



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

August 17, 2021

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

RE: Carl Duval Moore State Forest – Lease No. 4662

Dear Mr. Rowell:

On **August 13, 2021**, the Acquisition and Restoration Council (ARC) recommended approval of the **Carl Duval Moore 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 **Carl Duval Moore State Forest** management plan. The next management plan update is due August 13, 2031.

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

Mr. Keith Rowell

Page 2

August 17, 2021

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

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

Sincerely,

Deborah Burr

Digitally signed by
Deborah Burr
Date: 2021.08.18
08:36:54 -04'00'

Deborah Burr
Office of Environmental Services
Division of State Lands

TEN-YEAR LAND MANAGEMENT PLAN

FOR THE

CARL DUVAL MOORE STATE FOREST AND PARK

PUTNAM COUNTY



PREPARED BY

THE FLORIDA DEPARTMENT OF
AGRICULTURE AND CONSUMER SERVICES

FLORIDA FOREST SERVICE

APPROVED ON

AUGUST 13, 2021

TEN-YEAR LAND MANAGEMENT PLAN
FOR THE
CARL DUVAL MOORE STATE FOREST AND PARK



Approved by:

A handwritten signature in black ink, appearing to read "Erin Albury", written over a horizontal line.

Erin Albury, Director
Florida Forest Service

A handwritten date "9/8/21" in black ink, written over a horizontal line.

Date

A handwritten signature in blue ink, appearing to read "James Roberts", written over a horizontal line.

James Roberts, Chief
Forest Management Bureau

A handwritten date "9-7-20" in blue ink, written over a horizontal line.

Date

**TEN-YEAR LAND MANAGEMENT PLAN
CARL DUVAL MOORE STATE FOREST AND PARK
TABLE OF CONTENTS**

Land Management Plan Executive Summary	1
I. Introduction	3
A. General Mission and Management Plan Direction	3
B. Past Accomplishments	3
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.....	9
1. Purpose for Acquisition / Management Prospectus	9
2. Degree of Title Interest Held	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.....	12
4. Operations Infrastructure	12
D. Additional Acquisitions and Land Use Considerations	13
1. Alternate Uses Considered.....	13
2. Additional Land Needs	13
3. Surplus Land Assessment	13
4. Adjacent Conflicting Uses	14
5. Compliance with Comprehensive Plan.....	14
6. Utility Corridors and Easements.....	14
E. Agency and 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	16
6. Friends of Florida State Forests	16

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	16
IV. Natural Resources and Protection.....	17
A. Soils and Geologic Resources.....	17
1. Resources	17
2. Soil Protection.....	17
B. Water Resources.....	18
1. Resources	18
2. Water Classification.....	18
3. Water Protection	18
4. Swamps, Marshes, and Other Wetlands	18
5. Wetlands Restoration.....	19
6. Basin Management Action Plan.....	19
C. Floral and Faunal Resources	19
1. Rare, Threatened, and Endangered Species.....	19
2. Florida Natural Areas Inventory	20
3. Florida Fish and Wildlife Conservation Commission	21
4. Game Species and Other Wildlife.....	22
5. Survey and Monitoring	22
D. Sustainable Forest Resources.....	23
E. Beaches and Dune Resources	23
F. Mineral Resources	23
G. Unique Natural Features and Outstanding Native Landscapes.....	23
H. Research Projects / Specimen Collection.....	23
I. Ground Disturbing Activities	24
V. Public Access and Recreation.....	24
A. Existing Recreational Opportunities	24
B. Planned Recreational Opportunities.....	25
C. Hunter Access	26
D. Education	26
VI. Forest Management Practices.....	26
A. Prescribed Fire	26
B. Wildfires, Prevention, Fire / Prescribed Fire Strategies.....	28
1. Suppression Strategies	28
2. Smoke Management.....	29
3. Firebreaks and Firelines.....	29
4. Sensitive Areas.....	29
5. Firewise Communities	29
6. Adjacent Neighbor Contacts	29

7. Post-Burn Evaluations	29
C. Sustainable Forestry & Silviculture	30
1. Strategies.....	30
2. Silvicultural Operations	30
3. Forest Inventory	30
4. Timber Sales	31
5. Cattle Grazing.....	31
D. Non-Native Invasive Species Control.....	31
E. Insects, Disease, and Forest Health	32
F. Use of Private Land Contractors.....	32
VII. Proposed Management Activities for Natural Communities	33
A. Basin Swamp	35
B. Baygall.....	36
C. Depression Marsh	37
D. Flatwoods Lake	38
E. Floodplain Swamp	39
F. Mesic Flatwoods	40
G. Sandhill	41
H. Wet Flatwoods	42
I. Xeric Hammock	43
J. Managed Communities	44
K. Other Altered Landcover Types.....	45
VIII. References	46
IX. Glossary of Abbreviations	46

TABLES

Table 1. Acreage by Funding Source.....	Page 8
Table 2. Nearby Public Conservation Land and Easements.....	Page 8
Table 3. Parcel Acquisition.....	Page 9
Table 4. Endangered or Threatened Species.....	Page 20
Table 5. Non-Native Invasive Species Occurring on CDMSFP	Page 32
Table 6. Natural Community Types.....	Page 33
Table 7. Managed Community Types.....	Page 33
Table 8. Altered Landcover Types	Page 33
Table 9. Prescribed Fire Interval Guide.....	Page 34

**TEN-YEAR LAND MANAGEMENT PLAN
CARL DUVAL MOORE STATE FOREST AND PARK
EXHIBITS**

Ten-Year Management Accomplishment Summary	Exhibit A
Boundary Map	Exhibit B
Optimal Management Boundary Map	Exhibit C
Facilities, Recreation, and Improvements Map	Exhibit D
Road Map.....	Exhibit E
Proximity to Significant Managed Lands	Exhibit F
Department of State Report on Archeological and Historical Sites	Exhibit G
Management Procedures for Archaeological and Historical Sites and Properties on State Owned or Controlled Lands	Exhibit H
Soil Types Map and Descriptions.....	Exhibit I
DEP Outstanding Florida Waters.....	Exhibit J
Water Resources Map	Exhibit K
FNAI Managed Area Tracking Record.....	Exhibit L
FWC Listed Species Occurrence Records	Exhibit M
CDMSFP Fire History	Exhibit N
Non-Native Invasive Species Map.....	Exhibit O
Current FNAI Natural Communities and Cover Type Map	Exhibit P
Historic FNAI Natural Communities Map	Exhibit Q
Management Prospectus	Exhibit R
Florida Forever Projects.....	Exhibit S
Compliance with Local Comprehensive Plan	Exhibit T
CDMSFP Management Plan Advisory Group Summary	Exhibit U
Legal Description and Deed.....	Exhibit V
Arthropod Control Plan.....	Exhibit W

LAND MANAGEMENT PLAN EXECUTIVE SUMMARY

LEAD AGENCY: Florida Department of Agriculture and Consumer Services (FDACS), Florida Forest Service (FFS)
COMMON NAME: Carl Duval Moore State Forest and Park (CDMSFP)
LOCATION: Putnam County
ACREAGE TOTAL: 336 acres

Historic Natural Communities	Approximate Acreage
Sandhill	139
Mesic flatwoods	67
Baygall	53
Flatwoods lake	38

Historic Natural Communities	Approximate Acreage
Basin swamp	25
Floodplain swamp	8
Wet flatwoods	3
Depression marsh	1

TIITF LEASE AGREEMENT NUMBERS: 4662

USE: Single ____ Multiple X

MANAGEMENT AGENCY

FDACS, Florida Forest Service
Florida Fish and Wildlife Conservation Commission
St. Johns River Water Management District
Department of State, Division of Historical Resources

RESPONSIBILITY

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

DESIGNATED LAND USE: Multiple-Use State Forest
SUBLEASES: None
ENCUMBRANCES: None
TYPE ACQUISITION: Private donation and Florida Forever Project
UNIQUE FEATURES: Up and Down Lake, Hardesty Lake, and Alligator Creek
ARCHAEOLOGICAL / HISTORICAL: No (0) known sites
MANAGEMENT NEEDS: Continued restoration and maintenance of native ecosystems and protection of archaeological and historical sites if we find any
ACQUISITION NEEDS: Additional acreage located in the Optimal Management Boundary
SURPLUS ACREAGE: None
PUBLIC INVOLVEMENT: Carl Duval Moore State Forest and Park / Etoniah Creek State Forest Liaison Committee and Management Plan Advisory Group Public Hearing/Meeting- -----

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

ARC Approval Date: _____ TIITF Approval Date: _____

Comments: _____

I. Introduction

Carl Duval Moore State Forest and Park (CDMSFP) is comprised of approximately 336 acres located in central Putnam County. The Forest is comprised of two tracts. The South Tract is located approximately two miles southeast of Interlachen, and the North Tract is located one mile northeast of Interlachen.

CDMSFP contains one notable watercourse, Alligator Creek, which flows through the South Tract of the Forest. A portion of Hardesty Lake is contained within the boundaries of the South Tract, and a portion of Up and Down Lake is contained within the boundaries of the North Tract. The Forest is one of the smallest State Forests (336 acres), but still maintains a variety of ecosystems, including sandhill, mesic flatwoods, wet flatwoods, and flatwoods lake.

A. General Mission and Management Plan Direction

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

Management strategies for CDMSFP center on the multiple-use concept, as defined in sections 589.04(3) and 253.034(2)(a), Florida Statutes (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 CDMSFP will be accomplished with the following strategies:

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

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

B. Past Accomplishments

Data regarding past management activities and public use on CDMSFP have been compiled monthly and are available from the Forest manager. A table has been prepared for this plan that summarizes the accomplishments for each of the past ten years. See Exhibit A. The table does not attempt to account for all activities on the Forest, but summarizes major activities,

nor does it list the multitude of daily activities and public interactions involved in managing the Forest. Among the most notable accomplishments have been the following:

- Planted 25,250 containerized longleaf pines on 36 acres
- Harvested 786 tons of timber on 13 acres
- Conducted prescribed fire on 593 acres
- Rebuilt boardwalk and observation dock on Up and Down Lake
- Installed a gate and repaired 3 fences
- Estimated over 3,530-day use forest visits
- Sponsored 15 liaison committee meetings
- Treated 7 non-native invasive plant species on 12 acres
- Removed 18 feral hogs

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

The following goals and objectives provide direction and focus of 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 CDMSFP 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. Most of the management operations will be conducted by the FFS, although some activities will be contracted to private sector vendors or completed with the cooperation of other agencies. All activities will enhance the property's natural resource or public recreational value.

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

➤ GOAL 1: Sustainable Forest Management

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

Performance Measures:

- Annual updates of the Five-Year Silviculture Action Plan completed
- Continued implementation of the Five-Year Silviculture Action Plan (acres treated)

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

Performance Measures:

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

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

Objective 1: Maintain public access and recreational opportunities that are compatible with multiple-use management. (Ongoing objective)

Performance Measure: Number of visitor opportunities per day

Objective 2: Evaluate additional public access and recreational opportunities that are compatible with multiple-use management. (Short-term objective)

Performance Measure: Number of additional visitor opportunities evaluated

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

Performance Measures:

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

Objective 4: Continue to involve and meet with the Liaison Committee. The purpose of Liaison Committee meetings is to facilitate communication between the FFS and committee members (and the groups they represent) about State Forest management and to obtain feedback from these entities. The Liaison Committee consists of local residents, community leaders, special interest group representatives (vendors, hunters and other recreational users, etc.), environmental group representatives, and other public / private entities. (Ongoing objective)

Performance Measures:

- Liaison Committee remains organized
- Semi-annual meetings continue

Objective 5: Recruit volunteers and volunteer organizations to assist with recreation and / or resource management. (Ongoing objective)

Performance Measures:

- Number of volunteers and organizations that assist with projects
- Number of hours provided by volunteers

➤ **GOAL 3: Habitat Restoration, Improvement, and Fire Management**

Objective 1: The CDMSFP currently contains approximately 240 acres of fire-dependent communities. To achieve an average a fire-return interval of two (2) to three (3) years for most communities in the Forest, FFS will attempt to prescribe burn approximately 73 acres per year. Currently FFS staff estimates 182 acres at CDMSFP are within the desired fire-return interval. (Ongoing Objective)

Performance Measures:

- Number of acres burned during the dormant and growing seasons
- 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 Objective)

Performance Measures:

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

Objective 3: Reduce the threat of wildfire within the wildland urban interface on CDMSFP and the surrounding community through a comprehensive mitigation strategy that includes evaluating vegetative fuels near residential areas and identifying potential fuel reduction projects. (Ongoing Objective)

Performance Measures:

- Evaluation complete.
- Should the evaluation determine that fuel reduction is necessary, number of acres treated for fuel reduction.

Objective 4: Utilize prescribed fire to enhance restoration of native groundcover. Evaluate areas where native groundcover has been eliminated or heavily impacted from historical land use on a case by case basis for alternative methods to address reestablishment of native groundcover plants. Restore native groundcover where practical or heavily impacted from historical land use. (Long-term objective)

Performance Measure: Number of acres restored

➤ **GOAL 4: Listed and Rare Species Habitat Maintenance, Enhancement, Restoration, or Population Restoration**

Objective 1: In cooperation with FWC, develop a Wildlife Management Strategy addressing the wildlife species for CDMSFP, with emphasis on imperiled species and associated management prescriptions for their habitats. (Long-term objective)

Performance Measures:

- Imperiled species management strategy completed
- Baseline-listed and rare species list completed for CDMSFP

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

Performance Measure: Number of species for which monitoring is ongoing

➤ **GOAL 5: Non-Native Invasive Species Maintenance and Control**

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

Performance Measures:

- Total number of acres identified and successfully treated
- Annual updates of the Five-Year Ecological Plan completed
- Continue to maintain CDMSFP non-native invasive database information annually

➤ **GOAL 6: Cultural and Historical Resource Management**

Objective 1: Ensure all Ground Disturbing Activities are managed in compliance with the Florida Department of State, Division of Historical Resources (DHR) Florida Master Site File. (Ongoing objective)

Performance Measure: Number of Ground Disturbing Activities handled per DHR guidelines

Objective 2: Conduct an archeological survey of CDMSFP to determine if any archeological resources exist on site. (Long-term objective)

Performance Measure: Completed archeological survey through the Public Lands Archaeology program.

Objective 3: Ensure that any sites discovered during Ground Disturbing Activities are recorded in the DHR Master Site file. (Ongoing objective)

Performance Measure: Send any newly recorded site(s) to DHR Master Site file as needed and monitor the recorded site(s)

Objective 4: Maintain at least one (1) qualified staff member as an Archaeological Resource Management (ARM) monitor. (Ongoing objective)

Performance Measure: Number of local staff trained as ARM monitors

➤ **GOAL 7: Hydrological Preservation and Restoration**

Objective 1: Protect water resources during management activities through the implementation of Silviculture Best Management Practices (BMP) that are applicable to forest road maintenance and construction, construction of pre-suppression firelines, timber stand improvement activities, sinkholes, etc. (Ongoing objective)

Performance Measure: Percent compliance with Silviculture BMP

Objective 2: 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 objective)

Performance Measures:

- Number of roads, firelines, and trails closed, rehabilitated, and / or restored
- Number of culverts installed or maintained

Objective 3: Conduct or obtain a site assessment / study to identify potential hydrology restoration needs. (Short-term objective)

Performance Measure: Assessment conducted

➤ **GOAL 8: Capital Facilities and Infrastructure**

Objective 1: CDMSFP staff, along with help from volunteers and / or user groups, will continue to maintain three (3) facilities, 1.3 miles of road, and 1.2 miles of hiking trail existing on the Forest. (Ongoing objective)

Performance Measure: Number of existing facilities, miles of roads, and miles of trails maintained.

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

Performance Measures:

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

Objective 3: Continue to implement the Five-Year Boundary Survey and Maintenance Management Plan and update annually. Approximately 20 percent of the Forest boundary will be evaluated and remarked annually as necessary which includes harrowing, reposting signage, and repainting boundary trees. (Ongoing objective)

Performance Measures:

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

II. Administration Section

A. Descriptive Information

1. Common Name of Property

The common name of the property is the Carl Duval Moore State Forest and Park.

2. Legal Description and Acreage

The CDMSFP is comprised of 336 acres.

The boundaries and the major parcels are identified in Exhibit B. The CDMSFP is located in part of Sections 11 and 24, Township 10 South, Range 24, in central Putnam County and is comprised of two tracts. The South Tract (179.9 acres) is located approximately two miles southeast of Interlachen, the North Tract (126.1 acres) is located one mile northeast of Interlachen. The South Tract is located in Section 24, Township 10. See Table 1.

Table 1. CDMSFP Acreage by Funding Source

	Funding Source	Acres
Donation	Carl Duval Moore Estate	306.00
Florida Forever	FDACS / FFS	30.17

A complete legal description of lands owned by FDACS is on record at the CDMSFP Forestry Station Office, Florida Department of Environmental Protection (FDEP), 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 25 miles of the CDMSFP are included in Exhibit F and Table 2.

Table 2. Nearby Public Conservation Land and Easements

Tract	Managing Agency	Distance
Caravelle Ranch Wildlife Management Area	FWC	1 mile SE
Nine Mile Swamp Park	Putnam County	4 miles E
Rice Creek Conservation Area	SJRWMD	5 miles E

Tract	Managing Agency	Distance
Ocala National Forest	USFS	6 miles S
Etoniah Creek State Forest	FFS	6 miles NE
Cross Florida Greenway	OGT	6 miles SE
Ordway-Swisher Biological Station	UFF	8 miles NW
Seven Sisters Islands	SJRWMD	10 miles SE
Horseshoe Lake	Marion County	11 miles SW
Little Orange Creek Nature Park	City of Hawthorne	11 miles W
Little Rain Lake Preserve	North Florida Land Trust	13 miles NW
Lochloosa Creek Conservation Easement	Private Individual(s)	15 miles W
Phifer Flatwoods Preserve	Alachua County	19 miles W
McCullough Creek Conservation Area	St. Johns County	23 miles NE
Wood Conservation Easement	Private Individual(s)	24 miles SW

FFS – Florida Forest Service

OGT – Office of Greenways and Trails

SJRWMD – St. Johns River Water Management District

FWC – Florida Fish and Wildlife Conservation Commission

USFS – United States Department of Agriculture, Forest Service

USFS – United States Forest Service

UFF – University of Florida Foundation

4. Property Acquisition and Land Use Considerations

In 1993, the property was deeded by the Carl Duval Moore estate to the State of Florida to be used for public purposes as a forest. Mr. Moore originally deeded 179.9 acres of land bordering Hardesty Lake to FFS, and 126.1 acres surrounding Up and Down Lake was to be deeded to the Department of Natural Resources (DNR) as a state park. DNR decided against accepting this property, and the FFS requested this parcel be included with the 179.9 acres that were to be received in Mr. Moore's will. In February 1994, the estate was settled and the property ownership of 306 acres was deeded to the FDACS FFS. The Plum Creek Tract was purchased by TIITF in 2010, and the Putnam Land Conservancy parcel in 2018, both with Florida Forever funds. See Table 3.

The Forest is managed by the FFS under the multiple-use management concept to restore, protect and manage ecosystem functions while allowing compatible public uses.

Table 3. Parcel Acquisition

Parcel Name	Deed Date	Lease No.	Acres
Moore*	11/1993	N/A	306
Plum Creek Tract	1/2010	4662	29.95
Putnam Land Conservancy	11/2017	4662	.22

* Title is vested in FDACS

B. Management Authority, Purpose, and Constraints

1. Purpose for Acquisition / Management Prospectus

The FFS received title to this property through a gift in the will of Mr. Carl Duval Moore. With the deed, FFS accepted various conditions on the use of the property as is described elsewhere in this plan (II.A.4 and II.B.2,6). See Exhibit V.

Management is conducted by The Florida Department of Agriculture and Consumer

Service's FFS, with assistance, as warranted, from other agencies. FFS is the manager of forest resources, recreation, water resource protection, watershed protection, and land use planning on CDMSFP.

2. Degree of Title Interest Held

The property was deeded by the Carl Duval Moore Estate to the State of Florida, Department of Agriculture and Consumer Services, FFS on November 17th, 1993, with certain reservations. Specifically, as stated in the deed: "This land is only for the purposes of and is to be used for the production of timber, game management, or school for forestry management methods."

The Board of Trustees of the Internal Improvement Trust Fund (TIITF) holds fee simple title on 30.17 acres (10%) of the property.

3. Designated Single or Multiple-Use Management

CDMSFP is managed under a multiple-use concept by the FFS, under the authority of Chapters 253 and 589, F.S. The FFS is the lead managing agency as stated in TIITF Management Lease number 4662.

Multiple-use management 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 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 these resources and considering 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

Various activities on CDMSFP 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 CDMSFP include, but are not limited to:

- Recreation Fees – Fees are currently collected for day use activities, annual passes, and vendor / special use permits.
- Privately sponsored recreational events – Currently no events have taken place.
- Timber harvesting – Timber harvesting on CDMSFP will be conducted to improve forest health, promote wildlife habitat, restore plant communities, and provide additional benefits.
- Apiary leases – There are currently no apiary leases on CDMSFP. The feasibility of pursuing and establishing apiary leases on CDMSFP in areas where appropriate will be evaluated in accordance with guidelines stated in the State Forest Handbook.
- Firewood – CDMSFP staff may consider issuance of fuel wood permits as requested.

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 253, 259 and 589 F.S.

6. Legislative or Executive Constraints

There are no known legislative or executive constraints specifically directed toward CDMSFP. Use of the property is regulated in part by the following, as stated in the deed: "This land is only for the purposes of and is to be used for the production of timber, game management, or school for forestry management methods. In addition, the land shall be used for public purposes as a forest and park; it shall never be sold; and that there shall be no homes, dance halls, nor any type of development, except those necessary for uses consistent with its use as a State Forest and Park, or it will revert to the Shriner's Hospital for Children."

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

CDMSFP boundary lines, five (5) miles in total, are managed by State Forest personnel in accordance with the guidelines of the State Forest Handbook. There are four gates throughout CDMSFP that require periodic maintenance. Twenty percent of the State Forest boundary lines are to be maintained annually, or once every five years, by clearing, repainting and reposting, and placement of State Forest boundary signs by FFS personnel.

2. Improvements

Buildings / Recreation infrastructure present on the CDMSFP include:

- a. Boardwalk and observation platform located on the west side of Up and Down Lake on the North Tract
- b. Up and Down Lake Trail offering 1.5 miles of nature study and hiking
- c. Parking area north of State Road 20, on the east side of West Street
- d. Parking area south of Bill Street

See Exhibit D for a map of the improvements at CDMSFP.

3. On-Site Housing

There are no residences located on CDMSFP.

FFS may establish on-site housing (mobile / manufactured home) on CDMSFP if deemed necessary to alleviate security and management issues. The need and feasibility 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 Florida Division of Historical Resources (FDHR) and Florida Natural Areas Inventory (FNAI) for review and recommendations. The need and feasibility specific for the Forest will be evaluated and established if considered appropriate by the Waccasassa Center Manager and in compliance with the terms of Mr. Moore's will, and approved by the FFS Director.

4. Operations Infrastructure

a. Operations Budget

There is no operations budget for CDMSFP. CDMSFP is managed in conjunction with Etoniah Creek State Forest. Personnel, budget, and equipment resources are shared between these two forests. Implementation of any of the activities within this management plan is contingent on availability of funding, other resources, and other statewide priorities.

b. Equipment

To carry out the resource management work on the Forest, as well as to maintain forest improvements such as trails, roads, and facilities, the following equipment is available for work on CDMSFP:

- 2017 Kubota 4x4 Farm Tractor w/ 6' farm harrow, 6' bushhog, 6' box blade, 6' grade blade
- 2017 Kubota UTV 4x4, with trailer
- 2016 Bad Boys Buggy Intimidator UTV
- 2004 4wd pickup
- 2004 4wd pickup
- 2019 Type 6 Brush Truck
- 105-gallon diesel and 50-gallon gasoline portable fuel tanks
- 2001 John Deere 650H Crawler Dozer
- 2001 Transport
- 1998 Heavy Duty fire line harrow
- 1990 F900 Dump Truck

c. Staffing

All State Forests in Putnam County are managed under the direction of a Forestry Supervisor II, including CDMSFP. In addition to the Forestry Supervisor II, other staff assigned to these Forests include a Senior Forester, a Groundskeeping Supervisor II, two Park Rangers, an OPS Secretary Specialist, and an OPS Park Ranger. Additionally, there is a Forestry Resource Administrator, District Biologist, and District Recreation Coordinator who share duties with all State Forests in the Waccasassa Forestry Center. The Forest Area Supervisor and Forest Rangers from Putnam County also provided needed operational staffing.

The Forestry Supervisor II will work to achieve the goals outlined in this management plan. Recreation planning and management activities as well as resource management and planning activities, such as trail flagging/identification, recreational facility placement, timber cruising, 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, operations/recreational facility maintenance, prescribed burning, etc., are the responsibility of the Forest Area Supervisor under the direction of the Forestry Supervisor II and Center Manager.

To augment the staff working on CDMSFP, the Forestry Supervisor II is responsible for recruiting interested volunteers who can bring needed experience and skills to assist with the management of the Forest recreation program as well as the resource management activities.

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, 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. Deadhead logging is not compatible with nor considered appropriate use within or adjacent to State Forest boundaries. No water resource projects are being considered at this time on CDMSFP.

2. Additional Land Needs

There are eighty (80) parcels of land comprised of 1,508.64 acres adjacent to the property which should receive priority for acquisition, as they would benefit the management of the property. The FFS will work with these property owners, on a willing seller basis, to acquire these parcels.

Purchasing of additional land, within the optimal management boundary would facilitate restoration, protection, maintenance, and management of the natural resources on CDMSFP. The FFS will encourage the St. Johns River Water Management District's (SJRWMD) acquisition staff to emphasize the purchase of specific parcels that will provide for ecosystem links and recreational trail connections. See Exhibit C for a map of the Optimal Management Boundary.

3. Surplus Land Assessments

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 CDMSFP 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 CDMSFP is recommended for potential surplus.

4. Adjacent Conflicting Uses

Future development of adjacent parcels could adversely impact management of the Forest. FFS's management of the North Tract, specifically prescribed burning, may be hindered due to S.R. 20's location less than half of a mile to the south, and a housing development to the north and west.

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 Putnam County for review and compliance with their local comprehensive plans. See Exhibit T.

6. Utility Corridors and Easements

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. The FFS does not consider CDMSFP 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), minimize habitat fragmentation, limit disruption of management activities, including prescribed burns, and limit disruption of resource-based multiple use activities such as recreation.

Collocation of new linear facilities with existing corridors will be considered but will be used only where expansion of existing corridors does not increase the level of habitat fragmentation and disruption of management and multiple-use activities. FFS will further encourage the use of underground cable where scenic considerations are desirable. Easements for such utilities are subject to the review and approval of FDACS and 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 Lease number 4662. Pursuant to the management lease, the lead managing agency may enter into further agreements or to subleases on any part of the Forest.

FFS will cooperate with the FDHR regarding appropriate management practices on historical or archaeological sites on the property as stated in Section 267.061, F.S. FFS will consult FDHR prior to the initiation of ground disturbing activities as required per FDHR guidelines.

FWC assumes law enforcement responsibilities and conducts other wildlife management activities with input from FFS.

The SJRWMD will be consulted and involved in matters relating to water resources and hydrological restoration as appropriate.

Additionally, a State Forest Liaison Committee of private citizens and representatives of forest user groups meet biannually to provide input on forest management activities and share their ideas with FFS staff to improve the Forest.

2. Law Enforcement

Primary law enforcement responsibilities will be handled by FWC law enforcement officers. Rules governing the use of CDMSFP are stated in Chapter 5I-4, F.A.C. FWC will enforce fish and wildlife regulations and aid in enforcing State Forest rules. FWC does not currently have an officer dedicated to patrolling and enforcement on CDMSFP. This task is shared among multiple FWC officers who also patrol and enforce laws on properties and waterways outside of CDMSFP.

The FDACS Office of Agricultural Law Enforcement (OALE) will assist with open burning and wildfire investigations as needed. The Putnam County Sheriff's Office provides additional assistance as needed.

Special rules under Chapter 5I-4, F.A.C. were promulgated for FDAC, FFS, to manage the use of state lands and better control traffic and oversee camping and other uses on CDMSFP.

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 (F.S. 590.01). The FFS also has the responsibility of authorizing prescribed burns (F.S. 590.02 [1][i]).

4. Public and Local Government Involvement

This plan has been prepared by FFS and will be carried out primarily by the FFS. FFS responds to public involvement through liaison committees, management plan advisory groups, public hearings, and through ongoing direct contact with user groups.

The plan was developed with input from the CDMSFP Management Plan Advisory Group and was reviewed at a public hearing on April 14, 2021. A summary of the advisory group's meetings and discussions, as well as written comments received on the plan, are

included in Exhibit U. The Acquisition and Restoration Council (ARC) public hearing and meeting serve as an additional forum for public input and review of the plan. In accordance with 253.034(4) F.S., the TIITF is not required to review parcels which are less than 160 acres in size; thus, no Land Management Reviews coordinated by the Division of State Lands have been conducted on CDMSFP.

5. Volunteers

Volunteers are important assets to CDMSFP. Volunteer activities may occur as one-time events or in association with long-term recurring projects and routine maintenance. Additional volunteer recruitment will continue to assist furthering the FFS mission.

6. Friends of Florida State Forests

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 established by Florida statute, 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 FFS to expand opportunities for recreation, environmental education, fire prevention, and forest management within Florida's State Forests.

The FFSF program is referenced in Chapter 589.012, F.S. For more information visit: www.floridastateforests.org.

III. Archaeological/Cultural Resources and Protection

A. Past Uses

Mr. Carl Duval Moore owned and managed the property for many years, keeping it in timber production. Regeneration efforts through the 1960s and 1970s consisted of direct seeding of slash pine and planting of slash pine and some sand pine seedlings over most of the sandhills and flatwoods.

B. Archaeological and Historical Resources

A review of information contained in the Florida Department of State, FDHR, Florida Master Site File has determined there are no (0) recorded archeological sites and no (0) historical structures found within the designated area for CDMSFP. See Exhibit G.

C. Ground Disturbing Activities

Representatives of DHR and FNAI will be consulted prior to the initiation of proposed ground disturbing activity as required per FDHR guidelines. 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)(a,b) F.S. See Exhibit H. Any significant ground disturbing activity proposal will be submitted to DHR's Compliance and Review office for review prior to undertakings and allow the Division a reasonable opportunity to comment. 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 two (2) local district FFS staff are trained by FDHR as Archaeological Resource Management (ARM) monitors. FFS will pursue opportunities for additional personnel to receive ARM Monitor training. FFS will consult with public lands archaeologists at FDHR as necessary to determine an appropriate priority and frequency of monitoring at each of the listed sites, and any protection measures that might be required. Unless required on a more frequent basis, all archaeological and historical sites within the Forest will be monitored at least annually. FFS field staff will monitor the listed sites to note condition and any existing or potential threats.

Any known archaeological and historical sites will be identified on maps to aid State Forest personnel and if necessary, law enforcement personnel in patrolling and protecting sites. Applicable surveys will be conducted by trained FFS staff or contracted archaeologists 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 FDHR regarding any additional archaeological survey needs. Trained monitors may oversee limited types of ground disturbing activities in which FDHR recommends monitoring. FFS will utilize the services of FDHR 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

The primary purpose for FFS management of CDMSFP is to implement multiple-use management. Multiple-use management includes, but is not limited to silvicultural management, recreation, wildlife management, archaeological and cultural resource management, ecosystem restoration, environmental education and watershed management. The Forest will be managed so as to restore, protect and manage ecosystem functions while allowing compatible public uses. Management activities will be executed in a manner to minimize soil erosion and maintain and protect/enhance the hydrological resources on CDMSFP. If problems arise, corrective action will be implemented by FFS staff under the direction of the FFS Forest Hydrology Section. Efforts will be made to monitor and protect CDMSFP's waterbodies and their associated water quality and native plants and animals.

CDMSFP falls within the jurisdiction of the SJRWMD. FFS will coordinate with SJRWMD and / or FDEP, as necessary, on activities pertaining to water resource protection and management. Any activities requiring water management district permits will be handled accordingly. FFS will work with SJRWMD to ensure that levels and quality of ground and surface water resources are appropriately monitored.

A. Soils and Geologic Resources

1. Resources

Soil information for CDMSFP was obtained from the United States Department of Agriculture, Natural Resources Conservation Service (NRCS). CDMSFP contains twelve (12) major soils. Of the major soils, predominant soils listed by the NRCS include Pomona, Adamsville, Hontoon muck, and Tavares. Detailed information on all soils present on the Forest may be found in Exhibit I.

2. Soil Protection

Management activities will be executed in a manner to minimize soil erosion. As problems arise, corrective action will be implemented by FFS staff under the direction of the FFS Forest Hydrology section in conjunction with recommendations as contained in the most current version of the Florida Silviculture BMP Manual.

Currently there are no major or significant soil erosion problems on CDMSFP.

B. Water Resources

The water resources on CDMSFP 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 Hydrology Section to incorporate wetlands 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 on CDMSFP.

1. Resources

CDMSFP borders 1,700 feet of Hardesty Lake on the northeast side and surrounds almost all Up and Down Lake. Alligator Creek passes from the northwest to southeast through the South Tract.

2. Water Classification

The Florida Department of Environmental Protection, Standards Development Section reports there are no waters on or near the Forest listed as exceptions to Class III according to subparagraph 62-302.400(17)(b)54, F.A.C.; therefore, all of the surface waters on or adjacent to the site are classified III waters (Fish Consumption; Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife), which is the statewide default classification under subsection 62-302.400(15), F.A.C. See Exhibit J.

According to subsection 62-302.700(9), F.A.C., there are no Outstanding Florida Waters (OFWs) on, adjacent to, or near the Forest.

3. Water Protection

The acquisition and management of this public land had among its objectives to optimize ecological restoration, protect and manage existing natural resources, and facilitate sensible public use. Concern over a continuous usable source of fresh water requires emphasis on protecting this vital resource. Water resource protection measures, at a minimum, will be accomplished using BMPs as described in the most current version of the Silviculture BMP Manual.

4. Swamps, Marshes, and Other Wetlands

CHBSFP contains approximately 125 acres in five (5) hydric communities: Basin swamp, baygall, depression marsh, flatwoods lake, and floodplain swamp. Maintenance of naturally occurring wetlands communities is a high priority and will be accomplished through appropriate management activities, including prescribed fire when necessary,

non-native invasive species management, and adherence to Silviculture BMP.

5. Wetlands Restoration

Wetlands restoration objectives on the State Forest include erosion control, restoration of water levels 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. CDMSFP is highly fragmented thus presents management challenges for hydrological connectivity.

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

Wetlands restoration will be coordinated with SJRWMD. Any activities requiring permits from the water management district will be handled accordingly and will comply with the latest edition of the FFS Silviculture BMP Manual.

6. Florida Department of Environmental Protection Basin Management Action Plan

A Basin Management Action Plan (BMAP) is a "blueprint" for restoring impaired waters by reducing pollutant loadings to meet the allowable loadings established in a Total Maximum Daily Load (TMDL). It represents a comprehensive set of strategies, including, but not limited to permit limits on wastewater facilities, urban and agricultural best management practices, conservation programs, financial assistance, and revenue generating activities, all designed to implement the pollutant reductions established by the TMDL. These broad-based plans are developed with local stakeholders, as they rely on local input and local commitment, and are adopted by Secretarial Order to be enforceable.

The BMAP provides for phased implementation under Subparagraph 403.067(7)(a)1, F.S. The phased BMAP approach allows for the implementation of projects designed to achieve incremental reductions, while simultaneously monitoring and conducting studies to better understand the water quality dynamics (sources and response variables) in the watershed.

The CDMSFP is currently not within a BMAP project area.

C. Floral and Faunal Resources

1. Rare, Endangered, and Threatened Species

The intent of FFS is to manage CDMSFP in a manner that will minimize the potential for wildlife species to become imperiled. FFS employees continually monitor the Forest for

threatened or endangered species while conducting management activities. Specialized management techniques will be used, as necessary, to protect or increase protection of rare, threatened, and endangered species and species of special concern, as applicable for both plants and animals. See Table 4.

Table 4 Rare, Endangered, and Threatened Species Documented on CDMSFP

Common Name	Scientific Name	FNAI Global Rank	FNAI State Rank	Federal Status	State Status
Bald eagle	<i>Haliaeetus leucocephalus</i>	G5	S3	N	N
Eastern indigo snake	<i>Drymarchon couperi</i>	G3	S3	T	FT
Florida black bear	<i>Ursus americanus floridanus</i>	G5T4	S4	N	N
Florida sandhill crane	<i>Antigone canadensis pratensis</i>	G5T2	S2	N	ST
Gopher tortoise	<i>Gopherus polyphemus</i>	G3	S3	C	ST
Rosemary wolf spider	<i>Hogna ericeticola</i>	G1	S1	N	N
Southeastern American kestrel	<i>Falco sparverius paulus</i>	G5T4	S3	N	ST

*** 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, SSC = Listed as Species of Special Concern by the FWC, N = Not currently listed, nor currently being considered for listing.

Plants: LE = Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act; LT = Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered; CE = Commercially Exploited; 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 throughout Florida. FNAI has reported the following regarding CDMSFP. Also see Exhibit L.

a. Element Occurrences

FNAI element occurrences data layer includes occurrences of rare species and natural communities. For animals and plants, element occurrences usually indicate a viable population of the species. Based on the information available, this site appears to be located on or very near a significant region of scrub habitat, a natural community in decline that provides important habitat for several rare species within a small area.

Documented habitat includes: Basin swamp, baygall, depression marsh, flatwoods lake, floodplain swamp, mesic flatwoods, pine plantation, sandhill, wet flatwoods, and xeric hammock.

b. Likely and Potential Habitat for Rare Species

In addition to documented occurrences, other rare species and natural communities may be identified on or near CDMSFP. Rare species and communities that have not been documented but that are likely or potential at the site are listed in Exhibit L.

c. Land Acquisition Projects

Portions of the site are within the Etoniah Cross / Florida Greenway Florida Forever Project. This is part of the State of Florida's Conservation and Recreation Lands Acquisition Program. See Exhibit R.

Other Florida Forever Projects within the area include the Clay Ranch Project in Putnam County. See Exhibit S.

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

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.

Other findings by the FWC include:

- a. The property is located adjacent to and within multiple Strategic Habitat Conservation Areas for the short-tailed hawk (*Buteo brachyurus*).
- b. CDMSFP is located within an area of high Species Richness which is the number of species within a given sample, community, or area
- c. Multiple Priority Wetland habitats are located on and in close proximity to CDMSFP.
- 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. See Exhibit M.

The FWC recommends the review of management guidelines in the published FWC Gopher Tortoise Species Management Plan to guide management actions for the gopher tortoise (*Gopherus polyphemus*) on the Forest. 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 MyFWC.com.

The FWC recommends the review of management guidelines in FWC's published Species Action Plans for the management of imperiled, rare, and focal bird species. The FWC Species Action Plans provide beneficial resource guidelines for habitat management and monitoring of the respective species. For reference, the FWC Species Action Plans can be accessed at MyFWC.com.

4. Game Species and Other Wildlife

Both game and non-game species of fish and wildlife are important components of the CDMSFP ecosystem. The Forest is currently not open to regulated hunting. The FFS provides land management and general supervision of the property. Fishing is allowed on the Forest under current state law and policy, as administered by FWC.

The FFS manages the area using a combination of timber harvesting, reforestation, groundcover and hydrological restoration, and nonnative invasive species eradication. FWC provides cooperative technical assistance in managing the wildlife and fish populations, and overall wildlife and fish law enforcement.

Notable wildlife species inhabiting the Forest include Florida black bear (*Ursus americanus floridanus*), gopher tortoise (*Gopherus polyphemus*), eastern indigo snake (*Drymarchon couperi*), bald eagle (*Haliaeetus leucocephalus*), and Florida sandhill crane (*Antigone canadensis pratensis*).

All wildlife species will be managed and protected through the restoration and maintenance of native ecosystems found on the Forest. The State Forest Handbook provides details for snag management and retention.

5. Survey and Monitoring

FFS will implement species-specific management plans developed by FWC and other agencies as applicable. FFS will cooperate with FWC and other agencies in the development of new 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

An ad hoc survey for gopher tortoises has been conducted previously by FFS staff to ascertain the relative population on the forest. However, no formal survey has been conducted. All future, formal surveys will be completed in cooperation with FWC.

b. Florida Black Bear

FFS will continue to cooperate with FWC to implement FWC's state-wide Florida Black Bear Management Plan, with an emphasis on maintaining sustainable black bear populations in suitable habitats throughout Florida for the benefit of the species and people.

c. Listed Plant Species

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

d. Other Rare Biota Surveys

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

Most of the isolated CDMSFP wetlands have received a cursory biological survey, with rare and significant plant and animal species observed and documented. Assistance will be offered to FWC for gopher tortoise burrow commensals monitoring, as well as monitoring for other rare species 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 annually.

D. Sustainable Forest Resources

FFS practices sustainable multiple-use management to meet the Forest resource needs and values of the present without compromising the similar capability of the future. Sustainable management 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 CDMSFP.

F. Mineral Resources

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

G. Unique Natural Features and Outstanding Native Landscapes

One of the smallest state forests, CDMSFP yet maintains a variety of ecosystems, including sandhill, mesic flatwoods, wet flatwoods and flatwoods lake. Its most notable natural feature is Up and Down Lake.

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 CDMSFP must be considered in accordance with the guidelines stated in the State Forest Handbook. Any requests for research should be submitted

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

Research projects / specimen collections that have been initiated on the property include:

- University of North Carolina Chapel Hill (Weakley/Schoonover). 2018. Genetic and morphological analyses, species distribution and evolutionary trends on multiple state forests of *Trichostema* populations in the southeastern United States.

I. Ground Disturbing Activities

Although the FFS's approach to handling ground disturbing activities is identified in other sections of this plan, the FFS's overall approach to this issue is summarized here. FFS recognizes the importance of managing and protecting sensitive resources and will take steps to ensure that such resources are not adversely impacted by ground disturbing activities. Sensitive resources include areas such as known sensitive species locations; archaeological, fossil, and historical sites; ecotones, wetlands, and water resources. The process for evaluating and obtaining approval for ground disturbing activities is outlined in Appendix 2.A.6. of the State Forest Handbook.

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, SJRWMD, and ARC, as appropriate.

V. Public Access and Recreation

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

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

A. Existing

A variety of recreational opportunities are available on the Forest. Visitors can enjoy hiking, fishing, wildlife viewing, and photography. CDMSFP is part of the FFS Trailwalker Program. See Exhibit D for a map of the Recreation, Facilities, and Improvements.

The main trailhead and parking area for the Forest are along West Street, approximately four-tenths of a mile north of State Road 20. An additional trailhead is located on the northern boundary of the North Tract along Bill Street. The hiking trail is 1.2 miles in length and has interpretive tree identification signs along the route as well as an observation dock on Up and Down Lake.

B. Planned Recreational Activities

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

1. Public Access and Parking

Within the ten-year planning cycle, the potential for new parking and forest access points will be evaluated and considered for use. Existing parking and Forest access points will continually be evaluated for updates and improvements. Plans are under way to install a new kiosk at the Bill Street parking area on the North Tract. A new trailhead is being planned for the South Tract of the Forest near the intersection of Longhorn Trail and Clouds Avenue. This new trailhead will consist of a small lime rock parking area for up to five vehicles, and an informational kiosk.

2. Recreational Trails

Suitable locations are being explored for additional hiking and bicycle trails. A 1.5-mile hiking trail is also planned to be added to the South Tract. The construction, maintenance, and improvements of nature and hiking trails will be on-going. The CDMSFP Five-Year Outdoor Recreation Plan includes the update of existing interpretive signs on the North Tract trail and plans for installing interpretive signage on the South Tract trails, as well as placing benches on the trail system. Additionally, the installation of an observation dock on the South Tract will occur if funding becomes available.

Within this ten-year planning cycle, consideration will be made for producing a birding brochure. If the need arises, considerations will also be made for installing a pavilion or bathroom.

3. Environmental Education

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

4. Camping

There are currently no plans to construct a developed campground on CDMSFP, although construction of a bathroom may be considered in the future if the public demand is there.

Potential dispersed primitive camp sites will be hike-in, tent-only sites on both the North and South Tracts. At a minimum, each site will consist of a tent pad, fire ring, lantern pole, and picnic table. Potential camp site locations are shown on the Facilities, Recreation, and Improvement Map.

5. Equestrian, Hunter, and Hiker Education

FFS will continue communicating our needs and concerns with our user groups, cooperators, and our visitors.

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

C. Hunter Access

Both game and non-game species of fish and wildlife are important components of the CDMSFP ecosystem. The Forest is currently not open to regulated hunting. The FFS provides land management and general supervision of the property. Fishing is allowed on the Forest, and must follow current state law and policy, as administered by FWC.

D. Education

FFS may create partnerships with local K-12 schools and / or universities for the development and implementation of educational opportunities on CDMSFP. The Five-Year Outdoor Recreation Plan lends more insight to management activities as they pertain to future educational opportunities CDMSFP provides to the public.

VI. Forest Management Practices

A. Prescribed Fire

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

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

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

FFS has one (1) fire tower and five (5) tractor-plow units located in Putnam County. Additional support is available from neighboring counties. Personnel and equipment stationed in Putnam County will be used for pre-suppression practices, establishment of firebreaks, rehabilitation of existing firelines, construction of new firelines, maintenance of perimeter firebreaks, and prescribed burning.

The annual forest prescribed burning program produces multiple benefits. The purposes of

prescribed burning on CDMSFP 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 CDMSFP, which will consist of dormant and growing season burns. An update to the Five-Year Prescribed Burning Management Plan is developed each year by FFS staff. All burns conducted on CDMSFP are executed by Florida Certified Prescribed Burn Managers in accordance with Chapter 590.125, F.S. and Rule Chapter 5I-2, F.A.C.

According to FNAI, historic, fire-dependent natural communities on CDMSFP are estimated to have occupied approximately 290 acres and to have burned at approximately 1 to 10-year intervals. Current fire-dependent communities encompass 240 acres. Some historically fire-dependent communities have been altered through past land use practices, which inhibits the ability to meet objectives with prescribed fire alone. Based on current conditions and management objectives, CDMSFP will plan for 60 to 80 acres to be prescribed burned annually. Priority ranking of burn units is used to keep fire return intervals maintained while slowly adding additional acreage. 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. Currently it is estimated that approximately 182 acres of CDMSFP are within the desired fire return interval.

1. Fire Management

The fire management plan will serve as a working tool and an informational document for CDMSFP. 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 CDMSFP 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 (2019) to identify areas that may require mechanical 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 larger acreages. Consideration should be given to rotating burn units between dormant and growing season burns over time. Fire return intervals for a burn unit are recommended to fall within the natural, historic range for the dominant natural community or communities within a given burn unit.

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

B. Wildfires, Prevention, Fire / Prescribed Fire Strategies

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

FFS has three paramount considerations regarding wildfires and are established 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 CDMSFP Fire Management Plan.

1. Suppression Strategies

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

- a. Contain and Control** is defined as a suppression strategy where a fire is restricted to a certain area by using existing natural or constructed barriers that stop the fires spread under the prevailing and forecasted weather until it is out. This strategy allows the use of environmentally sensitive tactics based on fuels, fire behavior, and weather conditions that keep a wildfire from burning a large area or for a long duration.

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 CDMSFP 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 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 bladed 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. Plowed and bladed lines will be rehabilitated and BMPs implemented as soon as practical after the fire is suppressed.

4. Sensitive Areas

CDMSFP 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 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 CDMSFP. 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 CDMSFP, efforts in this regard will continue to identify communities at risk and to make contact with their representatives.

6. Adjacent Neighbor Contacts

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

7. Post-Burn Evaluations

A post-burn evaluation is required for each prescribed burn on the State Forest to assess impacts on timber and habitat. Based on the evaluations, decisions will be made on the effectiveness of the prescribed burn and improvements that can be made in the future. A

historical fire record for all significant fires and prescribed burns will be maintained. This will be accomplished using completed burn plans and 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 Forest.

1. Strategies

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

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

2. Silvicultural Operations

Silvicultural operations on CDMSFP 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 BMPs and the State Forest Handbook, and will follow the Five-Year Silviculture Action 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 the Forest area will be re-inventoried annually to provide an accurate estimation of the standing timber and to ensure that stands will be managed sustainably.

Timber / forestry resources available on the property include longleaf, slash, and small pockets of sand pine. In addition, there are mixed hardwoods found throughout the Forest.

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.

5. Cattle Grazing

Cattle grazing activities assist in maintaining pastures and controlling non-native plants, support the maintenance of fences and gates, and provide a source of income to the Forest.

Currently there are no (0) cattle leases on CDMSFP.

D. Non-Native Invasive Species Control

FFS employees continually monitor the Forest for non-native invasive species while conducting management activities. FFS will locate, identify, and apply control measures with the intent to eradicate or control non-native invasive species. Table 5 lists the general treatment strategy, acres impacted, and population stability trend for non-native invasive plant species occurring on CDMSFP. Also 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 CDMSFP 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 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 the effort to control non-native invasive animals. Feral hogs (*Sus scrofa*) are present on CDMSFP but are not believed to occur in significant numbers at this time. FWC has issued a feral hog control permit to FFS for all State Forests and FFS will allow for feral hog removal on CDMSFP through trapping 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 herbicide treatments.

Table 5. Non-Native Invasive Plant Species Occurring on CDMSFP

Scientific Name	Common Name	Treatment Strategy	Acres Impacted	Increasing /Decreasing
<i>Dioscorea bulbifera</i>	Air potato	Pull by hand and / or herbicide	0.1 Acres	Decreasing
<i>Cinnamomum camphora</i>	Camphor tree	Pull by hand, girdle, or herbicide	0.2 Acres	Increasing
<i>Triadica sebifera</i>	Chinese tallow	Pull by hand, girdle, or herbicide	.2 Acres	Increasing
<i>Ardisia crenata</i>	Coral ardisia	Pull by hand or herbicide	Unknown	Unknown
<i>Albizia julibrissin</i>	Mimosa	Pull by hand, girdle, or herbicide	0.2 Acres	Increasing
<i>Melinis repens</i>	Natal grass	Herbicide	0.7 Acres	Increasing
<i>Solanum viarum</i>	Tropical soda apple	Herbicide	0.1 Acres	Decreasing
<i>Eichhornia crassipes</i>	Water hyacinth	Hand removal or herbicide	Unknown	Increasing

E. Insects, Disease, and Forest Health

Currently there are no significant insect or disease problems on CDMSFP. In the event of a forest pest outbreak, CDMSFP resource managers will consult with the Forest Management Bureau's Forest Health Section to formulate an appropriate and effective response.

In compliance with Section 388.4111, F.S. 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 Putnam County will be notified of the approval of this plan documenting this designation.

As a result, prior to conducting any arthropod control activities on CDMSFP, 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 CDMSFP. This public lands 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 W.

F. Use of Private Land Contractors

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

1. Herbicide applications
2. Restoration activities
3. Reforestation activities
4. Timber harvesting
5. Biological assessments and mapping

VII. Proposed Management Activities for Natural Communities

In 2019, FNAI completed an inventory and natural community mapping project on CDMSFP. Current and historic natural community cover types can be found in Exhibits Q and R, and Table 6. This inventory included altered community types which are habitats that have been impacted by humans and do not fit into FNAI's Natural Community Classification. See Tables 7 and 8.

Table 6. Natural Community Types

Community Type	Historic Acres*	Current Acres*
Basin Swamp	25	25
Baygall	53	53
Depression marsh	1	1
Flatwoods lake	38	38
Floodplain swamp	8	8
Mesic flatwoods	67	50
Sandhill	139	118
Wet flatwoods	3	3
Xeric hammock	0	26
Managed and altered landcover types**	0	26
TOTAL	336	336

* Note rounding errors exist

** See Tables 7 and 8

Table 7. Managed Community Types

Community Type*	Current Acres**
Pine plantation	8
TOTAL	8

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

** Note rounding errors exist.

Table 8. Altered Landcover Types

Landcover Type*	Current Acres**
Clearing	13
Road	5
TOTAL	18

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

** Note rounding errors exist.

For the purposes of this management plan, restoration is defined as the process of returning ecosystems to the appropriate structure and species composition, based on soil type. Management during this ten-year period will begin with a forest-wide assessment of the fuel

loading, timber densities, reforestation needs, and groundcover in order to develop a five-year comprehensive operational plan for prescribed burning and other management activities across the Forest. Strategies may include thinning pine plantations, mowing or chopping in areas of heavy fuel buildup, application of both dormant and growing season fires, and / or the use of herbicides to control hardwoods and / or hardwood regeneration. Site preparation and reforestation may be required to increase pine stocking in stands with very poor stocking or in restoration efforts. Fire return intervals are included as a guide and may vary depending upon specific conditions and are intended to attain desired forest and resource management goals. See Table 9.

Table 9. Prescribed Fire Interval Guide on CDMSFP

Habitat Type	Historic Fire Return Intervals*	CDMSFP Fire Frequency Goal (Local)	Comments
Basin Swamp	Varies	N/A	Although basing swamps are pyrogenic in some areas, CDMSFP fragmentation makes it hard to burn these systems. If appropriate, they will be considered for ignition when surrounding stands are burned.
Baygall	50-100	25-50	Baygall should burn infrequently, perhaps only a few times each century in the deepest baygalls.
Depression marsh	1-8	1-8	Ideally, fire should be prescribed at a time when water is low or absent in the marshes. Marshes with substantial shrub cover should be targeted for repeated lightning season fires on a short return interval.
Flatwoods lake	N/A	N/A	Flatwoods lakes are not fire-maintained communities; fires from surrounding uplands should be allowed to burn into the lake and extinguish naturally.
Floodplain swamp	N/A	N/A	Floodplain swamps are usually too wet to support fires though fires in surrounding uplands that creep into the swamp edges are important to reduce pine and bay species invasion.
Mesic flatwoods	2-4	2-4	Frequent, low-intensity fires help maintain a diverse herbaceous layer and provide mineral soils for longleaf pine regeneration.
Pine plantation	N/A	1-4	
Sandhill	1-3	1-3	Frequent, low-intensity fires maintain a diverse herbaceous layer and provide mineral soils for longleaf pine regeneration.
Wet flatwoods	3-10	2-4	Frequent prescribed burns reduce woody encroachment, sustains herbaceous species, and aids in preventing heavy fuel loads that can lead to catastrophic wildfires.
Xeric hammock	N/A	N/A	Not a fire dependent natural community.

* As determined by FNAI

The following community descriptions, existing condition descriptions, and management recommendations are taken from a 2019 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 CDMSFP.

To achieve the objectives outlined in this plan, the following management activities will be performed in the natural and managed communities at CDMSFP 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 depressions that are typically large and / or embedded in a non-pyrogenic community and thus are not heavily influenced by frequent fires in the surrounding landscape. 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 the year.

The desired future condition of basin swamps at CDMSFP should be large, irregularly shaped, forested depressions that are dominated by hydrophytic trees and shrubs that can withstand an extended hydroperiod such as pond cypress (*Taxodium ascendens*), swamp tupelo (*Nyssa sylvatica* var. *biflora*), slash pine (*Pinus elliottii*), and fetterbush (*Lyonia lucida*). They should have variable shrub layers and sparse to dense herbaceous species cover. A mature canopy dominated by pond cypress, swamp tupelo, slash pine, and to a lesser extent, loblolly bay (*Gordonia lasianthus*), swamp bay (*Persea palustris*), and sweetbay (*Magnolia virginiana*). In most cases, shrubs should not form a dense layer below the canopy or in the ecotones of the swamps but rather be scattered throughout the swamp, although there may be some areas with heavier concentrations. Subcanopy tree and shrub species composition should be similar to the species currently inhabiting the swamps, primarily myrtle dahoon (*Ilex cassine* var. *myrtifolia*), fetterbush, and highbush blueberry (*Vaccinium corymbosum*). In the densely forested portions of basin swamps, herbs should be sparse and consist mostly of netted chain fern (*Woodwardia areolata*), Virginia chain fern (*Woodwardia virginica*), cinnamon fern (*Osmundastrum cinnamomeum*), and lizard's tail (*Saururus cernuus*). However, many of the basin swamps on CDMSF appear to be relatively shallow depressions and in the basin swamps that burn frequently (e.g., 3 to 10 years), herbaceous species should more closely resemble the desired future conditions of wet flatwoods. The ecotones of basin swamps that are adjacent to mesic and wet flatwoods should be dominated by herbaceous and graminoid species.

Current Conditions:

Basin Swamp on CDMSFP is the community covering the Alligator Creek watercourse and upstream feeder wetlands. The surrounding ecotone is typed as baygall. CDMSFP is highly fragmented and this fragmentation presents management challenges for hydrological connectivity and for prescribed fire. Alterations in hydroperiod and fire suppression have resulted in changes in various communities, including basin swamp. Canopy and subcanopy species include red maple (*Acer rubrum*), loblolly bay, sweetbay, southern bayberry (*Morella cerifera*), swamp bay, swamp laurel oak (*Quercus laurifolia*), and water oak (*Quercus nigra*). Shrubs include groundnut (*Apios americana*), common buttonbush (*Cephalanthus occidentalis*), and fetterbush. Herbs and vines include dogfennel (*Eupatorium capillifolium*),

cinnamon fern, sawtooth blackberry (*Rubus pensilvanicus*), lizard's tail (*Saururus cernuus*), 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 often burn in conjunction with the adjacent uplands, and these may burn as frequently as every 2 to 5 years.

Because of fragmentation, burning basin swamps on CDMSFP is a fire challenge. A property line traverses the middle of the west basin swamp, and the edge of the eastern swamp is also on private adjoining land. During adjacent prescribed fires, the boundary areas will be evaluated to allow the fire to extinguish naturally.

Management Needs:

Little active management should be required for this community type. Where it can be done safely, prescribed fires should be allowed to burn into basin swamp edges to restrict encroaching shrubs. Infrequent, low-intensity ground fires within basin swamps are necessary to maintain the cypress component. Swamp tupelo and other hardwoods dominate areas that burn less often. If hydrology has been altered (i.e. ditches/canals), normal hydroperiod should be restored if possible, since shortened hydroperiods can also allow devastating fire to enter, potentially altering the community. Heavy equipment that causes rutting that will alter the micro-hydrology of the ecotone; use of heavy equipment, if necessary, should be limited to dry seasons. The road crossing Alligator Creek will be maintained according to BMP standards. This community is thought to be very stable as long as hydrological conditions and water quality are maintained. Timber harvesting in this stand is not necessary for the foreseeable future due to current hardwood timber markets, as well as the small size of this community type. All silvicultural activities that occur adjacent to basin swamps on CDMSFP should follow Florida Silviculture BMPs to ensure that the hydrology of this community type is not negatively impacted.

B. Baygall**Description:**

Baygall is a forested wetland typically occurring at the base of sandy slopes where water seepage maintains a saturated peat substrate. Baygalls may form an ecotone between uplands and swamps, or they may develop as a larger bay swamp in isolated basins or broad areas of seepage. These forests are dominated by a tall canopy of abundant loblolly bay, sweetbay, and slash pine, with swamp bay and fetterbush usually forming a dense thicket in the understory. Red maple can be an occasional component of the canopy. Swamp doghobble (*Leucothoe racemosa*) may frequently be present in baygalls, and while usually not a dominant species, occurrence as a dominant is not necessarily undesirable. Other than *Sphagnum* spp., herbs are generally sparse and frequently include cinnamon fern. Peat fires or other types of hydrologic alteration may create shallow depressions that support shrubs more commonly found in swamps, such as dahoon (*Ilex cassine*), wax myrtle (*Myrica cerifera*), and Virginia willow (*Itea virginica*), as well as swamp or marsh herbs, including smallfruit beggarticks (*Bidens mitis*), sawgrass (*Cladium jamaicense*), and lizard's tail.

Current Conditions:

On CDMSFP larger, fragmented baygalls are associated with both Up and Down Lake and Hardesty Lake, and the ecotone along Alligator Creek. The canopy and subcanopy is dominated by loblolly bay but also include titi (*Cyrilla racemiflora*), dahoon, swamp bay, slash pine, and swamp laurel oak. Shrubs include smaller canopy species, along with willow herb (*Decodon verticillatus*), fetterbush, and saw palmetto (*Serenoa repens*). Vines include laurel greenbrier (*Smilax laurifolia*) and muscadine. Epiphytes occasionally include Spanish moss (*Tillandsia usneoides*). The herb layer occasionally includes Virginia chain fern.

Fire Regimes:

Baygalls should burn infrequently, perhaps only a few times each century in the deepest baygalls. Although the saturated soils and humid conditions within baygalls typically inhibit fire, droughts may create conditions that allow them to burn catastrophically. These fires not only destroy the canopy, but also may ignite the deep peat layers that can smolder for weeks, or even months. During adjacent prescribed fires, the boundary areas will be evaluated to allow flames to extinguish naturally.

Management Needs:

Baygalls occur in saturated areas where acidic organic material has accumulated. They can be allowed to burn along with the adjacent uplands if conditions permit. Typically, fires burn only into the edges of the baygall community and extinguish naturally, if the soil is damp. Caution should be used during periods of drought to minimize the chance of peat fires, which may burn for weeks outside of prescription. Management activities for baygalls on CDMSFP should focus on maintaining the natural hydrology wherever practical. Any further hydrological disturbances are to be avoided. Plowed firebreaks and ditches should be restored, and hydrology should be returned to its natural state where possible. Silvicultural activities in this ecosystem type should be limited. Following Silviculture BMPs when conducting operations adjacent to these areas is important to ensure that this ecosystem type is not negatively impacted.

C. Depression Marsh**Description:**

Depression marshes are isolated, non-forested wetland basins that are imbedded in a pyrogenic matrix community such as pine flatwoods or sandhill. These marshes typically have concentric zones of vegetation related to the length of hydroperiod and depth of flooding. Depression marshes are distinguished from basin marshes principally by their landscape position, which subjects them to more frequent fires.

Desired future conditions for depression marshes should generally match the description of the undisturbed marshes above. Grasses and sedges should dominate the vegetation cover in all but the deepest areas of the marsh where maidencane, sawgrass, or pickerelweed may be present.

Current Conditions:

Occasionally there is a canopy of slash pine and the shrub layer includes fetterbush. The herbaceous layer has chalky bluestem (*Andropogon virginicus* var. *glaucus*), Carolina redroot (*Lachnanthes caroliana*), maidencane (*Panicum hemitomon*), beaksedge (*Rhynchospora*

spp.), woolgrass (*Scirpus cyperinus*), and Virginia chain fern. Although overgrown, the single depression marsh on the south tract is important habitat for ephemeral pond-breeding amphibians.

Fire Regimes:

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

Management Needs:

Marshes should generally be allowed to burn with the surrounding communities. Ideally, fire should be prescribed at a time when water is low or absent in the marshes. Marshes with substantial shrub cover (either within the marsh or surrounding edges) should be targeted for repeated lightning season fires on a short return interval.

D. Flatwoods Lake

Description:

A flatwoods lake is a permanent water body surrounded mostly by flatwoods. Flatwoods lakes are similar to depression marshes but are typically larger, deeper basins that support a greater expanse of open water and a longer hydroperiod. Distinctions between a flatwoods lake and depression marsh are subtle; size and depth of the basin are the principal differences. The perimeter of a flatwoods lake may support either an herbaceous zone or a dense ring of saw palmetto. Open water occupies much of the basin. These lakes may have a border of wet prairie-like vegetation or a dense ring of saw palmetto and other shrubs. Water is derived mostly through runoff from surrounding uplands.

Current Conditions:

The three lakes on the property are Hardesty Lake, Up and Down Lake, and the edge of a no-name lake southwest of the corner of Joy Drive and Kitty Lane. The first two are surrounded by flatwoods, and the latter by sandhill. At CDMSFP, the flatwoods lakes' edges have a few scattered shrubs, including red maple, dahoon, fetterbush, peelbark St. John's wort (*Hypericum fasciculatum*), and wax myrtle. Herbaceous species include sawgrass and maidencane.

Fire Regimes:

Flatwoods lakes are not fire maintained communities.

Management Needs:

Flatwoods lakes function as aquifer recharge areas by acting as reservoirs that release groundwater when adjacent water tables drop during periods of drought. Hydrological alteration through ditching or canals should be avoided. Fires from surrounding uplands should be allowed to burn into the lake and extinguish naturally, no easy task since the state does not own the entire shore of any of these water bodies. Monitoring for aquatic non-native invasive plant species should continue in this community type.

E. 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. Higher ridges/levees, often found along the riverbank, may be included within the swamp, although these can harbor species that are more typical of drier communities.

Desired future condition for floodplain swamps is a semi-closed to closed canopy dominated by pond cypress and / or bald cypress (*Taxodium distichum*). Swamp tupelo, water tupelo (*Nyssa aquatica*), swamp laurel oak, sweetgum (*Liquidambar styraciflua*), swamp bay, red maple, myrtle dahoon, Carolina ash (*Fraxinus caroliniana*), southern magnolia (*Magnolia grandiflora*), tulip poplar (*Liriodendron tulipifera*), and pond pine (*Pinus serotina*) form a semi-closed subcanopy and may also be found in the canopy. Swamp laurel oak, southern magnolia, and pond pine are found on the higher levees within the swamp, usually along the banks. The understory is comprised mostly of shrubs with herbs sparse in most areas but frequent to abundant where gaps occur. Understory shrubs include dwarf palmetto (*Sabal minor*), false indigobush (*Amorpha fruticosa*), titi, wild olive (*Osmanthus americanus*), azalea (*Rhododendron* spp.), coastal sweet pepperbush (*Clethra alnifolia*), bayberry (*Myrica* spp.), buttonbush, hawthorn (*Crataegus* spp.), and highbush blueberry. Herbs include wood oats (*Chasmanthium* spp.), partridgeberry (*Mitchella repens*), sedge (*Carex* spp.), green arrow arum (*Peltandra virginica*), tall nutgrass (*Scleria triglomerata*), switchcane (*Arundinaria gigantea*), lobelia (*Lobelia* spp.), swamp leather-flower (*Clematis crispa*), witchgrass (*Dichanthelium* spp.), panicgrass (*Panicum* spp.), and cinnamon fern. Epiphytes are infrequent to occasional and consist of Spanish moss. Vines are found frequently and include laurel greenbrier, Carolina jessamine (*Gelsemium sempervirens*), and climbing hydrangea (*Decumaria barbara*).

Current Conditions:

Portions of the east and west shore of Up and Down Lake are floodplain swamp. The canopy and subcanopy layer include dahoon, sweetbay, swamp tupelo (*Nyssa biflora*), and slash pine. The understory contains common buttonbush, maidencane, pale meadowbeauty (*Rhexia mariana*), and Virginia chain fern.

Fire Regimes:

Floodplain swamps are usually too wet to support fires. However, fires in surrounding uplands that creep into the swamp edges are important to reduce pine and bay species invasion.

Management Needs:

Maintain natural hydrology and allow fires from surrounding uplands to burn into the swamp edges. Natural hydrology is crucial for maintaining species diversity and water quality. Hydrologic alterations associated with roads, berms, and ditches should be minimized as much as possible. Allowing fires from surrounding uplands to burn into the swamps will enhance diversity in ecotones and decrease bay and pine encroachment. Timber harvesting in this stand is not necessary for the foreseeable future due to current hardwood timber markets as well as the small size of this community type.

F. Mesic Flatwoods

Description:

Mesic flatwoods are forests of southern yellow pines; principally longleaf pine (*Pinus palustris*). Slash pine is present more frequently in transitions to adjacent wetlands or on more calcareous soils. There is little or no subcanopy and tall shrub layer other than pine recruitment. The shrub layer is moderately dense with an average height that does not generally exceed four feet. Typical species include saw palmetto, gallberry (*Ilex glabra*), tarflower (*Bejaria racemosa*), coastalplain staggerbush (*Lyonia fruticosa*), wax myrtle, winged sumac (*Rhus copallinum*), netted pawpaw (*Asimina reticulata*), running oak (*Quercus elliotii*), dwarf live oak (*Quercus minima*), shiny blueberry (*Vaccinium myrsinites*), and a diversity of other low shrubs. Herb cover is also moderately dense and dominated by grasses which help to carry frequent fires, especially wiregrass (*Aristida stricta*). Herbaceous species diversity is high in good quality mesic flatwoods. Vines occur rarely. Community types embedded within mesic flatwoods include dome swamp, basin swamp, depression marshes, wet flatwoods, and hydric hammocks.

Current Conditions:

Mesic flatwoods is the second largest community on CDMSFP, and has a canopy of widely spaced, planted or natural longleaf pine, slash pine and loblolly pine (*Pinus taeda*). Shrubs are mostly three to nine feet tall and saw palmetto was frequently dense, although blue huckleberry (*Gaylussacia frondosa* var. *tomentosa*), gallberry, rusty staggerbush (*Lyonia ferruginea*), fetterbush, dwarf live oak, winged sumac, and blueberries (*Vaccinium* spp.) were also common. Loblolly bay, swamp bay, myrtle oak (*Quercus myrtifolia*), and water oak are occasional among the tall shrubs, especially in fire excluded areas. A sparse weedy herb cover consists primarily of broomsedge bluestem (*Andropogon virginicus*), bottlebrush threeawn (*Aristida spiciformis*), bracken fern (*Pteridium aquilinum*), and Nuttall's meadowbeauty (*Rhexia nuttallii*). Most of these flatwoods have suffered from fire exclusion.

Fire Regimes:

Historically, fires ignited by lightning during the early thunderstorm season (April - June) would have burned the mesic flatwoods/wet flatwoods complex. These fires are critical for preserving the structure of the flatwoods, for preventing woody encroachment, and for reducing weedy competition. Frequent, low-intensity fires help maintain a diverse herbaceous layer and provide mineral soils for longleaf pine regeneration. For management purposes, prescribed fires should be applied on a 2 to 4-year interval, primarily in April – June, to keep fuel levels manageable and maintain maximum native biodiversity, and this will be the goal after a sufficient number of dormant season fires have reduced the duff layer to make this practical.

Management Needs:

Frequent prescribed fires are critical for maintaining optimal habitat conditions within mesic flatwoods. Fires every 2 to 4 years are needed to minimize hardwood encroachment, maintain high groundcover diversity, and promote longleaf pine regeneration on mineral soils. Although unlikely during this planning period, the potential for transitioning from dormant season burning to growing season burning will be evaluated based on fuel loads and conditions. Soil disturbance, such as those caused by roller chopping, plowing fire lines, or other mechanical treatments, should be minimized in areas with good groundcover. Soil

disturbance promotes weedy species and weakens or eliminates native perennials such as wiregrass. Currently there are no stands in this community type that warrant a timber harvest. However, mesic flatwoods stands will continue to be monitored for possible timber harvesting operations. If a harvest occurs and reforestation is desirable, the stand will be planted back with the tree species that is most appropriate to the site and the overall management objective of CDMSFP.

G. Sandhill

Description:

Sandhills are open pinelands of longleaf pine with a sparse understory of deciduous oaks, turkey oak (*Quercus laevis*), and a diverse, usually dense groundcover of wiregrass and other grasses and herbs. Sandhills get their name from the gently rolling hills of sand on which they are located. Their soils are composed of deep, well drained sands. Sand live oak (*Quercus geminata*), sand post oak (*Quercus margaretta*), and turkey oak are present in a sparse understory. Density of scrub oaks such as Chapman's oak (*Quercus chapmanii*) and myrtle oak can be reduced by more frequent prescribed fire in areas where they are abundant. Other shrubs found in the open understory include winged sumac, blue huckleberry, gopher apple (*Licania michauxii*), rusty staggerbush, coastalplain staggerbush, pricklypear (*Opuntia humifusa*), saw palmetto, queensdelight (*Stillingia sylvatica*), and blueberries. There is usually a dense cover of wiregrass and a diversity of other graminoids, including Elliott's bluestem (*Andropogon gyrans*), splitbeard bluestem (*Andropogon ternarius*), capillary hairsedge (*Bulbostylis ciliatifolia*), and *Rhynchospora* spp.; many showy Asteraceae, such as coastalplain honeycomb-head (*Balduina angustifolia*), coastalplain chaffhead (*Carphephorus corymbosus*), goldenasters (*Chrysopsis* spp.), garberia (*Garberia heterophylla*), narrowleaf silkgrass (*Pityopsis graminifolia*), and sweet goldenrod (*Solidago odora*); legumes such as Florida milkvetch (*Astragalus obcordatus*), summer farewell (*Dalea pinnata*), and *Rhynchosia* spp.; and other forbs including grassleaf roseline (*Callisia graminea*), dogtongue wild buckwheat (*Eriogonum tomentosum*), and fragrant eryngo (*Eryngium aromaticum*).

Sandhills have a distinctive signature on the 1943 aerial photographs. The open shrub layer appears as a mottled white and gray area, as opposed to the smoother gray signature of flatwoods.

Current Conditions:

Longleaf pine form the canopy in most sandhills at CDMSFP, with Sand live oak, sand post oak, Chapman's oak, laurel oak (*Quercus hemisphaerica*), bluejack oak (*Quercus incana*), turkey oak, water oak, and / or live oak (*Quercus virginiana*), present in a sparse understory. Longleaf pine is missing in a few locations, with sand live oak and turkey oak forming the highest layer. Frequent components of scrub are occasionally found, such as Florida rosemary (*Ceratiola ericoides*), Chapman's oak, and myrtle oak in more overgrown sandhill. Other shrubs found in the open understory include winged sumac, blue huckleberry, gopher apple, rusty staggerbush, coastalplain staggerbush, pricklypear, saw palmetto, queensdelight, shiny blueberry, and deerberry (*Vaccinium stamineum*). Red cedar (*Juniperus virginiana*), wild olive, sand pine (*Pinus clausa*), black cherry (*Prunus serotina*), and Adam's needle (*Yucca filamentosa*) are less common and occur on lower sandhill slopes, or in areas of slight groundcover disturbance. There is usually a dense cover of wiregrass and a diversity of other herbs including Elliott's bluestem, *Andropogon* spp., splitbeard bluestem, broomsedge

bluestem, *Aristida* spp., Florida milkvetch, coastalplain honeycomb-head, capillary hairsedge, coastalplain chaffhead, Maryland goldenaster (*Chrysopsis mariana*), coastalplain goldenaster (*Chrysopsis scabrella*), rabbitbells (*Crotalaria rotundifolia*), Elliott's lovegrass (*Eragrostis elliottii*), dogtongue wild buckwheat, fragrant eryngo, yankeeweed (*Eupatorium compositifolium*), garberia, narrowleaf silkgrass, bracken fern, sand blackberry (*Rubus cuneifolius*), summer farewell, whitetop aster (*Oclemena reticulata*), *Rhynchosia* spp., *Rhynchospora* spp., and sweet goldenrod. Earleaf greenbrier (*Smilax auriculata*) is an occasional vine.

Fire Regimes:

Sandhill requires growing season fires to maintain open structure. Fire should be applied to this community every 1 to 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:

Management activities in sandhills should focus on frequent prescribed burning while minimizing practices that create soil disturbance. Frequent, low-intensity fires maintain a diverse herbaceous layer and provide mineral soils for longleaf pine regeneration. Prescribed fires, primarily in April – June, should be initiated as soon as fuel levels allow, every 1 to 3 years.

Groundcover on xeric sands is highly susceptible to mechanical soil disturbances such as disking, plowing, or roller chopping, so this type of activity should be avoided, if possible, in sandhills in order to protect existing wiregrass groundcover and not to collapse gopher tortoise burrows. Soil disturbance also allows for the introduction of weedy and invasive non-native plants.

Young longleaf pine saplings planted in sandhill on CDMSFP represent a good step toward restoration of the natural pine canopy. More frequent prescribed fire is needed to allow for continued growth to maturity without competition.

Without frequent fires, sandhills will succeed to xeric hammock with a canopy dominated by sand live oak. A sand live oak canopy occurs in two places on the South Tract and will require hardwood removal and / or herbicide treatment to attain the open landscape of a sandhill. The existing sand pine in this stand could be managed by mechanical, hand, and pyrogenic methods. Larger sand pine will likely need to be removed by mechanical means and by hand while the continued use of prescribed fire can control smaller volunteering sand pine.

H. Wet Flatwoods

Description:

Wet flatwoods are characterized by relatively open-canopy forests of scattered 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 1 to 3 feet 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 one or more

months per year. Wet flatwoods often grade into basin swamps and mesic flatwoods.

The canopy is composed of slash pine, longleaf pine, or pond pine, with a thick shrubby understory of gallberry, maleberry (*Lyonia ligustrina* var. *foliosiflora*), fetterbush, mountain azalea (*Rhododendron canescens*), saw palmetto, blueberries, loblolly bay, and swamp bay. Groundcover can be very sparse due to the density of their shrub layer or dense with hydrophytic to mesic herbs present, including bottlebrush threeawn and wiregrass. Wet flatwoods along the lakes at CDMSFP have dense shrubs up to the shoreline and herbs such as Carolina redroot, cinnamon fern, royal fern (*Osmunda regalis* var. *spectabilis*), and maidencane at the waterline. Along the creek, fire is more of an influence and the herbaceous layer is maintained by frequent prescribed fire.

Current Conditions:

Wet flatwoods at CDMSFP are a small community, with three acres split over the two tracts. The wet flatwoods on the north tract are an extension of a seep that drains into Mirror Lake off-property. The wet flatwoods on the South Tract are part of an unburnable property edge leading to a swamp south of the property. They have a sparse to moderate canopy of slash pine, longleaf pine, and pond pine, with loblolly bay, water oak, and swamp bay occasional subcanopy trees. Shrubs are dense to sparse. Saw palmetto is dominant, in addition to red maple, dahoon, gallberry, maleberry, fetterbush, laurel oak, mountain azalea, highbush blueberry, Elliott's blueberry (*Vaccinium elliotii*), and shiny blueberry. Herbs are generally sparse, although a few areas have a dense cover, particularly on the southern portion of the south tract along the east side of the creek. Common herbs include *Andropogon* spp., bottlebrush threeawn, wiregrass, *Cyperus* spp., *Dichanthelium* spp., Carolina redroot, *Osmunda* spp. maidencane, bracken fern, pale meadowbeauty, and whip nutrush (*Scleria triglomerata*). Vines such as laurel greenbrier and muscadine are abundant.

Fire Regimes:

Historically, natural fires may have occurred every 3 to 10 years in wet flatwoods communities. For management purposes, prescribed fires are applied on a 2 to 4-year cycle. This reduces woody encroachment, sustains herbaceous species, and aids in preventing heavy fuel loads that can lead to catastrophic wildfires. The eastern portion of the Mirror Lake site can be burned, while the rest of the wet flatwoods are fragmented and unburnable.

Management Needs:

Prescribed fires every 2 to 4 years, primarily in April – June should be applied in wet flatwoods. Many fire-excluded or hydrologically altered wet flatwoods may require annual or bi-annual prescribed burns during the dormant season to reduce the shrubby component to desired levels ahead of spring burns. Prescribed burns from the surrounding mesic flatwoods should be allowed to burn into wet flatwoods. Avoiding the use of heavy equipment will help protect herbaceous groundcover and maintain hydrologic integrity.

I. Xeric Hammock

Description:

Xeric hammock is characterized as a scrubby, dense, low canopy forest with little understory, other than saw palmetto. Xeric hammock is often considered an advanced successional stage of scrub or sandhill. The variation in vegetation structure is predominantly due to the original

community from which it developed.

The two xeric hammocks mapped at CDMSFP were not present historically. These appear to have been historic sandhill based on their elevation and a white, open signature on the 1943 aerial photographs.

Current Conditions:

Two xeric hammocks were mapped at CDMSFP and appear to have been historic sandhill based on their elevation and white, open signature on the 1943 aerial photographs. The closed canopy consists primarily of Sand live oak. Slash pine and longleaf pine are also common in the canopy and subcanopy, with saw palmetto and wiregrass in the understory. On the North Tract, xeric hammock has been influenced by former habitations and contains mesic inclusions with laurel oak dominant in the canopy and an occasional pignut hickory (*Carya glabra*). Tall shrubs are common and include American holly (*Ilex opaca*), southern magnolia, wild olive, sand pine, black cherry, water oak, and deerberry. Short shrubs and herbs are sparse and include Sand live oak, dwarf live oak, water oak, cabbage palm (*Sabal palmetto*), and American beautyberry (*Callicarpa americana*). Sparse herbs include broomsedge bluestem, bigflower pawpaw (*Asimina obovata*), pawpaw (*Asimina* spp.), goldenaster (*Chrysopsis* spp.), rabbitbells, *Cyperus* spp., witchgrass, yankeeweed, Elliott's milkpea (*Galactia elliotii*), pinebarren frostweed (*Helianthemum corymbosum*), blazing star (*Liatris* spp.), and the non-native but non-invasive Madagascar periwinkle (*Catharanthus roseus*). Spanish moss is an occasional epiphyte. Vines are common, including yellow jessamine (*Gelsemium sempervirens*) and earleaf greenbrier.

Fire Regimes:

Xeric hammock is not a fire dependent natural community. The sparsity of herbs and the relatively incombustible oak litter preclude most fires in xeric hammock. When fire does occur, it is nearly always catastrophic.

Management Needs:

Xeric hammocks may be left alone. Current conditions provide a scenic view for those recreating on CDMSFP.

J. Managed Communities

Pine plantations and pastures represent vegetative communities that the FFS manages as integral components of the agency's multi-use management approach. These managed communities provide both ecological benefits, such as wildlife habitat and ground and surface water filtration, as well as opportunities for generating revenue that can be used to help offset management costs. Management of plantations and pastures within the State Forests is conducted to further ensure compatibility with other management goals and objectives.

1. Pine Plantation

Description:

Planted loblolly pine, and less frequently longleaf pine, form the canopy, with sand live oak and laurel oak often found as a sparse subcanopy. Tall and short shrubs are common but never dense, with laurel oak, water oak, *Asimina* spp., American beautyberry, blue huckleberry, southern bayberry, flatwoods plum (*Prunus umbellata*), sand live oak, myrtle

oak, saw palmetto, gallberry, American holly, swamp bay, live oak, and deerberry. Herbs are sparse and include *Cyperus* spp., pinebarren frostweed, blue maidencane (*Amphicarpum muehlenbergianum*), dogfennel, Piedmont marshelder (*Iva microcephala*), *Setaria* spp., rabbitbells, and Michaux's croton (*Croton michauxii*). Earleaf greenbrier and muscadine are frequent vines.

Current Conditions:

Refer to the fire regimes heading for mesic flatwoods and sandhill habitats individually. Currently this community type consists of loblolly pine with little to no mid-story, with an herbaceous groundcover and needle cast. This stand was planted in 2007 after being harvested in 2005.

Fire Regimes:

Refer to the fire regimes heading for mesic flatwoods and sandhill habitats individually.

Management Needs:

Because this site has been in rotation as a plantation for a significant length of time, intensive groundcover restoration is required to return the site to a natural state. Prescribed burns and herbicides are the most immediate management tools available to promote restoration.

It is likely during this planning cycle that this community type will be ready to be thinned. Depending upon when this community type is ready to be harvested, either a thinning operation or clearcut harvest method could be used. Either harvest method will meet the overall management objective of CDMSFP. If the basal area of this community type is approaching levels where a harvest is warranted, then thinning this stand while it is around age 17 would open the stand up and allow sunlight to reach the ground and promote the growth of herbaceous ground cover. If the timber in this community type is not ready to be thinned far after the "typical" age for thinning, the stand could be clearcut and resorted back to its historical community type.

K. Other Altered Landcover Types

Description:

Altered landcover types are mapped where the natural community has been overwhelmingly altered because of human activity. 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. Refer to the appropriate community type for a more specific explanation of the desired future condition.

Current Conditions:

Altered landcover types on CDMSFP are comprised of clearings and roads.

Clearing (13 acres) – Dove fields, wildlife food plots, recent or historic clearings that have significantly altered the groundcover and / or overstory of the original natural community (old homesites, etc.).

Road (5 acres) – paved or unpaved

Fire Regimes:

Refer to the historical community.

Management Needs:

How ruderal areas should be managed depends on the specific site under consideration. These areas may be useful for placement of support facilities or may be targeted for restoration of the historic natural community. If left alone, most of these areas are likely to remain in a ruderal state. 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.

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, Tallahassee, Florida.

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

Florida Natural Areas Inventory. Guide to the Natural Communities of Florida – 2010 Edition. Florida Natural Areas Inventory, Institute of Science and Public Affairs at The Florida State University, Tallahassee, Florida.

United States Department of Agriculture. Web Soil Survey. 2019. Natural Resources Conservation Service (NRCS), Washington D.C.

Wunderlin, Richard P. and Bruce F. Hansen. 2003. Guide to the Vascular Plants of Florida. University Press of Florida, Gainesville, Florida.

IX. Glossary of Abbreviations

ARC	Acquisition and Restoration Council
BMAP	Basin Management Action Plan
BMP	Best Management Practices
CDMSFP	Carl Duval Moore State Forest and Park
F.A.C.	Florida Administrative Code
FDACS.....	Florida Department of Agriculture and Consumer Services
FDEP	Florida Department of Environmental Protection
FDHR	Florida Division of Historical Resources
FFS	Florida Forest Service
FNAI	Florida Natural Areas Inventory
F.S.	Florida Statutes

FWC..... Florida Fish and Wildlife Conservation Commission
 NRCS Natural Resources Conservation Service
 SJRWMD St. Johns River Water Management District
 OALE FDACS Office of Agricultural Law Enforcement
 OFW Outstanding Florida Waters
 OGT Florida Division of Recreation and Parks, Office of Greenways and Trails
 TIITF Board of Trustees of the Internal Improvement Trust Fund
 UFF University of Florida Foundation
 USFS United States Forest Service
 USFWS United States Fish and Wildlife Service

CARL DUVAL MOORE
STATE FOREST AND PARK

2021 LAND MANAGEMENT PLAN

EXHIBITS

Exhibit A

Ten Year Management Accomplishment Summary

Carl Duval Moore State Forest
10-Year Accomplishments Summary

Site Preparation	Burning	Acres	36
	Herbicide	Acres	22
	Sand pine mechanical removal	Acres	23

Planting	Longleaf, containerized	No.	25,250
		Acres	36

Seedling survival checks	Planting checks	Acres	22
---------------------------------	-----------------	-------	----

Timber Sales	Harvest	Acres	13
		Tons	786

Timber Inventory	Inventory update	Acres	321
	New inventory	Acres	29
	Plots	Acres	10

Invasive Control	Melaleuca	Acres	6
	Chinese tallow	Acres	3
	Air potato	Acres	1
	Natal grass	Acres	1
	Camphor tree	Acres	<1
	Coral ardisia	Acres	<1
	Tropical soda apple	Acres	<1

Fire	Wildfire	No.	1
		Acres	12
	Prescribed burning	No.	15
		Acres	593

Recreation	Day Use estimated forest visitors	No.	3,530
-------------------	-----------------------------------	-----	-------

Roadwork	Gate installed	No.	1
	Repair/rebuild fencing	No.	3
	Other	No.	1

Boundary Maintenance	Maintenance/Marking	Miles	5
-----------------------------	---------------------	-------	---

I&E Activities	Programs/tours	No.	1
---------------------------	----------------	-----	---

Other Activities	Hogs trapped	No.	18
	Liaison committee meeting	No.	15
	Located bald eagle nest	No.	1
	Plum Creek land acquisition	Acres	30

Exhibit B

Boundary Map



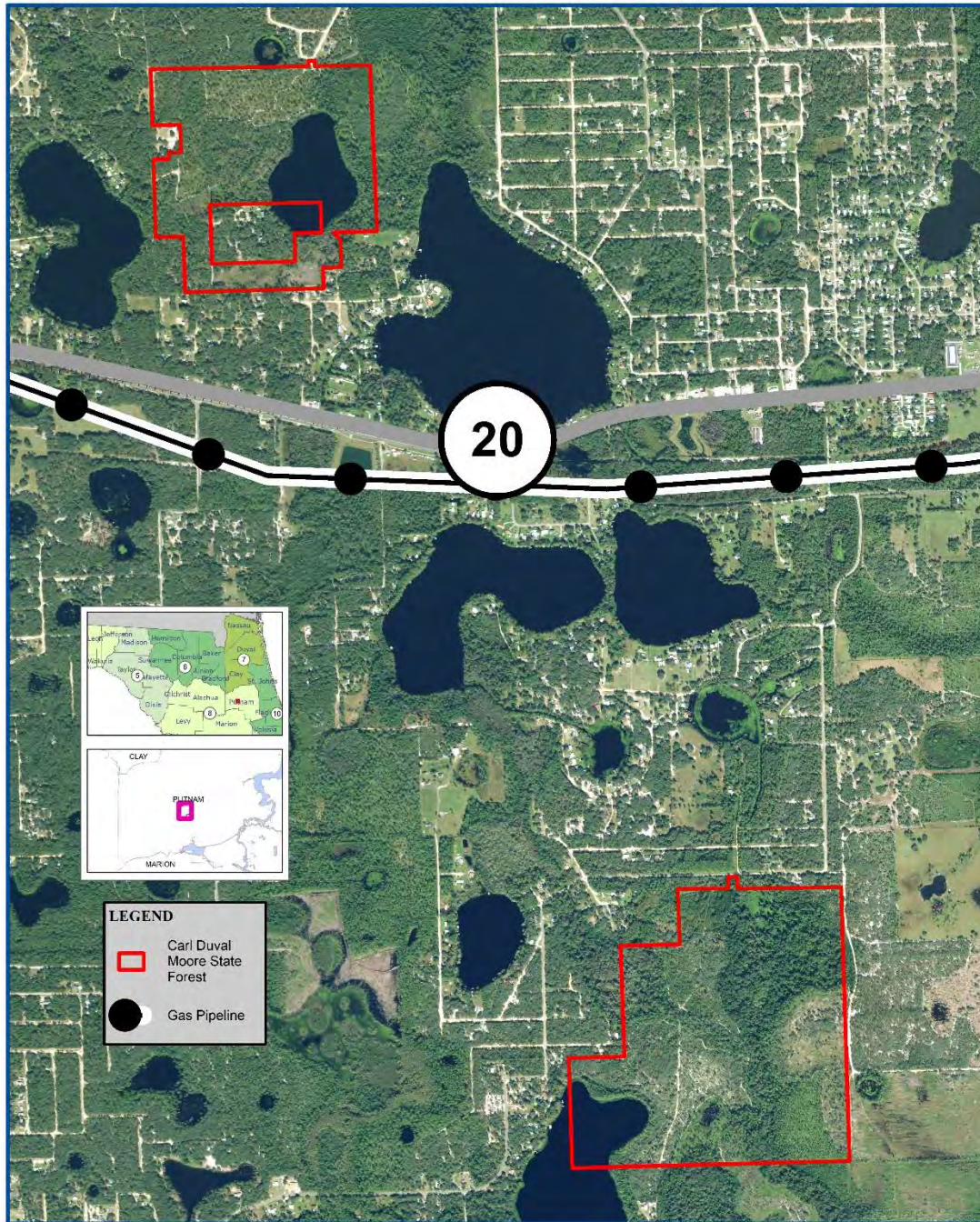
Florida Forest Service

Carl Duval Moore State Forest Boundary Map

Coordinate System: Florida Albers
High Accuracy Reference System (HARS) Datum

DISCLAIMER:
This map was prepared by the Florida Forest Service for informational purposes only. It is not intended to be used for legal or financial purposes. The Florida Forest Service does not warrant the accuracy or completeness of the information contained herein. The Florida Forest Service is not responsible for any errors or omissions in this map. The Florida Forest Service is not responsible for any damages or losses resulting from the use of this map.

Map of 2019 boundary of
Carl Duval Moore State Forest
primarily from USGS data
from 1984 and 1985.



LEGEND

- Carl Duval Moore State Forest
- Gas Pipeline



Map Month/Year: December 2019



Exhibit C

Optimal Management Boundary Map



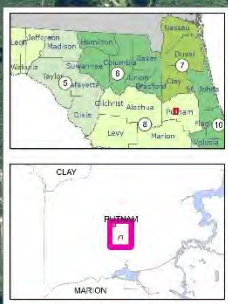
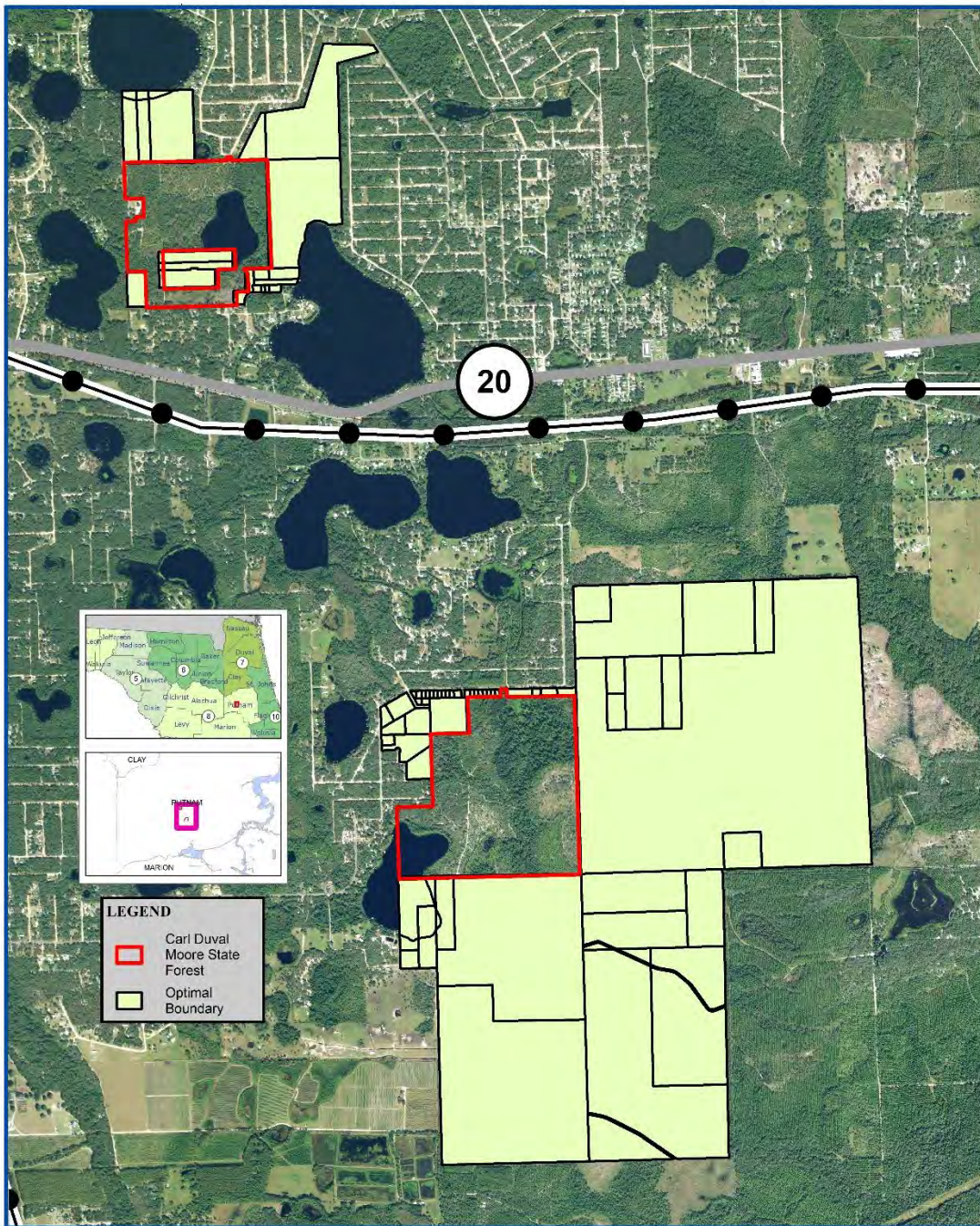
Florida Forest Service

Carl Duval Moore State Forest Optimal Management Boundary Map

Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

DISCLAIMER:
This map was prepared by the Florida Forest Service as a planning tool. It is not intended to be used for legal purposes. The Florida Forest Service makes no warranty, expressed or implied, for the accuracy or completeness of the information contained herein. The user assumes all liability for any use of this map.

Map of the State of Florida showing the location of the Carl Duval Moore State Forest. The map is titled "Map of the State of Florida" and shows the location of the forest in the central part of the state. The forest is located in the central part of the state, between the cities of Orlando and Tampa. The map is titled "Map of the State of Florida" and shows the location of the forest in the central part of the state.



LEGEND

- Carl Duval Moore State Forest
- Optimal Boundary

0.5 0.25 0 Miles



Map Month/Year: December 2019

0 500 1,000 Feet

Exhibit D

Facilities, Recreation, and Improvements Map



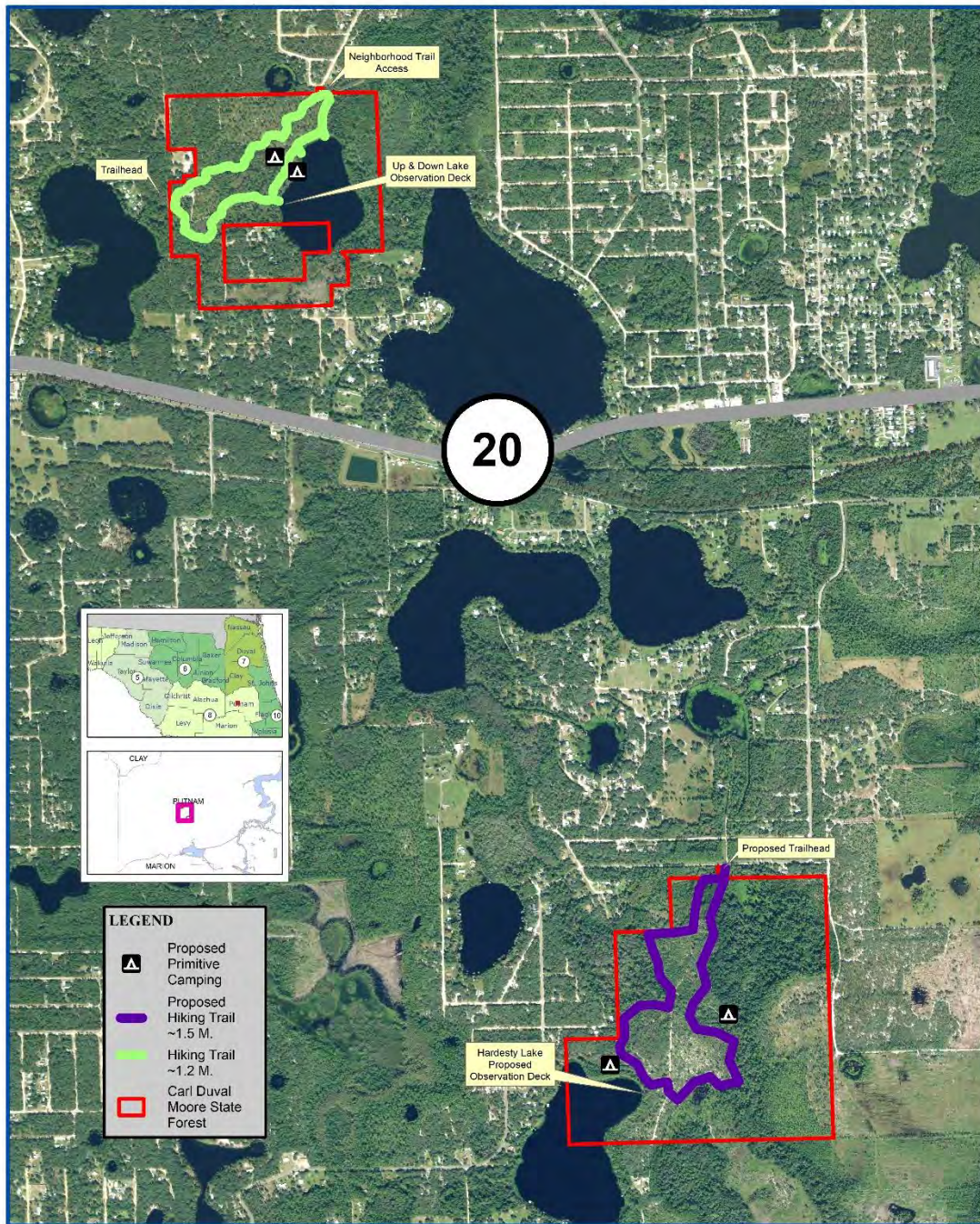
Florida Forest Service

Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

Carl Duval Moore State Forest Facilities, Recreation and Improvements Map

DISCLAIMER:
This map was prepared by the Florida Forest Service for informational purposes only. It is not intended to be used for legal or financial purposes. The Florida Forest Service makes no warranty, expressed or implied, for the accuracy or completeness of the information contained herein. The user assumes all liability for any use of this map.

Map of All Facilities:
This map shows the location of all facilities within the Carl Duval Moore State Forest. Facilities include observation decks, trailheads, and primitive camping areas. The map is intended to provide a general overview of the forest and its resources.



LEGEND

- Proposed Primitive Camping
- Proposed Hiking Trail ~1.5 M.
- Hiking Trail ~1.2 M.
- Carl Duval Moore State Forest



Map Month/Year: December 2019

1,000 500 0 Feet

Exhibit E

Road Map



Florida Forest Service

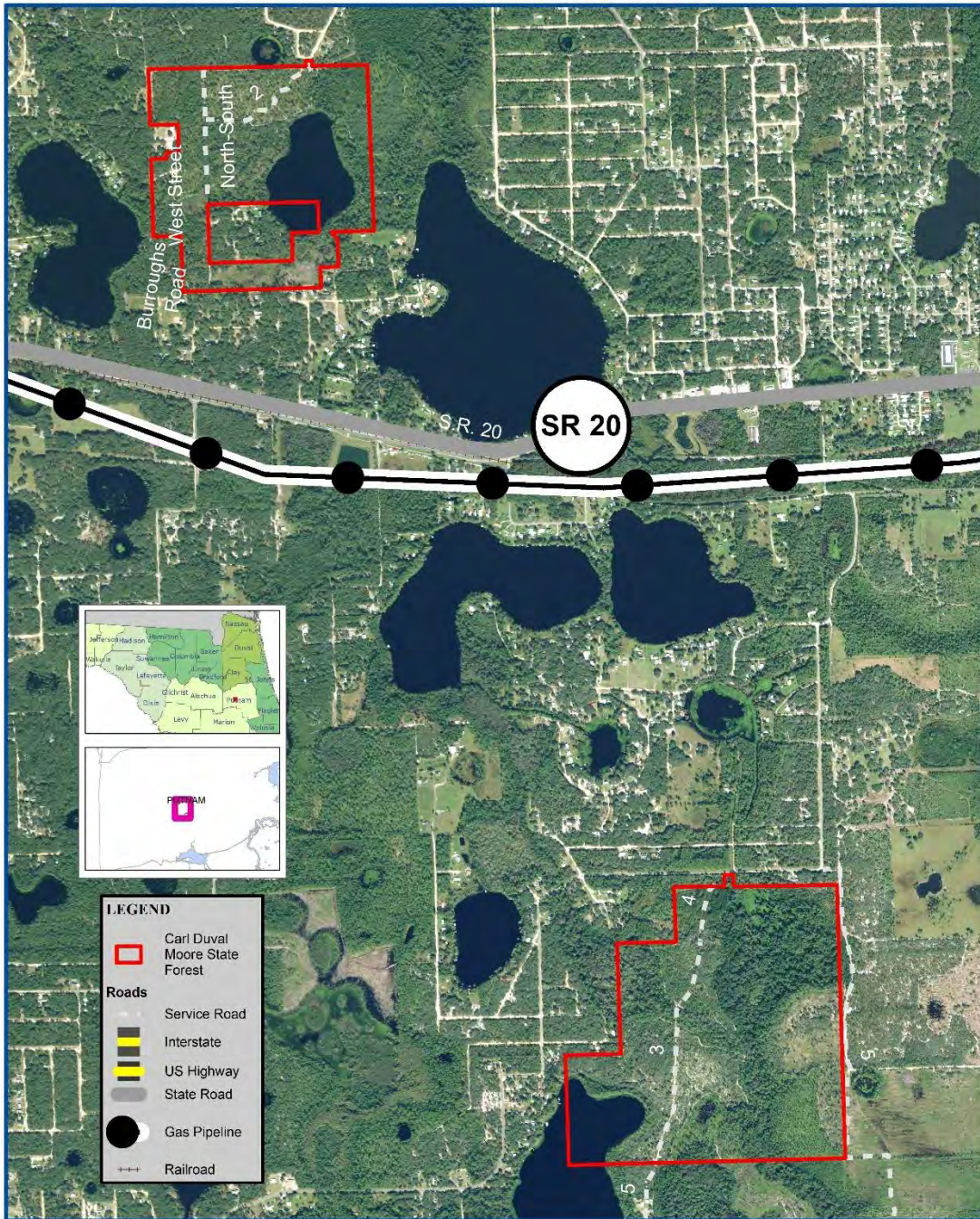
Carl Duval Moore State Forest

Road Map

Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

DISCLAIMER:
This map was created by the Florida Forest Service using data provided by the Florida Department of Transportation (FDOT) and the Florida Department of Environmental Protection (FDEP). The Florida Forest Service does not warrant the accuracy or completeness of the information contained herein. The Florida Forest Service is not responsible for any errors or omissions in this map. The Florida Forest Service is not responsible for any damages or injuries resulting from the use of this map.

Map of Florida showing the location of Carl Duval Moore State Forest. The forest is located in the central part of the state, primarily in Duval and Alachua counties. The map is a road map showing major roads and highways.



Map Month/Year: April 2020

1,000 500 0
Feet

Exhibit F

Proximity to Significant Managed Lands

[illegible]

Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

Managed Area bounded by corners of the Florida Hotel; Area Inventory normally Used Defense Sites (MDS) from the US Army Corps of Engineers



Map Month/Year: December 2019



Exhibit G

Department of State Report on Archeological and Historical Sites



This record search is for informational purposes only and does NOT constitute a project review. This search only identifies resources recorded at the Florida Master Site File and does NOT provide project approval from the Division of Historical Resources. Contact the Compliance and Review Section of the Division of Historical Resources at 850-245-6333 for project review information.

October 17, 2019



Patti Anderson

OPS Land Management Planner

Florida Forest Service

Florida Department of Agriculture and Consumer Services

Phone: (850) 681-5889

E-mail: Patricia.Anderson@FDACS.gov

In response to your inquiry of October 16, 2019, the Florida Master Site File lists no archeological sites and no other cultural resources found at **Carl Duval Moore State Forest** in Putnam County, Florida

When interpreting the results of this search, please consider the following information:

- This search area may contain *unrecorded* archaeological sites, historical structures or other resources even if previously surveyed for cultural resources.
- Federal, State and local laws require formal environmental review for most projects. This search **DOES NOT** constitute such a review. If your project falls under these laws, you should contact the Compliance and Review Section of the Division of Historical Resources at 850-245-6333.

Please do not hesitate to contact us if you have any questions regarding the results of this search.

Kind Regards,

Eman M. Vovsi

Data Base Analyst

Florida Master Site File

Eman.Vovsi@DOS.MyFlorida.com

Exhibit H

Management Procedures for Archaeological and Historical Sites and Properties on State Owned or Controlled Lands

**Management Procedures for Archaeological and Historical Sites and Properties on
State-Owned or Controlled Properties**
(revised September 2019)

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

A. General Discussion

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

B. Agency Responsibilities

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

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

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

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

C. Statutory Authority

Statutory Authority and more in-depth information can be found at:
<https://dos.myflorida.com/historical/preservation/compliance-and-review/regulations-guidelines/>

D. Management Implementation

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

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

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

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

E. Minimum Review Documentation Requirements

In order to have a proposed project reviewed by the Division, certain information must be submitted for comments and recommendations. The minimum review documentation requirements can be found at:
https://dos.myflorida.com/media/31392/minimum_review_documentation_requirements.pdf

* * *

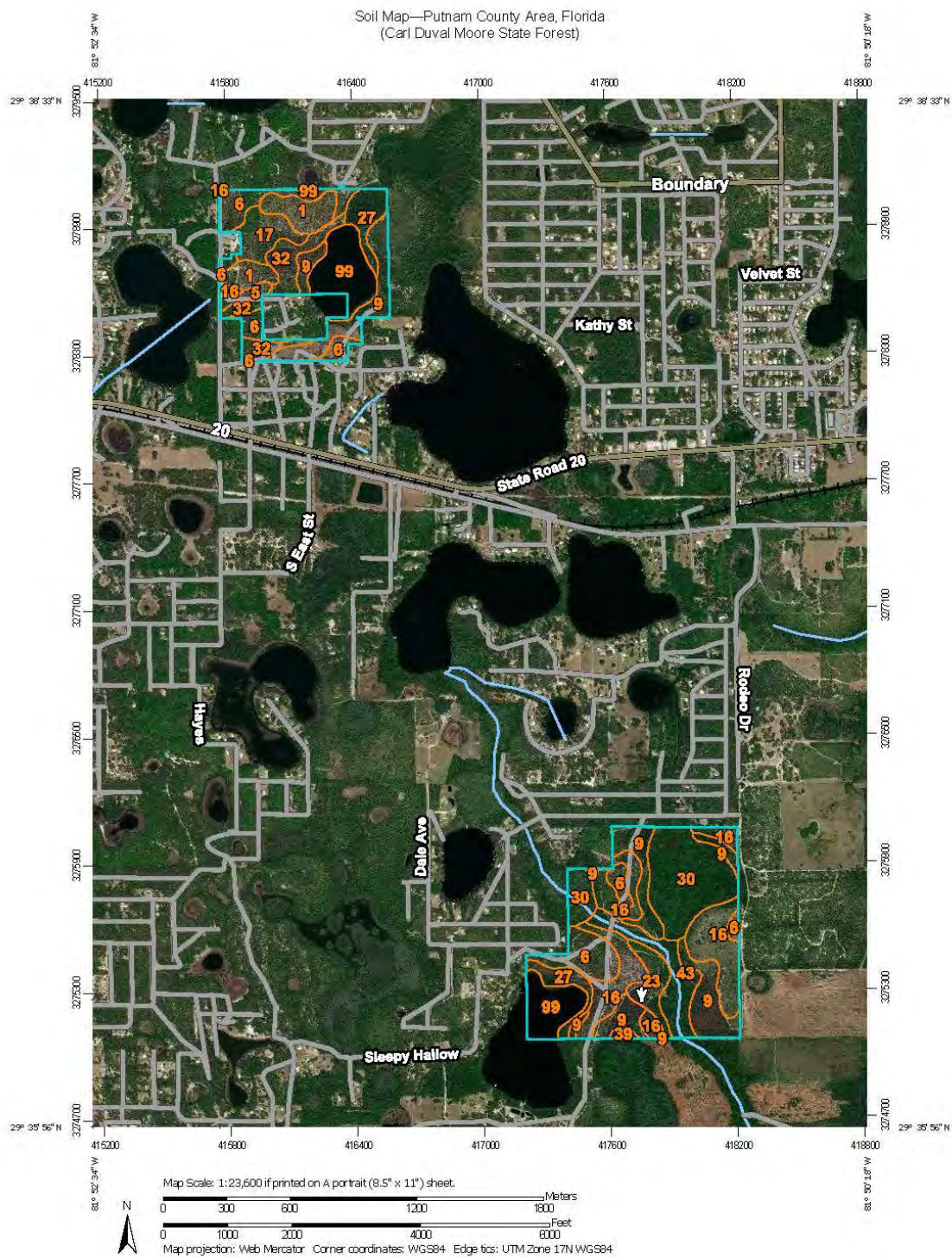
Questions relating to the treatment of archaeological and historic resources on state lands should be directed to:

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

Email: Robin.Jackson@DOS.MyFlorida.com
Phone: (850) 245-6496
Toll Free: (800) 847-7278
Fax: (850) 245-6439

Exhibit I

Soil Types Map and Descriptions



Soil Map—Pulnam County Area, Florida
(Carl Duval Moore State Forest)

MAP LEGEND

Area of Interest (AOI)		Spoil Area
Area of Interest (AOI)		Stony Spot
Soils		Very Stony Spot
Soil Map Unit Polygons		Wet Spot
Soil Map Unit Lines		Other
Soil Map Unit Points		Special Line Features
Special Point Features		Water Features
Blowout		Streams and Canals
Borrow Pit		Transportation
Clay Spot		Rails
Closed Depression		Interstate Highways
Gravel Pit		US Routes
Gravelly Spot		Major Roads
Landfill		Local Roads
Lava Flow		Background
Marsh or swamp		Aerial Photography
Mine or Quarry		
Miscellaneous Water		
Perennial Water		
Rock Outcrop		
Saline Spot		
Sandy Spot		
Severely Eroded Spot		
Sinkhole		
Slide or Slip		
Sodic Spot		

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Pulnam County Area, Florida
Survey Area Data: Version 17, Sep 17, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 13, 2014—Nov 12, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Candler fine sand, 0 to 5 percent slopes	17.8	5.3%
5	Placid fine sand, frequently ponded, 0 to 1 percent slopes	2.2	0.7%
6	Tavares fine sand, 0 to 5 percent slopes	40.2	12.0%
9	Pomona fine sand	60.2	18.0%
16	Adamsville sand, 0 to 2 percent slopes	52.9	15.8%
17	Milthopper sand, 0 to 5 percent slopes	12.5	3.7%
23	Palmetto fine sand	10.7	3.2%
27	Samsula muck, frequently ponded, 0 to 1 percent slopes	16.9	5.0%
30	Hontoon muck, frequently ponded, 0 to 1 percent slopes	46.2	13.8%
32	Sparr sand, 0 to 5 percent slopes	18.0	5.4%
39	Holopaw fine sand, frequently ponded, 0 to 1 percent slopes	1.4	0.4%
43	Placid-Pompano association, frequently flooded	19.4	5.8%
99	Water	36.5	10.9%
Totals for Area of Interest		334.9	100.0%

Component Legend

This report presents general information about the map units and map unit components in the selected area. It shows map unit symbols and names and the components in each map unit. It also shows the percent of the components in the map units, the kind of component, and the slope range of each component.

Report—Component Legend

Component Legend—Putnam County Area, Florida							
Map unit symbol and name	Map unit acres	Pct. of map unit	Component name	Component kind	Pct. slope		
					Low	RV	High
1—Candler fine sand, 0 to 5 percent slopes	29,650						
		90	Candler	Series	0.0	3.0	5.0
5—Placid fine sand, frequently ponded, 0 to 1 percent slopes	8,530						
		80	Placid	Series	0.0	0.5	1.0
6—Tavares fine sand, 0 to 5 percent slopes	20,000						
		85	Tavares	Series	0.0	3.0	5.0
9—Pomona fine sand	42,500						
		75	Pomona, non-hydric	Series	0.0	1.0	2.0
		10	Pomona, hydric	Series	0.0	1.0	2.0
16—Adamsville sand, 0 to 2 percent slopes	6,490						
		92	Adamsville	Series	0.0	1.0	2.0
17—Millhopper sand, 0 to 5 percent slopes	7,890						
		85	Millhopper	Series	0.0	3.0	5.0
23—Palmetto fine sand	12,350						
		75	Palmetto, non-hydric	Series	0.0	1.0	2.0
		10	Palmetto, hydric	Series	0.0	1.0	2.0
27—Samsula muck, frequently ponded, 0 to 1 percent slopes	16,300						
		85	Samsula	Series	0.0	0.5	1.0
30—Hontoon muck, frequently ponded, 0 to 1 percent slopes	9,430						
		80	Hontoon	Series	0.0	0.5	1.0
32—Sparr sand, 0 to 5 percent slopes	6,180						
		85	Sparr	Series	0.0	3.0	5.0

Component Legend—Putnam County Area, Florida							
Map unit symbol and name	Map unit acres	Pct. of map unit	Component name	Component kind	Pct. slope		
					Low	RV	High
39—Holopaw fine sand, frequently ponded, 0 to 1 percent slopes	2,620						
		85	Holopaw	Series	0.0	0.5	1.0
43—Placid-Pompano association, frequently flooded	15,600						
		55	Placid	Series	0.0	1.0	2.0
		30	Pompano	Series	0.0	1.0	3.0
99—Water	60,400						
		100	Water	Miscellaneous area			

Data Source Information

Soil Survey Area: Putnam County Area, Florida
 Survey Area Data: Version 17, Sep 17, 2019

Map Unit Description (Brief, Generated)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, provide information on the composition of map units and properties of their components.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The Map Unit Description (Brief, Generated) report displays a generated description of the major soils that occur in a map unit. Descriptions of non-soil (miscellaneous areas) and minor map unit components are not included. This description is generated from the underlying soil attribute data.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description (Brief, Generated)

Putnam County Area, Florida

Map Unit: 1—Candler fine sand, 0 to 5 percent slopes

Component: Candler (90%)

The Candler component makes up 90 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridges on marine terraces on coastal plains. The parent material consists of eolian deposits and/or sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Tavares (4%)

Generated brief soil descriptions are created for major soil components. The Tavares soil is a minor component.

Component: Adamsville (3%)

Generated brief soil descriptions are created for major soil components. The Adamsville soil is a minor component.

Component: Millhopper (3%)

Generated brief soil descriptions are created for major soil components. The Millhopper soil is a minor component.

Map Unit: 5—Placid fine sand, frequently ponded, 0 to 1 percent slopes**Component:** Placid (80%)

The Placid component makes up 80 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during July, August, September, October. Organic matter content in the surface horizon is about 6 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Basinger (7%)

Generated brief soil descriptions are created for major soil components. The Basinger soil is a minor component.

Component: Myakka (5%)

Generated brief soil descriptions are created for major soil components. The Myakka soil is a minor component.

Component: Samsula (3%)

Generated brief soil descriptions are created for major soil components. The Samsula soil is a minor component.

Component: Gentry (3%)

Generated brief soil descriptions are created for major soil components. The Gentry soil is a minor component.

Component: Felda (2%)

Generated brief soil descriptions are created for major soil components. The Felda soil is a minor component.

Map Unit: 6—Tavares fine sand, 0 to 5 percent slopes**Component:** Tavares (85%)

The Tavares component makes up 85 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridges on marine terraces on coastal plains. The parent material consists of eolian or sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 50 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Candler (5%)

Generated brief soil descriptions are created for major soil components. The Candler soil is a minor component.

Component: Apopka (4%)

Generated brief soil descriptions are created for major soil components. The Apopka soil is a minor component.

Component: Zolfo (3%)

Generated brief soil descriptions are created for major soil components. The Zolfo soil is a minor component.

Component: Narcoossee (3%)

Generated brief soil descriptions are created for major soil components. The Narcoossee soil is a minor component.

Map Unit: 9—Pomona fine sand**Component:** Pomona, non-hydric (75%)

The Pomona, non-hydric component makes up 75 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during June, July, August, September. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Pomona, hydric (10%)

The Pomona, hydric component makes up 10 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during June, July, August. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Pomona, depressional (5%)

Generated brief soil descriptions are created for major soil components. The Pomona, depressional soil is a minor component.

Component: Myakka, non-hydric (4%)

Generated brief soil descriptions are created for major soil components. The Myakka, non-hydric soil is a minor component.

Component: Wauchula, non-hydric (3%)

Generated brief soil descriptions are created for major soil components. The Wauchula, non-hydric soil is a minor component.

Component: Palmetto, non-hydric (3%)

Generated brief soil descriptions are created for major soil components. The Palmetto, non-hydric soil is a minor component.

Map Unit: 16—Adamsville sand, 0 to 2 percent slopes

Component: Adamsville (92%)

The Adamsville component makes up 92 percent of the map unit. Slopes are 0 to 2 percent. This component is on knolls on flatwoods on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 34 inches during June, July, August, September, October, November. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Narcoossee (4%)

Generated brief soil descriptions are created for major soil components. The Narcoossee soil is a minor component.

Component: Riviera (4%)

Generated brief soil descriptions are created for major soil components. The Riviera soil is a minor component.

Map Unit: 17—Millhopper sand, 0 to 5 percent slopes

Component: Millhopper (85%)

The Millhopper component makes up 85 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridges on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 57 inches during June, July, August, September. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Candler (5%)

Generated brief soil descriptions are created for major soil components. The Candler soil is a minor component.

Component: Tavares (4%)

Generated brief soil descriptions are created for major soil components. The Tavares soil is a minor component.

Component: Arredondo (3%)

Generated brief soil descriptions are created for major soil components. The Arredondo soil is a minor component.

Component: Sumterville, bouldery subsurface (1%)

Generated brief soil descriptions are created for major soil components. The Sumterville, bouldery subsurface soil is a minor component.

Component: Gainesville (1%)

Generated brief soil descriptions are created for major soil components. The Gainesville soil is a minor component.

Component: Kanapaha (1%)

Generated brief soil descriptions are created for major soil components. The Kanapaha soil is a minor component.

Map Unit: 23—Palmetto fine sand

Component: Palmetto, non-hydric (75%)

The Palmetto, non-hydric component makes up 75 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 10 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Palmetto, hydric (10%)

The Palmetto, hydric component makes up 10 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 2 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Holopaw, non-hydric (8%)

Generated brief soil descriptions are created for major soil components. The Holopaw, non-hydric soil is a minor component.

Component: Pomona, non-hydric (7%)

Generated brief soil descriptions are created for major soil components. The Pomona, non-hydric soil is a minor component.

Map Unit: 27—Samsula muck, frequently ponded, 0 to 1 percent slopes**Component:** Samsula (85%)

The Samsula component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of herbaceous organic material over sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Kaliga (3%)

Generated brief soil descriptions are created for major soil components. The Kaliga soil is a minor component.

Component: Myakka (3%)

Generated brief soil descriptions are created for major soil components. The Myakka soil is a minor component.

Component: Basinger (3%)

Generated brief soil descriptions are created for major soil components. The Basinger soil is a minor component.

Component: Floridana (2%)

Generated brief soil descriptions are created for major soil components. The Floridana soil is a minor component.

Component: Sanibel (2%)

Generated brief soil descriptions are created for major soil components. The Sanibel soil is a minor component.

Component: Anclote (2%)

Generated brief soil descriptions are created for major soil components. The Anclote soil is a minor component.

Map Unit: 30—Hontoon muck, frequently ponded, 0 to 1 percent slopes

Component: Hontoon (80%)

The Hontoon component makes up 80 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of herbaceous organic material. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 50 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Samsula (7%)

Generated brief soil descriptions are created for major soil components. The Samsula soil is a minor component.

Component: Placid (5%)

Generated brief soil descriptions are created for major soil components. The Placid soil is a minor component.

Component: Basinger (4%)

Generated brief soil descriptions are created for major soil components. The Basinger soil is a minor component.

Component: Pompano (2%)

Generated brief soil descriptions are created for major soil components. The Pompano soil is a minor component.

Component: Myakka (2%)

Generated brief soil descriptions are created for major soil components. The Myakka soil is a minor component.

Map Unit: 32—Sparr sand, 0 to 5 percent slopes**Component: Sparr (85%)**

The Sparr component makes up 85 percent of the map unit. Slopes are 0 to 5 percent. This component is on rises on marine terraces on coastal plains. The parent material consists of sandy marine deposits and/or loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 23 inches during July, August, September, October. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Candler (5%)

Generated brief soil descriptions are created for major soil components. The Candler soil is a minor component.

Component: Apopka (5%)

Generated brief soil descriptions are created for major soil components. The Apopka soil is a minor component.

Component: Tavares (5%)

Generated brief soil descriptions are created for major soil components. The Tavares soil is a minor component.

Map Unit: 39—Holopaw fine sand, frequently ponded, 0 to 1 percent slopes**Component: Holopaw (85%)**

The Holopaw component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during July, August, September, October. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Basinger (6%)

Generated brief soil descriptions are created for major soil components. The Basinger soil is a minor component.

Component: Riviera (4%)

Generated brief soil descriptions are created for major soil components. The Riviera soil is a minor component.

Component: Floridana (3%)

Generated brief soil descriptions are created for major soil components. The Floridana soil is a minor component.

Component: Manatee (2%)

Generated brief soil descriptions are created for major soil components. The Manatee soil is a minor component.

Map Unit: 43—Placid-Pompano association, frequently flooded**Component:** Placid (55%)

The Placid component makes up 55 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains on marine terraces on coastal plains, drainageways on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 1 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 6 percent. Nonirrigated land capability classification is 6w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Pompano (30%)

The Pompano component makes up 30 percent of the map unit. Slopes are 0 to 3 percent. This component is on flood plains on marine terraces on coastal plains, drainageways on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 1 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 6w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Samsula (15%)

Generated brief soil descriptions are created for major soil components. The Samsula soil is a minor component.

Map Unit: 99—Water

Component: Water (100%)

Generated brief soil descriptions are created for major soil components. The Water is a miscellaneous area.

Data Source Information

Soil Survey Area: Putnam County Area, Florida
Survey Area Data: Version 17, Sep 17, 2019

Exhibit J

Department of Environmental Protection
Outstanding Florida Waters



FLORIDA DEPARTMENT OF Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

January 10, 2019

Ms. Patti Anderson
Florida Forest Service Land Management Plan Coordinator
Florida Department of Agriculture and Consumer Services
3125 Conner Boulevard, Suite I-262, Mail Stop C-25
Tallahassee, FL 32399-1650

RE: Carl Duval Moore State Forest

Dear Ms. Anderson:

Thank you for your inquiry regarding the surface water quality classification of waters on and near Carl Duval Moore State Forest in Putnam County. There are no waters on or near the site listed as exceptions to Class III in subparagraph 62-302.400(17)(b)54., Florida Administrative Code (F.A.C.); therefore, all of the surface waters on or adjacent to the site are classified as Class III waters (Fish Consumption; Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife), which is the statewide default classification under subsection 62-302.400(15), F.A.C.

As requested, we also checked to see if there are any Outstanding Florida Waters (OFWs) near the state forest. According to subsection 62-302.700(9), F.A.C., there are no OFWs on, adjacent to, or near the state forest.

If you have any questions or need additional information, please feel free to contact me at the letterhead address (mail station 6511), by phone at 850-245-8427, or via E-mail at Janet.Klemm@FloridaDEP.gov.

Sincerely,

A handwritten signature in blue ink that reads "Janet Klemm".

Janet Klemm
Environmental Specialist
DEP Water Quality Standards Program

Exhibit K

Water Resources Map



DISCUSSION:
This study was limited by several factors. First, the study was a descriptive study and therefore cannot be used to make causal inferences. Second, the study was limited by the use of a convenience sample. Third, the study was limited by the use of a self-report measure. Fourth, the study was limited by the use of a cross-sectional design. Fifth, the study was limited by the use of a single time point. Sixth, the study was limited by the use of a single location. Seventh, the study was limited by the use of a single language. Eighth, the study was limited by the use of a single country. Ninth, the study was limited by the use of a single population. Tenth, the study was limited by the use of a single method. Eleventh, the study was limited by the use of a single instrument. Twelfth, the study was limited by the use of a single measure. Thirteenth, the study was limited by the use of a single variable. Fourteenth, the study was limited by the use of a single outcome. Fifteenth, the study was limited by the use of a single predictor. Sixteenth, the study was limited by the use of a single mediator. Seventeenth, the study was limited by the use of a single moderator. Eighteenth, the study was limited by the use of a single confounder. Nineteenth, the study was limited by the use of a single effect. Twentieth, the study was limited by the use of a single interaction. Twenty-first, the study was limited by the use of a single main effect. Twenty-second, the study was limited by the use of a single total effect. Twenty-third, the study was limited by the use of a single direct effect. Twenty-fourth, the study was limited by the use of a single indirect effect. Twenty-fifth, the study was limited by the use of a single total effect. Twenty-sixth, the study was limited by the use of a single direct effect. Twenty-seventh, the study was limited by the use of a single indirect effect. Twenty-eighth, the study was limited by the use of a single total effect. Twenty-ninth, the study was limited by the use of a single direct effect. Thirtieth, the study was limited by the use of a single indirect effect. Thirty-first, the study was limited by the use of a single total effect. Thirty-second, the study was limited by the use of a single direct effect. Thirty-third, the study was limited by the use of a single indirect effect. Thirty-fourth, the study was limited by the use of a single total effect. Thirty-fifth, the study was limited by the use of a single direct effect. Thirty-sixth, the study was limited by the use of a single indirect effect. Thirty-seventh, the study was limited by the use of a single total effect. Thirty-eighth, the study was limited by the use of a single direct effect. Thirty-ninth, the study was limited by the use of a single indirect effect. Fortieth, the study was limited by the use of a single total effect. Forty-first, the study was limited by the use of a single direct effect. Forty-second, the study was limited by the use of a single indirect effect. Forty-third, the study was limited by the use of a single total effect. Forty-fourth, the study was limited by the use of a single direct effect. Forty-fifth, the study was limited by the use of a single indirect effect. Forty-sixth, the study was limited by the use of a single total effect. Forty-seventh, the study was limited by the use of a single direct effect. Forty-eighth, the study was limited by the use of a single indirect effect. Forty-ninth, the study was limited by the use of a single total effect. Fiftieth, the study was limited by the use of a single direct effect. Fifty-first, the study was limited by the use of a single indirect effect. Fifty-second, the study was limited by the use of a single total effect. Fifty-third, the study was limited by the use of a single direct effect. Fifty-fourth, the study was limited by the use of a single indirect effect. Fifty-fifth, the study was limited by the use of a single total effect. Fifty-sixth, the study was limited by the use of a single direct effect. Fifty-seventh, the study was limited by the use of a single indirect effect. Fifty-eighth, the study was limited by the use of a single total effect. Fifty-ninth, the study was limited by the use of a single direct effect. Sixtieth, the study was limited by the use of a single indirect effect. Sixty-first, the study was limited by the use of a single total effect. Sixty-second, the study was limited by the use of a single direct effect. Sixty-third, the study was limited by the use of a single indirect effect. Sixty-fourth, the study was limited by the use of a single total effect. Sixty-fifth, the study was limited by the use of a single direct effect. Sixty-sixth, the study was limited by the use of a single indirect effect. Sixty-seventh, the study was limited by the use of a single total effect. Sixty-eighth, the study was limited by the use of a single direct effect. Sixty-ninth, the study was limited by the use of a single indirect effect. Seventieth, the study was limited by the use of a single total effect. Seventy-first, the study was limited by the use of a single direct effect. Seventy-second, the study was limited by the use of a single indirect effect. Seventy-third, the study was limited by the use of a single total effect. Seventy-fourth, the study was limited by the use of a single direct effect. Seventy-fifth, the study was limited by the use of a single indirect effect. Seventy-sixth, the study was limited by the use of a single total effect. Seventy-seventh, the study was limited by the use of a single direct effect. Seventy-eighth, the study was limited by the use of a single indirect effect. Seventy-ninth, the study was limited by the use of a single total effect. Eightieth, the study was limited by the use of a single direct effect. Eighty-first, the study was limited by the use of a single indirect effect. Eighty-second, the study was limited by the use of a single total effect. Eighty-third, the study was limited by the use of a single direct effect. Eighty-fourth, the study was limited by the use of a single indirect effect. Eighty-fifth, the study was limited by the use of a single total effect. Eighty-sixth, the study was limited by the use of a single direct effect. Eighty-seventh, the study was limited by the use of a single indirect effect. Eighty-eighth, the study was limited by the use of a single total effect. Eighty-ninth, the study was limited by the use of a single direct effect. Ninetieth, the study was limited by the use of a single indirect effect. Ninety-first, the study was limited by the use of a single total effect. Ninety-second, the study was limited by the use of a single direct effect. Ninety-third, the study was limited by the use of a single indirect effect. Ninety-fourth, the study was limited by the use of a single total effect. Ninety-fifth, the study was limited by the use of a single direct effect. Ninety-sixth, the study was limited by the use of a single indirect effect. Ninety-seventh, the study was limited by the use of a single total effect. Ninety-eighth, the study was limited by the use of a single direct effect. Ninety-ninth, the study was limited by the use of a single indirect effect. One hundredth, the study was limited by the use of a single total effect.

Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

Managed Area bounded by courtesy of
the Florida Historic Areas Inventory
formerly Used Defense Sites (UDS)
from the US Army Corps of Engineers

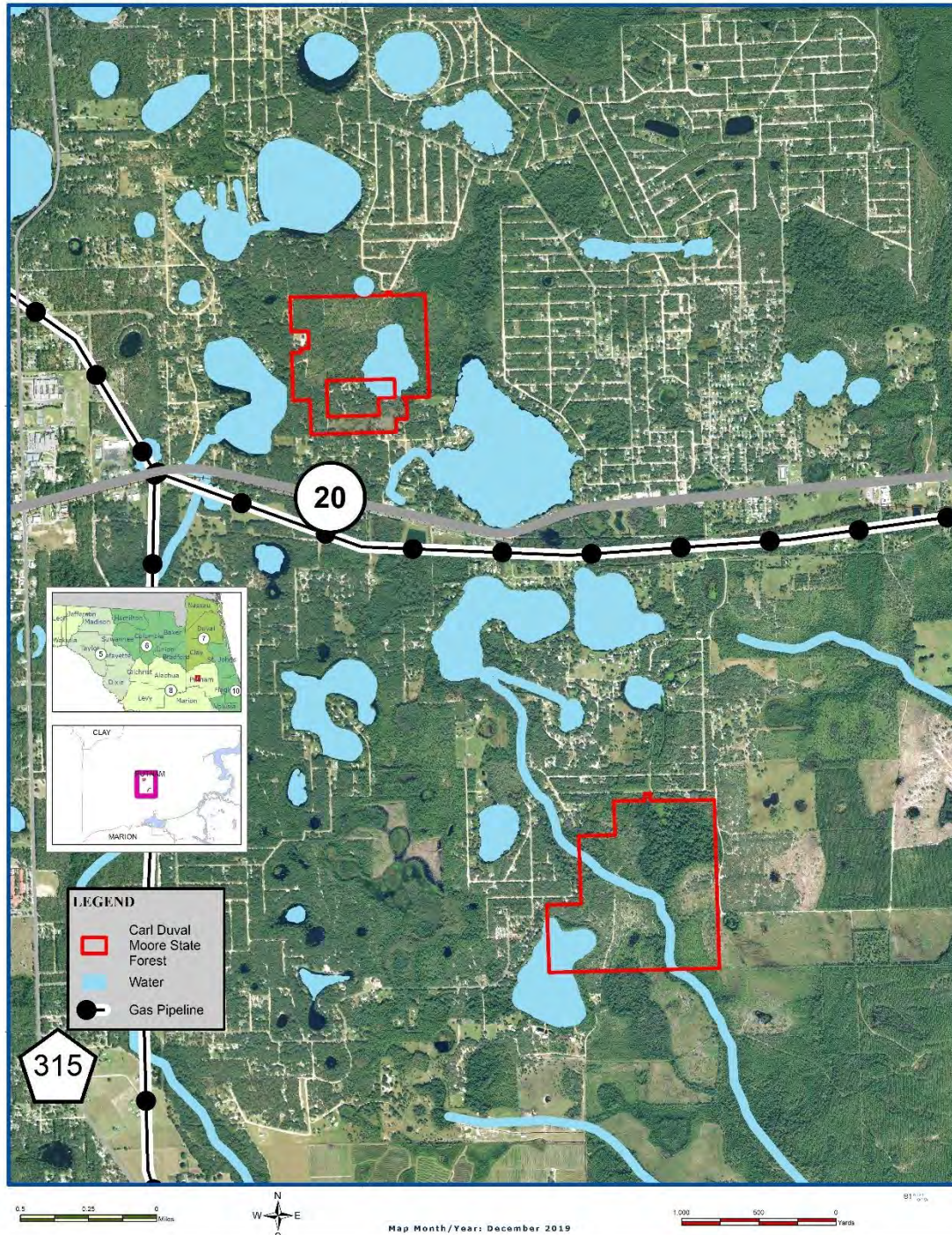


Exhibit L

Florida Natural Areas Inventory Managed Area Tracking Record



1010 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-223-8207
fax 850-681-9364
www.fnai.org

May 20, 2019

Patti Anderson
Florida Forest Service
Florida Department of Agriculture and Consumer Services
3125 Conner Boulevard, Suite I-258, Mail Stop C-25
Tallahassee, FL 32399-1650

Dear Ms. Anderson,

Thank you for requesting information from the Florida Natural Areas Inventory (FNAI). We have compiled the following information for your project area.

Project: Carl Duval Moore State Forest and Park
Date Received: 05/09/19
Location: Putnam County

Based on the information available, this site appears to be located on or very near a significant region of scrub habitat, a natural community in decline that provides important habitat for several rare species within a small area. Additional consideration should be given to avoid and/or mitigate impacts to these natural resources, and to design land uses that are compatible with these resources.

Element Occurrences

A search of our maps and database indicates that we currently have several element occurrences mapped in the vicinity of the study area (see enclosed map and element occurrence table). Please be advised that a lack of element occurrences in the FNAI database is not a sufficient indication of the absence of rare or endangered species on a site.

The element occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates that some element occurrences occur in the general vicinity of the label point. This may be due to lack of precision of the source data, or an element that occurs over an extended area (such as a wide ranging species or large natural community). For animals and plants, element occurrences generally refer to more than a casual sighting; they usually indicate a viable population of the species. Note that some element occurrences represent historically documented observations which may no longer be extant. Extirpated element occurrences will be marked with an 'X' following the occurrence label on the enclosed map.

Likely and Potential Rare Species

In addition to documented occurrences, other rare species and natural communities may be identified on or near the site based on habitat models and species range models (see enclosed Biodiversity Matrix Report). These species should be taken into consideration in field surveys, land management, and impact avoidance and mitigation.

FNAI habitat models indicate areas, which based on land cover type, offer suitable habitat for one or more rare species that is known to occur in the vicinity. Habitat models have been developed for approximately 300 of the rarest species tracked by the Inventory, including all federally listed species.



Florida Resources
and Environmental
Analysis Center

Institute of Science
and Public Affairs

The Florida State University

Tracking Florida's Biodiversity

FNAI species range models indicate areas that are within the known or predicted range of a species, based on climate variables, soils, vegetation, and/or slope. Species range models have been developed for approximately 340 species, including all federally listed species.

The FNAI Biodiversity Matrix Geodatabase compiles Documented, Likely, and Potential species and natural communities for each square mile Matrix Unit statewide.

Managed Areas

Portions of the site appear to be located within the Carl Duval Moore State Forest and Park, managed by the FL Dept. of Agriculture and Consumer Services, Florida Forest Service.

The Managed Areas data layer shows public and privately managed conservation lands throughout the state. Federal, state, local, and privately managed conservation lands are included.

The Inventory always recommends that professionals familiar with Florida's flora and fauna conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species.

Please visit www.fnai.org/trackinglist.cfm for county or statewide element occurrence distributions and links to more element information.

The database maintained by the Florida Natural Areas Inventory is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources. However, the data are not always based on comprehensive or site-specific field surveys. Therefore this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. Inventory data are designed for the purposes of conservation planning and scientific research, and are not intended for use as the primary criteria for regulatory decisions.

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and the Inventory must be credited as an information source in these publications. FNAI data may not be resold for profit.

This report is made available at no charge due to funding from the Florida Department of Environmental Protection, Division of State Lands.

Thank you for your use of FNAI services. If I can be of further assistance, please contact me at (850) 224-8207 or at kbrinegar@fnai.fsu.edu.

Sincerely,

Kerri Brinegar

Kerri Brinegar
GIS / Data Services

Encl

1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
(850) 681-3354 Fax
www.fnai.org

FLORIDA
NATURAL AREAS
INVENTORY

Element Occurrences

- Animals
- Plants
- Communities
- Other
- Data Sensitive

Point Indicates General
Vicinity of Element

U.S. Fish & Wildlife Service
Scrub Jay Survey 1992-96

Conservation Lands

- Federal
- State
- Local
- Private
- State Aquatic Preserves
- Land Acquisition Projects
- Florida Forever
- Board of Trustees Projects
- FNAI Rare Species
- Habitat
- FNAI Biodiversity Matrix
- Square Mile Units
- County Boundary
- Interstate
- Turnpike
- Major Highway
- Local Road
- Railroad [Inactive railroads shown in Gray]
- Water

NOTE
Map should not be interpreted without
accompanying documents.

Carl Duval Moore State Forest

Putnam County



Map produced by KAB
8/20/2019



1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
(850) 681-9364 Fax
www.fnai.org

FNAI ELEMENT OCCURRENCE REPORT on or near Carl Duval Moore State Forest and Park



Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Listing	Observation Date	Description	EO Comments
DRYMCUP527	<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	T	FT	2007-05-21	2007-05-21: 1 adult about 4ft long observed laying in sun near tortoise burrow (F08FNA02FLUS).
FALCPAUL40	<i>Falco sparverius paulus</i>	Southeastern American Kestrel	G5T4	S3	N	ST	1982-08-02	2 MALES AND ONE FEMALE SEEN IN AREA 25 MAY, 7 JUNE, 19JULY, AND 2 AUG. 1982 BY PETRA WOOD.
GOPHPOLY1305	<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST	2007-02-22	2007-02-22: burrows noted in four locations over 99 acres in three separate upland areas (F07FNA11FLUS).
GOPHPOLY1360	<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST	2007-05-21	2007-05-21: one large active burrow recorded incidentally during natural community survey (F08FNA02FLUS).
HALLLEUC1714	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2010-02-22	2010-02-22: no general description data provided (U11CRO01FLUS).
HOGNERIC3	<i>Hogna ericellicola</i>	Rosemary Wolf Spider	G1	S1	N	N	1985	1985: high, well-drained, sandy soil, high pine-turkey oak but with a high portion of rosemary in the plant association (U85REI01FLUS).
HOGNERIC4	<i>Hogna ericellicola</i>	Rosemary Wolf Spider	G1	S1	N	N	1985	1985: high, well-drained, sandy soil, high pine-turkey oak but with a high portion of rosemary in the plant association (U85REI01FLUS).
HOGNERIC5	<i>Hogna ericellicola</i>	Rosemary Wolf Spider	G1	S1	N	N	1985	1985: species collected at site by J. Reiskind (U85REI01FLUS). 1985-05-02: Three specimens were collected from turkey oak and rosemary from Reiskind (U08ALM01FLUS).



FNAI ELEMENT OCCURRENCE REPORT on or near Carl Duval Moore State Forest and Park

Map Label	Scientific Name	Common Name	Global State Rank	Federal State Rank	Status	Listing	Observation Date	Description	EO Comments
PHIDWORK'S	Phidippus workmani	Workman's Jumping Spider	G2G3	S2S3	N	N	1975-04-06	1975-04-06: swept Ceratiola sp (B04EDW01FLUS).	1975-04-06: G.B Edwards and found an immature. He reared this species and it became a male. This specimen was deposited in FSCA (B04EDW01FLUS).
STYLABD17	Stylisma abdita	scrub stylisma	G3	S3	N	E	1966	TURKEY OAK WOODS.	No EO data given
URSUFLO95	Ursus americanus floridanus	Florida Black Bear	G5T4	S4	N	N	2016	Large area of pine plantation, mesic and wet flatwoods, and dome and basin swamps. Largely private commercial timberland, nurseries, and small neighborhoods, public lands are dominated by pine plantation but also have flatwoods interspersed with dome swamps and patches of scrub. Large area of sand pine and oak scrub, mesic flatwoods, sandhill, depression marshes and hardwood swamps, pine plantation, regular harvesting of sand pine (U05SIN01FLUS).	2002: 1,025-1,539 bears estimated in the primary ranges in the Ocala-St. John's region. Part of a larger population that includes Okefenokee Swamp National Wildlife Refuge in Georgia (U05SIN01FLUS). 2014: 1,198 bears estimated in the Ocala-St. John's region and 495 estimated in the Osceola region (A16HUM01FLUS). 2016: polygons created to show where bears are considered 'Abundant' and 'Common' (U16FWC01FLUS) Primary is the FWC-designated core area that represents breeding range and contains documented evidence of reproduction or female bears within available habitat. and Secondary is the FWC-designated area where bears occur within available habitat but outside primary bear range (evidence of bears without documented evidence of reproduction) (U12FWC02FLUS, U05SIN01FLUS). These boundaries are based on decades of bear observations, roadkill distribution, nuisance bear locations, and bear research projects. For detailed location data contact the FWC.

Florida Natural Areas Inventory
Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Matrix Unit ID: 35795					
Likely					
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3Q	S3	T	FT
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N
Sandhill upland lake		G3	S2	N	N
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	N
Potential					
<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Antigone canadensis pratensis</i>	Florida Sandhill Crane	G5T2	S2	N	ST
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asplenium x heteroresiliens</i>	Morze's spleenwort	G2	S1	N	N
<i>Balduina atropurpurea</i>	purple honeycomb-head	G2	S1	N	E
<i>Brickellia cordifolia</i>	Flyr's brickell-bush	G3	S2	N	E
<i>Calopogon multiflorus</i>	many-flowered grass-pink	G2G3	S2S3	N	T
<i>Calydorea coelestina</i>	Bartram's ixia	G2G3	S2S3	N	E
<i>Coelorachis tuberculosa</i>	Piedmont jointgrass	G3	S3	N	T
<i>Ctenium floridanum</i>	Florida toothache grass	G2	S2	N	E
<i>Digitaria gracillima</i>	longleaf fingergrass	G1	S1	N	N
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Hartwrightia floridana</i>	hartwrightia	G2	S2	N	T
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Hogna ericeticola</i>	Rosemary Wolf Spider	G1	S1	N	N
<i>Lithobates capito</i>	Gopher Frog	G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Matelea floridana</i>	Florida spiny-pod	G2	S2	N	E
<i>Monotropis reynoldsiae</i>	pygmy pipes	G1	S1	N	E
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Myotis austroriparius</i>	Southeastern Bat	G4	S3	N	N
<i>Nemastylis floridana</i>	celestial lily	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina atopocarpa</i>	Florida beargrass	G3	S3	N	T
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2	C	N
<i>Parnassia grandifolia</i>	large-leaved grass-of-parnassus	G3	S2	N	E
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	E	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	N
<i>Pteronotropis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Pycnanthemum floridanum</i>	Florida mountain-mint	G3	S3	N	T
<i>Rudbeckia nitida</i>	St. John's blackeyed susan	G3	S2	N	E
<i>Salix floridana</i>	Florida willow	G2	S2	N	E
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Sideroxylon alachuense</i>	silver buckthorn	G1	S1	N	E
<i>Stylisma abdita</i>	scrub stylisma	G3	S3	N	E

Matrix Unit ID: 36127

Definitions: Documented - Rare species and natural communities documented on or near this site.
 Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.
 Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
 Potential - This site lies within the known or predicted range of the species listed.

Florida Natural Areas Inventory Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Documented					
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
Likely					
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3Q	S3	T	FT
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N
Scrub		G2	S2	N	N
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	N
Potential					
<i>Agrimonia incisa</i>	Incised groove-bur	G3	S2	N	T
<i>Antigone canadensis pratensis</i>	Florida Sandhill Crane	G5T2	S2	N	ST
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asplenium x heteroresiliens</i>	Morzenti's spleenwort	G2	S1	N	N
<i>Balduina atropurpurea</i>	purple honeycomb-head	G2	S1	N	E
<i>Calydorea coelestina</i>	Bartram's ixia	G2G3	S2S3	N	E
<i>Ctenium floridanum</i>	Florida toothache grass	G2	S2	N	E
<i>Digitaria gracillima</i>	longleaf fingergrass	G1	S1	N	N
<i>Gymnopogon chapmanianus</i>	Chapman's skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Illicium parviflorum</i>	star anise	G2	S2	N	E
<i>Lampropeltis extenuata</i>	Short-tailed Snake	G3	S3	N	ST
<i>Lithobates capito</i>	Gopher Frog	G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Matelea floridana</i>	Florida spiny-pod	G2	S2	N	E
<i>Monotropis reynoldsiae</i>	pygmy pipes	G1	S1	N	E
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Myotis austroriparius</i>	Southeastern Bat	G4	S3	N	N
<i>Nemastylis floridana</i>	celestial lily	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2	C	N
<i>Orbexilum virgatum</i>	pineland scurpea	G1	S1	N	E
<i>Parnassia grandifolia</i>	large-leaved grass-of-parnassus	G3	S2	N	E
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	N
<i>Pteronotropis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Pycnanthemum floridanum</i>	Florida mountain-mint	G3	S3	N	T
<i>Rhynchospora thornei</i>	Thorne's beaksedge	G3	S1S2	N	N
<i>Salix floridana</i>	Florida willow	G2	S2	N	E
<i>Sceloporus woodi</i>	Florida Scrub Lizard	G2G3	S2S3	N	N
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Sideroxylon alachuense</i>	silver buckthorn	G1	S1	N	E

Matrix Unit ID: 36128

Documented

<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
----------------------------	-----------------	----	----	---	----

Definitions: Documented - Rare species and natural communities documented on or near this site.

Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.

Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.

Potential - This site lies within the known or predicted range of the species listed.

Florida Natural Areas Inventory
Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Likely					
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3Q	S3	T	FT
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N
Sandhill upland lake		G3	S2	N	N
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	N
Potential					
<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Antigone canadensis pratensis</i>	Florida Sandhill Crane	G5T2	S2	N	ST
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asplenium x heteroresiliens</i>	Morzent's spleenwort	G2	S1	N	N
<i>Balduina atropurpurea</i>	purple honeycomb-head	G2	S1	N	E
<i>Calopogon multiflorus</i>	many-flowered grass-pink	G2G3	S2S3	N	T
<i>Calydorea coelestina</i>	Bartram's ixia	G2G3	S2S3	N	E
<i>Carex chapmannii</i>	Chapman's sedge	G3	S3	N	T
<i>Coelorachis tuberculosa</i>	Piedmont jointgrass	G3	S3	N	T
<i>Ctenium floridanum</i>	Florida toothache grass	G2	S2	N	E
<i>Digitaria gracillima</i>	longleaf fingergrass	G1	S1	N	N
<i>Gymnopogon chapmanianus</i>	Chapman's skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Illicium parviflorum</i>	star anise	G2	S2	N	E
<i>Lampropeltis extenuata</i>	Short-tailed Snake	G3	S3	N	ST
<i>Lithobates capito</i>	Gopher Frog	G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Matelea floridana</i>	Florida spiny-pod	G2	S2	N	E
<i>Monotropis reynoldsiae</i>	pygmy pipes	G1	S1	N	E
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Myotis austroriparius</i>	Southeastern Bat	G4	S3	N	N
<i>Nemastylis floridana</i>	celestial lily	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina atopocarpa</i>	Florida beargrass	G3	S3	N	T
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2	C	N
<i>Orbexilum virgatum</i>	pineland scurfspea	G1	S1	N	E
<i>Parnassia grandifolia</i>	large-leaved grass-of-parnassus	G3	S2	N	E
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	E	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	N
<i>Pteronotropis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Pycnanthemum floridanum</i>	Florida mountain-mint	G3	S3	N	T
<i>Rhynchospora thornei</i>	Thorne's beaksedge	G3	S1S2	N	N
<i>Rudbeckia nitida</i>	St. John's blackeyed susan	G3	S2	N	E
<i>Salix floridana</i>	Florida willow	G2	S2	N	E
<i>Sceloporus woodi</i>	Florida Scrub Lizard	G2G3	S2S3	N	N
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Sideroxylon alachuense</i>	silver buckthorn	G1	S1	N	E

Matrix Unit ID: 36129

Definitions: Documented - Rare species and natural communities documented on or near this site.
 Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.
 Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
 Potential - This site lies within the known or predicted range of the species listed.

Florida Natural Areas Inventory
Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Documented					
<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N
Likely					
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3Q	S3	T	FT
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N
Sandhill upland lake		G3	S2	N	N
Scrub		G2	S2	N	N
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	N
Potential					
<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Antigone canadensis pratensis</i>	Florida Sandhill Crane	G5T2	S2	N	ST
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asplenium x heteroresiliens</i>	Morzent's spleenwort	G2	S1	N	N
<i>Balduina atropurpurea</i>	purple honeycomb-head	G2	S1	N	E
<i>Calopogon multiflorus</i>	many-flowered grass-pink	G2G3	S2S3	N	T
<i>Calydorea coelestina</i>	Bartram's ixia	G2G3	S2S3	N	E
<i>Carex chapmannii</i>	Chapman's sedge	G3	S3	N	T
<i>Coelorachis tuberculosa</i>	Piedmont jointgrass	G3	S3	N	T
<i>Ctenium floridanum</i>	Florida toothache grass	G2	S2	N	E
<i>Digitaria gracillima</i>	longleaf fingergrass	G1	S1	N	N
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Gymnopogon chapmanianus</i>	Chapman's skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lithobates capito</i>	Gopher Frog	G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Matelea floridana</i>	Florida spiny-pod	G2	S2	N	E
<i>Monotropsis reynoldsiae</i>	pygmy pipes	G1	S1	N	E
<i>Mustela frenata peninsulae</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Myotis austroriparius</i>	Southeastern Bat	G4	S3	N	N
<i>Nemastylis floridana</i>	celestial lily	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina atopocarpa</i>	Florida beargrass	G3	S3	N	T
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2	C	N
<i>Orbexilum virgatum</i>	pineland scurfpea	G1	S1	N	E
<i>Parnassia grandifolia</i>	large-leaved grass-of-parnassus	G3	S2	N	E
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	E	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	N
<i>Pycnanthemum floridanum</i>	Florida mountain-mint	G3	S3	N	T
<i>Rudbeckia nitida</i>	St. John's blackeyed susan	G3	S2	N	E
<i>Salix floridana</i>	Florida willow	G2	S2	N	E
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Sideroxylon alachuense</i>	silver buckthorn	G1	S1	N	E

Matrix Unit ID: 36130

Definitions: Documented - Rare species and natural communities documented on or near this site.
 Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.
 Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
 Potential - This site lies within the known or predicted range of the species listed.



Florida Natural Areas Inventory Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Likely					
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3Q	S3	T	FT
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N
Sandhill upland lake		G3	S2	N	N
Scrub		G2	S2	N	N
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	N
Potential					
<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Antigone canadensis pratensis</i>	Florida Sandhill Crane	G5T2	S2	N	ST
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asplenium x heteroresiliens</i>	Morzent's spleenwort	G2	S1	N	N
<i>Balduina atropurpurea</i>	purple honeycomb-head	G2	S1	N	E
<i>Brickellia cordifolia</i>	Flyr's brickell-bush	G3	S2	N	E
<i>Calopogon multiflorus</i>	many-flowered grass-pink	G2G3	S2S3	N	T
<i>Calydorea coelestina</i>	Bartram's ixia	G2G3	S2S3	N	E
<i>Carex chapmannii</i>	Chapman's sedge	G3	S3	N	T
<i>Coelorachis tuberculosa</i>	Piedmont jointgrass	G3	S3	N	T
<i>Ctenium floridanum</i>	Florida toothache grass	G2	S2	N	E
<i>Digitaria gracillima</i>	longleaf fingergrass	G1	S1	N	N
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Gymnopogon chapmanianus</i>	Chapman's skeletongrass	G3	S3	N	N
<i>Hartwrightia floridana</i>	hartwrightia	G2	S2	N	T
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lithobates capito</i>	Gopher Frog	G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Matelea floridana</i>	Florida spiny-pod	G2	S2	N	E
<i>Monotropsis reynoldsiae</i>	pygmy pipes	G1	S1	N	E
<i>Nemastylis floridana</i>	celestial lily	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nolina atopocarpa</i>	Florida beargrass	G3	S3	N	T
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2	C	N
<i>Parnassia grandifolia</i>	large-leaved grass-of-parnassus	G3	S2	N	E
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	N
<i>Pycnanthemum floridanum</i>	Florida mountain-mint	G3	S3	N	T
<i>Rudbeckia nitida</i>	St. John's blackeyed susan	G3	S2	N	E
<i>Salix floridana</i>	Florida willow	G2	S2	N	E
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Sideroxylon alachuense</i>	silver buckthorn	G1	S1	N	E
Matrix Unit ID: 36463					
Documented					
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
Likely					
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3Q	S3	T	FT

Definitions: Documented - Rare species and natural communities documented on or near this site.
 Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.
 Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
 Potential - This site lies within the known or predicted range of the species listed.



1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
(850) 681-9364 Fax

FLORIDA
Natural Areas
INVENTORY

Florida Natural Areas Inventory Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N
Scrub		G2	S2	N	N
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	N
Potential					
<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Antigone canadensis pratensis</i>	Florida Sandhill Crane	G5T2	S2	N	ST
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Balduina atropurpurea</i>	purple honeycomb-head	G2	S1	N	E
<i>Calydorea coelestina</i>	Bartram's ixia	G2G3	S2S3	N	E
<i>Carex chapmannii</i>	Chapman's sedge	G3	S3	N	T
<i>Ctenium floridanum</i>	Florida toothache grass	G2	S2	N	E
<i>Digitaria gracillima</i>	longleaf fingergrass	G1	S1	N	N
<i>Gymnopogon chapmanianus</i>	Chapman's skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Illicium parviflorum</i>	star anise	G2	S2	N	E
<i>Lampropeltis extenuata</i>	Short-tailed Snake	G3	S3	N	ST
<i>Lithobates capito</i>	Gopher Frog	G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Matelea floridana</i>	Florida spiny-pod	G2	S2	N	E
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Myotis austroriparius</i>	Southeastern Bat	G4	S3	N	N
<i>Nemastylis floridana</i>	celestial lily	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2	C	N
<i>Orbexilum virgatum</i>	pineland scurfpea	G1	S1	N	E
<i>Parnassia grandifolia</i>	large-leaved grass-of-parnassus	G3	S2	N	E
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	E	FE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	N
<i>Pteronotropis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Pycnanthemum floridanum</i>	Florida mountain-mint	G3	S3	N	T
<i>Rhynchospora thornei</i>	Thorne's beaksedge	G3	S1S2	N	N
<i>Salix floridana</i>	Florida willow	G2	S2	N	E
<i>Sceloporus woodi</i>	Florida Scrub Lizard	G2G3	S2S3	N	N
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Sideroxylon alachuense</i>	silver buckthorn	G1	S1	N	E
Matrix Unit ID: 35464					
Documented					
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
Likely					
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3Q	S3	T	FT
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	N

Definitions: Documented - Rare species and natural communities documented on or near this site.

Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.

Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.

Potential - This site lies within the known or predicted range of the species listed.

Florida Natural Areas Inventory
Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Potential					
<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Antigone canadensis pratensis</i>	Florida Sandhill Crane	G5T2	S2	N	ST
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asplenium x heteroresiliens</i>	Morzent's spleenwort	G2	S1	N	N
<i>Balduina atropurpurea</i>	purple honeycomb-head	G2	S1	N	E
<i>Calydorea coelestina</i>	Bartram's ixia	G2G3	S2S3	N	E
<i>Carex chapmannii</i>	Chapman's sedge	G3	S3	N	T
<i>Ctenium floridanum</i>	Florida toothache grass	G2	S2	N	E
<i>Digitaria gracillima</i>	longleaf fingergrass	G1	S1	N	N
<i>Gymnopogon chapmanianus</i>	Chapman's skeletongrass	G3	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lampropeltis extenuata</i>	Short-tailed Snake	G3	S3	N	ST
<i>Lithobates capito</i>	Gopher Frog	G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Matelea floridana</i>	Florida spiny-pod	G2	S2	N	E
<i>Monotropsis reynoldsiae</i>	pygmy pipes	G1	S1	N	E
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Myotis austroriparius</i>	Southeastern Bat	G4	S3	N	N
<i>Nemastylis floridana</i>	celestial lily	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2	C	N
<i>Orbexilum virgatum</i>	pineland scurfpea	G1	S1	N	E
<i>Parnassia grandifolia</i>	large-leaved grass-of-parnassus	G3	S2	N	E
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phidippus workmani</i>	Workman's Jumping Spider	G2G3	S2S3	N	N
<i>Picoides borealis</i>	Red-cockaded Woodpecker	G3	S2	E	FE
<i>Peromyscus floridanus</i>	Florida Mouse	G3	S3	N	N
<i>Pteronotropsis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Pycnanthemum floridanum</i>	Florida mountain-mint	G3	S3	N	T
<i>Rhynchospora thornei</i>	Thorne's beaksedge	G3	S1S2	N	N
<i>Salix floridana</i>	Florida willow	G2	S2	N	E
<i>Sceloporus woodi</i>	Florida Scrub Lizard	G2G3	S2S3	N	N
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Sideroxylon alachuense</i>	silver buckthorn	G1	S1	N	E
<i>Verbesina heterophylla</i>	variable-leaf crownbeard	G2	S2	N	E

Definitions: Documented - Rare species and natural communities documented on or near this site.
 Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.
 Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
 Potential - This site lies within the known or predicted range of the species listed.

Elements and Element Occurrences

An **element** is any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature.

An **element occurrence (EO)** is an area of land and/or water in which a species or natural community is, or was, present. An EO should have practical conservation value for the Element as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location.

Element Ranking and Legal Status

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

FNAI GLOBAL ELEMENT RANK

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

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

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

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

G5 = Demonstrably secure globally.

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

GX = Believed to be extinct throughout range.

GXC = Extirpated from the wild but still known from captivity or cultivation.

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

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

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

G#Q = Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q).

G#T#Q = Same as above, but validity as subspecies or variety is questioned.

GU = Unrankable; due to a lack of information no rank or range can be assigned (e.g., GUT2).

GNA = Ranking is not applicable because the element is not a suitable target for conservation (e.g., a hybrid species).

GNR = Element not yet ranked (temporary).

GNRTNR = Neither the element nor the taxonomic subgroup has yet been ranked.

FNAI STATE ELEMENT RANK

S1 = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.

S2 = Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.

S3 = Either very rare and local in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.

S4 = Apparently secure in Florida (may be rare in parts of range).

S5 = Demonstrably secure in Florida.

SH = Of historical occurrence in Florida, possibly extirpated, but may be rediscovered (e.g., ivory-billed woodpecker).

SX = Believed to be extirpated throughout Florida.

SU = Unrankable; due to a lack of information no rank or range can be assigned.

SNA = State ranking is not applicable because the element is not a suitable target for conservation (e.g., a hybrid species).

SNR = Element not yet ranked (temporary).

FEDERAL LEGAL STATUS

Legal status information provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant federal agency.

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

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.
E = Endangered: species in danger of extinction throughout all or a significant portion of its range.
E, T = Species currently listed endangered in a portion of its range but only listed as threatened in other areas.
E, PDL = Species currently listed endangered but has been proposed for delisting.
E, PT = Species currently listed endangered but has been proposed for listing as threatened.
E, XN = Species currently listed endangered but tracked population is a non-essential experimental population.
T = Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.
PE = Species proposed for listing as endangered
PS = Partial status: some but not all of the species' infraspecific taxa have federal
PT = Species proposed for listing as threatened
SAT = Treated as threatened due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.
SC = Not currently listed, but considered a "species of concern" to USFWS.

STATE LEGAL STATUS

Provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant state agency.

Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

C = Candidate for listing at the Federal level by the U. S. Fish and Wildlife Service
FE = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service
FT = Listed as Threatened Species at the Federal level by the U. S. Fish and Wildlife Service
FXN = 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 FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.
SSC = Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. (SSC* for *Pandion haliaetus* (Osprey) indicates that this status applies in Monroe county only.)
N = Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or see: <http://www.doacs.state.fl.us/pi/>.

E = 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.
T = 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.

Element Occurrence Ranking

FNAI ranks of quality of the element occurrence in terms of its viability (EORANK). Viability is estimated using a combination of factors that contribute to continued survival of the element at the location. Among these are the size of the EO, general condition of the EO at the site, and the conditions of the landscape surrounding the EO (e.g. an immediate threat to an EO by local development pressure could lower an EO rank).

A = Excellent estimated viability
A? = Possibly excellent estimated viability
AB = Excellent or good estimated viability
AC = Excellent, good, or fair estimated viability
B = Good estimated viability
B? = Possibly good estimated viability
BC = Good or fair estimated viability
BD = Good, fair, or poor estimated viability
C = Fair estimated viability
C? = Possibly fair estimated viability
CD = Fair or poor estimated viability
D = Poor estimated viability
D? = Possibly poor estimated viability
E = Verified extant (viability not assessed)
F = Failed to find
H = Historical
NR = Not ranked, a placeholder when an EO is not (yet) ranked.
U = Unrankable
X = Extirpated

*For additional detail on the above ranks see: <http://www.natureserve.org/explorer/eorankguide.htm>

FNAI also uses the following EO ranks:

H? = Possibly historical
F? = Possibly failed to find
X? = Possibly extirpated

The following offers further explanation of the H and X ranks as they are used by FNAI:

The rank of H is used when there is a lack of recent field information verifying the continued existence of an EO, such as (a) when an EO is based only on historical collections data; or (b) when an EO was ranked A, B, C, D, or E at one time and is later, without field survey work, considered to be possibly extirpated due to general habitat loss or degradation of the environment in the area. This definition of the H rank is dependent on an interpretation of what constitutes "recent" field information. Generally, if there is no known survey of an EO within the last 20 to 40 years, it should be assigned an H rank. While these time frames represent suggested maximum limits, the actual time period for historical EOs may vary according to the biology of the element and the specific landscape context of each occurrence (including anthropogenic alteration of the environment). Thus, an H rank may be assigned to an EO before the maximum time frames have lapsed. Occurrences that have not been surveyed for periods exceeding these time frames should not be ranked A, B, C, or D. The higher maximum limit for plants and communities (i.e., ranging from 20 to 40 years) is based upon the assumption that occurrences of these elements generally have the potential to persist at a given location for longer periods of time. This greater potential is a reflection of plant biology and community dynamics. However, landscape factors must also be considered. Thus, areas with more anthropogenic impacts on the environment (e.g., development) will be at the lower end of the range, and less-impacted areas will be at the higher end.

The rank of X is assigned to EOs for which there is documented destruction of habitat or environment, or persuasive evidence of eradication based on adequate survey (i.e., thorough or repeated survey efforts by one or more experienced observers at times and under conditions appropriate for the Element at that location).

Exhibit M

Florida Fish and Wildlife Conservation Commission



**Florida Fish
and Wildlife
Conservation
Commission**

Commissioners

Bo Riyard
Chairman
Panama City

Robert A. Spottswood
Vice Chairman
Key West

Joshua Kellam
Palm Beach Gardens

Gary Lester
Oxford

Gary Nicklaus
Jupiter

Sonya Rood
St. Augustine

Michael W. Sole
Tequesta

**Office of the
Executive Director**
Eric Sutton
Executive Director

Thomas H. Eason, Ph.D.
Assistant Executive Director

Jennifer Fitzwater
Chief of Staff

850-487-3796
850-921-5786 FAX

*Managing fish and wildlife
resources for their long-term
well-being and the benefit
of people.*

620 South Meridian Street
Tallahassee, Florida
32399-1800
Voice: 850-488-4676

Hearing/speech-impaired:
800-955-8771 (T)
800 955-8770 (V)

MyFWC.com

01/08/2019

Patti Anderson
Land Planning Coordinator
Florida Forest Service
3125 Conner Boulevard
Tallahassee, FL
32399

Dear Patti Anderson:

This letter is in response to your request for listed species occurrence records and Strategic Habitat Conservation Areas (SHCA's), on the following properties: Little-Big Econ, Charles H. Bronson, Holopaw, Pine log, Carl Duval Moore, Watson Island, Tiger Bay, and Myakka. Records from The Florida Fish and Wildlife Conservation Commission's database indicate that listed species occurrence data and critical habitats are located within the project areas. The Florida Fish and Wildlife Conservation Commission's database indicates that SHCA's for short-tailed hawk occur on Carl Duval Moore. SHCA's for Cooper's hawk, swallow-tailed kite, and short-tailed hawk occur in Charles H. Bronson. SHCA's for Cooper's hawk and Florida black bear were found on Pine Log, and SHCA's for Cooper's hawk and Florida black bear occur on Tiger Bay. Enclosed are 8.5 x 11 maps showing prioritized SHCA's, priority wetlands, landcover, species richness, and species locations for all projects. Additional species records were found on, or within a 1-mile distance of, the properties will be included in a spreadsheet; these species records are maintained by FNAI and cannot be distributed through FWC.

This letter and attachments should not be considered as a review or an assessment of the impact upon threatened or endangered species of the project site. It provides FWC's most current data regarding the location of listed species and their associated habitats.

Our SHCA recommendations are intended to be used as a guide. Land development and ownership in Florida is ever-changing and priority areas identified as SHCA might already have been significantly altered due to development or acquired into public ownership. Onsite surveys, literature reviews, and coordination with FWC biologists remain essential steps in documenting the presence or absence of rare and imperiled species and habitats within the project area.

Our fish and wildlife location data represents only those occurrences recorded by FWC staff and other affiliated researchers. It is important to understand that our database does not necessarily contain records of all listed species that may occur in a given area. Also, data on certain species, such as gopher tortoises, are not entered into our database on a site-specific basis.

Therefore, one should not assume that an absence of occurrences in our database indicates that species of significance do not occur in the area.

The Florida Natural Areas Inventory (FNAI) maintains a separate database of listed plant and wildlife species, please contact FNAI directly for specific information on the location of element occurrences within the project area.

Because FNAI is funded to provide information to public agencies only, you may be required to pay a fee for this information. County-wide listed species information can be located at their website (<http://www.fnai.org>).

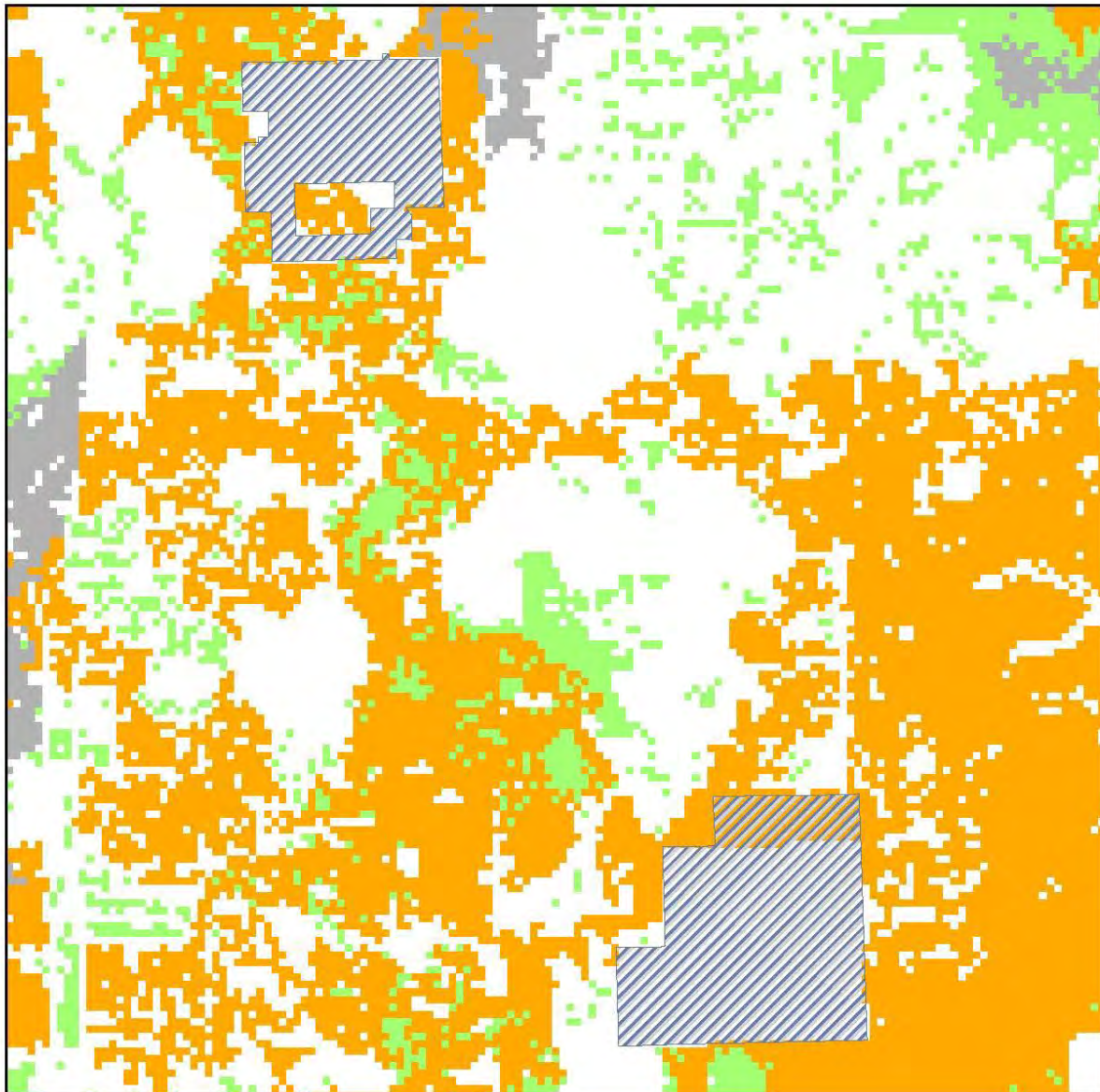
Please credit the Florida Fish and Wildlife Conservation Commission in any publication or presentation of these data. If you have any questions or further requests, please contact me at (850) 488-0588 or gisrequests@myfwc.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'E. Salinas'.

Eva Salinas
Research Assistant

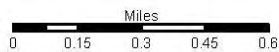
ES
2019_6326
Enclosures



Carl Duval Moore



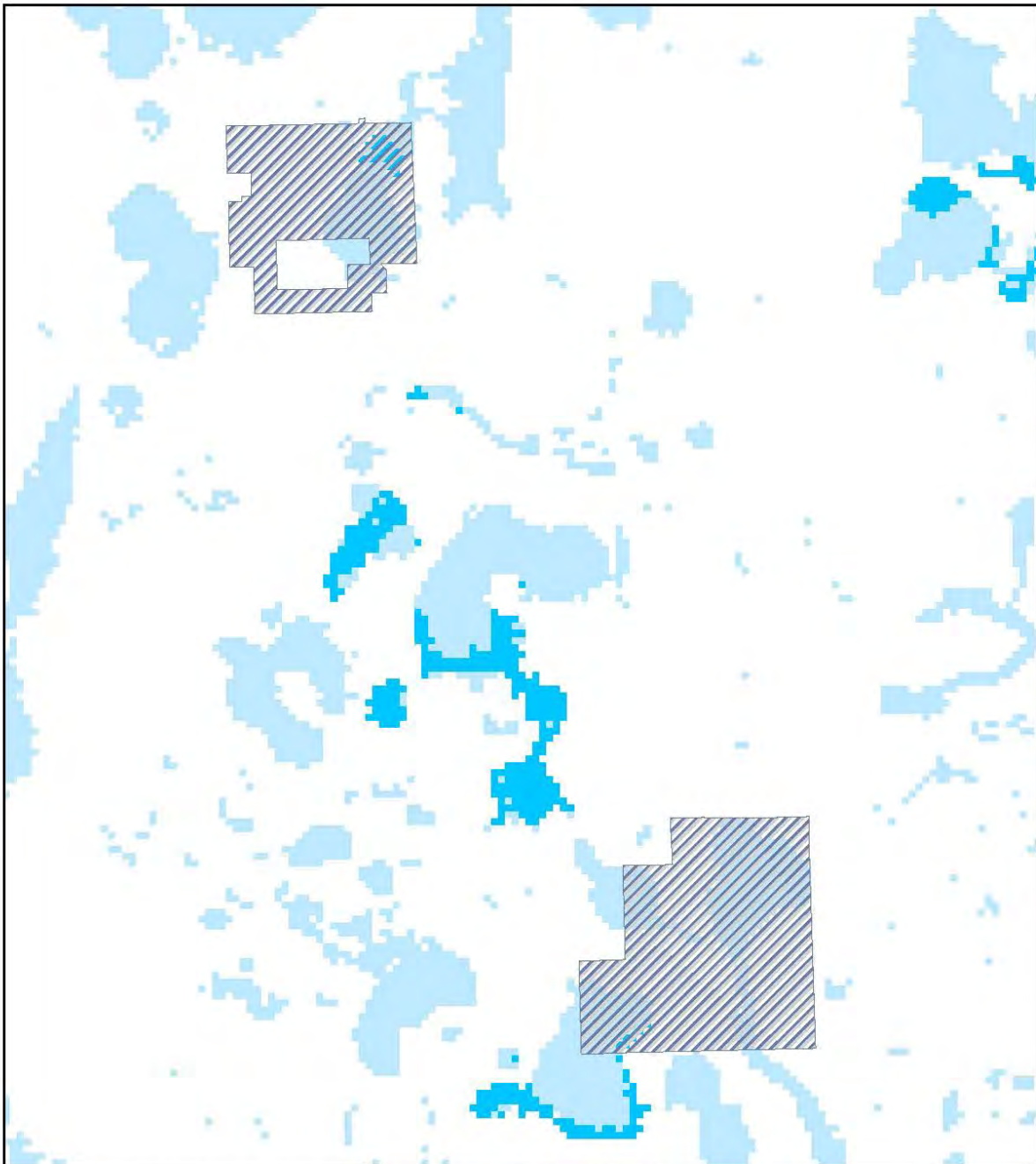
The prioritized SHCA map identifies 5 classes of SHCA based upon Heritage ranking criteria developed by The Nature Conservancy, the Natural Heritage Program Network, and the Florida Natural Areas Inventory. There are 2 possible ranks used to prioritize a species' SHCA: 1) the global rank based on a species worldwide status, and 2) the state rank based upon the species status in Florida. The state and global ranks are based upon many factors such as known occurrence locations, estimated abundance, range, amount of habitat currently protected, perceived levels of threats towards the species, and ecological fragility.



Florida Fish and Wildlife
Conservation Commission
MyFWC.com



FWC ID: 2019_6326 January 7th, 2019



Carl Duval Moore

Priority Wetlands

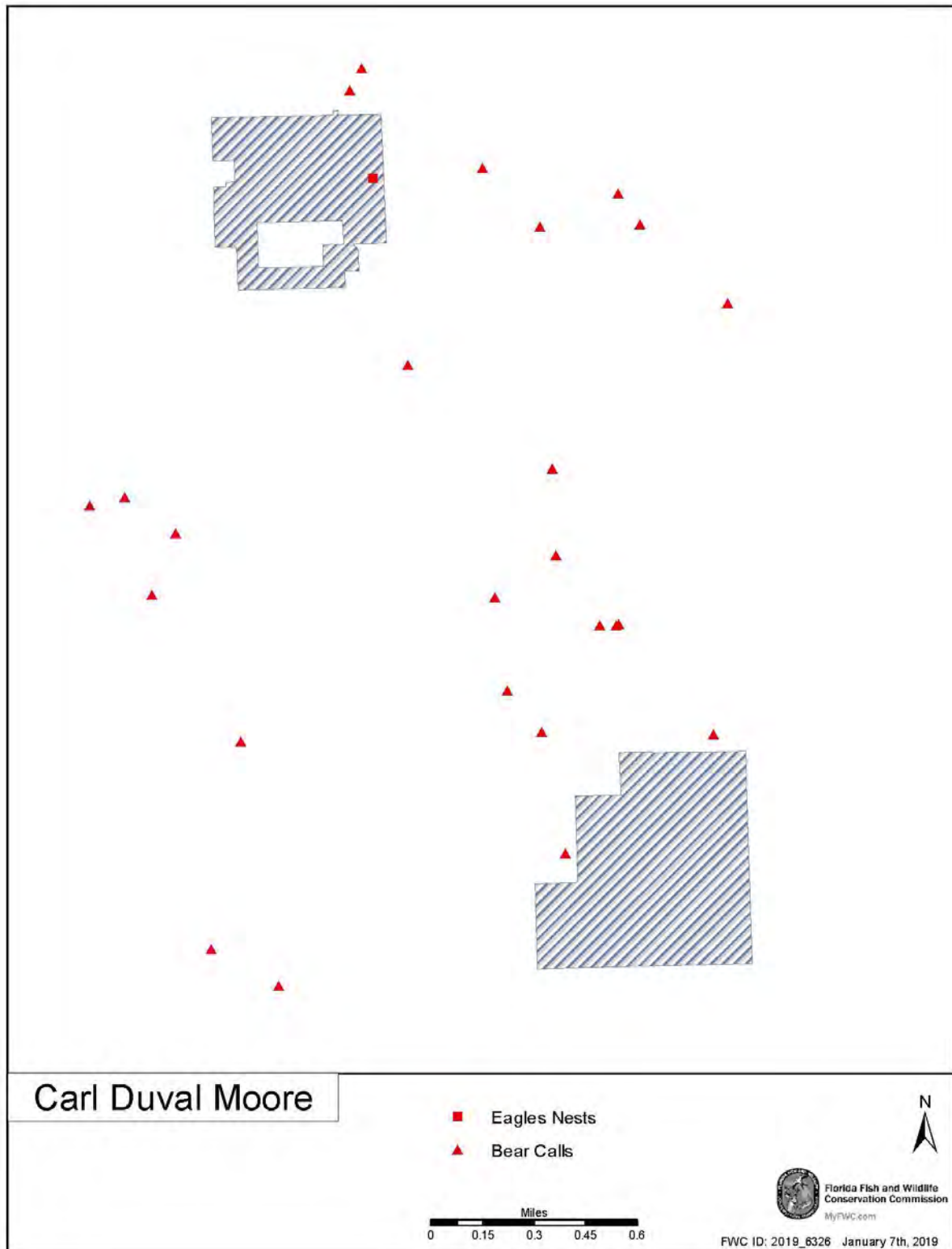
- 1-3 Species, Wetlands habitat
- 4-6 Species, Wetlands habitat
- 7-9 Species, Wetlands habitat
- 10-11 Species, Wetlands habitat

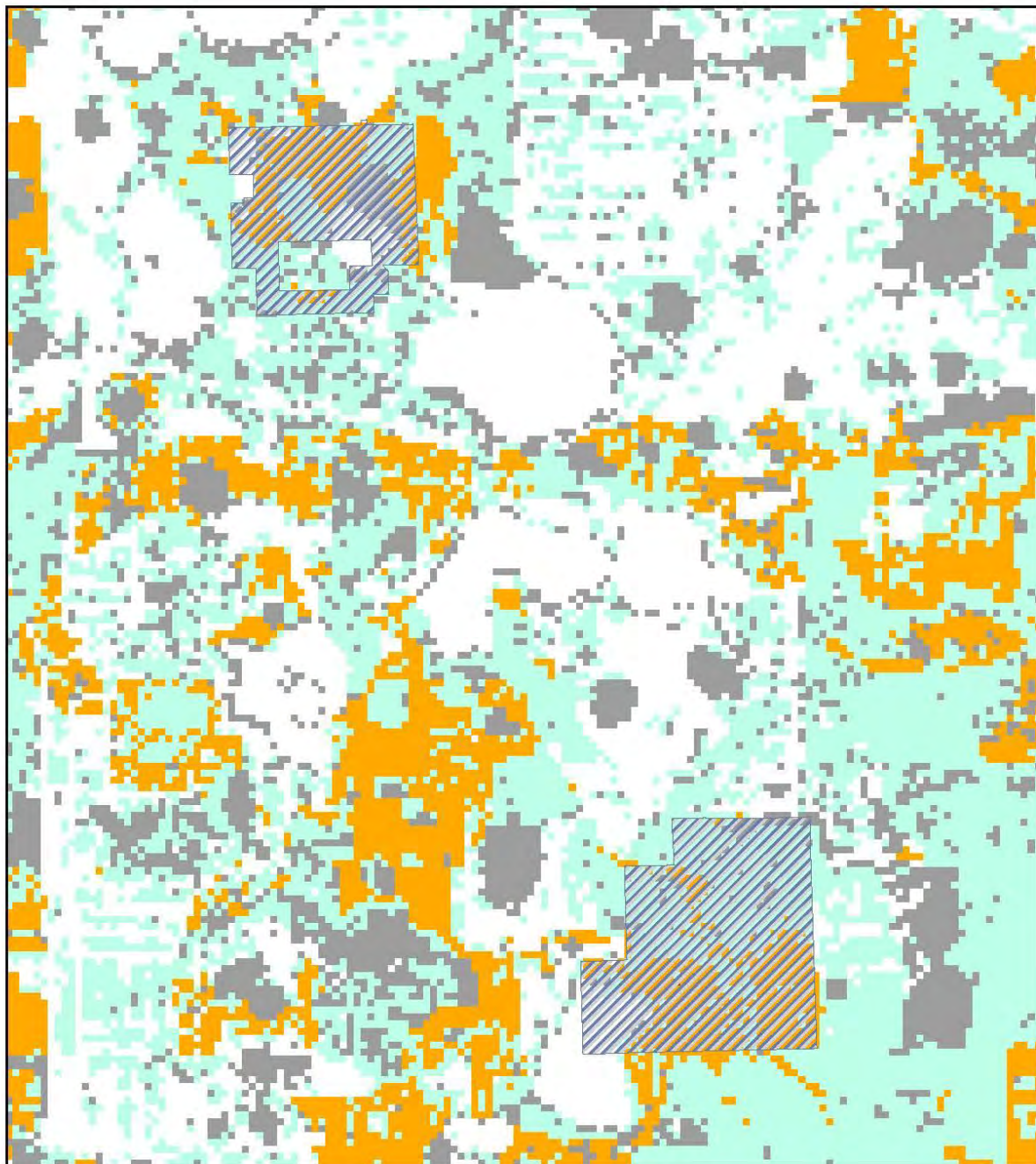
Miles
0 0.15 0.3 0.45 0.6



Florida Fish and Wildlife
Conservation Commission
MyFWC.com

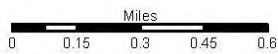
FWC ID: 2019_6326 January 7th, 2019





Carl Duval Moore

Species Richness



Florida Fish and Wildlife
Conservation Commission
MyFWC.com

FWC ID: 2019_6326 January 7th, 2019

Exhibit N

Fire History

Carl Duval Moore SF Burn Acres by FY

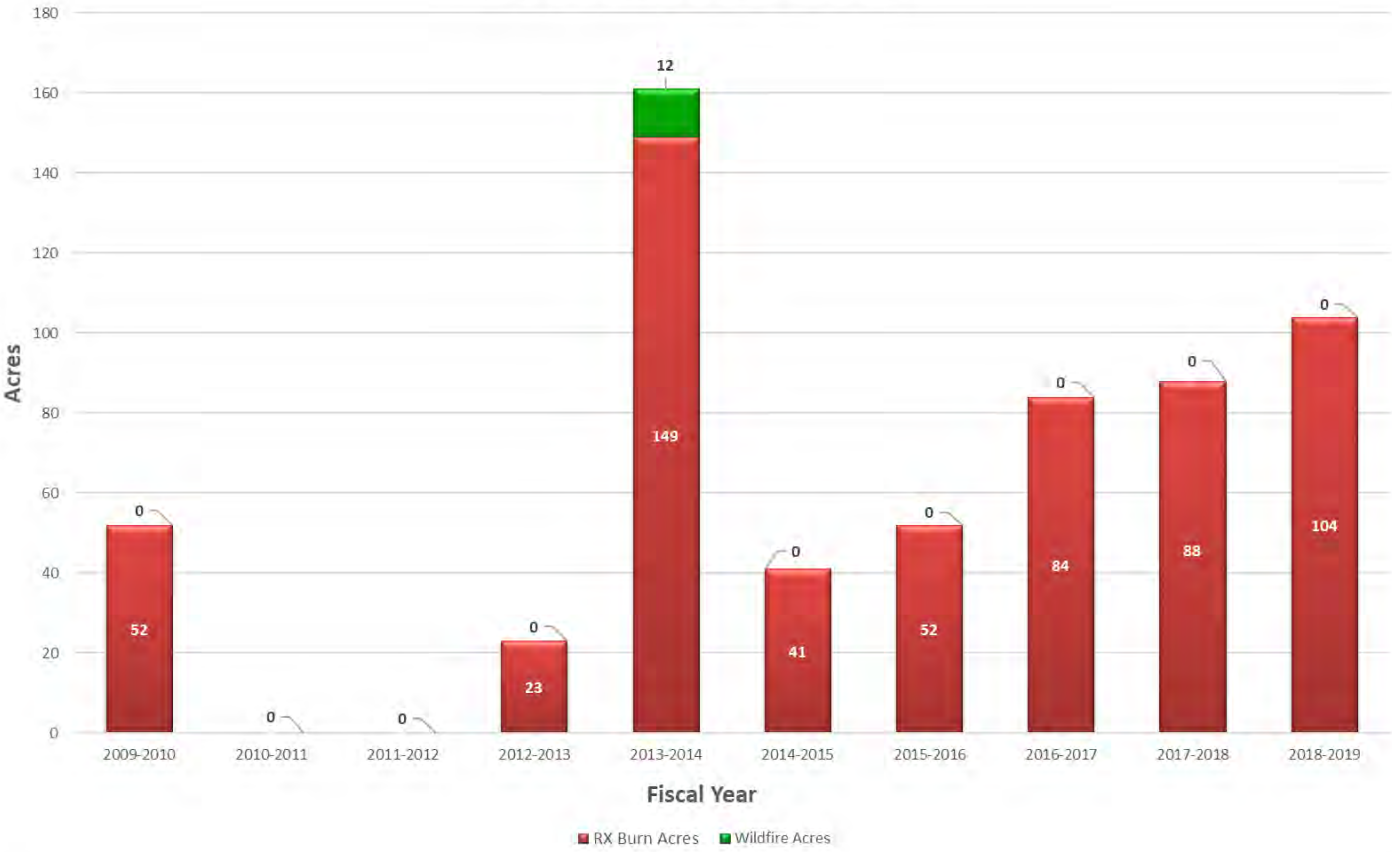


Exhibit O

Non-Native Invasive Species Map



Florida Forest Service

Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

Carl Duval Moore State Forest Non-Native Invasive Species Map

DISCLAIMER
This map was created by the Florida Forest Service for informational purposes only. It is not intended to be used for legal or regulatory purposes. The Florida Forest Service is not responsible for any errors or omissions on this map. The Florida Forest Service is not responsible for any damages or injuries resulting from the use of this map. The Florida Forest Service is not responsible for any claims, damages, or liabilities arising from the use of this map.

Map Data
Map Data was obtained from the Florida Department of Transportation (FDOT) and the U.S. Army Corps of Engineers.

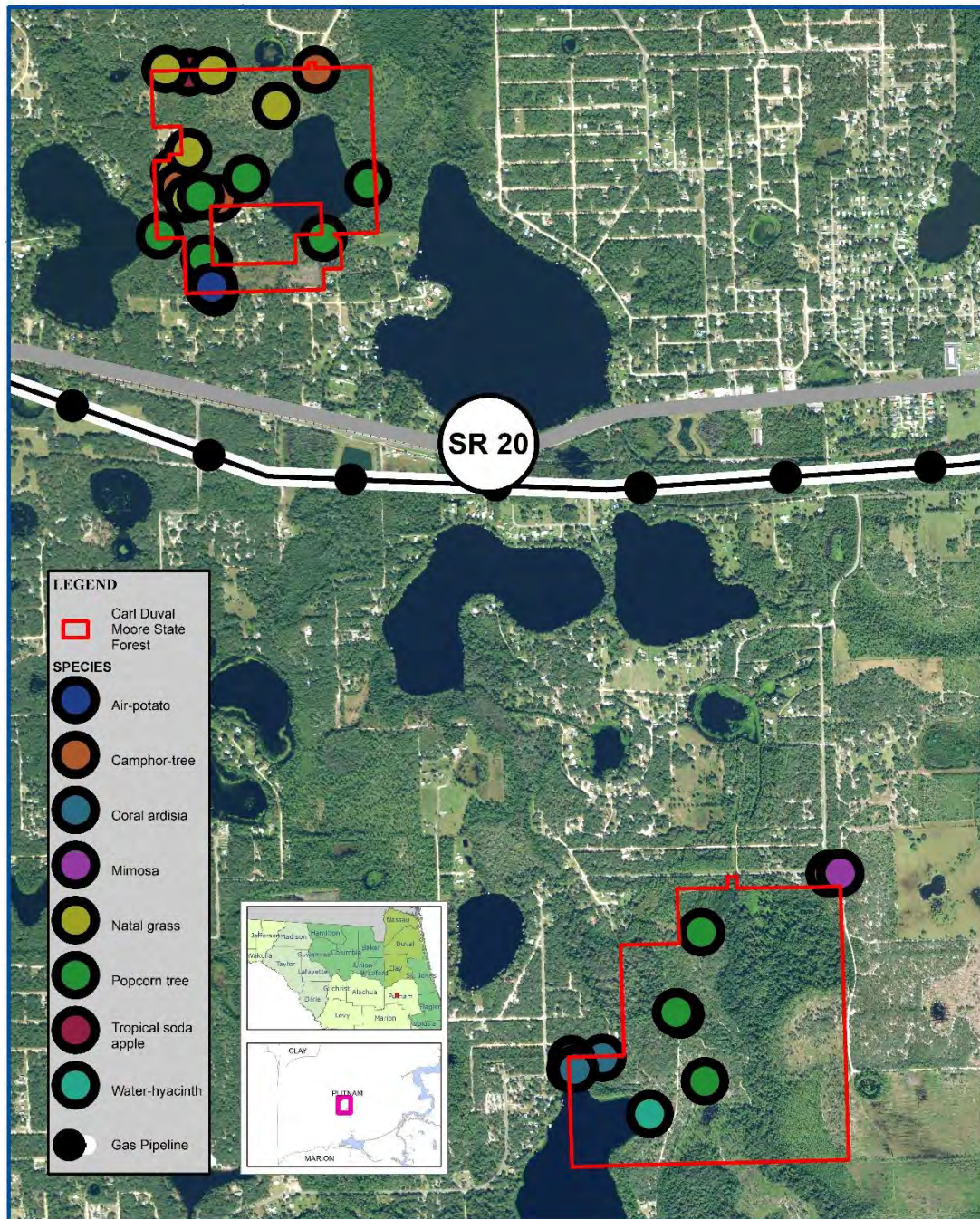


Exhibit P

Current FNAI Natural Communities and Cover Type Map



Florida Forest Service

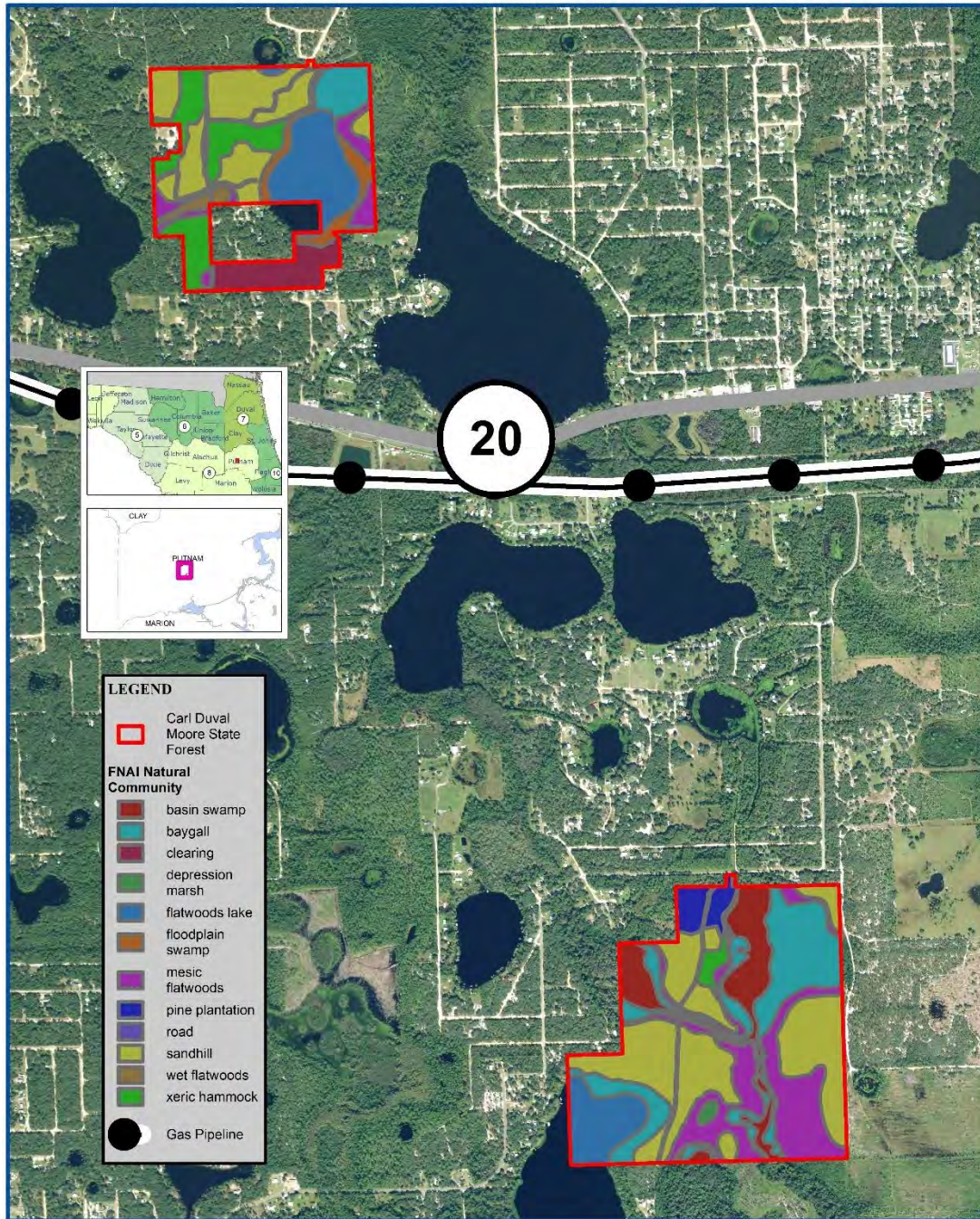
Carl Duval Moore State Forest

Current FNAI Natural Communities and Cover Type

Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

DISCLAIMER:
This map was created by the Florida Forest Service using data provided by the Florida Department of Transportation (FDOT) and the Florida Department of Environmental Protection (FDEP). The Florida Forest Service is not responsible for any errors or omissions in this map. The Florida Forest Service is not responsible for any damages or injuries resulting from the use of this map. The Florida Forest Service is not responsible for any claims, damages, or liabilities arising from the use of this map.

Map of Florida showing the location of Carl Duval Moore State Forest.
The map shows the location of Carl Duval Moore State Forest in the central part of the state. The forest is located in the central part of the state, between the cities of Orlando and Tampa. The forest is located in the central part of the state, between the cities of Orlando and Tampa.



Map Month/Year: December 2019

1,000 500 0
Feet

Exhibit Q

Historic FNAI Natural Communities Map



Florida Forest Service

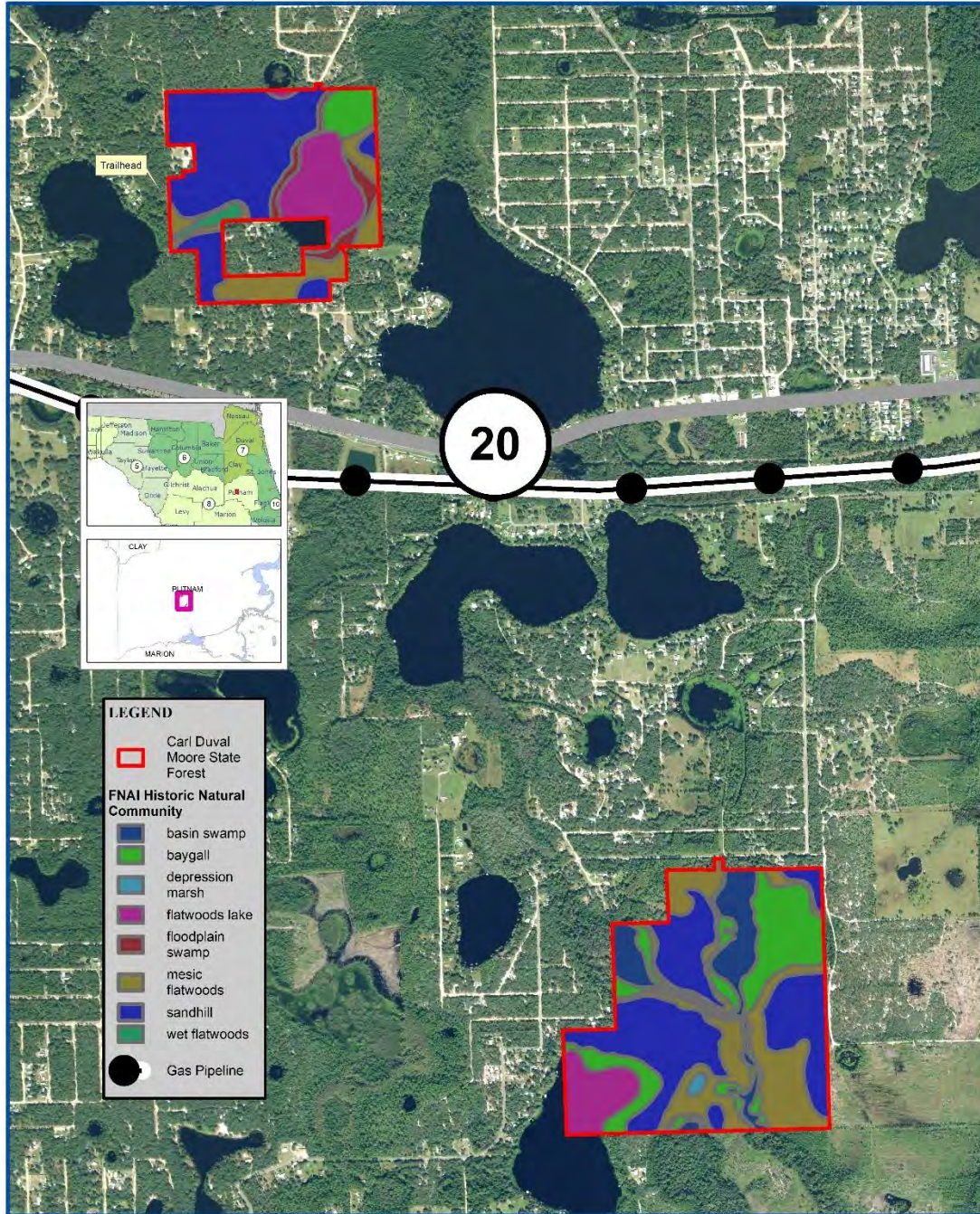
Carl Duval Moore State Forest

Historic FNAI Natural Communities and Cover Type

Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

DISCLAIMER:
This map was created by the Florida Forest Service and is intended for informational purposes only. It is not a legal document and should not be used for legal or regulatory purposes. The Florida Forest Service does not warrant the accuracy or completeness of the information on this map. The Florida Forest Service is not responsible for any errors or omissions on this map. The Florida Forest Service is not responsible for any damages or liabilities arising from the use of this map.

Map of Florida showing the location of the Carl Duval Moore State Forest in the north central part of the state. The map is primarily composed of land with some water bodies. The forest area is highlighted in a red outline. The map is titled 'Map of Florida' and includes a scale bar and a north arrow.



Map Month/Year: December 2019

1,000 500 0 Feet

Exhibit R

Management Prospectus

Etoniah / Cross Florida Greenway

Citrus, Clay, Levy, Marion and Putnam Counties

Critical Natural Lands

Project-at-a-Glance

<i>Placed on List</i>	<i>1995*</i>
<i>Project Area (GIS acres)</i>	<i>92,180</i>
<i>Acres Acquired (GIS)</i>	<i>32,186**</i>
<i>at a Cost of</i>	<i>\$20,773,131**</i>
<i>Acres Remaining (GIS)</i>	<i>59,994</i>

**Etoniah Creek, Cross Florida Greenways and Cross Florida Greenways Phase II were combined in 1995 to create Etoniah/Cross Florida Greenway. A less-than-fee parcel of approximately 18,406 acres was added to the project in 1997.*

*** Includes a donation of 43 acres and acreage acquired and funds spent by the SJRWMD on Plum Creek/Rick Co.*

Purpose for State Acquisition

Though partially logged and planted in pine, the large expanse of flatwoods, sandhills, and scrub in central Putnam County, extending to the Cross Florida Greenway along the Ocklawaha River, is important for the survival of many kinds of wildlife and plants. The Greenway itself is a unique strip of land for recreation and conservation that makes a cross-section of the peninsula from the Withlacoochee River to the St. Johns. The Etoniah/Cross Florida Greenway project will conserve the Putnam County land as well as fill in gaps in the Greenway; ensure that wildlife such as Florida black bear and scrub jays and plants such as the Etoniah rosemary will have areas in which to live; and provide recreation for the public ranging from long-distance hiking trails to fishing, camping, and hunting. This project may also help complete the Florida National Scenic Trail, a statewide non-motorized trail that crosses several Florida Forever project sites.

Manager(s)

The managers are the Florida Forest Service/FFS (Florida Department of Agriculture and Consumer Services) for the Etoniah Creek tract and for the remaining tracts, the Office of Greenways and Trails /OGT, (Florida Department Environmental Protection). FFS will monitor compliance with the terms of any less-than-fee purchase agreement.

General Description

The project consists of a large tract extending north from the Cross Florida Greenway to Clay County, and four smaller tracts designed to fill in gaps in state ownership along the Cross Florida Greenway. The original Etoniah/Cross Florida Greenway project is important for the survival of black bear in northeast Florida. It has many acres of pine plantation and cutover flatwoods, but also high-quality sandhill, a unique white-cedar swamp along Deep Creek, and patches of sand pine scrub near Etoniah Creek that harbor at least a dozen rare species. They include fox squirrel, gopher tortoise, indigo and pine snakes, rare crayfish, and seven rare plants, including the only known site for federally listed Etoniah rosemary. The smaller tracts include high-quality floodplain swamps along the Ocklawaha River; mixed forest land near U.S. 441 south of Ocala; and Inglis Island, disturbed pinelands between the old Cross Florida



Barge Canal and the Withlacoochee River. Eight archaeological sites are known from the project. The greatest threat to the project area is intensive logging, but the uplands on the large tract are suitable for residential development. The smaller sites would lose their value as connectors if developed for residences.

Public Use

The Cross Florida Greenway connectors will form part of a conservation and recreation area; the majority of the large (Etoniah) tract will become a state forest. The various parts of the project will offer opportunities for hiking, hunting, fishing and nature appreciation.

Acquisition Planning

Etoniah Creek

Phase I tracts (essential) include Stokes and Agricola, formerly Deltona (acquired), Union Camp, Manning (acquired) and Interlachen Lake Estates Subdivision. Life-of-the-South (Odom) is also an essential tract. Phase II includes other large ownerships, such as Roberts, as well as other smaller tracts and subdivisions.

Cross Florida Greenway

Phase I (essential) includes the westernmost segment (Deep Creek Corridor) consisting of a portion of the Miller family ownerships and approximately 14 other owners.

Cross Florida Greenway Phase II

The priority tract (essential) within this portion of the project is the Inglis Island site (acquired by the Office of Greenways and Trails).

On July 20, 1994 the Council added 210 acres to the boundaries of the predecessor projects.

On December 7, 1995, the Council approved the addition of 2,664 acres to the project boundary. The addition included lakeshore and lake bottom associated with Rodman Reservoir. A second modification was made to allow the St. Johns River Water Management District (SJRWMD) to acquire, on the State's behalf, a large ownership (Odom) not identified in the original Phase I area. Acquisition of the canal easement areas is also a priority.

On March 15, 1996 the Council approved adding 141 acres to the project boundaries. On December 5, 1996, the Council transferred the Georgia-Pacific ownership (18,146 acres) to the Less-Than-Fee category.

On October 15, 1998, the Council designated as essential an additional 9,870 acres - Georgia-Pacific and seven smaller tracts in a corridor between two already acquired tracts, and portions of the Roberts ownership.

On August 22, 2000, the Acquisition and Restoration Council (ARC) added 2,110 acres (Florida Power ownership along the Cross Florida Greenway State Recreation and Conservation areas) to the project.

On January 25, 2001, ARC added 1,543 acres to the project boundary in the Deep Creek area. On May 1, 2001, ARC added 1,110 acres to the boundaries of the project.



On February 25, 2003 the project was added to the Group A list of Florida Forever projects.

On April 13, 2007, the ARC approved a fee-simple, 85-acre addition, known as Foxtrotter Ranch, to the project boundary. It was sponsored by OGT, and consisted of one landowner, Richard Simon, one parcel, and a taxable value of \$2,267,908. OGT will manage the site. The house (approximately 2.5 acres) is not included in the addition, however, it may be donated to the state subsequent to acquisition. After this most recent boundary change in 2007, the project had a combined, historic, estimated tax assessed value of \$170,079,702.

In June 2008, 1.19 acres of the Harrington ownership were purchased for \$15,000 with the FFS Florida Forever funds. FFS will manage this section. In September 2008, the FFS used Florida Forever funds to buy the following acreages: 1.08 acres (Fred Yankee, LLC) for \$13,500; 0.87 acres (Goddard) for \$23,000; 1.01 acres (Land Reclamation, Inc.) for \$15,000; 2.52 acres (Cann) for \$23,000; 1.21 acres (Martin) for \$14,000; 1.27 acres (Vehoski) for \$14,000; and 1 acre (Murray) for \$15,000. The DOF will manage all of these parcels. In October 2008, the FFS used Florida Forever funds to buy 1.25 acres (Uttech) for \$11,500; 2.5 acres (Lachmansingh) for \$25,000; 3.61 acres (Chapman) for \$37,500; and 2.53 acres (Thornton) for \$23,000. The FFS will manage these parcels. In November 2008, the FFS used Florida Forever funds to buy 1.27 acres (Dubay) for \$14,000; 1.24 acres (Hood) for \$15,500; 1.25 acres (Contreras) for \$14,000; and 1.24 acres (South) for \$14,000. FFS will manage these parcels.

On January 21, 2009 SJRWMD purchased 208 acres for \$474,363 (Plum Creek/Rick Co.). In October 2009, 1.25 acres were purchased from Margaret Vail for \$14,000. In November 2009, 1.25 acres were purchased from Kenneth/Diane Schwing for \$15,500. On December 10, 2009, FFS purchased 1.43 acres for \$13,500 and will manage this tract.

On November 4, 2010, FFS purchased 106 acres (Moore--\$405,000) with Florida Forever funds. FFS will manage this.

On January 3, 2011, FFS purchased 1.29 acres (Williams--\$18,000 with FF funds. The FFS will manage this. On May 2, 2011 the FFS purchased 1.25 acres (Cearley-\$12,000) in the Cross Florida Greenway portion and will manage it. On August 3, 2011, FFS purchased 3.69 acres (Interlachen Lakes Estates) for \$27,500; FFS to manage. On December 9, 2011 ARC recommended a 1,509-acre reduction to the project boundary containing residential development, commercial buildings, and other infrastructure.

On December 9, 2011, ARC placed this project in the Critical Natural Lands category of Florida Forever projects.

On September 21, 2012, the BOT acquired 1.25 acres for \$6,000 to be part of the Etoniah Creek State Forest.

On August 24, 2018 ARC members voted to amend the project by adding two parcels, 48 acres, in Putnam County to the project boundary. The addition was proposed by Patrick E. Troxel and is near the town of Satsuma.



The tax assessed value for the remaining acres to be acquired in this project per property appraiser information (2017) is \$144,155,578.

Coordination

The SJRWMD was the intermediary in the acquisition of the Manning tract and has provided information and expertise on several other tracts. The Office of Greenways and Trails used additions and inholding funds to acquire Inglis Island. The Division of State Lands will assume the lead on acquisition of the remaining tracts.

Management Policy Statement

The primary goals of management of the Etoniah/Cross Florida Greenway project are: to conserve and protect environmentally unique and irreplaceable lands that contain native, relatively unaltered flora and fauna representing a natural area unique to, or scarce within, a region of this state or a larger geographic area; to conserve and protect significant habitat for native species or endangered and threatened species; to conserve, protect, manage, or restore important ecosystems, landscapes, and forests, in order to enhance or protect significant surface water, coastal, recreational, timber, fish or wildlife resources which local or state regulatory programs cannot adequately protect; and to provide areas, including recreational trails, for natural-resource-based recreation.

Management Prospectus

Qualifications for state designation

The large size, restorable pine plantations, and diversity of the Etoniah Creek portion of this project make it highly desirable for management as a state forest. The Cross Florida Greenway State Recreation and Conservation Area includes scenic and historic rivers, lakes, wetlands, and uplands. It is also near, or contiguous with, many other state-owned lands. The Cross Florida Greenway portion of this project, together with the lands already in the Greenway, has the configuration, location, and the resources to qualify as a state recreation area.

Manager

The FFS proposes to manage the 57,000-acre Etoniah Creek portion of the project and the OGT will manage the remaining lands near the old Cross Florida Barge Canal.

Conditions affecting intensity of management

There are no known major disturbances in the Etoniah Creek portion that will require extraordinary attention, so management intensity is expected to be typical for a state forest. Lands in the Cross Florida Greenway portion are generally moderate-need tracts.

Timetable for implementing management and provisions for security and protection of infrastructure

Once the core area of the Etoniah Creek portion is acquired, the FFS will provide access to the public for low-intensity, non-facilities-related outdoor recreation. Initial activities will include securing the tract, providing public and fire management accesses, inventorying resources, and removing trash. The FFS will provide access to the public while protecting sensitive resources. The tract's natural resources and threatened and endangered plants and animals will be inventoried to provide the basis for a management

plan. Long-range plans for the Etoniah Creek portion will generally be directed toward restoring disturbed areas to their original conditions, as far as possible, as well as protecting threatened and endangered species. An all-season burning program will use, whenever possible, existing roads, black lines, foam lines and natural breaks to contain fires. Timber management will mostly involve improvement thinning and regeneration harvests. Plantations will be thinned and, where appropriate, reforested with species found in natural ecosystems. Stands will not have a targeted rotation age. Infrastructure will primarily be in disturbed areas and will be the minimum required for management and public access. The FFS will promote environmental education. For the Greenway portion, activities within the first year after acquisition will primarily consist of site security, resource inventory, removal of trash, and resource-management planning. Long-range activities proposed include a multipurpose trail and facilities for public access.

Revenue-generating potential

In the Etoniah Creek portion, the FFS will sell timber as needed to improve or maintain desirable ecosystem conditions. These sales will provide a variable source of revenue, but the revenue-generating potential for this project is expected to be moderate. In the Greenway portion, no revenues are expected to be generated within the first three years after acquisition. However, as the Greenway is developed during its 20-year facility development plan, revenues will be derived from user fees, the sale of products from the lands (limerock berm and timber), and the sale of surplus lands.

Cooperators in management activities

The FFS will cooperate with and seek the assistance of other state agencies, local government entities and interested parties as appropriate. Currently, properties along the Greenway are managed in partnership with Marion County, the Florida Game and Fresh Water Fish Commission, and private individuals for recreational purposes.



Etoniah/Cross Florida Greenway Table 1

Project-at-a-Glance	Data
Placed on List	1995*
Project Area (GIS acres)	92,180
Acres Acquired (GIS)	32,186**
at a Cost of	\$20,773,131**
Acres Remaining (GIS)	59,994

*Etoniah Creek, Cross Florida Greenways and Cross Florida Greenways Phase II were combined in 1995 to create Etoniah/Cross Florida Greenway. A less-Than-Fee parcel of approximately 18,406 acres was added to the project in 1997.

** Includes a donation of 43 acres and acreage acquired and funds spent by the SJRWMD on Plum Creek/Rick Co.

Etoniah/Cross Florida Greenway Table 2

Etoniah/Cross Florida Greenway FNAI Elements	Score
Etonia Rosemary	G1/S1
Florida Scrub-Jay	G2/S2
Florida Black Bear	G5T4/S4
Eastern Indigo Snake	G3/S3
Florida Mouse	G3/S3
Gopher Tortoise	G3/S3
Swallow-tailed Kite	G5/S2
Curtiss' loosestrife	G1/S1
Gopher Tortoise Acrolophus Moth	G1/S1
Black Creek Crayfish	G2/S2
Florida spiny-pod	G2/S2
Florida willow	G2/S2

There are 37 rare species associated with the project.

Etoniah/Cross Florida Greenway Table 3a

Management Cost Summary: OGT	Startup	Recurring
Source of Funds	LATF	LATF
Salary	\$36,380	\$36,380
OPS	\$72,660	\$72,660
Expense	\$62,301	\$46,362
OCO	\$3,167	\$0
FCO	\$100,000	\$0
Total	\$274,508	\$185,402



Etoniah/Cross Florida Greenway Table 3b

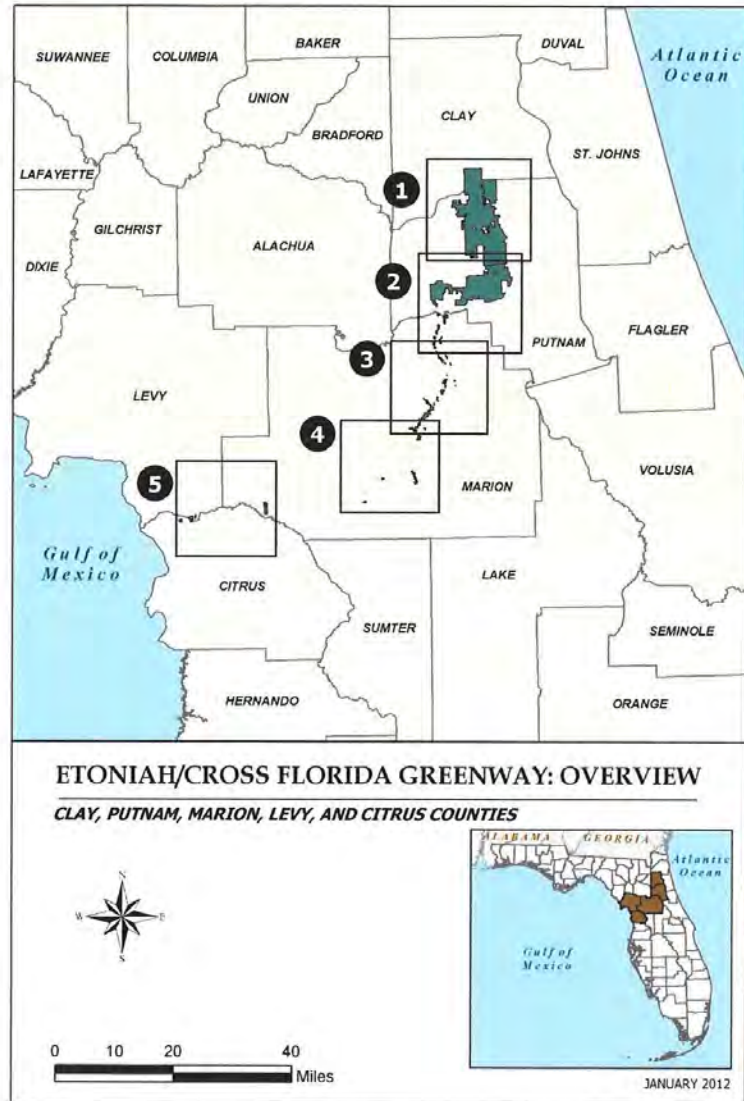
Management Cost Summary: DOF	1996/97	1997/98
Source of Funds	CARL	CARL
Salary	\$45,337	\$56,487
OPS	\$0	\$3,000
Expense	\$11,225	\$22,825
OCO	\$43,320	\$50,500
FCO	\$0	\$0
Total	\$99,882	\$132,814

Map(s): Etoniah / Cross Florida Greenway4

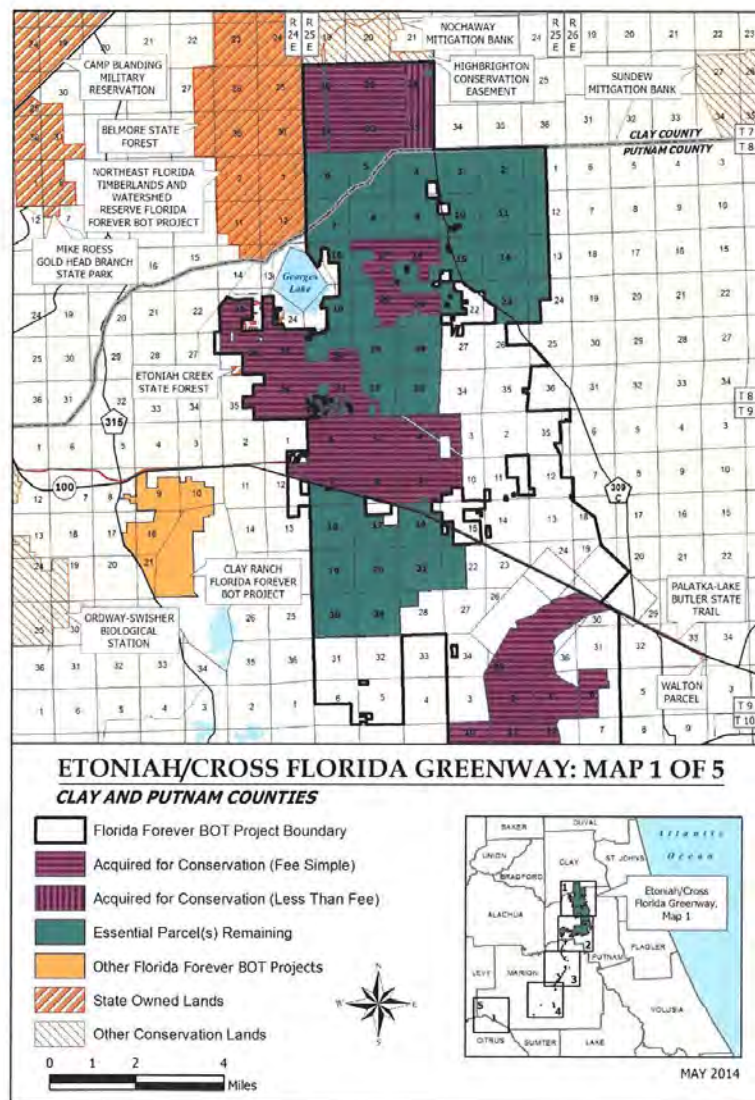


Map(s): Etoniah / Cross Florida Greenway⁴

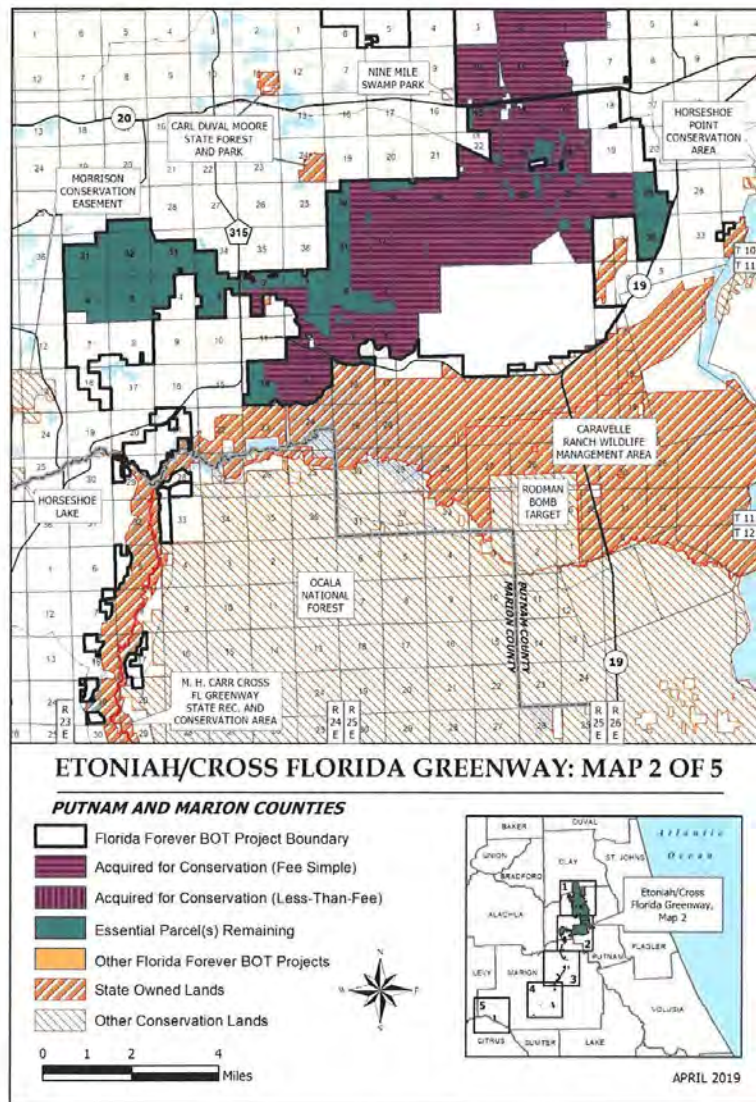
Etoniah / Cross Florida Greenway



Map 63



Map 64



Map 65

Exhibit S

Florida Forever Projects Near CDMSFP

Clay Ranch

Putnam County

Substantially Complete

Project-at-a-Glance

<i>Placed on List</i>	<i>2006</i>
<i>Project Area (GIS acres)</i>	<i>2,446</i>
<i>Acres Acquired (GIS)</i>	<i>2,292</i>
<i>at a Cost of</i>	<i>\$0</i>
<i>Acres Remaining (GIS)</i>	<i>154</i>

Purpose for State Acquisition

Acquiring a conservation easement over Clay Ranch would contribute to the goal of eventually attaining connections among the conservation lands in the region to create landscape-scale protection of the xeric uplands and associated wetlands characteristic of the Trail Ridge. It could also help to preserve and protect the healthy aquatic biota in lower reaches of Etoniah Creek. The tract has the characteristics needed to harbor imperiled species, and some imperiled species are documented to occur there. The sandhill upland lakes and marsh natural communities that occur on the tract are mostly intact and fulfilling their natural function. Although much of the uplands are in commercial uses including sod farming, cattle grazing, hay production and silviculture, the majority is in a semi-natural condition and has good potential, with the reintroduction of fire, for providing quality habitat for many imperiled species in the future.

Manager(s)

The property will continue to be managed by the landowner with restrictions imposed by a negotiated conservation easement. The Department of Environmental Protection's Office of Environmental Services (OES) will be responsible for monitoring compliance with the terms and conditions of the easement, unless otherwise noted.

General Description

Clay Ranch, approximately 2,446 acres in northwestern Putnam County, consists of a mix of forested uplands, scattered depression marshes and sandhill upland lakes and areas - both uplands and wetlands - that have been converted to pasture and/or sod farm. Some remnant sandhill remains in the western half, although a large portion of the forested area has developed into xeric/mesic hammock. Clay Ranch is situated on the southeastern portion of Trail Ridge, a physiographic province dominated by rolling sandhills and dotted with sandhill upland lakes.

The proximity to other conservation lands in this region embellish the less-than-fee acquisition proposal. An added benefit is the potential to connect a corridor for the Florida black bear and provide a large tract of conservation land for watershed and wildlife protection. However, even with this acquisition, other tracts would need to be protected for the corridor to be complete. If a conservation easement were



acquired on this site, perhaps other private landowners within the corridor would also consider their tracts for public acquisition.

Public Use

Since the Clay Ranch is being offered as a less-than-fee acquisition, public access is not being contemplated at this time. During the negotiations with the Clay family, some limited access for research or education may be possible to acquire.

Acquisition Planning

On June 9, 2006, the Acquisition and Restoration Council (ARC) added the Clay Ranch project to Group A of the August 2006 Florida Forever Priority list. This less-than-fee acquisition, sponsored by The Nature Conservancy (TNC) and the Alachua Conservation Trust, consists of one landowner, the Clay Family, ±2,380 acres and a 2005 tax assessed value of \$1,634,125.

On December 9, 2011, ARC placed this project in the Less-than-Fee category.

*In June 2017, the Rural and Family Lands program acquired a 2,292-acre rural and family lands protection easement over the Clay Ranch Florida Forever less-than-fee project area.

The tax assessed value for the remaining acres to be acquired in this project per property appraiser information (2017) is \$320,180.

Coordination

No acquisition partnerships were suggested initially at the time this project was placed on the list. However, in June 2017, the Rural and Family Lands program acquired a 2,292-acre rural and family lands protection easement over much of the project area.

Management Policy Statement

As a conservation or less-than-fee interest, the project will be managed by the private landowner with restrictions. The purchase of the development rights, the prohibition of further conversion of existing natural areas and open space to more intensive uses, and limited public access will likely be the primary focus of the conservation easement.

Management Prospectus

Qualifications for state designation

Protection of Clay Ranch would contribute to the goal of eventually connecting the conservation lands in the region to create landscape-scale protection of the xeric uplands and associated wetlands characteristic of the Trail Ridge, as well as agricultural open space. TNC indicates that efforts are being made to secure some of this area that could provide a direct connection between Clay Ranch and Ordway-Swisher Preserve. Katharine Ordway Preserve and Carl M. Swisher Memorial Nature Preserve (contiguous properties and both managed by the University of Florida) lay approximately 1.5 and 2.75 miles, respectively, west of the western boundary of Clay Ranch. The former Conservation and Recreation Lands (CARL) project, Putnam County Sandhills, abuts Ordway-Swisher Preserve on its eastern boundary and approaches to within approximately one mile of Clay Ranch. Etoniah Creek State



Forest is located 1.75 miles northeast of the site. Camp Blanding Military Reservation, Mike Roess Gold Head Branch State Park, and Belmore State Forest are within 6 to 10 miles to the north and northwest of Clay Ranch.

Manager

The property will continue to be managed by the landowner with restrictions imposed by a negotiated conservation easement. OES will be responsible for monitoring compliance with the terms and conditions of the easement, unless otherwise noted.

Conditions affecting intensity of management

Acquiring the Clay Ranch could help to preserve and protect the healthy aquatic biota in lower reaches of Etoniah Creek. While the natural communities on Clay Ranch need restoration, the site still exhibits a nice transition from higher xeric uplands in the west to more mesic conditions to the east.



Clay Ranch Table 1

Project-at-a-Glance	Data
Placed on List	2006
Project Area (GIS acres)	2,446
Acres Acquired (GIS)	2,292
at a Cost of	\$0
Acres Remaining (GIS)	154

Clay Ranch Table 2

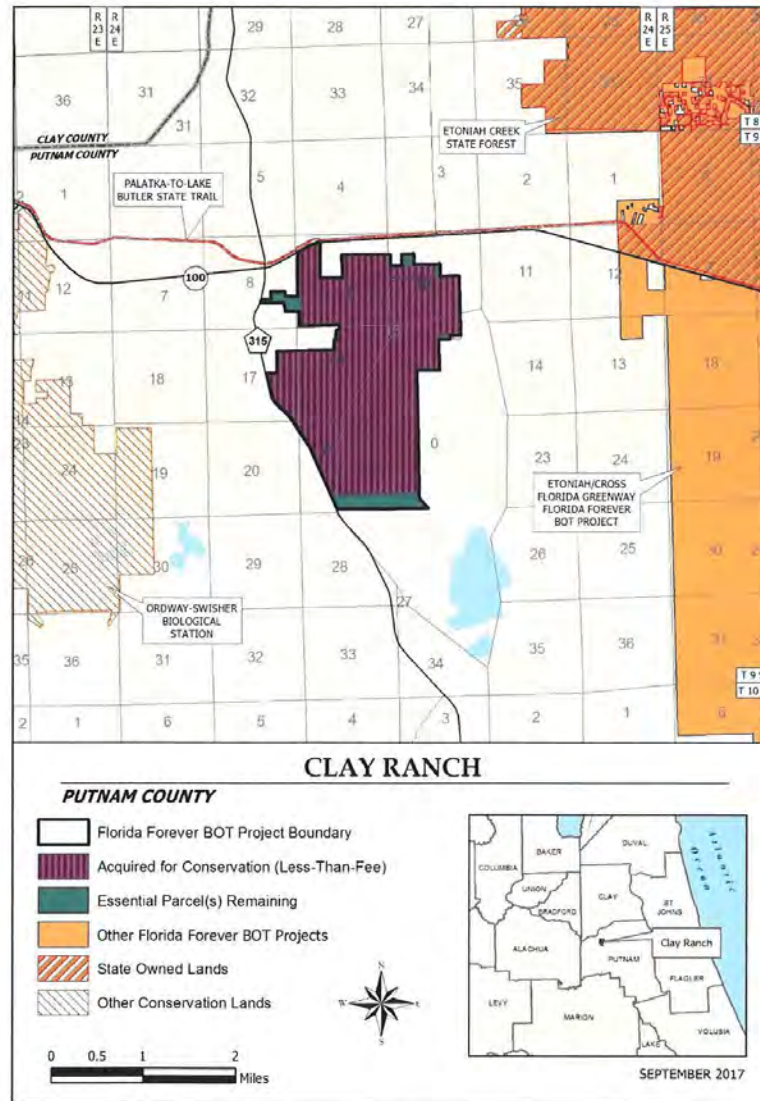
Clay Ranch FNAI Elements	Score
Gopher Tortoise	G3/S3
Florida Black Bear	G5T4/S4
Southeastern American Kestrel	G5T4/S3

There are 3 rare species associated with the project.

Map(s): Clay Ranch

Map(s): Clay Ranch

Clay Ranch



Map 38

Exhibit T

Compliance with Local Comprehensive Plan

Exhibit U

CDMSFP Management Plan Advisory Group Summary

Management Plan Advisory Group Public Hearing
Carl Duval Moore State Forest and Park
10-Year Land Management Plan

April 14, 2021

10:30 A.M.

Meeting Minutes

MPAG Members Present:

- | | |
|-------------------|---|
| • Rick Dolan | Waccasassa District Manager, Florida Forest Service (FFS) |
| • Jason Slater | Biologist, Florida Fish and Wildlife Conservation Commission |
| • Jeremy Olson | Land Manager, St. Johns River Water Management District |
| • Doug Doran | Board Member, Putnam County Soil and Water Conservation District |
| • Willy the Losen | CEO and Conservation Director, Putnam Land Conservancy (PLC) |
| • Ben Williams | Private Property Owner, President of North Florida Prescribed Burn Assoc. |
| • Larry Harvey | Commissioner, Putnam County Board of Commissioners |

MPAG Members Not Present:

- | | |
|-----------------|------------------------|
| • Mark Anderson | Private Property Owner |
|-----------------|------------------------|

Staff:

- Alan Davis, Land Planning Coordinator, FFS
- Brian Camposano, Forest Management Assistant Bureau Chief, FFS
- Stephen Montgomery, Forestry Resource Administrator, FFS
- Andrew Usina, Forestry Supervisor II, FFS
- Charlie Pedersen, Biological Scientist III, FFS
- Matt Kennard, Senior Forester, FFS
- Patti Anderson, Assistant Land Planning Coordinator, FFS

Guests:

- Tanya Reeves

Virtual Public Meeting Start Time: 10:30 A.M.

- Land Planning Coordinator Alan Davis opened the meeting by introducing himself and explained the purpose and statutory framework for the Carl Duval Moore State Forest and Park 10-Year Land Management Plan process. He explained that the Plan is not an annual work plan or detailed operational plan but provides general guidance for management of Carl Duval Moore State Forest and Park for the next 10-year period. It also outlines the major concepts that will guide management activities on the State Forest.
- Mr. Davis confirmed compliance with the Florida Sunshine Law reminding MPAG members to not discuss the draft outside of the public meetings. He stated that the meetings are open to the public, recorded, and minutes taken.
- Mr. Davis stated both MPAG meetings are open to the public and proper notice was given. The meetings were advertised to the public through local newspaper (Palatka Daily News, March 18, 2021), Florida Administrative Register, FFS webpage, as well as posted at the kiosks on the Forest. The meetings were announced at the Putnam County Board of County Commissioners meeting on March 9, 2021. He noted that the draft goes through various approvals before and after the MPAG meetings but that the Director

assumes final authority on changes to the draft. He described the day's two meetings: The first meeting is informational and provides opportunity for public comment; the 1:00 workshop meeting provides opportunity for the MPAG members to discuss the public comments. The public is encouraged to attend the Workshop, but participation is limited to MPAG members.

- Mr. Davis asked for MPAG member introductions.
- Mr. Davis then asked the advisory group to elect an MPAG chairperson. Commissioner Harvey nominated Rick Dolan, FFS Waccasassa District Manager. By further negative response consensus, Mr. Dolan was appointed chairperson. Mr. Davis then introduced Brian Camposano, Forest Management Assistant Bureau Chief.
- Mr. Camposano explained the technical logistics and how to use the webinar tools to share comments, then asked if there were any technical questions. No questions followed.
- Mr. Davis reiterated the purpose of this meeting is to hear public input. He acknowledged the in-person location and asked the FFS overseers to remark on any attendees. Stephen Montgomery stated that no attendees were present.
- Mr. Davis then introduced Forestry Supervisor II Andrew Usina who showed a 10-minute PowerPoint presentation of the 2021 10-year plan.
- Mr. Davis requested comments on the presentation. None followed.
- Mr. Davis then thanked everyone for attending adjourned the public hearing portion of the day's meetings.

Virtual Public Meeting End Time: 10:55 A.M.

Management Plan Advisory Group Workshop Meeting
Carl Duval Moore State Forest and Park
10-Year Land Management Plan

April 14, 2021

1:00 P.M.

Meeting Minutes

MPAG Members Present:

- | | |
|-------------------|---|
| • Rick Dolan | Waccasassa District Manager, Florida Forest Service (FFS) |
| • Jason Slater | Biologist, Florida Fish and Wildlife Conservation Commission |
| • Jeremy Olson | Land Manager, St. Johns River Water Management District |
| • Willy the Losen | CEO and Conservation Director, Putnam Land Conservancy (PLC) |
| • Ben Williams | Private Property Owner, President of North Florida Prescribed Burn Assoc. |
| • Mark Anderson | Private Property Owner |
| • Larry Harvey | Commissioner, Putnam County Board of Commissioners |

MPAG Members Not Present:

- | | |
|--------------|--|
| • Doug Doran | Board Member, Putnam County Soil and Water Conservation District |
|--------------|--|

Staff:

- Alan Davis, Land Planning Coordinator, FFS
- Brian Camposano, Forest Management Assistant Bureau Chief, FFS
- Stephen Montgomery, Forestry Resource Administrator, FFS
- Andrew Usina, Forestry Supervisor II, FFS
- Charlie Pedersen, Biological Scientist III, FFS
- Matt Kennard, Senior Forester, FFS
- Patti Anderson, Assistant Land Planning Coordinator, FFS

Guests:

- Tanya Reeves

Virtual Workshop Meeting Start Time: 1:00 P.M.

- Land Planning Coordinator Alan Davis introduced himself and opened the meeting by conducting an MPAG member sound check. He then stated that minutes will be emailed in a few days and will be approved via MPAG member negative response. He reminded the MPAG members to follow the Florida Sunshine Law guidelines, MPAG member appointment will terminate when the final draft is submitted to the Acquisition Restoration Council (ARC). The meeting will involve review of the draft and public comments through a page-by-page process.
- Mr. Davis noted that Mr. Usina would be revising the draft with proposed changes made during the meeting and subsequently presented to the Director for adoption.
- Mr. Davis asked if any MPAG members had comments regarding the public hearing conducted earlier. None followed. He then read aloud an email received after the public hearing. Guest Tanya Reeves asked if something could be done about areas on the Up-and-Down Lake Trail that have deep furrows making it difficult to hike. Mr. Davis stated that the issue would be recorded to be addressed by field personnel but is not a plan revision item.
- Mr. Davis and Mr. Usina proceeded with the page-by-page review.

- Commissioner Harvey asked if the meeting could proceed without page-by-page review and instead invite impromptu comments. Mr. Davis noted FFS's position to remain consistent with established review procedures for all State Forest MPAG Workshops. Mr. Dolan stated that the meeting should move forward as prearranged.
- Page 8. II. Administrative Section: Jeremy Olson noted the discrepancy between the tracts listed and their quantity reference. Mr. Usina corrected the reference.
- Page 24. V. Public Access and Recreation: Willy the Losen inquired as to whether the hiking trails allow bikes. Mr. Usina stated that the hiking trails are not restricted to hiking however, it was noted by Mr. Camposano that if the trail is currently designated as single-use (hiking only), then language should be added in the Planned section to evaluate the opportunity to integrate hiking and/or bicycle trails during the next 10-year period. Mr. Slater said that in his experience with management plans, recreational areas are approved for specific usage. Language was changed to consider bicycling.
- Page 27. Mr. the Losen noted concerns over the use of foaming agents in fire suppression as having toxic ingredients. Mr. Dolan said that it is not used near water bodies and to his knowledge FFS has not been directed to discontinue use of foaming agents.
- Jason Slater recommended adding language that designates geographical areas of approved and unapproved multiple-use, such as for cattle grazing. Mr. Davis noted that much of the LMP language is boilerplate. Mr. Camposano explained that potential multiple-use activities are outlined in all FFS LMPs as conceptual. He continued that with only 336 acres, CDMSFP may not be suitable for cattle grazing but is kept as option for possible expansion of the Forest. FFS lists examples of (but not all to avoid redundancy) revenue-generating activities under the framework of Florida Statute 589 for multiple-use activities. However, if an activity is found to negatively impact a Forest, proposed language by consensus is presented to the Director. Regarding existing and potential trails, he noted that single or multiple-use designation is/will be posted at the trailhead(s) for the public.
- Mr. Davis asked if there are further questions about the draft or exhibits. He then requested individual MPAG member response of approval of the plan changes.
- Mr. Slater approved of the changes and indicated that he hadn't earlier realized that the CDMSFP southern boundary is close to Caravelle Ranch Wildlife Management Area and that should the adjoining property be acquired; the contiguous property could be considered for hunting. Mr. Davis replied that FFS is always looking for acquisition opportunities as funding becomes available and with FDEP assistance. Mr. Dolan said that FFS is looking at partnering in management activities for prescribed burns and trail access and is reviewing deed restrictions to consider opening a WMA.
- Mr. the Losen was appreciative of FFS considering bicycling in the Recreation section. He asked if there are any pending acquisitions in the Optimal Boundary. Mr. Davis answered 'none' to his knowledge and that properties are considered as they come up for amendment to, or created in, a Florida Forever project which requires a willing seller. Mr. the Losen asked if PLC could assist with outreach to property owners. Mr. Davis and Mr. Dolan resounded with, "Yes, thank you".
- Ben Williams liked the discussion on connectivity and inclusivity into the future which he stated, 'makes good planning sense'.
- Mark Anderson approved of the plan and appreciated the discussion and the work put in.
- Commissioner Harvey approved of the plan as excellent and thanked FFS for the hard work and including him in the conversation.
- Mr. Davis advised that the revisions will be presented to Director Albury and upon approval will be submitted for ARC consideration on August 13, 2021. Mr. Davis thanked everyone for their participation and adjourned the meeting.

Virtual Workshop Meeting End Time: 1:38 P.M.

Exhibit V

Legal Description and Deed

FL 222139 B 637 P 822
CO:PUTNAM ST:FL

OK
JEM

PERSONAL REPRESENTATIVE'S DISTRIBUTIVE DEED

THIS INDENTURE is made this 17th day of November, 1993, by and between ANNA NICOSIA, the duly qualified and acting personal representative of the estate of CARL DUVAL MOORE, deceased, of which the taxpayer's identification number is 59-6972168, grantor, and THE STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, DIVISION OF FORESTRY, of which the federal identification number is: 59-6001874 and whose mailing address is: c/o Bob Crawford, Commissioner of Agriculture, The Capitol, Tallahassee, Florida 32399-0810, grantee.

WITNESSETH: That WHEREAS, CARL DUVAL MOORE died testate a resident of Putnam County, Florida, on November 4, 1991, seized and possessed of the real property hereinafter described; and

WHEREAS, title to parcels one and two of said property is being conveyed to grantee by virtue of two orders of the court named below dated March 4, 1992 and August 18, 1993, respectively, and the stipulations of the Florida Department of Natural Resources, and Shriners' Hospital for Crippled Children, a Colorado corporation not for profit, in accord with the proceedings in the Circuit Court for Putnam County, Florida, in Case No.: 91-9300-CP-53, subject to the rights of the grantor to sell or encumber the property for the purpose of defraying claims, costs and expenses of administration of decedent's estate; and

WHEREAS, the grantor wishes to distribute the parcels of property to this grantee and evidence the release of the property

THIS INSTRUMENT WAS PREPARED BY
TIMOTHY KEYSER, ATTORNEY AT LAW
P.O. BOX 92
INTERLACHEN, FLORIDA 32146

1

Documentary Tax PD. \$ 0
Certificate # 64-0000000-00-01
EDWARD L. BROOKS, Clerk of Circuit Court
By _____

from said right to sell or encumber,

FL 222139 B 637 P 823
CO:PUTNAM ST:FL

NOW, THEREFORE, in consideration of the foregoing and in connection with the distribution of the estate of said decedent, grantor has granted, conveyed, and confirmed unto grantee, its successors and assigns forever, all of the interest of said decedent in and to the real property situated in Putnam County, Florida, described as follows:

PARCEL ONE

Lot 60, Block 227, Unit 16, INTERLACHEN LAKES ESTATES, as recorded in Map Book 5, page 4 of the public records of the county.

Parcel Number: 11-10-24-4075-2270-0600

TOGETHER with all and singular the tenements, hereditaments, and appurtenances belonging to or in any way appertaining to the real property, subject to all reservations and easements of record, if any.

AND

PARCEL TWO

Parts of Section 11, Township 10 South, Ranger 24 East more particularly described as follows:

(1) The North 1/2 of the Southeast 1/4

EXCEPT the cemetery property described in Deed Book 25, page 772 and the land described in O.R. Book 489, page 862 TOGETHER with and SUBJECT to certain nonexclusive easements described in O.R. Book 414, pages 1847 through 1853.

(2) the North four and one-half acres, more or less, of the Northeast 1/4 of the Southwest 1/4 of the Southeast 1/4.

(3) the North four and one-half acres, more or less, of

the Northwest 1/4 of the Southeast 1/4 of the Southeast 1/4.

(4) the West 3/4 of the South 1/2 of the South 1/2 of the Southeast 1/4 EXCEPT for the lands described in O.R. Book 363, page 88 and O.R. Book 378, page 398 and TOGETHER with and SUBJECT to those nonexclusive easements described in O.R. Book 373, page 1561 (known as Burroughs Road).

(5) the Northeast 1/4 of the Southeast 1/4 of the Southeast 1/4. SUBJECT to an exclusive easement described in O.R. Book 374, page 1701 and O.R. Book 433, page 745.

(6) the Northwest 1/4 of the Southwest 1/4 of the Southeast 1/4 TOGETHER with and SUBJECT to the easement recorded in O.R. Book 373, page 1561.

(7) Those parts of the Southeast 1/4 described in Deed Book 21, page 340 not otherwise mentioned above or later conveyed.

All of the above references are to the public records of Putnam County, Florida.

Parcel Number: 11-10-24-0000-0080-0000

ALSO SUBJECT TO the following specific restrictions, reservations and reverters:

a. Along the West 350.0 feet, as measured along the North line, of the Northwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 11, Township 10 South, Range 24 East, there is a RESERVATION TO grantor's assigns an easement for roadway and utility purposes over and across the Westerly 30.0 feet thereof. Containing 5.34 acres, more or less, inclusive of reservation.

This portion of the aforesaid parcel, at the time of decedent's death, pass to BOBBY BRANHAM for his lifetime, or so long as he is able to tend and maintain or supervise it and all profits, income, taxes and maintenance shall belong to and be the sole responsibility of BOBBY BRANHAM during this time. At his death or whenever he is no longer able to tend and maintain or supervise it, it shall then pass to the STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, DIVISION OF FORESTRY to become a part of the CARL DUVAL MOORE STATE FOREST AND PARK.

b. The STATE OF FLORIDA shall use both of parcels (including the reserved portion when it reverts) as a forest and park to be known as the CARL DUVAL MOORE STATE FOREST AND PARK in perpetuity.

c. There shall be no homes, dance halls, nor any type of development, except those necessary for uses consistent with its use as a state forest and park.

d. This parcel shall never be sold.

e. In the event that this property is used for other purposes than those set forth above, then title to this property shall immediately revert to and vest in the SHRINERS' HOSPITAL FOR CRIPPLED CHILDREN, a Colorado corporation not for profit (SHRINERS), with all of the above restrictions applying fully, except that those set forth in the last part of c. which shall state instead: EXCEPT those necessary for uses with the work for crippled children, hospitals, clinics, or other health facilities that are for the purposes of research, treatment, or therapy in connection with the SHRINERS work in the physical or mental treatment, care and assistance, including physical therapy when necessary, of those persons entitled to such care and assistance.

f. In the event that paragraph e. applies, the STATE OF FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, DIVISION OF FORESTRY shall be immediately divested of any and all interest in or to this property and to any and all improvements that are then or have been made on or to the property, including those made by the STATE and it shall be forthwith barred from any of the property or from any use of the property whatsoever. In the event that any portion of this property has been used for an undesignated purpose, then the entire property shall vest in SHRINERS for the purposes as set forth above.

Because this deed is given to evidence the distribution of assets of a decedent's estate and involves the assumption of no mortgage, minimum state documentary stamps are affixed.

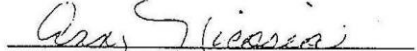
IN WITNESS WHEREOF, the undersigned, as personal representative of the estate of said decedent, has executed this instrument

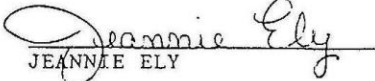
under seal on the date aforesaid.

Signed, sealed and delivered
in the presence of:

FL 222139 B 637 P 826
CO:PUTNAM ST:FL

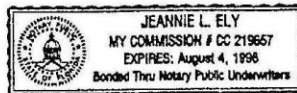

TIMOTHY KEYSER

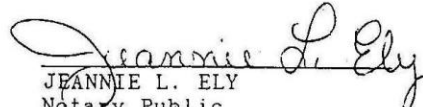

ANNA NICOSIA, as Personal
Representative of the Estate
of CARL DUVAL MOORE, Deceased
Post Office Box 277
Interlachen, Florida 32148


JEANNIE ELY

STATE OF FLORIDA)
COUNTY OF PUTNAM)

The foregoing instrument was acknowledged before me on this
17th day of November, 1993 by ANNA NICOSIA, as personal represen-
tative of the estate of CARL DUVAL MOORE, who is personally known
to me.




JEANNIE L. ELY
Notary Public
My commission expires:

FILED AND RECORDED
DATE 11/23/93 TIME 12:35
ED BROOKS CLERK
CO:PUTNAM ST:FL



FL 222140 B 637 P 827
CO:PUTNAM ST:FL

PERSONAL REPRESENTATIVE'S DISTRIBUTIVE DEED

THIS INDENTURE is made this 17th day of November, 1993, by and between ANNA NICOSIA, the duly qualified and acting personal representative of the estate of CARL DUVAL MOORE, deceased, of which the taxpayer's identification number is 59-6972168, grantor, and THE STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, DIVISION OF FORESTRY, of which the federal identification number is: 59-6001874 and whose mailing address is: c/o Bob Crawford, Commissioner of Agriculture, The Capitol, Tallahassee, Florida 32399-0810, grantee.

WITNESSETH: That WHEREAS, CARL DUVAL MOORE died testate a resident of Putnam County, Florida, on November 4, 1991, seized and possessed of the real property hereinafter described; and

WHEREAS, title to said property passed to grantee as of the date of said decedent's death pursuant to the provisions of the decedent's last will and testament and first codicil to the will, which were duly admitted to probate as will more fully appear from those certain proceedings in the Circuit Court for Putnam County, Florida, in Case No.: 91-9300-CP-53, subject to the rights of the grantor to sell or encumber the property for the purpose of defraying claims, costs and expenses of administration of decedent's estate; and

WHEREAS, the grantor wishes to distribute said property to

1

THIS INSTRUMENT WAS PREPARED BY:
TIMOTHY KEYSER, ATTORNEY AT LAW
P.O. BOX 92
INTERLACHEN, FLORIDA 32143

Documentary Tax PD. \$ 0
Certificate # 64-0000000-00-01
EDWARD L. BROOKS, Clerk of Circuit Court
By _____

FL 222140 B 637 P 828
CO:PUTNAM ST:FL

this grantee and evidence the release of the property from said right to sell or encumber,

NOW, THEREFORE, in consideration of the foregoing and in connection with the distribution of the estate of said decedent, grantor has granted, conveyed, and confirmed unto grantee, its successors and assigns forever, all of the interest of said decedent in and to the real property situated in Putnam County, Florida, described as follows:

The Southeast 1/4 and the East 1/2 of the Southeast 1/4 of the Southwest 1/4 of Section 24, Township 10 South, Range 24 East.

Parcel Number: 24-10-24-0000-0060-0000

TOGETHER with all and singular the tenements, hereditaments, and appurtenances belonging to or in any way appertaining to the real property, subject to all reservations and easements of record, if any, and SUBJECT TO the following specific restrictions, reservations and reverts:

This land is only for the purposes of and is to be used for the production of timber, game management, or school for forestry management methods. It is not to be used for other purposes and this conveyance is only for so long as the land is used for those specific purposes. In the event that any other use is made of this land, then title to this property is to immediately vest in the SHRINERS HOSPITAL FOR CRIPPLED CHILDREN (SHRINERS), a Colorado corporation not for profit and exempt pursuant to Internal Revenue Code Section 501(c)(3). The STATE OF FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, DIVISION OF FORESTRY shall be completely

divested of any and all interest in this land and the timber and other improvements, produce, income, or accruments attached thereto, forevermore. In the event that the title to this property reverts to SHRINERS', then it shall be subject to the following restrictions:

a. There are to be no homes, dance halls, nor any type of development, except those necessary for uses with the work for crippled children, hospitals, clinics or other health facilities that are for the purposes of research, treatment or therapy in connection with the SHRINERS' work in the physical or mental treatment, care and assistance, including physical therapy when necessary, of those persons entitled to such care and assistance.

b. This parcel must never be sold.

c. In the event that this property is used for other purposes than those set forth above, then the title to this property shall immediately vest in the STATE OF FLORIDA to be used as a park, such park shall be known as the CARL MOORE STATE PARK, and the SHRINERS shall be completely divested of any and all interest in or to this property and to any and all improvements that are now or have been made on or to the property, including those made by the SHRINERS and they shall be forthwith barred from any income from the property in any manner whatsoever. In the event that one portion of this property has been used for an undesignated purpose, then the entire property shall vest in the STATE OF FLORIDA for the purposes so designated above.

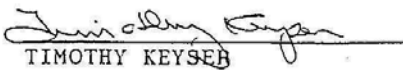
Because this deed is given to evidence the distribution of assets of a decedent's estate and involves the assumption of no mortgage, minimum state documentary stamps are affixed.

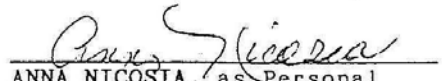
IN WITNESS WHEREOF, the undersigned, as personal representative of the estate of said decedent, has executed this instrument

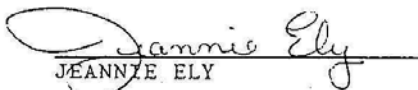
FL 222140 B 637 P 830
CO:PUTNAM ST:FL

under seal on the date aforesaid.

Signed, sealed and delivered
in the presence of:

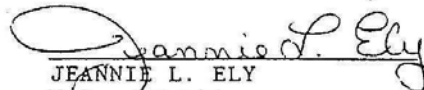

TIMOTHY KEYSER

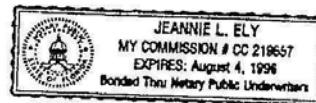

ANNA NICOSIA, as Personal
Representative of the Estate
of CARL DUVAL MOORE, Deceased
Post Office Box 277
Interlachen, Florida 32148


JEANNIE ELY

STATE OF FLORIDA)
COUNTY OF PUTNAM)

17th The foregoing instrument was acknowledged before me on this
day of November, 1993 by ANNA NICOSIA, as personal represen-
tative of the estate of CARL DUVAL MOORE, who is personally known
to me.


JEANNIE L. ELY
Notary Public
My commission expires:



4

FILED AND RECORDED
DATE 11/23/93 TIME 12:35
ED BROOKS
CO:PUTNAM
CLERK
ST:FL

Exhibit W

Arthropod Control Plan



PUTNAM COUNTY

P.O. BOX 2499
PALATKA, FLORIDA 32178-2499

PHONE: (386) 329-0395

SUNCOM: 860-0395

FAX: (386) 329-0486

SANITATION DEPARTMENT

LANDFILL OPERATIONS
RECYCLING & EDUCATION
SOLID WASTE COLLECTION
MOSQUITO CONTROL

March 25, 2020

Stephen Montgomery
Forestry Resources Administrator
Waccasassa Forestry Center

Mr. Montgomery,

The Putnam County Mosquito Control department is responsible for pest control and oversight of our local Arthropod Control Plan. At this time, there are no special activities related to or within the Carl Duval Moore State Forest and Park located in Putnam County. Our Mosquito Control Office has not been requested to provide service within the forested area to date, therefore no spraying has occurred. We are not recommending arthropod control treatment for Carl Duval Moore State Forest.

Sincerely,

A handwritten signature in cursive script that reads "Melinda Wasdin".

Melinda Wasdin, Program Manager
Putnam County Mosquito Control

MCW:lcw

xc: file



NICOLE "NIKKI" FRIED
COMMISSIONER

Florida Department of Agriculture and Consumer Services
Division of Agricultural Environmental Services

ARTHROPOD MANAGEMENT PLAN - PUBLIC LANDS

Section 388.4111, F.S.
Telephone: (850) 617-7995

Return to:

Mosquito Control Program
3125 Conner Blvd, Bldg 6,
Tallahassee, Florida 32399-1650

For use in documenting an Arthropod Control Plan for lands designated by the State of Florida or any political subdivision thereof as being environmentally sensitive and biologically highly productive therein. Fill this form out if control work is necessary or planned.

Name of Designated Land: CARL DUVAL MOORE STATE FOREST AND PARK

Is Control Work Necessary: ☐ Yes ☒ No

Location: PUTNAM COUNTY, FL

Land Management Agency: FOREST MANAGEMENT BUREAU

Are Arthropod Surveillance Activities Necessary? ☐ Yes ☒ No
If "Yes", please explain:

Which Surveillance Techniques Are Proposed?
Please Check All That Apply:

☐ Landing Rate Counts

☐ Light Traps

☐ Sentinel Chickens

☐ Citizen Complaints

☐ Larval Dips

☐ Other

N/A

If "Other", please explain:

N/A

Arthropod Species for Which Control is Proposed:

N/A

Proposed Larval Control:

N/A

Proposed larval monitoring procedure:

Are post treatment counts being obtained:

☐ Yes

☒ No

Biological Control of Larvae:

N/A

Might predacious fish be stocked:

☐ Yes

☒ No

Other biological controls that might be used:

Material to be Used for Larvaciding Applications:

N/A

(Please Check All That Apply:)

☐ Bti

☐ Bs

☐ Methoprene

☐ Non-Petroleum Surface Film

☐ Other, please specify:

Please specify the following for each larvacide:

Chemical or Common name:

☐ Ground

☐ Aerial

Rate of application:

Method of application:

Proposed Adult Mosquito Control:

Aerial adulticiding ☐ Yes ☒ No

Ground adulticiding ☐ Yes ☒ No

Please specify the following for each adulticide:

Chemical or common name:

Rate of application:

Method of application:

N/A

Proposed Modifications for Public Health Emergency Control: Arthropod control agency may request special exception to this plan during a threat to public or animal health declared by State Health Officer or Commissioner of Agriculture.

✓

Proposed Notification Procedure for Control Activities:

STEPHEN MONTGOMERY - PFS RESOURCE ADMINISTRATOR
352-395-4924 OFFICE
Records: 352-494-5703 MOBILE
352-395-4959 FAX

Are records being kept in accordance with Chapter 388, F.S.:

☒ Yes ☐ No

Records Location: 140 COUNTY LANDFILL RD. PALATKA, FL 32177

How long are records maintained: 5-10 YEARS

Vegetation Modification:

What trimming or altering of vegetation to conduct surveillance or treatment is proposed?

NONE

Proposed Land Modifications:

Is any land modification, i.e., rotary ditching, proposed:

NONE

Include proposed operational schedules for water fluctuations:

N/A

List any periodic restrictions, as applicable, for example peak fish spawning times.

N/A

Proposed Modification of Aquatic Vegetation:

N/A

Land Manager Comments:

Arthropod Control Agency Comments:

PUTNAM COUNTY MOSQUITO CONTROL WILL NOT RECOMMEND
CHEMICAL ARTHROPOD SPRAYING OF PUBLIC LANDS UNLESS
THERE IS A GRAVE THREAT TO PUBLIC HEALTH.


Signature of Lands Manager or Representative

4/28/2020
Date


Signature of Mosquito Control Director / Manager

12/6/19
Date