



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

February 14, 2020

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

RE: Plank Road State Forest – Lease No. 4806

Dear Mr. Rowell,

On **February 14, 2020**, the Acquisition and Restoration Council (ARC) recommended approval of the **Plank Road 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 **Plank Road State Forest** management plan. The next management plan update is due February 14, 2030.

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

Mr. Keith Rowell
Page 2
February 14, 2020

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,



Deborah Burr
Office of Environmental Services
Division of State Lands

TEN-YEAR LAND MANAGEMENT PLAN
FOR
PLANK ROAD STATE FOREST
LEON AND JEFFERSON COUNTIES



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

APPROVED ON

February 14, 2020

TEN-YEAR LAND MANAGEMENT PLAN
FOR
PLANK ROAD STATE FOREST



Approved by:

A blue ink signature of Jim Karels, written over a horizontal line. The signature is stylized and extends to the left.

Jim Karels, Director
Florida Forest Service

2.21.2020
Date

A blue ink signature of James Roberts, written over a horizontal line. The signature is stylized and extends to the left.

James Roberts, Chief
Forest Management Bureau

2-14-20
Date

**TEN-YEAR LAND MANAGEMENT PLAN
PLANK ROAD
TABLE OF CONTENTS**

Land Management Plan Executive Summary	1
I. Introduction	3
A. General Mission and Management Plan Direction	3
B. Past Accomplishments	4
C. Goals / Objectives for the Next Ten-Year Period	4
II. Administration Section.....	8
A. Descriptive Information	8
1. Common Name of Property	8
2. Legal Description and Acreage.....	8
3. Proximity to Other Public Resource	8
4. Property Acquisition and Land Use Considerations	9
B. Management Authority, Purpose, and Constraints	10
1. Purpose for Acquisition / Management Prospectus	10
2. Degree of Title Interest Held by the Board.....	10
3. Designated Single or Multiple-Use Management.....	10
4. Revenue Producing Activities.....	10
5. Conformation to State Lands Management Plan	11
6. Legislative or Executive Constraints	11
7. Aquatic Preserve/Area of Critical State Concern	11
C. Capital Facilities and Infrastructure	11
1. Property Boundaries Establishment and Preservation	11
2. Improvements	11
3. On-Site Housing.....	11
4. Operations Infrastructure	12
D. Additional Acquisitions and Land Use Considerations	12
1. Alternate Uses Considered.....	12
2. Additional Land Needs	13
3. Surplus Land Assessment	13
4. Adjacent Conflicting Uses	13
5. Compliance with Comprehensive Plan	13
6. Utility Corridors and Easements	13
E. Agency & Public Involvement	14
1. Responsibilities of Managing Agencies.....	14
2. Law Enforcement.....	15
3. Wildland Fire	15
4. Public and Local Government Involvement	15
5. Volunteers	15
6. Friends of Florida State Forests	15
III. Archaeological / Cultural Resources and Protection	16
A. Past Uses	16
B. Archaeological and Historical Resources	16

C. Ground Disturbing Activities	16
D. Survey and Monitoring	17
IV. Natural Resources and Protection.....	17
A. Soils and Geologic Resources.....	17
1. Resources	17
2. Soil Protection.....	17
B. Water Resources.....	17
1. Resources	18
2. Water Classification.....	18
3. Water Protection	18
4. Swamps, Marshes, and Other Wetlands	18
5. Wetlands Restoration	18
C. Wildlife Resources	18
1. Threatened and Endangered Species	19
2. Florida Natural Areas Inventory	19
3. Florida Fish and Wildlife Conservation Commission	20
4. Game Species and Other Wildlife.....	21
5. Survey and Monitoring	21
D. Sustainable Forest Resources.....	22
E. Beaches and Dune Resources	22
F. Mineral Resources	22
G. Unique Natural Features and Outstanding Native Landscapes.....	22
H. Research Projects / Specimen Collection.....	22
I. Ground Disturbing Activities	22
V. Public Access and Recreation	23
A. Existing	23
B. Planned	23
C. Hunter Access	24
D. Education	24
VI. Forest Management Practices	24
A. Prescribed Fire	24
B. Wildfires, Prevention, Fire / Prescribed Fire Strategies.....	26
1. Suppression Strategies	26
2. Smoke Management.....	27
3. Firebreaks and Firelines.....	27
4. Sensitive Areas.....	27
5. Firewise Communities	27
6. Post-Burn Evaluations	28
C. Sustainable Forestry & Silviculture	28
1. Strategies.....	28
2. Silvicultural Operations	28
3. Forest Inventory	28
4. Timber Sales	29
D. Non-Native Invasive Species Control.....	29
E. Insects, Disease, and Forest Health	30
F. Use of Private Land Contractors.....	30

VII. Proposed Management Activities for Natural Communities	30
A. Basin Swamp	31
B. Bottomland Forest.....	33
C. Dome Swamp.....	35
D. Floodplain Swamp	36
E. Mesic Flatwoods	37
F. Sandhill	39
G. Shrub Bog	41
H. Sinkhole Lake	42
I. Upland Hardwood Forest.....	43
J. Upland Pine.....	44
K. Wet Flatwoods	46
L. Other Altered Landcover Types.....	47
VIII. References	48
IX. Glossary of Abbreviations	49

TABLES

Table 1. PRdSF Acreage by Funding Source	Page 8
Table 2. Nearby Public Conservation Land and Easements	Page 9
Table 3. Parcel Acquisition.....	Page 10
Table 4. Archaeological and Historical Sites.....	Page 16
Table 5. Rare, Threatened, or Endangered Species	Page 19
Table 6. Non-Native Invasive Species.....	Page 29
Table 7. Prescribed Fire Interval Guide	Page 31

**TEN-YEAR LAND MANAGEMENT PLAN
PLANK ROAD
EXHIBITS**

PRdSF Ten-Year Management Accomplishment Summary	Exhibit A
Boundary, Location, and Roads Map	Exhibit B
Optimal Management Boundary Map	Exhibit C
Facilities, Recreation and Improvements	Exhibit D
Proximity to Significant Managed Lands	Exhibit E
Florida Forever Projects near PRdSF	Exhibit F
Archaeological and Cultural Sites	Exhibit G
Management Procedures for Archaeological and Historical Sites and Properties on State Owned or Controlled Lands	Exhibit H
Soil Maps and Descriptions	Exhibit I
DEP Outstanding Florida Waters.....	Exhibit J
Water Resources Map	Exhibit K
FNAI Response	Exhibit L
FWC Response.....	Exhibit M
Fire History	Exhibit N
Non-Native Invasive Species	Exhibit O
Historic FNAI Natural Communities Map	Exhibit P
Management Prospectus	Exhibit Q
Compliance with Local Comprehensive Plan(s)	Exhibit R
State Forest Management Plan Advisory Group Summary	Exhibit S
State Forest Summary Budget	Exhibit T
Arthropod Control Plans	Exhibit U

LAND MANAGEMENT PLAN EXECUTIVE SUMMARY

LEAD AGENCY: Florida Department of Agriculture and Consumer Services (FDACS), Florida Forest Service
COMMON NAME: Plank Road
LOCATION: Leon and Jefferson Counties
ACREAGE TOTAL: 9,043.5 acres

Historic Natural Communities	Approximate Acreage
Basin swamp	1,260
Bottomland forest	766
Dome swamp	415
Floodplain swamp	1,999
Mesic flatwoods	1,328
Sandhill	502

Historic Natural Communities	Approximate Acreage
Shrub bog	195
Sinkhole lake	4
Upland hardwood forest	9
Upland pine	238
Wet flatwoods	2,326

TIITF LEASE AGREEMENT NUMBER: 4806

USE: Single ☐ Multiple ☒

MANAGEMENT AGENCY

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

RESPONSIBILITY

General Forest Resource Management
Wildlife Resources and Laws
Water Resource Protection and Restoration
Historical and Archaeological Resource Management

DESIGNATED LAND USE:

Multiple-Use State Forest

SUBLEASES:

None

ENCUMBRANCES:

Non-exclusive common road easements along adjacent property boundary; oil, gas and mineral reservations; Natural Gas Pipeline Easement; Easement in favor of Talquin Electric Cooperative, Inc.

TYPE ACQUISITION:

Division of State Lands – Land Acquisition Trust Fund

UNIQUE FEATURES:

St. Marks River and associated floodplain

ARCHAEOLOGICAL / HISTORICAL:

12 known sites

MANAGEMENT NEEDS:

Restoration and maintenance of native ecosystems, reintroduction of historic fire regimes, and improve public access

ACQUISITION NEEDS:

Acquisitions of adjacent uplands needed to increase spring shed buffer, improve access and eliminate potential conflicts created by common road easements

SURPLUS ACREAGE:

None

PUBLIC INVOLVEMENT:

Management Plan Advisory Group and Public Hearing, and DEP Acquisition and Restoration Council Public Hearing

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

ARC Approval Date: _____ TIITF Approval Date: _____

Comments: _____

I. Introduction

Plank Road State Forest (PRdSF) consists of 9,043.5 acres along the upper St. Marks River corridor in Leon and Jefferson Counties. Its name is derived from the historic wood plank road which was constructed in the mid-1800's with the purpose of transporting cotton and other goods from Newport, where the St. Marks River ceases to be reasonably navigable, to the Georgia line. The road was never finished and only made it to what is currently US 27, east of Tallahassee. Although there are no signs of the original plank road, what is now a paved portion of Old Plank Road makes up part of the PRdSF boundary on the west. See Exhibit B.

The St. Marks River is the dominant feature flowing through the forest. The intact forested wetlands of PRdSF provide a water quality buffer for this Outstanding Florida Water, as well as protection of numerous springs, including the second magnitude Horn Spring located on the boundary of the adjacent State Park, and to the first magnitude St. Marks Spring just to the south.

The property is habitat for an abundance of wildlife and serves as a corridor between the St. Marks River Headwaters, L. Kirk Edwards Wildlife and Environmental Area (WEA) to the Aucilla Wildlife Management Area (WMA), St. Marks National Wildlife Refuge, and the Gulf of Mexico.

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 PRdSF 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 PRdSF 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;
- 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 PRdSF 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 interim management activities and public use on PRdSF has been completed and is available from the forest manager. A table has been prepared for this plan that summarizes the accomplishments for the past two years. 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. See Exhibit A.

Since the assignment of interim management of the property in November 2017, there have been many events, developments, and accomplishments. Among the most noteworthy have been the following:

- 1,374 acres of prescribed fire
- In cooperation with FWC, establishment of the Plank Road Wildlife Management Area
- Conducted the first Operation Outdoor Freedom (OOF) hunt event hosting 3 veterans
- The timber inventory of 1,874 acres comprises 20% of the forested land area of PRdSF
- Marking and posting 29 miles of forest boundaries
- Preparation of 172 acres for timber thinning
- 5 miles of road surface stabilized
- 1 low water crossing installed
- 3 culverts installed

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 PRdSF 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: Develop and implement the Five-Year Silviculture Management Plan including reforestation, harvesting, prescribed burning, restoration, and timber stand

improvement activities and goals. (Ongoing Goal)

Performance Measures:

- The Five-Year Silviculture Management Plan is developed and updated annually.
- Continued implementation of the Five-Year Silviculture Management Plan (acres treated).

Objective 2: Continue to implement and conduct the FFS process for conducting stand descriptions and forest inventory updates according to established criteria in the State Forest Handbook including a Geographic Information System (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 Goal)

Performance Measures:

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

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

Objective 1: Maintain public access and recreational opportunities to allow for compatible recreational users. (Ongoing Goal)

Performance Measure: Number of visitor opportunities maintained.

Objective 2: Develop additional public access and recreational opportunities to allow for all users. (Long Term Goal)

Performance Measure: Number of additional visitor opportunities per day.

Objective 3: To continue to safely integrate human use into PRdSF, develop and follow the Five-Year Outdoor Recreation Plan and update annually. (Ongoing Goal)

Performance Measures:

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

Objective 4: Solicit and organize a liaison committee. The committee should consist 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 PRdSF. (Short Term Goal)

Performance Measures:

- Liaison group is organized.
- Meetings are held.

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

Objective 1: Utilize prescribed fire, mechanical and other treatments as necessary 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 Goal)

Performance Measure: Number of acres restored.

➤ **GOAL 4: Fire Management**

Objective 1: The PRdSF currently contains approximately 2,459 acres suitable for prescribed burning. PRdSF staff will conduct habitat / natural community improvement on the forest annually. In order to achieve an average fire return interval of two to four years across the forest, approximately 600 to 1,600 acres will be prescribed burned annually. (Ongoing Goal)

Performance Measures:

- Number of acres burned during the dormant and growing seasons, and number of acres burned within target fire return interval.

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

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 with prescribed fire).

Objective 3: Reduce the threat of wildfire within the Wildland Urban Interface on PRdSF 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 Goal)

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 PRdSF, with emphasis on imperiled species and associated management prescriptions for their habitats. (Long Term Goal)

Performance Measures:

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

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

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

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

Objective 1: Continue to follow and annually update the Five-Year Ecological Plan for

PRdSF, specifically to locate, identify, and control non-native invasive species. (Ongoing Goal)

Performance Measures:

- Total number of acres identified and successfully treated.
- Annual updates of the Five-Year Ecological Plan completed.

Objective 2: Implement prevention measures such as training for state forest staff and ensuring special conditions for preventing the spread of non-native invasive species are included and enforced in vendor contracts (Ongoing Goal)

Performance Measures:

- Number of staff trained.
- Number of conditions included and enforced.

➤ **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 Goal)

Performance Measure: Number of recorded sites.

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

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

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

Performance Measure: Number of local staff trained.

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

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

Performance Measure: Assessment conducted.

Objective 2: Protect water resources during management activities through the implementation of Silviculture Best Management Practices (BMPs) (Ongoing Goal)

Performance Measure: Percent compliance with Silviculture BMPs.

Objective 3: Close, rehabilitate, or restore those roads, firelines, and trails that have evidence of erosion into surrounding water bodies causing alterations to the hydrology and/or water quality. (Ongoing Goal)

Performance Measure: Total number of roads, firelines, and trails closed, rehabilitated, and/or restored.

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

Objective 1: PRdSF staff, along with help from volunteers, will continue maintenance of all primary, secondary, tertiary, service roads and parking areas. (Ongoing Goal)

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 Goal)

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 where appropriate, reposting signage, and repainting boundary trees. (Ongoing Goal)

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 Plank Road State Forest.

2. Legal Description and Acreage

The PRdSF is comprised 9,043.5 acres in eastern Leon, and western Jefferson Counties, Florida. The state forest is along the Upper St. Marks River corridor between Tram Road and Natural Bridge Road. The PRdSF is located in Sections 25, 26, 34 through 36, Township 1 South, Range 2 East. Sections 30 through 32, Township 1 South, Range 3 East. Sections 1 through 5, 8 through 12, 14, 16, 17, 20, Township 2 South, Range 2 East. Sections 5 through 8, Township 2 South, Range 3 East.

Table 1. PRdSF Acreage by Funding Source

	Funding Source	Acres
DSL-LATF	DSL – Land Acquisition Trust Fund	9,043.5

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

3. Proximity to Other Public Resources

Lands managed by state, federal, or local government for conservation of natural or cultural resources that are located within approximately 30 miles of the PRdSF are included in Exhibit E as well as the table below:

Table 2. Nearby Public Conservation Land and Easements

Tract	Agency	Distance
St. Marks River Preserve State Park	DRP	Adjacent N
Natural Bridge Battlefield State Park	DRP	Adjacent S
Aucilla Wildlife Management Area	FWC	1 Mile SE
Headwaters of the Wacissa River	Jefferson County	3 Miles E
L Kirk Edwards Wildlife Environmental Area	FWC	5 Miles N
Tallahassee-St. Marks Historic Railroad State Trail	DRP	5 Miles W
J. R. Alford Greenway	Leon County	6 Miles NW
Apalachicola National Forest	USFS	6 Miles W
Wakulla State Forest	FFS	7 Miles W
Edward Ball Wakulla Springs State Park	DRP	8 Miles SW
St. Marks Headwaters	Leon County	9 Miles N
Flint Rock Tract	TNC	9 Miles S
Miccosukee Canopy Road Greenway	Leon County	10 Miles N
St. Marks National Wildlife Refuge	USFWS	10 Miles S
San Marcos de Apalache Historic State Park	DRP	10 Miles S
Middle Aucilla Conservation Area	SRWMD	11 Miles SE
Letchworth-Love Mounds Archaeological State Park	DRP	11 Miles N
Fallschase Greenway	Leon County	12 Miles NW
Big Bend Wildlife Management Area	FWC	13 Miles SE
Gil Waters Preserve at Lake Munson	Leon County	13 Miles W
Alfred B. Maclay Gardens State Park	DRP	13 Miles N
Lake Jackson Mounds Archaeological State Park	DRP	15 Miles NE
Okecheepkee Prairie	Leon County	15 Miles NW
Fred George Greenway	Leon County	17 Miles NW
Lake Talquin State Forest	FFS	17 Miles NW
Upper Aucilla Conservation Area	SRWMD	17 Miles E
Econfina River State Park	DRP	18 Miles SE
Upper Aucilla Conservation Area	SRWMD	19 Miles E
Tall Timbers Research Station and Land Conservancy	Tall Timbers Research, Inc.	21 Miles N
Joe Budd Wildlife Management Area	FWC	23 Miles NW
Lake Talquin State Park	DRP	24 Miles NW
Bald Point State Park	DRP	26 Miles SW
Ochlockonee River State Park	DRP	27 Miles SW
Tate's Hell State Forest	FFS	30 Miles SW

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

DSL-Florida Department of Environmental Protection, Division of State Lands

FFS – Florida Forest Service

FWC – Florida Fish and Wildlife Conservation Commission

SRWMD-Suwannee River Water Management District

TNC – The Nature Conservancy

USFS – United States Forest Service

USFWS – United States Fish & Wildlife Service

4. Property Acquisition and Land Use Considerations

The property is a Florida Forever Project acquired in 2017 with funding from the Land Acquisition Trust Fund. As the largest Florida Forever acquisition since 2006, the 11,027-acre parcel was formally owned by St. Joe Timberlands and more recently Deseret Cattle and Timber. The Division of Recreation and Parks (DRP) assumed management of approximately 1,985 acres (added to Natural Bridge Battlefield S.P.), with the remaining 9,043 acres becoming FFS managed PRdSF. See Exhibit F.

Table 3. Parcel Acquisition

Parcel Name	Deed Date	Lease Date	Acres (County)
Natural Bridge Timberlands	5/23/2017	11/27/2017	9,043.5 (Leon and Jefferson)

B. Management Authority, Purpose and Constraints

1. Purpose for Acquisition / Management Prospectus

As a Florida Forever project acquired through the Land Acquisition Trust Fund, the property serves as a conservation corridor for the upper St. Marks River, maintaining biodiversity, increasing public recreation opportunities, and protecting water resources within the forest as well as the surrounding area. See Exhibit Q.

As lead-managing agency, the Florida Forest Service will manage PRdSF for the conservation and protection of natural and historical resources, and for resource based public outdoor activities and education which are compatible with the conservation and protection of these public lands.

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

PRdSF 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 4806.

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 PRdSF 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 PRdSF include, but are not limited to:

- *Timber Harvests* – Timber harvests on PRdSF will be conducted as needed to improve forest health, promote wildlife habitat, restore plant communities, and provide other benefits.

- *Recreation Fees* – As recreational opportunities and infrastructure develop, fees may be collected for day use, camping (both walk-up and through online reservation system), and miscellaneous commercial vendor permits.
- *Apiaries* – Potential sites for apiaries have been identified in accordance with the FFS State Forest Handbook.
- *Other miscellaneous* – Other miscellaneous forest products including but not limited to worm harvesting (grunting), firewood permits, and pine straw raking may be considered.

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 PRdSF; however, there are numerous statutes, rules, and ordinances that have the potential to impact the FFS's ability to manage the property. 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

PRdSF boundary lines are managed by state forest personnel in accordance with the guidelines of the State Forest Handbook.

2. Improvements

The state forest headquarters office and equipment pole barn on the southwest corner of the forest on Old Plank Rd was completed in 2019. The replacement of two bridges crossing Gum Creek and the St. Marks River are approved, pending funding availability.

3. On-Site Housing

There are no residences located on PRdSF.

FFS may establish on-site housing (mobile / manufactured home) on PRdSF 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 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 three 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 2018-2019, the total annual budget for PRdSF was \$81,934. This amount includes salaries, expenses, contractual services, and OPS. A summary budget for PRdSF is contained in Exhibit T. 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 to the PRdSF includes a pick-up truck, a type-6 engine (brush truck), a farm tractor with a mowing deck, and a UTV side-by-side. One medium dozer with transport will be stationed at PRdSF headquarters and although not directly assigned to PRdSF, will be available for resource management activities when not engaged in wildfire suppression or private landowner assistance.

c. Staffing

A Senior Forester is the only staff assigned to PRdSF.

The Senior Forester will work to achieve the goals outlined in this management plan. Resource management activities, such as timber cruising, planning, and sale administration, etc., are the responsibility of the Senior Forester under the direction of the Forestry Supervisor II and Center Manager. Forest operations, such as road maintenance, prescribed burning, etc., are the responsibility of the FFS Tallahassee 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 at this time. 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, maintenance, and management of the resources on PRdSF.

The land adjacent to PRdSF on the eastern, northern, southern, and western borders should be considered for acquisition. Additional lands outlined on the optimal management boundary map is recommended for future inclusion in PRdSF. See Exhibit C.

3. Surplus Land Assessment

On conservation lands where FFS is the lead manager, FFS assesses and identifies areas for potential surplus land. This consists of an examination of: resource and operational management needs, public access and recreational use, and GIS modeling and analysis.

The evaluation of PRdSF by FFS has determined that all portions of the area are being managed and operated for the original purposes of acquisition, as well as, 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. Therefore, no portion of the PRdSF is recommended for potential 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 the determination there are currently no known conflicting adjacent land 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.

Residential development of adjacent property and adjoining county highways may hinder prescribed burning due to smoke management concerns.

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 Leon and Jefferson Counties for review and compliance with their local comprehensive plans. See Exhibit R.

6. Utility Corridors and Easements

The Florida Gas Transmission company has a permanent easement along the northern

boundary adjacent to the Tram Road right-of-way. On the northwest, southeast and portions of the east side of the forest, where the boundary follows the centerline of the road between the forest and adjacent landowners, there is a non-exclusive easement agreement for ingress/egress.

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 PRdSF 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 disrupt management of 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. 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 4806. 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 (Florida Statute 590.02 (1i)).

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 NFWFMD 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 PRdSF 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 Office of Agricultural Law Enforcement (OALE) will assist with open burning and wildfire investigations as needed. Additional assistance is provided by the Leon and Jefferson Counties Sheriff's Offices as needed.

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 PRdSF.

3. Wildland Fire

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 (Florida Statute 590.02 (1i)).

4. 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.

The plan was developed with input from the PRdSF Management Plan Advisory Group and was reviewed at a public hearing on September 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 S. The Acquisition and Restoration Council (ARC) public hearing and meeting serve as an additional forum for public input and review of the plan.

5. Volunteers

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

6. 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.

III. Archaeological/Cultural Resources and Protection

A. Past Uses

St. Joe Paper Company held title to the property for several decades and practiced short rotation pine silviculture. Practices such as bedding, and fertilization took place on much of the uplands/flatwoods. Hunting leases were maintained. In 2014, the property was sold to Deseret Cattle and Timber Inc. and was managed similarly until state acquisition in 2017.

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 are 11 previously recorded archeological sites on PRdSF. Currently, there are no known sites listed in the National Register of Historic Places on PRdSF. See Exhibit G.

Table 4. Cultural Resources on PRdSF

Site ID	Site Name	Site Type
JE00068	8JE68	AR
JE00069	NN	AR
JE00880	P103-1-4	AR
JE01624	#8JE1624	AR
JE01643	FL-Leon-105-2AR-A3	AR
LE00565	Logger's Dam	AR
LE01549	South Tram	AR
LE02106	X156F-2	AR
LE02125	S5-68-1	AR
LE04946	Enigmatic Abo	AR
LE05496	8LE5496	AR

C. Ground Disturbing Activities

Representatives of DHR and Florida Natural Areas Inventory 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" and will comply with all appropriate provisions of Section 267.061(2) Florida Statutes. See Exhibit H. 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".

D. Survey and Monitoring

Currently, five local 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

A. Soils and Geologic Resources

1. Resources

Soil information for PRdSF was obtained from the United States Department of Agriculture Natural Resources Conservation Service (NRCS). PRdSF consists of 27 different soils. The predominant soils listed by the NRCS include: Pickney soils (occasionally flooded), Talquin fine sand, Pamlico-Dorovan complex, Chipley fine sand (0 to 2 percent slopes), and Pamlico-Dorovan mucks. Detailed information on all soils present on the state forest may be found in Exhibit I.

2. Soil Protection

Currently, there are no significant soil erosion problems at PRdSF. 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 Management Bureau in conjunction with recommendations as contained in the most current version of the Florida Silviculture Best Management Practices Manual.

B. Water Resources

The water resources on PRdSF perform essential roles in the protection of water quality, groundwater recharge, flood control, and aquatic habitat preservation. In the interest of maintaining these valuable resource functions, state forest management personnel will work with the FFS Forest Management Bureau 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 PRdSF.

1. Resources

The St. Marks river, which is the major watershed drainage through the forest, forms on the northern and eastern sides of PRdSF. Gum Creek, Limestone Creek, Chicken Branch, and Hamlin Branch are all tributaries that flow through the forest and into St. Marks River within the PRdSF boundaries. Horn Springs, along with at least ten other springs are found on the adjacent state park and flow into the St. Marks River.

2. Water Classification

The St. Marks River is designated as an Outstanding Florida Water (OFW) by the Florida Department of Environmental Protection. All other surface waters on PRdSF are classified as Class III waters, which is the statewide default classification. See Exhibit J.

3. Water Protection

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, Floodplains, and Other Wetlands

Most of the wetlands located on PRdSF are associated with the St. Marks River. However, there are several other small isolated wetlands found within the forest. 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, PRdSF, with assistance from the FFS Forest Management Bureau, will 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.

C. Wildlife Resources

1. Threatened and Endangered Species

The intent of FFS is to manage PRdSF in a fashion that will minimize the potential for

wildlife species to become imperiled. FFS staff 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.

The presence of listed species is based on information compiled from FNAI tracking records and FWC, as well as, field observations by FFS.

Table 5. Rare, Threatened or Endangered Species Documented on PRdSF

Scientific Name	Common Name	FNAI Global Rank	FNAI State Rank	Federal Status	State Status
<i>Gopherus Polyphemus</i>	Gopher tortoise	G3	S3	C	ST
<i>Procambarus youngi</i>	Florida longbeak crayfish	G1G2	S1S2	N	N
<i>Mustela frenata olivacea</i>	Southeastern weasel	G5T4	S3?	N	N
<i>Crotalus adamanteus</i>	Eastern diamondback rattlesnake	G4	S3	N	N
<i>Drymarchon</i>	Eastern indigo snake	G3Q	S3	T	FT
<i>Haliaeetus leucocephalus</i>	Bald eagle	G5	S3	N	N
<i>Stenacron floridense</i>	A Mayfly	G3G4	S3S4	N	N

Species list developed from adjacent state lands and will be updated to known occurrences as documented.

*** 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. SAT, T(S/A) = threatened due to similarity of appearance. A species that is threatened due to similarity of appearance with another listed species and is listed for its protection. Species listed as T(S/A) are not biologically endangered or threatened and are not subject to Section 7 consultation

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, 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 Florida Natural Inventories reports several documented Element Occurrences of rare or endangered species within the vicinity of the property. See Exhibit L. Documented species are listed in Table 5.

Documented habitat includes: Basin swamp, Bottomland forest, Dome swamp, Floodplain swamp, Mesic flatwoods, Sandhill, Shrub bog, Sinkhole lake, Upland Hardwood Forest, Upland pine, Wet flatwoods.

- 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 PRdSF. See Exhibit L for more information.
- c. Land Acquisition Projects: Portions of this site are located within the St. Joe Timberland Florida's First Magnitude Springs – St. Marks Springs Florida Forever BOT Project and Upper St. Marks River Corridor Florida Forever Project, which is part of the State of Florida's Conservation and Recreation Lands land acquisition program. See Exhibit L.

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. See Exhibit M.

Other findings by the FWC include:

- a. The property is adjacent to and within multiple Strategic Habitat Conservation Areas.
- b. PRdSF is located within an area of Species Richness.
- c. Multiple Priority Wetlands are located on and in close proximity to PRdSF.
- 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.

The FWC recommends the use 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 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 use of management guidelines in FWC's published Species Action Plans for the management of imperiled, rare, and focal fauna. The FWC Species Action Plans provide beneficial resource guidelines for habitat management and monitoring of the respective species. For 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 PRdSF. On PRdSF, 8,114 acres of the state forest currently make up the Plank Road Wildlife Management Area. FWC provides cooperative technical assistance in managing the wildlife and fish populations, setting hunting seasons, establishing bag and season limits, and overall wildlife and fish law enforcement.

PRdSF provides habitat for many different species of wildlife. More common species include: Florida black bear (*Ursus americanus*), wild turkey (*Meleagris gallapavo*), red shouldered hawk (*Buteo lineatus*), bobcat (*Lynx rufus*), white tailed deer (*Odocoileus virginianus*), as well as numerous species of ducks, wading birds, snakes and turtles.

FFS maintains approximately 18 acres of permanent wildlife openings on the PRdSF. Wildlife openings and food plots will be established and maintained in accordance with the FFS State Forest Handbook.

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 cooperate with FWC and other agencies in the development of wildlife management plans and monitoring protocols, as necessary. Such plans will be consistent with rule and statute promulgated for the management of such species.

a. Gopher Tortoises

Surveys for gopher tortoise burrows may be conducted by FFS and FWC staff intermittently, as needed. All future surveys will be done in cooperation with FWC and maintained in a GIS database.

b. Listed Plant Species

All known locations of listed or rare flora are GIS mapped and location data are shared with FNAI.

c. Other Rare Biota Surveys

Surveys are done as time and staffing allow. High quality plant communities continue to have ad hoc surveys for both invasive weeds and listed plants.

Assistance to FWC for gopher tortoise burrow commensals monitoring will be offered as appropriate.

During routine management activities, incidental sightings of rare animals and plants are GIS mapped by FFS staff. All rare species data is collected and sent to FNAI twice annually.

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 in order to assure 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.

E. Beaches and Dune Resources

No beaches or dunes occur on the PRdSF.

F. Mineral Resources

No known mineral deposits of commercial value are known to exist on this property.

G. Unique Natural Features and Outstanding Native Landscapes

The wetlands associated with the St. Marks River are important natural features of PRdSF. The floodplain and bottomland forests along the St. Marks River and its tributaries are in excellent natural condition.

H. Research Projects / Specimen Collection

Research projects may be performed on the forest on a temporary or permanent basis for the purpose of 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 PRdSF 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. 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 PRdSF staff. Other special conditions may be applicable, and the authorization may be terminated at any point if the study is not in compliance.

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 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, NFWFMD, 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 and to provide outdoor recreation events to wounded veterans through Operation Outdoor Freedom (OOF). FFS will continue to promote and encourage public access and recreational use by the public while protecting resources and practicing multiple-use management. Recreation activities available on PRdSF include nature study, hiking, horseback riding, hunting, and fishing.

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

Currently hunting is the primary recreational opportunity on PRdSF. Hiking, bicycling, horseback riding, and nature study can be enjoyed using existing roads and firelines. Access to the St. Marks River for fishing is also available, as well as paddling for the more adventurous. See Exhibit D for a map of the Facilities and Improvements.

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. Both terrestrial and aquatic resources and relative activities will be evaluated. Any specific plans will be incorporated into the Five-Year Outdoor Recreational Plan on file at PRdSF.

Trails: Suitable locations are being explored for hiking and/or equestrian trails. The construction, maintenance, and improvements of trails will be on-going. A multi-use trail connecting St. Marks River State Park and Natural Bridge S.P. will be considered.

Camping: The need for primitive campsites on the PRdSF will be evaluated during this planning period.

Picnic pavilion: Suitable locations are being explored for a picnic pavilion in PRdSF. One possible location is at the south bank of the St. Marks River on Two Bridge Road.

Paddling: The installation or designation of canoe/kayak launches along the St. Marks River or its tributaries are planned based on user demand, as well as economic and ecological feasibility.

Information & Education: The PRdSF headquarters will serve as the forest visitor information center, as well as kiosks constructed at selected entrances.

Operation Outdoor Freedom (OOF): Special events designed to provide nature based outdoor recreation activities for U.S. military veterans with service connected disabilities will take place throughout the forest. These events include, but are not limited to, guided game hunts. The portion of the forest south of Chicken Branch along Old Plank Road is open for general recreation activities, with an emphasis on OOF events.

The Florida Forest Service will handle permitting requests for recreational activities.

C. Hunter Access

Hunting is an important recreational activity on PRdSF. Approximately 8,100 acres are established as the Plank Road WMA (PRdWMA). Hunting season dates, limits, and methods are established annually by FWC, in cooperation with FFS. PRdWMA regulations are updated annually and are identified in the current WMA brochure provided online by FWC at <https://myfwc.com/hunting/wma-brochures/nw/plank-road/>.

OOF may host multiple events on PRdSF. These events will involve all aspects of outdoor recreation activities including, but not limited to, hunting, fishing, hiking, camping, clay shooting and any other activity that is developed as an outdoor activity for wounded veterans. The supporting personnel will include state and private volunteers and any support personnel necessary for the operation, support or funding of such events. Events can be recreational, fundraising or planning in nature. The OOF programs needs may include the upgrading of existing or construction of new facilities for lodging and recreation of participants, logistical and operational needs of the program. On-site and off-site fundraising for the benefit of OOF may occur to assist in these efforts and will be performed under the coordination and consistent with the guidelines of the Friends of Florida State Forests.

D. Education

FFS may create partnerships with local K-12 schools and/or universities for the purpose of the development and implementation of educational opportunities on PRdSF.

VI. Forest Management Practices

A. Prescribed Fire

Forest management practices on PRdSF are important in the restoration and maintenance of forest ecosystems and provide a variety of socio-economic benefits to Floridians. Management practices on PRdSF 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 Tallahassee 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. See Exhibit N.

The annual forest prescribed burning program produces multiple benefits. The purposes of prescribed burning on PRdSF 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 PRdSF, 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 PRdSF are executed by Florida Certified Prescribed Burn Managers in accordance with F.S.-590.125 and F.A.C. 5I-2.

According to FNAI, historic, fire dependent natural communities on PRdSF are estimated to have occupied approximately 4,390 acres and to have burned at approximately 1-10-year intervals. Currently there are approximately 2,459 acres suitable for prescribed burning. Based on current conditions and management objectives, PRdSF will plan for 600 to 1,600 acres to be prescribed burned annually. As restoration progresses and timber stands mature, acreage suitable for prescribed burning will increase, and annual prescribed burning goals will be adjusted accordingly. Meeting prescribed fire goals will be largely dependent on weather conditions, available personnel, and statewide emergency situations such as wildfires, hurricanes, and other natural disaster response and relief.

1. Fire Management

FFS will develop a fire management plan that will serve as a working tool and an informational document for PRdSF. 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 PRdSF 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 (2018) to identify areas that may require mechanical and/or chemical 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 alternating 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 Tallahassee 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 PRdSF Fire Management Plan.

1. Suppression Strategies

If a wildfire occurs on PRdSF there are two 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 PRdSF 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

PRdSF 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 PRdSF. When possible, fire staff will avoid line construction in wetland ecotones throughout the forest.

5. Firewise Communities

FFS has implemented a Firewise community approach for prevention statewide. Specifically, in the area adjacent to or nearby PRdSF, efforts in this regard will continue to identify communities at risk and to make contact with their representatives.

6. 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. An 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. Strategy

The following silvicultural strategy will apply to silvicultural practices on PRdSF: 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 to create a forest with both young and old growth components that yields sustainable economic, ecological, and social benefits.

2. Silvicultural Operations

Silvicultural operations on PRdSF 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.

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 PRdSF 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 resources available on the property include slash, loblolly, and longleaf 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, as well as in FFS policy and procedure.

D. Non-Native Invasive Species Control

FFS personnel 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. See Exhibit O.

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 PRdSF 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*) are present on PRdSF. FWC has issued a feral hog control permit to FFS for all state forests and FFS will allow for hog removal on PRdSF through trapping and hunting as 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 PRdSF

Scientific Name	Common Name	Treatment Strategy	Acres Impacted	Increasing /Decreasing
<i>Albizia julibrissin</i>	Mimosa	Spot	Scattered plants	Stable
<i>Lygodium japonicum</i>	Japanese climbing	Spot	Scattered along road	Stable

E. Insects, Disease and Forest Health

Currently, there are no insect or disease problems on PRdSF. 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.

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 Leon and Jefferson Counties will be notified of the approval of this plan documenting this designation.

As a result, prior to conducting any arthropod control activities on PRdSF, 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 PRdSF. This public land control plan must be in compliance with FDACS guidelines and using the appropriate FDACS form. The plan must then be approved and mutually adopted by the county, FFS, and FDACS, 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. See Exhibit U.

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. Mechanical site preparation
4. Tree planting
5. Timber harvesting
6. Biological assessments and mapping
7. Contractors for fixed capital and infrastructure improvements

VII. Proposed Management Activities for Natural Communities

In 2018, FNAI completed an inventory and natural community mapping project on PRdSF. Historic natural community cover type maps were created. See Exhibit P.

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. 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 encroachment of the woody shrub component as appropriate. Fire return intervals are included as a guide (Table 7) 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 7. Prescribed Fire Interval Guide on PRdSF

Habitat Type	Historic Fire Return Intervals**	PRdSF Fire Frequency Goal (Local)	Comments
Basin Swamp	10-20 years	10-20 years	Frequency at periphery
Bottomland Forest	N/A	N/A	
Dome Swamp	3-5 years	3-5 years	Frequency at periphery
Floodplain Swamp	N/A	N/A	
Mesic Flatwoods	2-4 years	2-4 years	
Sandhill	1-3 years	2-4 years	
Shrub Bog	10-20 years	N/A	Frequency at periphery
Sinkhole Lake	N/A	N/A	
Upland Hardwood Forest	N/A	N/A	
Upland Pine	1-3 years	2-4 years	
Wet Flatwoods	3-10 years	2-5 years	

** As determined by FNAI

The following community descriptions, existing condition descriptions, and management recommendations are taken from a 2018 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 PRdSF.

To achieve the objectives outlined in this plan, the following management activities will be performed in the natural communities at PRdSF 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. Basin Swamp

Description:

Basin swamps are forested wetlands of primarily deciduous trees occurring in large, irregularly shaped depressions or as inclusions in non-pyrogenic habitats such as bottomland forest. The soils are generally acidic, nutrient-poor peats overlying an impervious soil layer. This community type is dominated by hydrophytic trees and shrubs that can withstand inundation for most or all of the year, including bald (or pond) cypress (*Taxodium distichum*) and swamp tupelo (*Nyssa biflora*). Typical subcanopy trees include slash pine (*Pinus elliottii*), red maple (*Acer rubrum*), swamp bay (*Persea palustris*), sweetbay (*Magnolia virginiana*), loblolly bay (*Gordonia lasianthus*), swamp laurel oak (*Quercus laurifolia*), sweetgum (*Liquidambar styraciflua*), water oak (*Quercus nigra*), green ash (*Fraxinus pennsylvanica*), and American hornbeam (*Carpinus caroliniana*). Shrubs are typically scattered throughout the swamp, although some areas may have heavier concentrations. The herbaceous layer is variable. In densely forested portions of basin swamps, herbs are sparse. Sphagnum moss (*Sphagnum* spp.) often occurs in patches where the soil is saturated but not flooded. Epiphytes and vines may be common.

Basin swamps are common on PRdSF, appearing as medium to dark grey forested areas on the 1941 aerials. In the central portion of the property, basin swamps are scattered throughout the wet and mesic flatwoods. The large bottomland forest in the northeast contains several inclusions of basin swamp. These two communities are difficult to distinguish on the 1941 aerials. Some basin swamps contain inclusions of shrub bogs (titi shrubs lacking a hardwood canopy), which appear as a smooth medium to dark grey signature.

Existing Conditions:

Cypress logging, pine plantations, and lack of fire in surrounding uplands under prior ownership have made large impacts on the quality of basin swamps at PRdSF. Recent aerial photography shows logging scars in basin swamps in the northeast portion of the property. These areas are mostly devoid of a cypress canopy, and typically have a moderate to dense shrub layer that may be impenetrable with vines such as laurel greenbrier (*Smilax laurifolia*) and muscadine (*Vitis rotundifolia*). In the central portion of the property, basin swamps are common throughout the surrounding mesic and wet flatwoods. Most of these flatwoods have been converted to pine plantation prior to state acquisition. As a result, most of the basin swamps in these areas have an edge of planted pine. Due to lack of fire in the surrounding pine plantations, basin swamps in these areas also have a dense, often impenetrable border of tall shrubs including sweet pepperbush (*Clethra alnifolia*), black titi (*Cliftonia monophylla*), titi (*Cyrilla racemiflora*), and fetterbush (*Lyonia lucida*).

In general, basin swamps on PRdSF are dominated by a mixture of wetland trees, particularly pond cypress (*Taxodium ascendens*), bald cypress (*Taxodium distichum*), swamp tupelo (*Nyssa biflora*), slash pine (*Pinus elliotii*), and sweetbay (*Magnolia virginiana*). The understory consists of smaller canopy species plus red maple (*Acer rubrum*), American hornbeam (*Carpinus caroliniana*), Carolina ash (*Fraxinus caroliniana*), dahoon (*Ilex cassine*), myrtle-leaved holly (*Ilex cassine* var. *myrtifolia*), sweetgum (*Liquidambar styraciflua*), swamp bay (*Persea palustris*), swamp chestnut oak (*Quercus michauxii*), and water oak (*Quercus nigra*). The tall and short shrub layer is sparse to dense with sweet pepperbush, black titi, titi, fetterbush, Virginia willow (*Itea virginica*), southern bayberry (*Morella cerifera*), and mountain azalea (*Rhododendron canescens*). Climbing fetterbush (*Pieris phylllyreifolia*) is occasionally found growing on cypress trunks.

Herbs are generally sparse and include sedges (*Carex* spp.), Carolina redroot (*Lachnanthes caroliniana*), cinnamon fern (*Osmunda cinnamomea*), swamp dock (*Rumex verticillatus*), lizard's tail (*Saururus cernuus*), netted chain fern (*Woodwardia areolata*), Virginia chain fern (*Woodwardia virginica*), and yellow-eyed grass (*Xyris* spp.). Epiphytes and vines are sparse to common and include southern needleleaf (*Tillandsia setacea*), Spanish moss (*Tillandsia usneoides*), laurel greenbrier (*Smilax laurifolia*), coral greenbrier (*Smilax walteri*), eastern poison ivy (*Toxicodendron radicans*), and muscadine (*Vitis rotundifolia*).

Fire Regimes:

Fire intervals in basin swamps are highly variable. The lowest portions of basin swamps rarely, if ever, burn. Graminoid-dominated ecotones burn in conjunction with the adjacent

uplands, and these may burn as frequently as every 2 to 5 years.

Fire is more frequent in cypress dominated swamps and may be absent or rare in hardwood swamps. Slash pine, pond pine, and cypress can establish in these areas immediately after a fire, benefiting from ample sunlight and available bare mineral soils; they are also tolerant of moderate fires once past a certain size, thus systems dominated by these species may have been subjected to fires, every 10-20 years.

Management Needs:

Many basin swamps on PRdSF have had their cypress harvested for timber under prior ownership. Although cypress trees are capable of regenerating, or re-sprouting from cut stumps, cypress regeneration is usually from seed. It is therefore important that at least a few seed trees be left in place for canopy regeneration. These areas should also be monitored closely for non-native invasive plants. Planted pine will be harvested out of the basin swamps edges as forest stands within the adjacent mesic and wet flatwoods stands need thinning.

Prescribed fires in uplands surrounding basin swamps should be allowed to burn and extinguish naturally at or within the wetlands and encouraged to “push” into shrub wetlands in ecotones. Fires should be encouraged to burn completely smaller, isolated wetlands under dry conditions, when safety considerations allow.

B. Bottomland Forest

Description:

Bottomland forest is a deciduous, or mixed deciduous/evergreen, closed-canopy forest on terraces and levees within riverine floodplains and in shallow depressions. Found in situations intermediate between swamps (which are flooded most of the time) and uplands, the canopy may be quite diverse with both deciduous and evergreen hydrophytic to mesophytic trees. Characteristic canopy species of bottomland forests include sweetgum (*Liquidambar styraciflua*), swamp laurel oak (*Quercus laurifolia*), swamp chestnut oak (*Quercus michauxii*), red maple (*Acer rubrum*), American elm (*Ulmus americana*), and loblolly pine (*Pinus taeda*). Smaller trees and shrubs often include American hornbeam (*Carpinus caroliniana*), swamp dogwood (*Cornus foemina*), swamp bay (*Persea palustris*), southern bayberry (*Morella cerifera*), bluestem palmetto (*Sabal minor*), and highbush blueberry (*Vaccinium corymbosum*). Ground cover is variable in composition and abundance, often with species overlap between herbs suited to either mesic or hydric conditions. Characteristic species include witchgrasses (*Dichanthelium* spp.), longleaf woodoats (*Chasmanthium laxum* var. *sessiliflorum*), and sedges (*Carex* spp.).

On PRdSF, bottomland forest occurs along the St. Marks River, and as a large swath of lowlands in the northeastern portion of the property that drain into the river. Bottomland forest is often intermixed with floodplain swamp and the two communities are impossible to distinguish on the 1941 aerials. Current aerial photography and ground-truthing were used to delineate these two communities.

Existing Conditions:

Most bottomland forests on PRdSF are in good condition. The canopy includes sweetgum (*Liquidambar styraciflua*), sweetbay (*Magnolia virginiana*), slash pine (*Pinus elliottii*), loblolly pine (*Pinus taeda*), swamp laurel oak (*Quercus laurifolia*), swamp chestnut oak (*Quercus michauxii*), American elm (*Ulmus americana*), and water oak (*Quercus nigra*). The open subcanopy includes canopy species along with red maple (*Acer rubrum*), American hornbeam (*Carpinus caroliniana*), swamp dogwood (*Cornus foemina*), and swamp bay (*Persea palustris*). Tall and short shrubs are typically sparse with common buttonbush (*Cephalanthus occidentalis*), sweet pepperbush (*Clethra alnifolia*), large gallberry (*Ilex coriacea*), Virginia willow (*Itea virginica*), sweetbay (*Magnolia virginiana*), southern bayberry (*Morella cerifera*), bluestem palmetto (*Sabal minor*), highbush blueberry (*Vaccinium corymbosum*), and possumhaw (*Viburnum nudum*).

The herbaceous layer is sparse to dense with sedges (*Carex* spp.), longleaf woodoats (*Chasmanthium laxum* var. *sessiliflorum*), yellow stargrass (*Hypoxis* spp.), rushes (*Juncus* spp.), sensitive fern (*Onoclea sensibilis*), panic grass (*Panicum* spp.), bracken fern (*Pteridium aquilinum*), swamp dock (*Rumex verticillatus*), lizard's tail (*Saururus cernuus*), netted chain fern (*Woodwardia areolata*), and Virginia chain fern (*Woodwardia virginica*). Vines are abundant and include peppervine (*Ampelopsis arborea*), earleaf greenbrier (*Smilax auriculata*), saw greenbrier (*Smilax bona-nox*), laurel greenbrier (*Smilax laurifolia*), sarsaparilla vine (*Smilax pumila*), bristly greenbrier (*Smilax tamnoides*), coral greenbrier (*Smilax walteri*), eastern poison ivy (*Toxicodendron radicans*), muscadine (*Vitis rotundifolia*), and yellow-eyed grass (*Xyris* spp.). Epiphytes and vines are sparse to common and include southern needleleaf (*Tillandsia setacea*), Spanish moss (*Tillandsia usneoides*), laurel greenbrier (*Smilax laurifolia*), coral greenbrier (*Smilax walteri*), eastern poison ivy (*Toxicodendron radicans*), and muscadine (*Vitis rotundifolia*).

In some areas where bottomland forest borders upland communities such as sandhill, a transitional area resembling mesic hammock may be present. The canopy layer is consistent with typical bottomland forest species. Saw palmetto (*Serenoa repens*), dominates the shrub layer along with occasional wild olive (*Cartrema americanum*), coastalplain staggerbush (*Lyonia fruticosa*), southern bayberry (*Morella cerifera*), highbush blueberry (*Vaccinium corymbosum*), and deerberry (*Vaccinium stamineum*). The herb layer is sparse with panic grass (*Panicum* spp.), and bracken fern (*Pteridium aquilinum*).

Fire Regimes:

Fire is not a significant factor in bottomland forest and is primarily limited to individual trees affected by lightning strikes.

Management Needs:

Management activities should focus on maintaining natural hydrologic patterns and allowing prescribed fires from adjacent communities to extinguish themselves at the edges of the community. Activities that alter the surrounding hydrology, including ditches and canals, should be avoided as they are highly detrimental to bottomland forest.

C. Dome Swamp

Description:

Dome swamps are isolated, shallow, forested wetland basins that are imbedded in a pyrogenic matrix community such as pine flatwoods. These swamps have domed profiles resulting from smaller trees growing around the edges and larger trees growing in the interior. Dome swamps have peat soils that are thickest toward the center and are generally underlain with acidic soils and a limestone layer. Dome swamps are distinguished from basin swamps principally by their often more circular shape, smaller size, and higher historical fire frequency due to landscape position.

The canopy is dominated by pond cypress (*Taxodium ascendens*) and/or swamp tupelo (*Nyssa biflora*) and may also have a mixture of loblolly bay (*Gordonia lasianthus*) and sweetbay (*Magnolia virginiana*), as well as a midstory of scattered tall shrubs including dahoon (*Ilex cassine*), myrtle-leaved holly (*Ilex cassine* var. *myrtifolia*), fetterbush (*Lyonia lucida*), southern bayberry (*Morella cerifera*), and swamp bay (*Persea palustris*). The herbaceous layer is sparse in the interior, becoming denser on the edges, and dominated by various hydrophytic herbs. Species composition and hydroperiods are similar to basin swamps, but generally with fewer shrubs and greater herbaceous cover and diversity. Dome swamps usually have a diverse herbaceous ecotone with the surrounding pine dominated community, created through frequent fires that extinguish naturally along the edge of the dome.

Existing Conditions:

Numerous dome swamps are scattered throughout the uplands on PRdSF. Many of these dome swamps have an edge of slash pine canopy due to adjacent uplands being converted to pine plantation. Due to lack of fire in the surrounding pine plantations, dome swamps in these areas also have a dense, often impenetrable border of tall shrubs including sweet pepperbush (*Clethra alnifolia*), black titi (*Cliftonia monophylla*), titi (*Cyrilla racemiflora*), and fetterbush (*Lyonia lucida*). Recent aerial photography shows logging scars in some dome swamps on the northeastern portion of the property.

The closed canopy is composed of cypress (*Taxodium ascendens*), tupelo (*Nyssa biflora*), and slash pine (*Pinus elliottii*). Subcanopy species include loblolly bay (*Gordonia lasianthus*), myrtle-leaved holly (*Ilex cassine* var. *myrtifolia*), and sweetbay (*Magnolia virginiana*). Shrubs may be dense at swamp edges and include red chokeberry (*Aronia arbutifolia*), sweet pepperbush (*Clethra alnifolia*), black titi (*Cliftonia monophylla*), titi (*Cyrilla racemiflora*), Virginia willow (*Itea virginica*), myrtle-leaved holly, fetterbush (*Lyonia lucida*), and swamp bay (*Persea palustris*). Herbs are generally sparse and include chalky bluestem (*Andropogon virginicus* var. *glaucus*), Virginia chain fern (*Woodwardia virginica*), and yellow-eyed grasses (*Xyris* spp.).

Fire Regimes:

Fire is important in limiting hardwood encroachment and peat buildup, while encouraging herbaceous growth in dome swamps. Fire frequency is greatest at the periphery of a dome swamp, where a normal fire cycle might be as short as 3 to 5 years.

Management Needs:

Management of dome swamps in PRdSF should focus on the restoration of surrounding pine communities, primarily through thinning of planted pines and the reestablishment of a frequent fire return interval to be determined by the needs of the surrounding community.

During previous ownership, some dome swamps on PRdSF have had their cypress harvested for timber. Although cypress trees are capable of regenerating, or re-sprouting from cut stumps, cypress regeneration is usually from seed. It is therefore important that at least a few seed trees be left in place for canopy regeneration. These areas should also be monitored closely for non-native invasive plants. Planted pine will be harvested out of the dome swamps edges as forest stands within the adjacent mesic and wet flatwoods stands need thinning.

D. Floodplain Swamp**Description:**

Floodplain swamp is a closed-canopy forest of hydrophytic trees occurring on frequently or permanently flooded hydric soils adjacent to stream and river channels and in depressions and oxbows within floodplains. The canopy is typically closed and dominated by pond cypress (*Taxodium ascendens*) and/or bald cypress (*Taxodium distichum*), water tupelo (*Nyssa aquatica*), and swamp tupelo (*Nyssa biflora*) with occasional Carolina ash (*Fraxinus caroliniana*), and swamp laurel oak (*Quercus laurifolia*). Shrubs and smaller trees such as titi (*Cyrilla racemiflora*), green ash (*Fraxinus pennsylvanica*), Virginia willow (*Itea virginica*), common buttonbush (*Cephalanthus occidentalis*), cabbage palm (*Sabal palmetto*), and dahoon (*Ilex cassine*) may be present. A groundcover of flood tolerant ferns and herbs such as royal fern (*Osmunda regalis* var. *spectabilis*), netted chain fern (*Woodwardia areolata*), swamp dock (*Rumex verticillatus*), lizard's tail (*Saururus cernuus*) may be occasional.

On PRdSF, floodplain swamp occurs along the St. Marks River and its floodplain. These swamps are often found in a mosaic with bottomland forest. The two communities are impossible to distinguish on the 1941 aerials. Current aerial photography and ground-truthing were used to delineate both communities.

Existing Conditions:

A large portion of floodplain swamp on the northeastern portion of the property (east of the river) has been logged for cypress under prior ownership. Logging scars are visible in recent aerial photography of these swamps. These areas are mostly devoid of a cypress canopy, and typically have a moderate to dense shrub layer that may be impenetrable with vines such as laurel greenbrier (*Smilax laurifolia*) and muscadine (*Vitis rotundifolia*).

In general, floodplain swamps on PRdSF have a closed canopy of pond cypress (*Taxodium ascendens*), bald cypress (*Taxodium distichum*), water tupelo (*Nyssa aquatica*), and swamp tupelo (*Nyssa biflora*). Less frequent hydrophytic trees include red maple (*Acer rubrum*), swamp dogwood (*Cornus foemina*), green ash (*Fraxinus pennsylvanica*), Carolina ash (*Fraxinus caroliniana*), sweetgum (*Liquidambar styraciflua*), sweetbay (*Magnolia virginiana*), laurel oak (*Quercus laurifolia*), water oak (*Quercus nigra*), coastalplain

willow (*Salix caroliniana*), and American elm (*Ulmus americana*). Shrubs are sparse and usually limited to raised areas around cypress knees. Common shrubs include common buttonbush (*Cephalanthus occidentalis*), sweet pepperbush (*Clethra alnifolia*), swamp dogwood (*Cornus foemina*), titi (*Cyrilla racemiflora*), Virginia willow (*Itea virginica*), sweetgum (*Liquidambar styraciflua*), fetterbush (*Lyonia lucida*), and southern bayberry (*Morella cerifera*).

Occasional hydrophytic herbs include Atlantic sedge (*Carex atlantica*), floatingheart (*Nymphoides* spp.), cinnamon fern (*Osmunda cinnamomea*), royal fern (*Osmunda regalis* var. *spectabilis*), butterweed (*Packera glabella*), swamp dock (*Rumex verticillatus*), lizard's tail (*Saururus cernuus*), bulrush (*Scirpus* spp.), and netted chain fern (*Woodwardia areolata*). Vines are sparse to common and include rattan vine (*Berchemia scandens*), trumpet creeper (*Campsis radicans*), climbing hydrangea (*Decumaria barbara*), climbing hempvine (*Mikania scandens*), Virginia creeper (*Parthenocissus quinquefolia*), cat greenbrier (*Smilax glauca*), laurel greenbrier (*Smilax laurifolia*), bristly greenbrier (*Smilax tamnoides*), coral greenbrier (*Smilax walteri*), eastern poison ivy (*Toxicodendron radicans*), and muscadine (*Vitis rotundifolia*).

Fire Regimes:

Fire is not necessary to maintain floodplain swamp. This community is typically too wet to carry a fire. If floodplain swamps experience drought, fires may occur and cause damage to the understory.

Management Needs:

Alteration of the hydroperiod by impoundments or river diversions and the conversion of floodplain communities to forestry or agriculture uses have devastating consequences to river system. The maintenance of natural hydrologic regimes is critical to the health of floodplain swamps and to the downstream systems with which they are connected. During previous ownership, cypress trees have been harvested for timber in large areas of floodplain swamp on PRdSF. Although cypress trees are capable of regenerating, or resprouting from cut stumps, cypress regeneration is usually from seed. It is therefore important that at least a few seed trees be left in place for canopy regeneration. These areas should also be monitored closely for non-native invasive plants.

E. Mesic Flatwoods

Description:

Mesic flatwoods are forests of southern pine species, including longleaf pine (*Pinus palustris*) and slash pine (*Pinus elliottii*). There is little or no subcanopy and very few tall shrubs, but a dense ground cover of herbs and short shrubs is typically present. The latter help maintain community structure by fueling growing-season fires. Characteristic short shrubs include saw palmetto (*Serenoa repens*), coastalplain staggerbush (*Lyonia fruticosa*), rusty staggerbush (*Lyonia ferruginea*), fetterbush (*Lyonia lucida*), gallberry (*Ilex glabra*), southern bayberry (*Morella cerifera*), tarflower (*Bejaria racemosa*), dwarf huckleberry (*Gaylussacia dumosa*), blue huckleberry (*Gaylussacia frondosa* var. *tomentosa*), shiny blueberry (*Vaccinium myrsinites*), and dwarf live oak (*Quercus minima*). The herbaceous layer is predominantly grasses plus a large number of showy forbs. Species include

wiregrass (*Aristida stricta*), arrowfeather threeawn (*Aristida purpurascens*), Florida dropseed (*Sporobolus floridanus*), lopsided Indiangrass (*Sorghastrum secundum*), witchgrasses (*Dichanthelium* spp.), beaksedges (*Rhynchospora* spp.), narrowleaf silkgrass (*Pityopsis graminifolia*), vanillaleaf (*Carphephorus odoratissimus*), and bracken fern (*Pteridium aquilinum*).

The ecotone between mesic flatwoods and wetland communities is an important area for many rare species and is maintained with frequent, low-intensity fires, typically every 2-4 years. Soils are mainly in the spodosol family, bearing a spodic horizon (i.e., a clay hardpan) that develops under poorly drained conditions. These low pH soils are characterized by low levels of nutrients and organic matter.

Mesic flatwoods were historically widespread throughout PRdSF. On the 1941 aerial photographs the flatwoods appear as light to medium gray smooth signatures with darker trees dotting the landscape. Mesic flatwoods generally appear identical to wet flatwoods in the historic aerials, although they may be a lighter grey in some areas. Mesic flatwoods in the northeastern portion of the property are often transitional to sandhill and upland pine communities. These areas may have a rougher texture than the usual smooth grey signature in the historic aerials. Mesic flatwoods on the remainder of the property are often intermixed with wet flatwoods.

Existing Conditions:

All historic mesic flatwoods on PRdSF were planted with slash pine (*Pinus elliottii*) or loblolly pine (*Pinus taeda*) prior to state acquisition. Stands that have received some thinning, but that remain highly disturbed, are indicative that management is moving the community towards a more natural structure.

The canopy layer of the mesic flatwoods community is dominated by slash pine (*Pinus elliottii*) or loblolly pine (*Pinus taeda*). A subcanopy may or may not be present with sweetgum (*Liquidambar styraciflua*), sweetbay (*Magnolia virginiana*), swamp bay (*Persea palustris*), laurel oak (*Quercus hemisphaerica*), water oak (*Quercus nigra*), and live oak (*Quercus virginiana*). The tall and short shrub layer may be moderate to dense and includes rusty staggerbush (*Lyonia ferruginea*), coastalplain staggerbush (*Lyonia fruticosa*), fetterbush (*Lyonia lucida*), saw palmetto (*Serenoa repens*), dwarf huckleberry (*Gaylussacia dumosa*), blue huckleberry (*Gaylussacia frondosa* var. *tomentosa*), coastalplain St. John's wort (*Hypericum brachyphyllum*), gallberry (*Ilex glabra*), dwarf live oak (*Quercus minima*), Darrow's blueberry (*Vaccinium darrowii*), and shiny blueberry (*Vaccinium myrsinites*).

Mesic flatwoods that are transitional to sandhill or upland pine typically have sparkleberry (*Vaccinium arboreum*) or deerberry (*Vaccinium stamineum*) in the shrub layer. Areas transitional to wet flatwoods typically have titi (*Cyrilla racemiflora*), southern bayberry (*Morella cerifera*), or large gallberry (*Ilex coriacea*) common in the shrub layer.

The herbaceous layer is generally sparse due to the density of shrubs. Common herbs include broomsedge bluestem (*Andropogon virginicus*), chalky bluestem (*Andropogon*

virginicus var. *glaucus*), wiregrass (*Aristida stricta*), witchgrasses (*Dichanthelium* spp.), candyroot (*Polygala nana*), bracken fern (*Pteridium aquilinum*), and Florida dropseed (*Sporobolus floridanus*). Vines are occasional and include yellow jessamine (*Gelsemium sempervirens*), earleaf greenbrier (*Smilax auriculata*), and laurel greenbrier (*Smilax laurifolia*).

Fire Regimes:

Mesic flatwoods require repeated applications of prescribed fire on a 2-4 year cycle.

Management Needs:

A prescribed fire return interval of every 2-4 years is recommended. Past silvicultural activities and lack of frequent prescribed fires prior to state ownership have damaged native groundcover and allowed for woody encroachment in many areas. It may be necessary to apply fire more frequently in flatwoods where fuel levels are high due to a history of fire exclusion. Thinning of pine plantations as needed, and mid-rotation mechanical or chemical treatments may be applied. Offsite tree species may be removed, and the site reforested with appropriate species.

F. Sandhill

Description:

Sandhill occurs on crests and slopes of rolling hills and ridges with steep or gentle topography. Soils are deep, marine-deposited, often yellowish sands that are well-drained and relatively infertile. Sandhill is important for aquifer recharge because the porous sands allow water to percolate rapidly with little runoff and minimal evaporation. The deep, sandy soils and a lack of near surface hardpan or water table contribute to a xeric environment.

Sandhills are forests consisting of longleaf pine (*Pinus palustris*) trees, typically with a sparse subcanopy of turkey oak (*Quercus laevis*), bluejack oak (*Quercus incana*) and/or sand post oak (*Quercus margaretta*), and a fairly dense groundcover of herbs, particularly wiregrass (*Aristida stricta*). The greatest plant diversity within sandhill is in the herbaceous groundcover. Dominant grasses, in addition to wiregrass, include other three-awns (*Aristida* spp.), pineywoods dropseed (*Sporobolus junceus*), lopsided indiagrass (*Sorghastrum secundum*), several species of bluestems (*Andropogon* spp.), and little bluestem (*Schizachyrium scoparium*). Sandhills are fire-maintained communities that occur on relatively well-drained, deep sands.

Sandhill historically occurred mostly along the northern border and in the south-central portion of PRdSF. On the 1941 historic photographs, sandhill appears as light to medium grey areas with a mottled texture. Trees appear as light grey flecks or dark grey dots scattered over the landscape. Some portions of sandhill appear to have already been disturbed by 1941. These areas are light colored with a high density of large oaks dotting the landscape.

Existing Conditions:

Conversion to pine plantation and lack of fire prior to state acquisition have had significant

impacts to sandhills on PRdSF. Nearly all of the historic sandhills have been planted with slash pine (*Pinus elliottii*) or with loblolly pine (*Pinus taeda*). A few areas of historic sandhill have become closed-canopied forests dominated by fast growing hardwoods such as laurel oak (*Quercus hemisphaerica*), water oak (*Quercus nigra*), and/or sweetgum (*Liquidambar styraciflua*).

Intact, historical sandhill communities on PRdSF have an open canopy of slash pine (*Pinus elliottii*), or loblolly pine (*Pinus taeda*) and less frequently, longleaf pine (*Pinus palustris*). Laurel oak (*Quercus hemisphaerica*), sparkleberry (*Vaccinium arboreum*), and deerberry (*Vaccinium stamineum*) are very common in the subcanopy and tall shrub layer due to fire exclusion. The subcanopy also contains turkey oak (*Quercus laevis*), sand live oak (*Quercus geminata*), bluejack oak (*Quercus incana*). The tall and short shrub layer is relatively open in these areas. In addition to subcanopy species the shrub layer includes common persimmon (*Diospyros virginiana*), dwarf huckleberry (*Gaylussacia dumosa*), blue huckleberry (*Gaylussacia frondosa* var. *tomentosa*), rusty staggerbush (*Lyonia ferruginea*), pricklypear (*Opuntia humifusa*), saw palmetto (*Serenoa repens*), shiny blueberry (*Vaccinium myrsinites*), highbush blueberry (*Vaccinium corymbosum*) and hawthorn (*Crataegus* spp.).

The herbaceous layer is sparse to moderate and contains splitbeard bluestem (*Andropogon ternarius*), wiregrass (*Aristida stricta*), tread softly (*Cnidoscolus stimulosus*), Carolina frostweed (*Crocianthemum carolinianum*), narrowleaf silkgrass (*Pityopsis graminifolia*), silver croton (*Croton argyranthemus*), witchgrass (*Dichanthelium* spp.), blazing star (*Liatris* spp.), lady lupine (*Lupinus villosus*), crowngrass (*Paspalum* spp.), candyrroot (*Polygala nana*), bracken fern (*Pteridium aquilinum*), dollarleaf (*Rhynchosia reniformis*), Florida dropseed (*Sporobolus floridanus*), and forked bluecurls (*Trichostema dichotomum*).

Fire Regimes:

Sandhill requires frequent fires to maintain its natural structure. Fire should be applied to this community every 1-3 years. Variability in the season, frequency, and intensity of fire is important for preserving species diversity, since different species in the community flourish under different fire regimes.

Management Needs:

Thinning of pine plantations as needed, and mid-rotation mechanical or chemical treatments may be applied. Offsite tree species may be removed, and the site reforested with appropriate species. Groundcover restoration projects should focus on practices that will increase wiregrass abundance. Dormant and growing season burns at a 1-3-year interval will be the most effective at accomplishing this and decreasing weedy species such as laurel oak (*Quercus hemisphaerica*). In areas with high densities of laurel oak, evaluate the merchantability for a timber sale, followed by a herbicide treatment to control re-sprouting oak. FFS may consider seeding or transplanting of wiregrass to facilitate burns through these areas if feasible.

G. Shrub Bog

Description:

Shrub bogs are dense stands of broadleaved evergreen shrubs, vines, and short trees, one to five meters tall depending on time since fire, with or without an overstory of scattered pine or bay trees, growing in mucky soil where water is usually less than a foot deep. Characteristic shrubs include titi (*Cyrilla racemiflora*), black titi (*Cliftonia monophylla*), fetterbush (*Lyonia lucida*), large gallberry (*Ilex coriacea*), myrtle-leaved holly (*Ilex cassine* var. *myrtifolia*), gallberry (*Ilex glabra*), southern bayberry (*Morella cerifera*), and sweet pepperbush (*Clethra alnifolia*), often laced together with laurel greenbrier (*Smilax laurifolia*). Herbs are sparse and patchy, confined to sunny openings, and often include beaksedges (*Rhynchospora* spp.), tenangle pipewort (*Eriocaulon decangulare*), Virginia chain fern (*Woodwardia virginica*), and yellow-eyed grasses (*Xyris* spp.). Soils of shrub bogs frequently have an organic muck layer of varying depth at the surface underlain by sand or loamy sands. Sphagnum moss (*Sphagnum* spp.) is common on the ground surface.

On the 1941 aerial photographs, shrub bogs on PRdSF appear as small to medium sized, irregularly shaped depressions with a dark grey color and smooth to rough texture, depending on tree density. These shrub bogs are scattered throughout upland communities or occur as inclusions in swamps. Several basin swamps on the property are partly bordered by shrub bog.

Existing Conditions:

Most shrub bogs on PRdSF have received some degree of disturbance under prior ownership from past cypress logging in adjacent basin swamps or conversion of adjacent uplands to pine plantation. Shrub bogs that occur in upland communities are usually bordered by a canopy of planted slash pine (*Pinus elliotii*) or loblolly pine (*Pinus taeda*).

Shrub bogs on PRdSF typically have a scattered canopy and moderate to dense subcanopy of loblolly bay (*Gordonia lasianthus*), sweetbay (*Magnolia virginiana*), swamp tupelo (*Nyssa biflora*), sweetgum (*Liquidambar styraciflua*), swamp bay (*Persea palustris*), and pond cypress (*Taxodium ascendens*). The shrub layer is dense with sweet pepperbush (*Clethra alnifolia*), black titi (*Cliftonia monophylla*), titi (*Cyrilla racemiflora*), swamp doghobble (*Eubotrys racemosus*), myrtle-leaved holly (*Ilex cassine* var. *myrtifolia*), large gallberry (*Ilex coriacea*), and fetterbush (*Lyonia lucida*).

Herbs are patchy, usually occurring in openings where a road or other disturbance intersects the bog. Common herbs include sedges (*Carex* spp.), sawgrass (*Cladium jamaicense*), soft rush (*Juncus effusus solutus*), beaksedges (*Rhynchospora* spp.), lizard's tail (*Saururus cernuus*), Virginia chain fern (*Woodwardia virginica*), and yellow-eyed grasses (*Xyris* spp.).

Fire Regimes:

Fires starting in the surrounding pinelands can burn into the edges of shrub bogs, but burn through them only during drought periods, probably on the order of every 10-20 years. The shrubs and bay trees respond to fire by re-sprouting, either from root crowns or rhizomes. During droughts the peat may become dry enough to burn completely.

Management Needs:

Management should focus on allowing prescribed fires to burn into shrub bog edges to limit titi encroachment into surrounding communities.

H. Sinkhole Lake**Description:**

Sinkhole lakes occur typically in deep, funnel-shaped depressions in a limestone base. Although the depression is relatively permanent, water levels may fluctuate dramatically. These lakes are characterized by clear, alkaline, hard water with high mineral content, including calcium, bicarbonate, and magnesium. The vegetation in some sinkhole lakes may be conspicuously absent or limited to a narrow fringe of emergents at the edge of the water. Other Sinkhole Lakes are completely covered by floating plants. When they occur, typical plants include smartweeds (*Persicaria* spp.), rushes (*Juncus* spp.), cattails (*Typha* spp.), bladderworts (*Utricularia* spp.), and duckweeds (*Lemna* spp.).

Sinkhole lakes are considered imperiled in Florida. They are threatened by erosion which causes destruction of surrounding vegetation and to pollution and other threats to the aquifers with which they are connected.

Sinkhole lakes are scattered throughout PRdSF in mesic flatwoods, wet flatwoods, and sandhills. In the 1941 historic photographs, sinkhole lakes appear as small, dark, circular depressions in the upland communities.

Existing Conditions:

Most sinkhole lakes on PRdSF appear to be in good condition. Canopy and subcanopy trees only occur around the perimeter of the sinkhole lake. Trees include swamp tupelo (*Nyssa biflora*), slash pine (*Pinus elliottii*), and pond cypress (*Taxodium ascendens*). A variety of tall and short shrubs may border the sinkhole lake, including black titi (*Cliftonia monophylla*), titi (*Cyrilla racemiflora*), saw palmetto (*Serenoa repens*) peelbark St. John's wort (*Hypericum fasciculatum*), myrtle-leaved holly (*Ilex cassine* var. *myrtifolia*), common buttonbush (*Cephalanthus occidentalis*), swamp doghobble (*Eubotrys racemosus*), fetterbush (*Lyonia lucida*), and southern bayberry (*Morella cerifera*). Herbs are limited to the edges of sinkhole lakes. Common herbs include clustered sedge (*Carex glaucescens*), pink sundew (*Drosera capillaris*), whitehead bogbutton (*Lachnocaulon anceps*), foxtail club-moss (*Lycopodiella alopecuroides*), royal fern (*Osmunda regalis* var. *spectabilis*), beaksedges (*Rhynchospora* spp.), Virginia chain fern (*Woodwardia virginica*), and yellow-eyed grass (*Xyris* spp.).

Fire Regimes:

Fire is not required to maintain this community. Prescribed fires in the surrounding uplands should be allowed to burn through or naturally extinguish in sinkhole lakes.

Management Needs:

This community is vulnerable to erosion and other general soil disturbances. Major soil disturbances in the adjoining uplands should be avoided as they could disrupt seepage

water sources.

I. Upland Hardwood Forest

Description:

Upland hardwood forest is a well-developed, closed-canopy forest dominated by deciduous hardwood trees on mesic soils in areas sheltered from fire. The community typically has a diverse assemblage of deciduous and evergreen tree species in the canopy and midstory, shade-tolerant shrubs, and a sparse groundcover. Characteristic canopy trees include southern magnolia (*Magnolia grandiflora*), pignut hickory (*Carya glabra*), sweetgum (*Liquidambar styraciflua*), Florida maple (*Acer saccharum floridanum*), live oak (*Quercus virginiana*), laurel oak (*Quercus hemisphaerica*), loblolly pine (*Pinus taeda*), American beech (*Fagus grandifolia*), and white oak (*Quercus alba*). The midstory layer is composed of younger canopy species as well as small trees, and tall shrubs, such as common serviceberry (*Amelanchier arborea*), American holly (*Ilex opaca*), American hornbeam (*Carpinus caroliniana*), devil's walkingstick (*Aralia spinosa*), eastern hophornbeam (*Ostrya virginiana*), flowering dogwood (*Cornus florida*), horse sugar (*Symplocos tinctoria*), and American witchhazel (*Hamamelis virginiana*). The groundcover is composed of shade-tolerant herbs, graminoids, and vines.

Two small upland hardwood forests occur on PRdSF on fire-sheltered hillsides between upland communities and basin swamps.

Existing Conditions:

The two upland hardwood forests mapped on PRdSF have received past disturbances from development and logging prior to state acquisition. The upland hardwood forest mapped along Tram Road is only a fragment of the larger community that historically occurred west of the property boundary. The other upland hardwood forest mapped on the property is bordered to the west by historic upland pine that has been converted to pine plantation and to the east by basin swamp which has been logged for cypress. Lack of fire in the adjacent historic upland pine has allowed shrubs such as sparkleberry (*Vaccinium arboreum*) and deerberry (*Vaccinium stamineum*) to establish in the understory of the upland hardwood forest.

Despite past disturbances, the overall structure of the upland hardwood forests on PRdSF remains intact. The closed canopy includes American beech (*Fagus grandifolia*), southern magnolia (*Magnolia grandiflora*), loblolly pine (*Pinus taeda*), white oak (*Quercus alba*), laurel oak (*Quercus hemisphaerica*), and water oak (*Quercus nigra*). The subcanopy is open to moderately dense with canopy species and wild olive (*Cartrema americanum*), pignut hickory (*Carya glabra*), sweetgum (*Liquidambar styraciflua*), and eastern hophornbeam (*Ostrya virginiana*). The tall and short shrub layer is fairly open to moderate with common serviceberry (*Amelanchier arborea*), smallflower pawpaw (*Asimina parviflora*), American witchhazel (*Hamamelis virginiana*), American holly (*Ilex opaca*), rusty staggerbush (*Lyonia ferruginea*), eastern hophornbeam (*Ostrya virginiana*), saw palmetto (*Serenoa repens*), horse sugar (*Symplocos tinctoria*), sparkleberry (*Vaccinium arboreum*), highbush blueberry (*Vaccinium corymbosum*), and deerberry (*Vaccinium stamineum*). A closed canopy and high leaf litter limits herbaceous growth. Vines are

occasional and include sarsaparilla vine (*Smilax pumila*) and muscadine (*Vitis rotundifolia*).

Fire Regimes:

Upland hardwood forest is not a fire-adapted natural community. However, low intensity, naturally occurring fires that creep into the forest edges from surrounding pyrogenic upland communities is a natural part of the forest dynamics of upland hardwood forest.

Management Needs:

If prescribed burns are applied to the adjacent upland pine community (now pine plantation), those fires should be allowed to burn to the edge of the upland hardwood forest and extinguish naturally.

J. Upland Pine

Description:

Upland pine is a woodland of southern pines with a sparse to moderate shrub layer and a dense, species-rich groundcover of grasses and herbs, occurring on gently rolling terrain. The canopy is dominated by longleaf pine (*Pinus palustris*). There is an intermittent subcanopy layer of smaller pines, and hardwoods including slash pine (*Pinus elliotii*), southern red oak (*Quercus falcata*), blackjack oak (*Quercus. marilandica*), flowering dogwood (*Cornus florida*), bluejack oak (*Quercus. incana*), laurel oak (*Quercus. hemisphaerica*), winged sumac (*Rhus copallinum*), common persimmon (*Diospyros virginiana*), and mockernut hickory (*Carya alba*). Though typically present as low shrubs and occasional midstory trees, these species can form a dense midstory (subcanopy and tall shrubs layers) in areas that have experienced a lack of fire for many years. Shrub cover can vary from sparse to dense and includes low-growing species such as dwarf huckleberry (*Gaylussacia dumosa*), gallberry (*Ilex glabra*), and Darrow's blueberry (*Vaccinium darrowii*). Herbaceous cover varies, from sparse to abundant, dependent upon the density and shading effects of the shrubs. Wiregrass (*Aristida stricta*) is often dominant, but a high diversity of grasses and forbs may be present, including broomsedge bluestem (*Andropogon virginicus*), indiagrass (*Sorghastrum* spp.), narrowleaf silkgrass (*Pityopsis graminifolia*), pineland silkgrass (*Pityopsis aspera*), bracken fern (*Pteridium aquilinum*), soft greeneyes (*Berlandiera pumila*), and goat's rue (*Tephrosia virginiana*). Woody vines such as greenbrier (*Smilax* spp.) and summer grape (*Vitis aestivalis*) are occasionally present.

Upland pine historically occurred in the northeastern portion of PRdSF. On the 1941 historic photographs, upland pine appears as medium grey areas with a rough texture. Canopy pines appear as dark grey dots scattered over the landscape. The historic upland pine bordering the northeast corner of the property appears to have already been cleared for agriculture or development by 1941.

Existing Conditions:

All historic upland pine on PRdSF has been converted to pine plantation under prior ownership. A large section of historic upland pine east of the St. Marks River has been

planted with longleaf pine. These mature longleaf plantations have been delineated from adjacent slash pine plantations in the current mapping. The longleaf plantations have been thinned once but have not received fire. Lack of fire has led to a dense subcanopy and tall shrub layer of sparkleberry (*Vaccinium arboreum*) and laurel oak (*Quercus hemisphaerica*), with occasional flowering dogwood (*Cornus florida*), deerberry (*Vaccinium stamineum*), highbush blueberry (*Vaccinium corymbosum*), wild olive (*Cartrema americanum*), American holly (*Ilex opaca*), eastern hophornbeam (*Ostrya virginiana*), horse sugar (*Symplocos tinctoria*), rusty staggerbush (*Lyonia ferruginea*). Occasional short shrubs include saw palmetto (*Serenoa repens*) and shiny blueberry (*Vaccinium myrsinites*). Herbaceous cover is sparse due to the dense shrubs. Typical herbs include bracken fern (*Pteridium aquilinum*), coralbean (*Erythrina herbacea*), and Adam's needle (*Yucca filamentosa*). Vines are occasional and include yellow jessamine (*Gelsemium sempervirens*), trumpet honeysuckle (*Lonicera sempervirens*), earleaf greenbrier (*Smilax auriculata*), and muscadine (*Vitis rotundifolia*).

The historic upland pine along the property's northeastern boundary is currently in poor condition. This area has been subject to heavy disturbance for several decades (prior to 1941). The stand is currently pre-merchantable planted loblolly pine. The tall and short shrub layer is fairly dense with laurel oak and sand blackberry (*Rubus cuneifolius*), with occasional southern bayberry (*Morella cerifera*), swamp bay (*Persea palustris*), and highbush blueberry. The weedy herbaceous layer includes dogfennel (*Eupatorium capillifolium*), broomsedge bluestem (*Andropogon virginicus*), narrowleaf silkgrass (*Pityopsis graminifolia*), and witchgrass (*Dichanthelium* spp.).

Most of the historic upland pine communities west of the St. Marks River are more xeric than mesic with a structure that somewhat resembles xeric hammock. These areas have a canopy of planted loblolly pine. The subcanopy is mostly laurel oak with occasional chinquapin (*Castanea pumila*) blackjack oak (*Quercus marilandica*), and water oak (*Quercus nigra*). The shrub layer is moderate to dense with laurel oak, bluejack oak (*Quercus incana*), sparkleberry, rusty staggerbush, deerberry, horse sugar and occasional saw palmetto. Occasional herbs include bracken fern, wiregrass (*Aristida stricta*), and Florida dropseed (*Sporobolus floridanus*).

Fire Regimes:

Fires should be frequent in upland pine, usually every 1-3 years.

Management Needs:

Most of these pine plantations have heavy hardwood and shrub encroachment and will require mechanical or chemical treatments to reduce the midstory, followed by prescribed fire. Thinning of pine plantations as needed is recommended. Offsite tree species may be removed, and the site reforested with appropriate species.

When longleaf pine communities such as upland pine are subject to fire exclusion for several years, the build-up of fuel loads may cause an exponential gain in heat-release rates which can be lethal to longleaf pine. After long periods without fire, the burning of accumulated duff during very dry conditions can burn live roots growing in the duff and

cause pine mortality. Lighting multiple, low-intensity fires over a period of years, when the duff is relatively moist is another effective means for gradually reducing accumulations of duff and heavier fuels.

K. Wet Flatwoods

Description:

Wet flatwoods are characterized as forests of pine trees with a thick shrubby understory and very sparse ground cover, or a fire-maintained, sparse understory and dense ground cover of hydrophytic herbs. Wet flatwoods exist on relatively flat, poorly drained land. The soils are generally 0.3 to 1 m (ca. 1 to 3 ft.) of acidic sands overlying an organic hardpan or clay layer. The hardpan substantially reduces the percolation of water below and above its surface, and therefore wet flatwoods can be inundated for 1 or more months per year.

The pine canopy typically consists of one or a combination of longleaf pine (*Pinus palustris*), slash pine (*Pinus elliottii*), loblolly pine (*Pinus taeda*), or pond pine (*Pinus serotina*). The subcanopy contains scattered sweetbay (*Magnolia virginiana*), swamp bay (*Persea palustris*), loblolly bay (*Gordonia lasianthus*), pond cypress (*Taxodium ascendens*), dahoon (*Ilex cassine*), wild olive (*Cartrema americanum*), black titi (*Cliftonia monophylla*), titi (*Cyrilla racemiflora*), and southern bayberry (*Morella cerifera*). In addition to subcanopy species, the moderate shrub layer includes large gallberry (*Ilex coriacea*), fetterbush (*Lyonia lucida*), sweet pepperbush (*Clethra alnifolia*), red chokeberry (*Photinia pyrifolia*), mountain azalea (*Rhododendron canescens*), and swamp azalea (*Rhododendron viscosum*). Saw palmetto (*Serenoa repens*) and gallberry (*Ilex glabra*), species also found in mesic flatwoods sites, may be present. Typical herbs include wiregrass (*Aristida stricta*), blue maidencane (*Amphicarpum muhlenbergianum*), toothache grass (*Ctenium aromaticum*), yellow-eyed grasses (*Xyris* spp.), Carolina redroot (*Lachnanthes caroliana*), and beaksedges (*Rhynchospora* spp.).

Wet flatwoods historically covered approximately 25% of PRdSF. On the 1941 aerial photographs the wet flatwoods appear as medium gray smooth signatures with darker trees dotting the landscape. Wet flatwoods generally appear identical to mesic flatwoods in the historic aerials, although they may be a darker grey in some areas. Wet flatwoods often intermix with mesic flatwoods on this property, making the distinction between the two difficult to discern on the historic aerials. All of the wet and mesic flatwoods areas should be treated similarly for desired future conditions.

Existing Conditions:

The majority of historic wet flatwoods on PRdSF have been planted with slash pine (*Pinus elliottii*) or loblolly pine (*Pinus taeda*). Wet flatwoods with a history of silviculture activities and lack of prescribed fire are very susceptible to woody encroachment, particularly by black titi (*Cliftonia monophylla*) and titi (*Cyrilla racemiflora*). This encroachment is evident in much of the historic wet flatwoods currently mapped as pine plantation. These areas have a canopy of planted slash or loblolly pine, and an extremely dense, impenetrable subcanopy/tall shrub layer of titi and black titi.

The dominant canopy species in wet flatwoods is slash pine (*Pinus elliottii*). Other occasional canopy species include sweetgum (*Liquidambar styraciflua*), laurel oak (*Quercus hemisphaerica*), swamp laurel oak (*Quercus laurifolia*), and water oak (*Quercus nigra*). In addition to canopy species, other common subcanopy species include red maple (*Acer rubrum*), wild olive (*Cartrema americanum*), black titi (*Cliftonia monophylla*), loblolly bay (*Gordonia lasianthus*), sweetbay (*Magnolia virginiana*), and swamp bay (*Persea palustris*). Shrubs are moderate to dense with sweet pepperbush (*Clethra alnifolia*), flatwoods St. John's wort (*Hypericum microsepalum*), large gallberry (*Ilex coriacea*), gallberry (*Ilex glabra*), rusty staggerbush (*Lyonia ferruginea*), fetterbush (*Lyonia lucida*), swamp doghobble (*Eubotrys racemosus*), blue huckleberry (*Gaylussacia frondosa* var. *tomentosa*), southern bayberry (*Morella cerifera*), mountain azalea (*Rhododendron canescens*), swamp azalea (*Rhododendron viscosum*), and highbush blueberry (*Vaccinium corymbosum*).

Herbs are sparse to moderate with purple bluestem (*Andropogon glomeratus* var. *glaucopsis*), witchgrasses (*Dichanthelium* spp.), cinnamon fern (*Osmunda cinnamomea*), bracken fern (*Pteridium aquilinum*), beaksedges (*Rhynchospora* spp.), and yellow-eyed grasses (*Xyris* spp.). Vines are sporadic to dense with earleaf greenbrier (*Smilax auriculata*), cat greenbrier (*Smilax glauca*), laurel greenbrier (*Smilax laurifolia*), sarsaparilla vine (*Smilax pumila*), bristly greenbrier (*Smilax tamnoides*), and muscadine (*Vitis rotundifolia*).

Fire Regimes:

Historically, the fire return interval in wet flatwoods is 3 to 10 years. However, in areas of heavy fire exclusion and/or densely planted slash pine, mechanical vegetation removal and/or a more frequent fire interval of 2 to 4 years may need to be applied for initial restoration.

Management Needs:

Management of the wet flatwoods at PRdSF should focus on returning a natural fire regime to historic wet flatwoods. In areas with an extremely dense titi midstory, physical removal or mowing of woody vegetation may be necessary.

Prescribed burning should be applied to pine plantations in historical wet flatwoods on a 2-4-year cycle, with both dormant and growing season burns increasing with fuel reduction. This will reduce woody encroachment, sustain herbaceous species, and aid in prevention of catastrophic wildfires.

L. Other Altered Landcover Types

Description:

Altered landcover types are areas where the natural community has been overwhelmingly altered as a result of human activity. Pine plantation and restoration natural communities are described in separate sections of this report.

The altered landcover types described in this section are often not appropriate areas for restoration. If restoration is desired, the target future condition of the ruderal habitat is

dependent on the historic community. Please refer to the appropriate community type for a more specific explanation of the desired future condition.

Existing Conditions:

Altered landcover types PRdSF comprise borrow areas, clearings, roads, developed areas, and utility corridors.

Borrow Area (3 acres) – There is one large borrow pit mapped on the northeastern portion of the property in historic upland pine.

Clearing (22 acres) – These are cleared or otherwise unnatural openings. Most of these clearings are game plots or staging areas. Clearings were mapped where evident on 2015 aerial photography but are known to be more numerous based on field surveys.

Developed (0.4 acres) – One small clearing with existing structures associated a hunt camp was mapped as a developed area.

Road (58 acres) – Roads ≥ 5 meters wide are delineated on the current natural community map. For the most part, ditches are included in the road polygons.

Utility Corridor (34 acres) – The mapped utility corridor runs parallel to Tram Road along the north property boundary.

Fire Regimes:

Refer to the historic community.

Management Needs:

It may not be practical or desirable to restore some of the altered landcover types (e.g., developed land, roads, etc.) to the historic natural community. These areas of high disturbance should be monitored for invasive exotic plants.

VIII. References

Florida Department of State, Division of Historical Resources. Revised 2013. Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Lands. Department of the State, Division of Historical Resources. Tallahassee, Florida.

Florida Department of Agriculture and Consumer Services. Revised 2008. Silviculture Best Management Practices (BMPs) for Florida. Florida Department of Agriculture and Consumer Services, Florida Forest Service.

Florida Department of Agriculture and Consumer Services. State Forest Handbook. Florida Department of Agriculture and Consumer Services, Florida Forest Service.

Florida Natural Areas Inventory (FNAI). 2010. Guide to the natural communities of Florida: 2010 Edition. Florida Natural Areas Inventory, Tallahassee, Florida.

IX. Glossary of Abbreviations

ARC	Acquisition and Restoration Council
BMP	Best Management Practice
DEP	Department of Environmental Protection
DHR	Division of Historical Resources
DRP	Division of Recreation and Parks
FDACS.....	Florida Department of Agriculture and Consumer Services
FFS	Florida Forest Service
FNAI	Florida Natural Areas Inventory
FWC	Florida Fish and Wildlife Conservation Commission
GIS	Geographic Information System
NRCS	Natural Resources Conservation Service
NWFWMD	Northwest Florida Water Management District
OALE	DACS Office of Agricultural Law Enforcement
OFW	Outstanding Florida Water
OOF	Operation Outdoor Freedom
TIITF	Board of Trustees of the Internal Improvement Trust Fund
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
PRdSF	Plank Road State Forest
PRdWMA.....	Plank Road Wildlife Management Area
WMA	Wildlife Management Area
WEA.....	Wildlife and Environmental Area