.

### **3. Forest Inventory**

The purpose of a forest inventory is to provide FFS resource managers with information and tools for short and long-range resource management and planning. Ten percent of RPSF forest will be re-inventoried annually to provide an accurate estimation of the standing timber and to ensure that stands will be managed sustainably.

Timber / forestry resources available on the property include loblolly, longleaf, sand pine, slash pines, and mixed hardwoods.

### **4. Timber Sales**

Timber sales are generally advertised for competitive bids and sold on a per unit or lump sum basis. All timber sales are conducted according to guidelines specified in the State Forest Handbook and in accordance with Forestry Policy and Procedures.

## **D. Non-Native Invasive Species Control**

FFS employees continually monitor the forest for non-native invasive species while conducting management activities. FFS will locate, identify, and apply control measures with the intent to eradicate or control non-native invasive species.

On-going maintenance and monitoring strategies are outlined in the Five-Year Ecological Management Plan which is developed to locate, identify, and control non-native invasive plant species. Occurrences of non-native invasive species are recorded in the RPSF GIS database and are monitored and treated annually as funding permits. The GIS database is updated as new infestations are discovered.

Adjacent landowners who are known to have these species on their property will be approached in an effort to cooperate on control measures. FFS works to control the spread of non-native invasive species by decontaminating agency equipment and equipment used by private contractors according to the State Forest Handbook.

FFS will enlist support from FWC in efforts to control non-native invasive animals. Feral hogs (*Sus scrofa*) have been present on RPSF in the past but are not known to occur in any substantial numbers at this time. FWC has issued a feral hog control permit to FFS for all state forests and FFS will allow for hog removal on RPSF through trapping and hunting if necessary.

Training in the identification and control of invasive species will be scheduled for personnel as time and resources permit. Training concerning non-native invasive plants

will be coordinated with the Forest Management Bureau's Forest Health Section. Control of non-native invasive species will be target specific and use a variety of methods including appropriately labeled and efficacious herbicides.

**Table 6. Non-Native Invasive Plant Species Occurring on RPSF**

| Scientific Name               | Common Name            | Treatment Strategy     | Acres Impacted | Increasing /Decreasing |
|-------------------------------|------------------------|------------------------|----------------|------------------------|
| <i>Imperata cylindrica</i>    | Cogon grass            | Herbicide              | 5              | Stable                 |
| <i>Melenis repens</i>         | Natal grass            | Herbicide/hand removal | 5              | Increasing             |
| <i>Albizia julibruisin</i>    | Mimosa                 | Herbicide              | 3              | Stable                 |
| <i>Nephropolis cordifolia</i> | Tuberous sword fern    | Herbicide              | 2              | Stable                 |
| <i>Coloscacia esculenta</i>   | Wild taro              | Herbicide/hand removal | .20            | Stable                 |
| <i>Lygodium japonicum</i>     | Japanese climbing fern | Herbicide              | .01            | Stable                 |
| <i>Sus scrofa</i>             | Feral hog              | Consult FWC as needed  |                | Low/stable             |

All species being managed are Florida Exotic Pest Plant Council Category 1 or 2 species. Staff also scouts for and manages Cooperative Invasive Species Management Areas and Early Detection Rapid Response species when found.

#### **E. Insects, Disease and Forest Health**

Management strategies will include restoration and maintenance of native species and natural plant communities, natural prescribed fire regimes specific for plant communities, site-appropriate tree plantings, and the natural regeneration of native species. In addition, the control or elimination of invasive and non-native species will promote overall good forest health.

There are no known insects and disease problems on RPSF. Forest management practices will be conducted in such a way as to avoid insect and disease problems. In the event of an outbreak of any disease or insects, consultation with the Forest Management Bureau's Forest Health Section will be sought to formulate an appropriate and effective response. Specific long-range strategies to avoid and/or minimize losses to such outbreaks in the future will be the management objective. State forest management staff will consult with the Forest Health Section to develop scientifically sound responses and/or management prescriptions.

In compliance with Section 388.4111, Florida Statutes and in Section 5E-13.042, F.A.C., all lands have been evaluated and subsequently designated as environmentally sensitive and biologically highly productive. Such designation is appropriate and consistent with the previously documented natural resources and ecosystem values and affords the appropriate protection for these resources from arthropod control practices that would impose a potential hazard to fish, wildlife, and other natural resources existing on this property. The local arthropod control agencies in Marion County will be notified of the approval of this plan documenting this designation. [Exhibit W]

As a result, prior to conducting any arthropod control activities on RPSF, the local agency must prepare a public lands control plan that addresses all concerns that FFS may have for

protecting the natural resources and ecosystem values on the state forest. In this regard, FFS will provide the local agency details on the management objectives for RPSF. This public land control plan must be in compliance with DACS guidelines and using the appropriate DACS form. The plan must then be approved and mutually adopted by the county, FFS, and DACS, prior to initiation of any mosquito control work. Should the local mosquito control district not propose any mosquito control operations on the property, no arthropod control plan is required. [Exhibit W]

#### **F. Use of Private Land Contractors**

The forest manager makes ongoing evaluations of the use of private contractors and consultants to facilitate the total resource management activities of this state forest. The opportunities for outsourcing land management work include, or are anticipated to include:

1. Herbicide applications
2. Restoration activities
3. Tree reforestation
4. Timber harvesting
5. Biological assessments and mapping
6. Boundary/State Forest Surveys

#### **VII. Proposed Management Activities for Natural Communities**

In 2007, FNAI completed an inventory and natural community mapping project on RPSF and a historic natural community type map was created. [Exhibit Q] Current natural communities and cover types can be found in [Exhibit P].

**Table 7. Current Natural Communities (Acres)**

| Natural Community Type          | Current Natural Community (Approximate Acres*) |
|---------------------------------|------------------------------------------------|
| Depression Marsh                | 153                                            |
| Mesic Flatwoods                 | 17                                             |
| Mesic Hammock                   | 281                                            |
| Sandhill                        | 1,893                                          |
| Scrubby Flatwoods               | 366                                            |
| Xeric Hammock                   | 300                                            |
| Other Altered Landcover Types** | 510                                            |

\* Note rounding errors exist in category totals

\*\* See Table 8

**Table 8. Other Altered Landcover Types Found on RPSF**

| Altered Landcover Type*       | Current Acres Mapped |
|-------------------------------|----------------------|
| Utility Corridor              | 100                  |
| Restoration Natural Community | 410                  |

\*Protocol as described in Appendix 2 of FNAI's "Guide to the Natural Communities of Florida", 2010 Edition

For the purposes of this management plan, restoration is defined as the process of returning ecosystems to the appropriate structure and species composition, based on soil type.

Management during this ten-year period will begin with a forest wide assessment of the fuel loading, timber densities, reforestation needs, and groundcover in order to develop a five-year comprehensive operational plan for prescribed burning and other operational plans across the forest. Strategies may include thinning of pine plantations, mowing or chopping in areas of heavy fuel buildup, application of both dormant and growing season fires, and/or the use of herbicides to control hardwoods and/or hardwood sprouting. Fire return intervals are included as a guide (Table 9) and may vary depending upon specific conditions. The intention is to use prescribed fire in a manner and frequency that will attain the desired goals. Prescribed fire frequency and timing is generally adjusted depending upon the conditions of the specific area.

**Table 9. Prescribed Fire Interval Guide on RPSF**

| Habitat Type      | Historic Fire Return Intervals* | RPSF Fire Frequency Goal (Local) | Comments                                                                           |
|-------------------|---------------------------------|----------------------------------|------------------------------------------------------------------------------------|
| Depression Marsh  | 1 - 8                           | 2-5                              | Frequent fire will help reduce unwanted woody species and reduce oak encroachment. |
| Mesic Flatwoods   | 2 - 4                           | 3-5                              |                                                                                    |
| Mesic Hammock     | 1 - 8                           | 5-100+                           | Burning surrounding communities will establish a more natural ecotone.             |
| Sandhill          | 1 - 3                           | 2-3                              |                                                                                    |
| Scrubby Flatwoods | 3 - 8                           | 3-5                              |                                                                                    |
| Xeric Hammock     | Varies                          | 3-5 Periphery, Interior 100+     |                                                                                    |

\* As determined by FNAI

The following community descriptions, existing condition descriptions, and management recommendations are taken from a 2007 FNAI mapping project report and the Guide to the Natural Communities of Florida (FNAI 2010), as well as from the knowledge and experience gained by FFS during forest inventory efforts and routine field work on RPSF.

To achieve the objectives outlined in this plan, the following management activities will be performed in the natural communities at RPSF during the next ten-year planning period. Goals, desired conditions, standards, and guidelines provide management area direction. These goals and desired conditions may take many planning cycles to attain.

#### **A. Depression Marsh**

##### **Description:**

Depression marsh is a herbaceous wetland found in small, shallow depressions. The vegetation often occurs in concentric bands along the hydrologic gradient, and has a diverse herbaceous community dominated by grasses and sedges in all but deep-water areas. A canopy is absent, and the shrub stratum very open. The shrub buttonbush (*Cephalanthus occidentalis*) may be locally common and peelbark St. John's wort (*Hypericum fasciculatum*) is infrequent. The dominant herbaceous groundcover may have blue maidencane (*Amphicarpum muhlenbergianum*), shortspike bluestem (*Andropogon brachystachyus*), bushy bluestem (*Andropogon glomeratus*), broomsedge bluestem (*Andropogon virginicus* var. *glaucus*), big carpetgrass (*Axonopus furcatus*), flatsedge (*Cyperus* spp.), witchgrass (*Dichanthelium* spp.), flattened pipewort (*Eriocaulon*

*compressum*), southern umbrellasedge (*Fuirena scirpoidea*), Small's bogbutton (*Lachnocaulon minus*), maidencane (*Panicum hemitomon*), swamp smartweed (*Polygonum hydropiperoides*), pickerelweed (*Pontederia cordata*), beakrush (*Rhynchospora* spp.), sand cordgrass (*Spartina bakeri*), and yellow hatpins (*Syngonanthus flavidulus*). The deeper water areas include hairy smartweed (*Polygonum hirsutum*), beakrush (*Rhynchospora inundata*), and water lily (*Nymphaea odorata*).

#### **Current Conditions:**

RPSF has an extensive high-quality marsh system in the north central section and scattered smaller depressions elsewhere. These depression marshes are generally in good condition with little woody plant encroachment. One large depression marsh in the north end has an artificial dike around its perimeter. The large marshes are part of Ross Prairie which continues north onto the adjacent Cross Florida Greenway. This series of depressions range from about five to more than 50 acres, and are often separated by narrow ridges of uplands. Although they are sometimes quite large, they are not considered to be basin marsh as they are generally very shallow and regularly dry out completely. During our survey, standing water was present only in a few deep holes.

The composition of the vegetation varies with location and depth of the depression. The smaller and shallower marshes may have mesic or even xeric plant species mixed with wetland species because of recent drought conditions. A canopy is generally absent, but may include an occasional slash pine (*Pinus elliottii*), longleaf pine (*Pinus palustris*), and live oak (*Quercus virginiana*). The shrub buttonbush (*Cephalanthus occidentalis*) is widespread and common, frequently persisting in the most dry and shallow marshes, and even spreading into adjacent upland hammock. Other infrequent shrubs include peelbark St. John's wort (*Hypericum fasciculatum*), rusty staggerbush (*Lyonia ferruginea*), prickly pear (*Opuntia humifusa*), live oak seedlings, coastalplain willow (*Salix caroliniana*), saw palmetto (*Serenoa repens*), and sparkleberry (*Vaccinium arboreum*). The herbaceous groundcover has blue maidencane (*Amphicarpum muhlenbergianum*), shortspike bluestem (*Andropogon brachystachyus*), bushy bluestem (*Andropogon glomeratus*), broomsedge bluestem (*Andropogon virginicus* var. *glaucus*), big carpetgrass (*Axonopus furcatus*), cladina lichen (*Cladina evansii*), flatsedge (*Cyperus* spp.), witchgrass (*Dichanthelium* spp.), dogfennel (*Eupatorium capillifolium*), falsefennel (*Eupatorium leptophyllum*), southern umbrellasedge (*Fuirena scirpoidea*), rush (*Juncus* spp.), Small's bogbutton (*Lachnocaulon minus*), maidencane (*Panicum hemitomon*), swamp smartweed (*Polygonum hydropiperoides*), pickerelweed (*Pontederia cordata*), beakrush (*Rhynchospora* spp.), sand cordgrass (*Spartina bakeri*), and yellow hatpins (*Syngonanthus flavidulus*). Hairy smartweed (*Polygonum hirsutum*), beakrush (*Rhynchospora inundata*), and water lily (*Nymphaea odorata*) occur in deeper holes.

#### **Fire Regimes:**

Depression marshes likely burned irregularly every 1 to 8 years depending on water levels at the time of fires on the landscape. Historically, fires generally occurred early in the lightning season (April-June) when water was low and surrounding communities were dry.

#### **Management Needs:**

Fire suppression or burning only during winter months when the depressions hold water allows establishment of shrubs or trees. This may eventually reduce the hydroperiod and lead to succession of the community to wet flatwoods. Fire should be prescribed in the surrounding community at a time when water in the marshes is low or absent (late winter to mid-summer), allowing fires to burn through the marsh. Depression marsh requires frequent fire every two to five years to eliminate woody trees and shrubs. Roads and firebreaks should not be located on the periphery of the depression marshes. Off-road vehicle trails through marshes should be eliminated wherever possible.

The potential to remove a dike system around a 29-acre depression marsh was evaluated in the last planning period by the Forest Hydrology section (Robin Holland - Diked Wetland Assessment 2017). After consultation with SWFWMD staff on this report, no decisions have been made and this project is still ongoing.

## **B. Mesic Flatwoods**

### **Description:**

Mesic flatwoods is an upland forest with an understory composed of varying mixtures of shrubs and grasses. The target condition has a canopy of longleaf pine (*Pinus palustris*) covering a shrub stratum of five feet or less. Ideally, fire should be used to maintain the short shrub layer, typically dominated by saw palmetto (*Serenoa repens*), to less than 75 percent cover to allow ample light for herbaceous species. The groundcover should be diverse and be dominated by wiregrass (*Aristida stricta*). Weedy cover should be less than 5 percent.

### **Current Conditions:**

On RPSF, mesic flatwoods occur only in very limited areas, often as small pockets at the bottom of sandhill ridges. The mesic flatwoods generally have high fuel loads and need more frequent fire to increase groundcover quality. The extreme eastern side has the largest pocket of mesic flatwoods at RPSF. The canopy has mature longleaf pine (*Pinus palustris*) over a sub-canopy of young longleaf pine, bluejack oak (*Quercus incana*), turkey oak (*Quercus laevis*), sand post oak (*Quercus margaretta*), myrtle oak (*Quercus myrtifolia*), and live oak (*Quercus virginiana*). The shrub layer is dominated by dense saw palmetto (*Serenoa repens*), with occasional taller American holly (*Ilex opaca*), myrtle oak, sassafras (*Sassafras albidum*), and sparkleberry (*Vaccinium arboreum*). The depauperate herbaceous cover has broomsedge bluestem (*Andropogon virginicus*) but lacks wiregrass (*Aristida stricta* var. *beyrichiana*).

### **Fire Regimes:**

Historically, fires ignited by lightning during the early thunderstorm season (April-June) would burn the mesic flatwoods every 2 to 4 years. Mesic flatwoods depend on frequent, low-intensity fires to maintain an open structure and diverse herbaceous layer.

### **Management Needs:**

Management goals for mesic flatwoods should focus on frequent prescribed fires. Timing of fires should ideally be during the early lightning season or as close to this period as possible. New ground disturbances should be avoided to prevent establishment of weedy

species.

### C. **Mesic Hammock**

#### **Description:**

Mesic hammock is an upland forest community of evergreen broadleaved trees occurring in naturally fire-protected areas. Mesic hammock typically has a closed canopy of live oak (*Quercus virginiana*), laurel oak (*Quercus hemisphaerica*), and infrequent longleaf pine (*Pinus palustris*). American holly (*Ilex opaca*), sweetgum (*Liquidambar styraciflua*), magnolia (*Magnolia grandiflora*), wild olive (*Osmanthus americanus*), red bay (*Persea borbonia*), laurel oak, live oak, and cabbage palm (*Sabal palmetto*) make up the subcanopy. The shrub layer is sparse to moderate and dominated by sparkleberry (*Vaccinium arboreum*), with lesser amounts of American holly (*Ilex opaca*), red bay, laurel oak, saw palmetto (*Serenoa repens*), Darrow's blueberry (*Vaccinium darrowii*), shiny blueberry (*Vaccinium myrsinites*), and deerberry (*Vaccinium stamineum*). The groundcover is mainly partridgeberry (*Mitchella repens*) with occasional sarsaparilla vine (*Smilax pumila*). The epiphytes green-fly orchid (*Epidendrum conopseum*), resurrection fern (*Polypodium polypodioides*), and Spanish moss (*Tillandsia usneoides*) are common.

#### **Current Conditions:**

At RPSF, mesic hammock of high quality occurs along the perimeter of the depression marshes in the northern half of the forest. It often intergrades with xeric hammock making the border hard to distinguish on current aerial photographs. The mature mesic hammock contains a vigorous and large population of the state threatened three-bird's orchid (*Triphora trianthophoros*). The mesic hammock and orchid population extend north onto Cross Florida Greenway property. The slight increase in acreage is probably because of infrequent fires that allows mesic hammock to spread slightly into sandhill around the depression marshes.

#### **Fire Regimes:**

Fires rarely occur in mesic hammock because of its protected location along wetlands. Lightning ignited fires spreading from surrounding uplands likely occurred every 1 to 8 years, and probably few were able to burn into the hammock.

#### **Management Needs:**

Prescribed burns in the adjacent natural communities should naturally extinguish along the hammock edge. Firebreaks in the mesic hammock should be discouraged to help minimize invasion by weedy or non-native invasive species.

### D. **Sandhill**

#### **Description:**

Sandhill is a xeric upland community characterized by a pine canopy with an understory of deciduous oaks and fairly dense groundcover on well-drained hills of sand. Sandhill has a canopy of longleaf pine (*Pinus palustris*) with a subcanopy of turkey oak (*Quercus laevis*) and sand live oak (*Quercus geminata*). Pine recruitment is high with numerous saplings and seedlings. Other subcanopy species include bluejack oak (*Quercus incana*) and sand post oak (*Quercus margaretta*). The open shrub strata include woolly pawpaw (*Asimina*

*incana*), bigflower pawpaw (*Asimina obovata*), garberia (*Garberia heterophylla*), dwarf huckleberry (*Gaylussacia dumosa*), sand holly (*Ilex ambigua*), gopher apple (*Licania michauxii*), rusty staggerbush (*Lyonia ferruginea*), wax myrtle (*Myrica cerifera*), pricklypear (*Opuntia humifusa*), wild olive (*Osmanthus americanus*), silk bay (*Persea borbonia* var. *humilis*), sand live oak, laurel oak (*Quercus hemisphaerica*), bluejack oak, turkey oak, sand post oak, myrtle oak (*Quercus myrtifolia*), winged sumac (*Rhus copallinum*), scrub palmetto (*Sabal etonia*), saw palmetto (*Serenoa repens*), rufous Florida bully (*Sideroxylon rufohirtum*), sparkleberry (*Vaccinium arboreum*), Darrow's blueberry (*Vaccinium darrowii*), shiny blueberry (*Vaccinium myrsinites*), deerberry (*Vaccinium stamineum*), and Adam's needle (*Yucca filamentosa*). The groundcover is a diverse mix of short shrubs and herbs with a small percentage of bare sand. The diverse groundcover is dominated by wiregrass (*Aristida stricta* var. *beyrichiana*) and pineywoods dropseed (*Sporobolus junceus*). Other herbaceous species are Florida greeneyes (*Berlandiera subacaulis*), capillary hairsedge (*Bulbostylis ciliatifolia*), coastalplain chaffhead (*Carphephorus corymbosus*), tread softly (*Cnidoscolus stimulosus*), wild buckwheat (*Eriogonum tomentosum*), eastern milkpea (*Galactia regularis*), frostweed (*Helianthemum corymbosus*), skyblue lupine (*Lupinus diffusus*), sandhill spiny pod (*Matelea pubiflora*), coastalplain palafox (*Palafoxia integrifolia*), narrowleaf silkgrass (*Pityopsis graminifolia*), bracken fern (*Pteridium aquilinum*), sandyfield beaksedge (*Rhynchospora megalocarpa*), little bluestem (*Schizachyrium scoparium*), lopsided indiagrass (*Sorghastrum secundum*), and queensdelight (*Stillingia sylvatica*). Weedy cover should be less than five percent.

#### **Current Conditions:**

Sandhill covers the majority of RPSF, much of it in good to excellent condition. The rolling hills on the western side have the highest species diversity due to a history of more frequent, recent fires. Mature to older mature longleaf pine (*Pinus palustris*) form the canopy. Pine recruitment is high with numerous saplings and seedlings. Younger mature pines, abundant turkey oak (*Quercus laevis*), and occasional sand live oak (*Quercus geminata*) make up the subcanopy. The shrub strata are very open with very little saw palmetto (*Serenoa repens*). The sandhill on the east side is similar but has a higher percentage of younger mature pines. Bracken fern (*Pteridium aquilinum*) is abundant in some sections, and occasional small pockets of xeric hammock and sand pine (*Pinus clausa*) dot the area. In contrast, large parts of the eastern section north of SW 145 Street remain overgrown with mature oaks and sand pine. Recent prescribed burning has begun to improve conditions in this area. The decrease in acreage is a result of infrequent fires allowing xeric hammock to cover former sandhill.

Typical sandhill vegetation at RPSF has a canopy of longleaf pine over turkey oak and sand live oak. Other tree species include sand pine, laurel oak (*Quercus hemisphaerica*), bluejack oak (*Quercus incana*), and sand post oak (*Quercus margaretta*). The open shrub strata includes woolly pawpaw (*Asimina incana*), bigflower pawpaw (*Asimina obovata*), garberia (*Garberia heterophylla*), dwarf huckleberry (*Gaylussacia dumosa*), sand holly (*Ilex ambigua*), gopher apple (*Licania michauxii*), rusty staggerbush (*Lyonia ferruginea*), wax myrtle (*Myrica cerifera*), pricklypear (*Opuntia humifusa*), wild olive (*Osmanthus americanus*), silk bay (*Persea borbonia* var. *humilis*), sand live oak, laurel oak, bluejack oak, turkey oak, sand post oak, myrtle oak (*Quercus myrtifolia*), winged sumac (*Rhus*

*copallinum*), scrub palmetto (*Sabal etonia*), saw palmetto (*Serenoa repens*), rufous Florida bully (*Sideroxylon rufohirtum*), sparkleberry (*Vaccinium arboreum*), Darrow's blueberry (*Vaccinium darrowii*), shiny blueberry (*Vaccinium myrsinites*), deerberry (*Vaccinium stamineum*), and Adam's needle (*Yucca filamentosa*). The diverse groundcover is dominated by wiregrass (*Aristida stricta* var. *beyrichiana*) and pineywoods dropseed (*Sporobolus junceus*). Other herbaceous species are Florida greeneyes (*Berlandiera subacaulis*), capillary hairsedge (*Bulbostylis ciliatifolia*), coastalplain chaffhead (*Carphephorus corymbosus*), cladina lichen (*Cladina subtenuis*), tread softly (*Cnidioscolus stimulosus*), wild buckwheat (*Eriogonum tomentosum*), eastern milkpea (*Galactia regularis*), frostweed (*Helianthemum corymbosus*), skyblue lupine (*Lupinus diffusus*), sandhill spiny pod (*Matelea pubiflora*), coastalplain palafox (*Palafoxia integrifolia*), narrowleaf silkgrass (*Pityopsis graminifolia*), bracken fern (*Pteridium aquilinum*), sandyfield beaksedge (*Rhynchospora megalocarpa*), little bluestem (*Schizachyrium scoparium*), lopsided indiagrass (*Sorghastrum secundum*), and queensdelight (*Stillingia sylvatica*).

Numerous gopher tortoise burrows are located throughout the sandhill. The gopher tortoise population should expand as the sandhill is burned on a regular schedule.

**Fire Regimes:**

Historically, fires ignited by lightning during the early thunderstorm season (April-June), would have spread across the landscape every 1-3 years. This would keep the number of oaks to a low level and increase the herbaceous groundcover.

**Management Needs:**

Most of the sandhill on RPSF has been under a regular prescribed fire regime. Prescribed fire may be applied in both dormant and growing season periods.

**E. Scrubby Flatwoods**

**Description:**

Scrubby flatwoods are characterized by a canopy of pine trees with a xeric shrubby understory growing on well drained white sand. Vegetation is a combination of scrub and mesic flatwoods species. Flatwoods with a high scrub oak component are identified as scrubby flatwoods. On RPSF it occurs on slightly elevated areas within a mesic flatwoods matrix.

The desired future condition for scrubby flatwoods has a canopy of longleaf pine (*Pinus palustris*) and/or slash pine (*Pinus elliottii*) growing over a less than five-foot-tall shrub stratum dominated by sand live oak (*Quercus geminata*), myrtle oak (*Quercus myrtifolia*), Chapman's oak (*Quercus chapmanii*), and saw palmetto (*Serenoa repens*). The groundcover has wiregrass (*Aristida stricta*), coastalplain honeycomb-head (*Balduina angustifolia*), capillary hairsedge (*Bulbostylis ciliatifolia*), bracken fern (*Pteridium aquilinum*), sandyfield beaksedge (*Rhynchospora megalocarpa*), and lopsided indiagrass (*Sorghastrum secundum*).

**Current Conditions:**

Scrubby flatwoods is found covering much of the center of RPSF and in smaller scattered patches elsewhere. The average shrub height varies from three feet in recently burned areas to 15 feet tall or more in long unburned pieces, or chopped areas that have carried fire poorly and grown back as thick coppice. Recent FFS restoration work near the center of Section 10 has knocked down the vegetation to shrubs averaging less than 3 feet tall. The groundcover is generally very sparse because of shrub shading. Typical vegetation is a tree canopy of older mature longleaf pine (*Pinus palustris*) over a dense shrub stratum dominated by sand live oak (*Quercus geminata*), and/or myrtle oak (*Quercus myrtifolia*), and/or Chapman's oak (*Quercus chapmanii*), and saw palmetto (*Serenoa repens*). The oak component of scrubby flatwoods varied with location in RPSF. Some areas have abundant myrtle oak while others are almost entirely a thicket of sand live oak.

Other canopy and subcanopy species include sand live oak, laurel oak (*Quercus hemisphaerica*), bluejack oak (*Quercus incana*), turkey oak (*Quercus laevis*), and sand post oak (*Quercus margaretta*). Shrub strata include gopher apple (*Licania michauxii*), rusty staggerbush (*Lyonia ferruginea*), wax myrtle (*Myrica cerifera*), bluejack oak, turkey oak, dwarf live oak (*Quercus minima*), winged sumac (*Rhus copallinum*), sparkleberry (*Vaccinium arboreum*), and shiny blueberry (*Vaccinium myrsinites*). Herbaceous species include shortspike bluestem (*Andropogon brachystachyus*), wiregrass (*Aristida stricta* var. *beyrichiana*), coastalplain honeycomb-head (*Balduina angustifolia*), capillary hairsedge (*Bulbostylis ciliatifolia*), bracken fern (*Pteridium aquilinum*), sandyfield beaksedge (*Rhynchospora megalocarpa*), and lopsided indiagrass (*Sorghastrum secundum*).

Inclusions of more xeric scrub within scrubby flatwoods have indicators like patches of bare sand, sand pine (*Pinus clausa*), and xeric shrubs such as Florida rosemary (*Ceratiola ericoides*), rusty staggerbush (*Lyonia ferruginea*), Chapman's oak (*Quercus chapmanii*), sand live oak (*Quercus geminata*), myrtle oak (*Quercus myrtifolia*), scrub palmetto (*Sabal etonia*), and low density saw palmetto (*Serenoa repens*). Herbaceous species include sand beaksedge (*Rhynchospora megalocarpa*) and the terrestrial lichens *Cladina evansii*, *Cladina subtenuis*, and *Cladonia leporina*.

### **Fire Regimes:**

Scrubby flatwoods generally burn slightly less frequently than the adjacent sandhills. This results from the general incombustibility of the oak litter, as well as the bare sand patches that inhibit the spread of fire. Natural fire frequency is likely every 3 to 8 years, with most burns occurring during late spring and early summer (April-June).

### **Management Needs:**

Recent FFS management practices have been aimed at improving habitat for the listed Florida scrub-jay (*Aphelocoma coerulescens*) by reducing the height and density of the shrub. Prescribed burning and mechanical treatments in most scrubby flatwoods areas have reduced shrub height from more than ten feet to two or three feet. This compares favorably with recommended scrub-jay conditions of oaks generally less than six feet tall and 20 percent bare soil. In the future, fires from adjacent sandhill should be allowed to burn into the scrubby flatwoods. A fire prescription targeting the scrubby flatwoods should be considered if this natural community does not burn after repeated fires in the adjacent

sandhill. Some of the areas chopped and burned in 2005 that were colonized by scrub jays are growing a thick mid-story of sand pine (*Pinus clausa*), which is not ideal habitat for Florida scrub-jay.

## **F. Xeric Hammock**

### **Description:**

Xeric hammock is a closed canopy forest, typically oak-dominated, occurring on excessively drained soils that originate from old dune systems. Xeric hammock is often considered an advanced successional stage of sandy upland communities such as sandhill, scrub, and scrubby flatwoods. Xeric hammock may develop naturally through fire protection afforded by a wetland or other natural barrier such as a downward slope.

Xeric hammock has a closed tree canopy of mature sand live oak (*Quercus geminata*) and laurel oak (*Quercus hemisphaerica*). Other canopy species include longleaf pine (*Pinus palustris*), loblolly pine (*Pinus taeda*), sand post oak (*Quercus margaretta*), myrtle oak (*Quercus myrtifolia*), and live oak (*Quercus virginiana*). Subcanopy species include American holly (*Ilex opaca*), longleaf pine, sand live oak, laurel oak, bluejack oak (*Quercus incana*), turkey oak (*Quercus laevis*), and sand post oak. Shrubs are sand holly (*Ilex ambigua*), American holly (*Ilex opaca*), wild olive (*Osmanthus americanus*), sand live oak, laurel oak, myrtle oak, winged sumac (*Rhus copallinum*), cabbage palm (*Sabal palmetto*), sparkleberry (*Vaccinium arboreum*), and deerberry (*Vaccinium stamineum*). Short shrubs add garberia (*Garberia heterophylla*), gopher apple (*Licania michauxii*), scrub palmetto (*Sabal etonia*), cabbage palm, saw palmetto (*Serenoa repens*), and shiny blueberry (*Vaccinium myrsinites*). The groundcover may be absent or include species such as wiregrass (*Aristida stricta* var. *beyrichiana*), bracken fern (*Pteridium aquilinum*), and sandyfield beaksedge (*Rhynchospora megalocarpa*). Vines include yellow jessamine (*Gelsemium sempervirens*) and muscadine grape (*Vitis rotundifolia*).

### **Current Conditions:**

Xeric hammock is frequently an artifact of long-term fire exclusion in sandhill and scrubby flatwoods natural communities. Xeric hammock has become more widespread because of infrequent fires in the past sixty years, and is most prevalent east and south of the large depression marsh at the northern end of RPSF. It also occurs as small pockets throughout RPSF. Historically, it covered a much smaller area than it does currently.

Most xeric hammocks on RPSF are dominated by a closed canopy of mature sand live oak (*Quercus geminata*) and laurel oak (*Quercus hemisphaerica*). Other canopy species include sand pine (*Pinus clausa*), longleaf pine (*Pinus palustris*), loblolly pine (*Pinus taeda*), sand post oak (*Quercus margaretta*), myrtle oak (*Quercus myrtifolia*), and live oak (*Quercus virginiana*). Subcanopy species include American holly (*Ilex opaca*), longleaf pine, sand live oak, laurel oak, bluejack oak (*Quercus incana*), turkey oak (*Quercus laevis*), and sand post oak. Shrubs are sand holly (*Ilex ambigua*), American holly (*Ilex opaca*), wild olive (*Osmanthus americanus*), sand live oak, laurel oak, myrtle oak, winged sumac (*Rhus copallinum*), cabbage palm (*Sabal palmetto*), sparkleberry (*Vaccinium arboreum*), and deerberry (*Vaccinium stamineum*). Short shrubs include garberia (*Garberia heterophylla*), gopher apple (*Licania michauxii*), scrub palmetto (*Sabal etonia*), cabbage

palm, saw palmetto (*Serenoa repens*), and shiny blueberry (*Vaccinium myrsinites*). Herbaceous species include wiregrass (*Aristida stricta* var. *beyrichiana*), coastalplain chaffhead (*Carphephorus corymbosus*), cladina lichen (*Cladina subtenuis*), needleleaf witchgrass (*Dichanthelium aciculare*), Elliott's milkpea (*Galactia elliotii*), partridgeberry (*Mitchella repens*), bracken fern (*Pteridium aquilinum*), sandyfield beaksedge (*Rhynchospora megalocarpa*), and lopsided indiagrass (*Sorghastrum secundum*). Vines include yellow jessamine (*Gelsemium sempervirens*) and muscadine grape (*Vitis rotundifolia*).

A representative example of xeric hammock is in the southwest part of the forest. Xeric hammock fills a large shallow bowl downhill from the surrounding sandhill. The closed canopy has a few older mature longleaf pine and abundant sand live oak and laurel oak. The very open sub-canopy consists of sapling oaks and infrequent American holly. The dominant short shrub saw palmetto is very dense in some areas but the many gaps have numerous oak seedlings. Oak leaf litter completely covers the ground. Bracken fern is occasional among the saw palmetto and in the openings. The vine muscadine grape climbs the trees.

**Fire Regimes:**

Xeric hammocks rarely burn and typically develop after 30 or more years of fire protection. Fires in xeric hammocks are usually catastrophic and may lead to reversion of the xeric hammock to sandhill or scrub. Prescribed fires in surrounding sandhills may be allowed to burn across the ecotone, if firelines or natural barriers are present.

**Management Needs:**

Some of the xeric hammock should be considered as historically present to maximize diversity in the RPSF landscape. Management activities should maintain current conditions by avoiding disturbances such as firebreaks and off-road vehicle trails.

**G. Other Altered Landcover Types**

**Description:**

Other Altered Landcover Types at RPSF have been historically sandhill. Refer to the desired future conditions for sandhill.

**Current Conditions:**

A corridor across the entire south end of Ross Prairie State Forest has been cleared for an existing high voltage power transmission line. This area historically was sandhill but is mown frequently to minimize the height of the woody vegetation. The shrub stratum includes groundsel tree (*Baccharis halimifolia*), longleaf pine seedlings (*Pinus palustris*), American beautyberry (*Callicarpa americana*), pricklypear (*Opuntia humifusa*), bluejack oak (*Quercus incana*), turkey oak (*Quercus laevis*), sand post oak (*Quercus margaretta*), sand blackberry (*Rubus cuneifolius*), and saw palmetto (*Serenoa repens*). The herbaceous layer has bushy bluestem (*Andropogon glomeratus*), Mexican tea (*Chenopodium ambrosioides*), pinebarren flatsedge (*Cyperus retrorsus*), dogfennel (*Eupatorium capillifolium*), spotted beebalm (*Monarda punctata*), cutleaf eveningprimrose (*Oenothera*

*laciniata*), bahiagrass (*Paspalum notatum*), bracken fern (*Pteridium aquilinum*), and heartwing dock (*Rumex hastatulus*).

Part of the abandoned pasture in the southwest corner has been planted with longleaf pine (*Pinus palustris*). Under the young pine is a weedy tangle of sand blackberry (*Rubus cuneifolius*), common persimmon (*Diospyros virginiana*), black cherry (*Prunus serotina*), and turkey oak.

**Fire Regimes:**

Refer to the fire regime for sandhill.

**Management Needs:**

See the management needs for sandhill.

**VIII. References**

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**IX. Glossary of Abbreviations**

ARC .....Acquisition and Restoration Council

|              |                                                          |
|--------------|----------------------------------------------------------|
| BMP .....    | Best Management Practice                                 |
| CARL .....   | Conservation and Recreation Lands                        |
| DACS .....   | Department of Agriculture and Consumer Services          |
| DEP .....    | Department of Environmental Protection                   |
| DHR .....    | Division of Historical Resources                         |
| DRP .....    | Division of Recreation and Parks                         |
| FFS .....    | Florida Forest Service                                   |
| FNAI .....   | Florida Natural Areas Inventory                          |
| FSJ.....     | Florida Scrub Jay                                        |
| FWC.....     | Florida Fish and Wildlife Conservation Commission        |
| NRCS .....   | Natural Resources Conservation Service                   |
| SWFWMD ..... | Southwest Florida Water Management District              |
| OALE .....   | DACS Office of Agricultural Law Enforcement              |
| OFW.....     | Outstanding Florida Waters                               |
| OGT .....    | DEP Office of Greenways & Trails                         |
| P2000 .....  | Preservation 2000                                        |
| TIITF .....  | Board of Trustees of the Internal Improvement Trust Fund |
| USFS .....   | United States Forest Service                             |
| USFWS .....  | United States Fish and Wildlife Service                  |
| RPSF .....   | Ross Prairie State Forest                                |
| WMA .....    | Wildlife Management Area                                 |