SEMINOLE STATE FOREST

2024 LAND MANAGEMENT PLAN

EXHIBITS

Exhibit A

Twelve-Year Management Accomplishment Summary

Seminole State Forest

12-Year Accomplishments

Site Preparation	Chop Single Pass	No.	587
	Burning	Acres	570
	Herbicide	Acres	242
	Mowing	Acres	15

Planting	South Florida Slash, Bareroot	No.	217,000
		Acres	299
	Longleaf Containerized	No.	398,500
		Acres	573

Seedling Survival Checks	Survival Checks	Acres	1,172
	Plots	No.	70

Timber Stand Improvement	Mowing	Acres	120
	Other	Acres	120

Timber Sales	Marking	Acres	820
	Cruising	Acres	766
	Harvest	Acres	2,232
		Tons	62,070

Timber Inventory	Inventory Update	Acres	19,380
	New Inventory	Acres	1,181
	Plots	Acres	2,081

Invasive Control	Air Potato	Acres	20.15
	Caesar Weed	Acres	387.66
	Camphor Tree	Acres	72.43
	China Berry	Acres	29.44
	Chinese Tallow	Acres	13.57
	Cogon Grass	Acres	439.02
	Japanese Climbing Fern	Acres	14.02
	Natal Grass	Acres	229.27
	Other	Acres	628.22

Fire	Wildfire	No.	28
		Acres	809.10
	Prescribed Burning	Acres	26,985

Recreation	Day Use Estimated Forest Visitors	No.	1,657,212
	Overnight Primitive Camping	No.	14,732
	Annual Entrance Pass	No.	332

Roadwork	Road Graded	Miles	99
	Road Rebuilt	Miles	12.15
	Culverts Installed	No.	1
	Low Water Crossing	No.	1

Boundary Maintenance	Maintenance/Marking	Miles	103.18

I&E Activities	Programs/Tours	No.	79
	Radio/TV Articles	No.	2
	Education/Research	No.	14

Other Activities	Firelines Rehab	Miles	8
	Archaeological Sites Monitored	No.	31
	Feral Hogs Removed	No.	72
	Scrub Restoration Oak Reduction	Acres	270
	Scrub Restoration Single Drum Chopping	Acres	767

Exhibit B

Boundary, Tract, Primary Roads, and Acreage Map

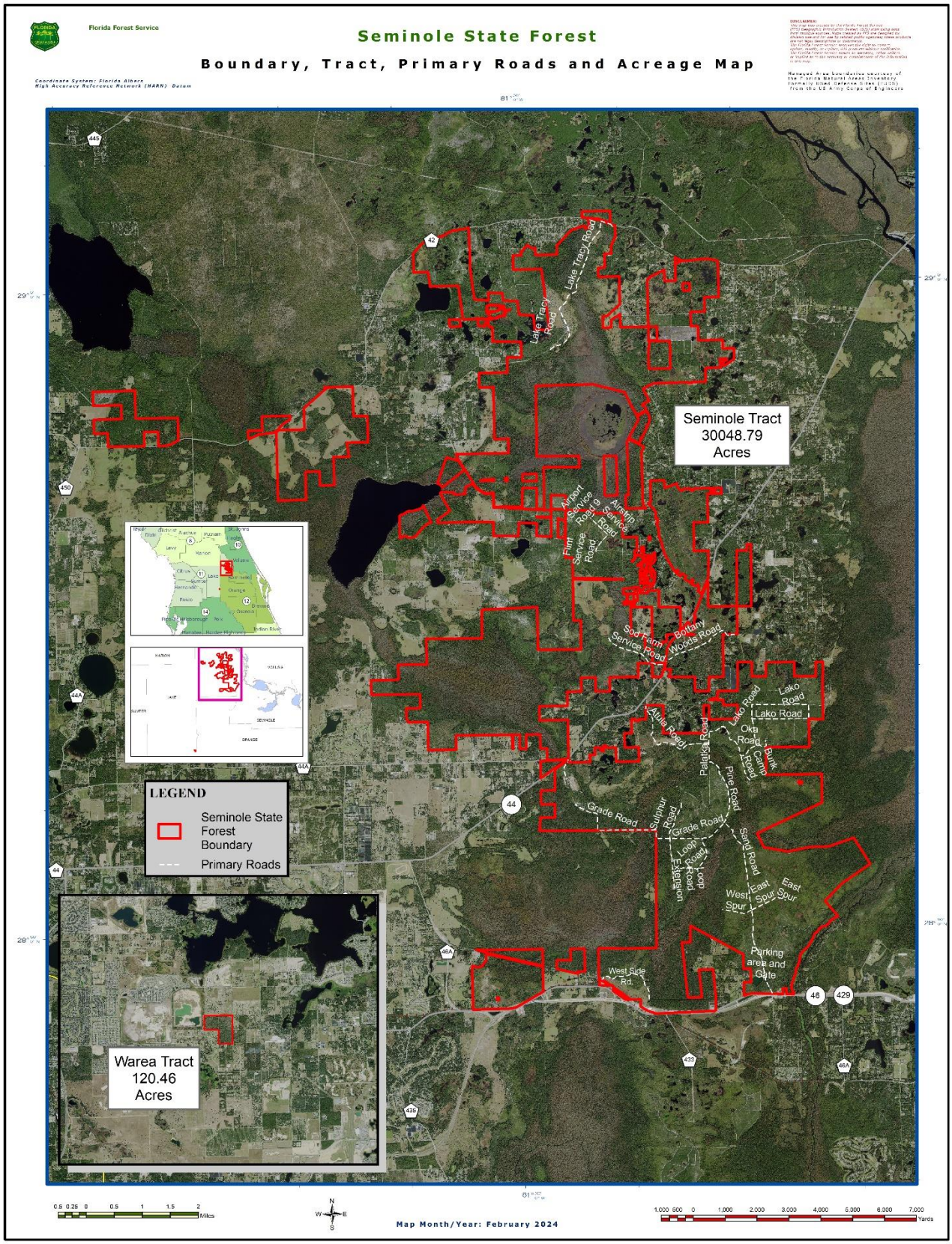

Florida Forest Service
Seminole State Forest
Boundary, Tract, Primary Roads and Acreage Map
Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum
Seminole Tract
30048.79
Acres
Warea Tract
120.46
Acres
LEGEND
Seminole State Forest Boundary
Primary Roads
Lake Tracy Road
Airport Service Road
Flint Service Road
Sod Farm Service Road
Botany Woods Road
Lako Road
Okl Road
Camp Road
Burk Road
Pine Road
Grade Road
Sulphur Road
Loop Road
Loop Road Extension
Sand Road
East Spur
West Spur
Parking area and Gate
West Side Rd
Map Month/Year: February 2024

Exhibit C

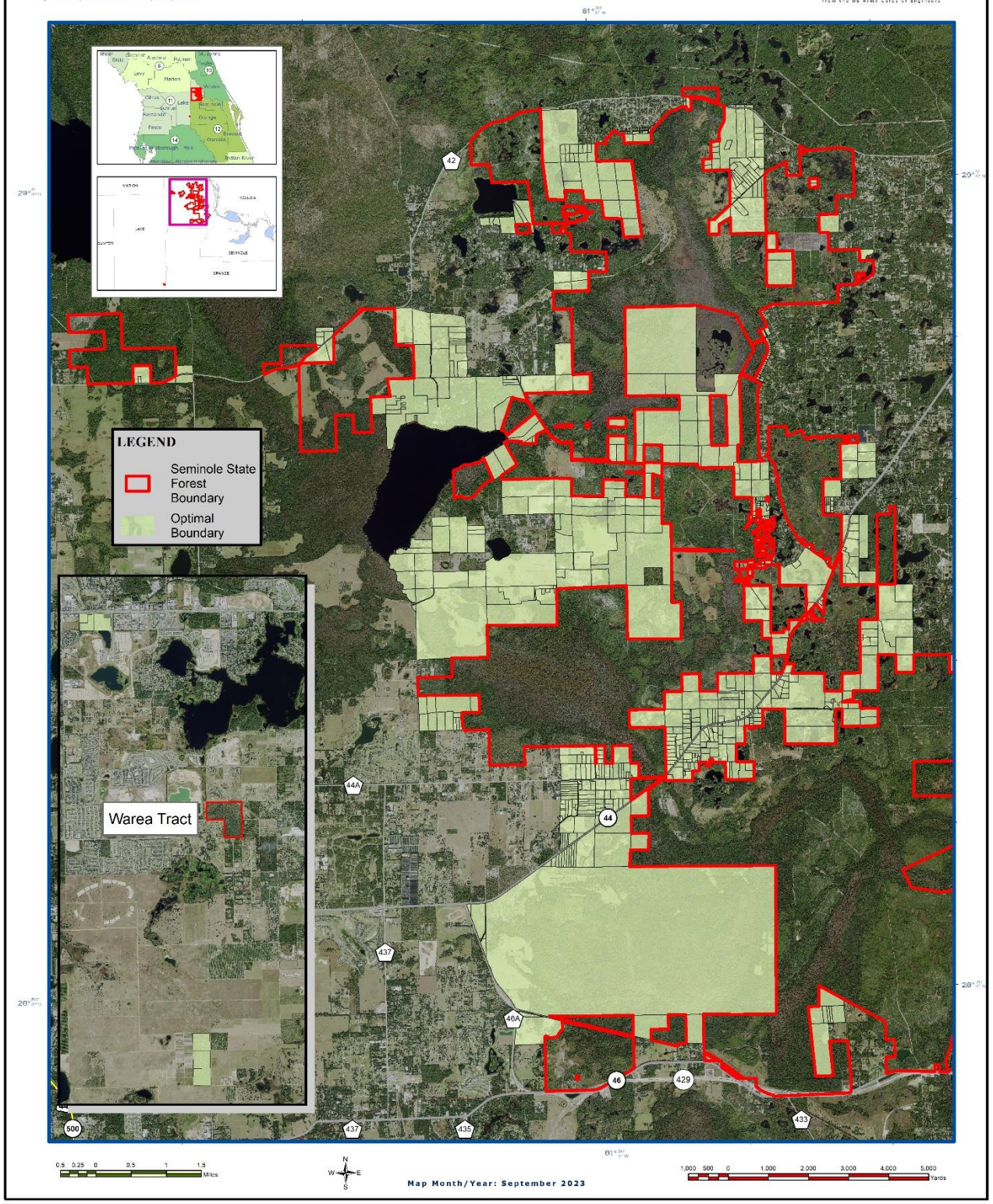
Optimal Management Boundary Map

Florida Forest Service

Seminole State Forest

Optimal Boundary Map

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



Map Month/Year: September 2023

Exhibit D

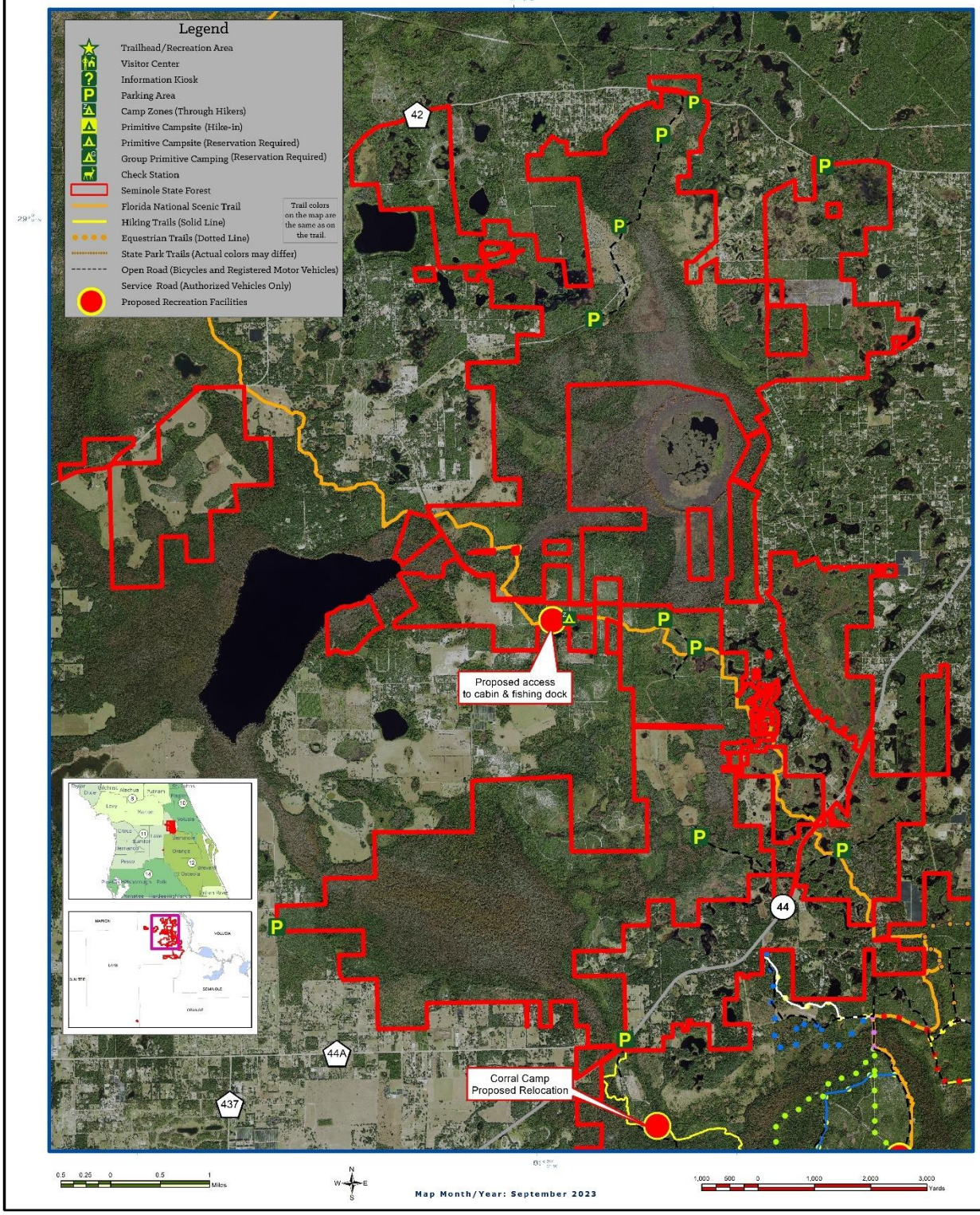
Facilities, Recreation, and Improvements Maps

Florida Forest Service

Seminole State Forest

Facilities, Recreation and Improvements Map (North)

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



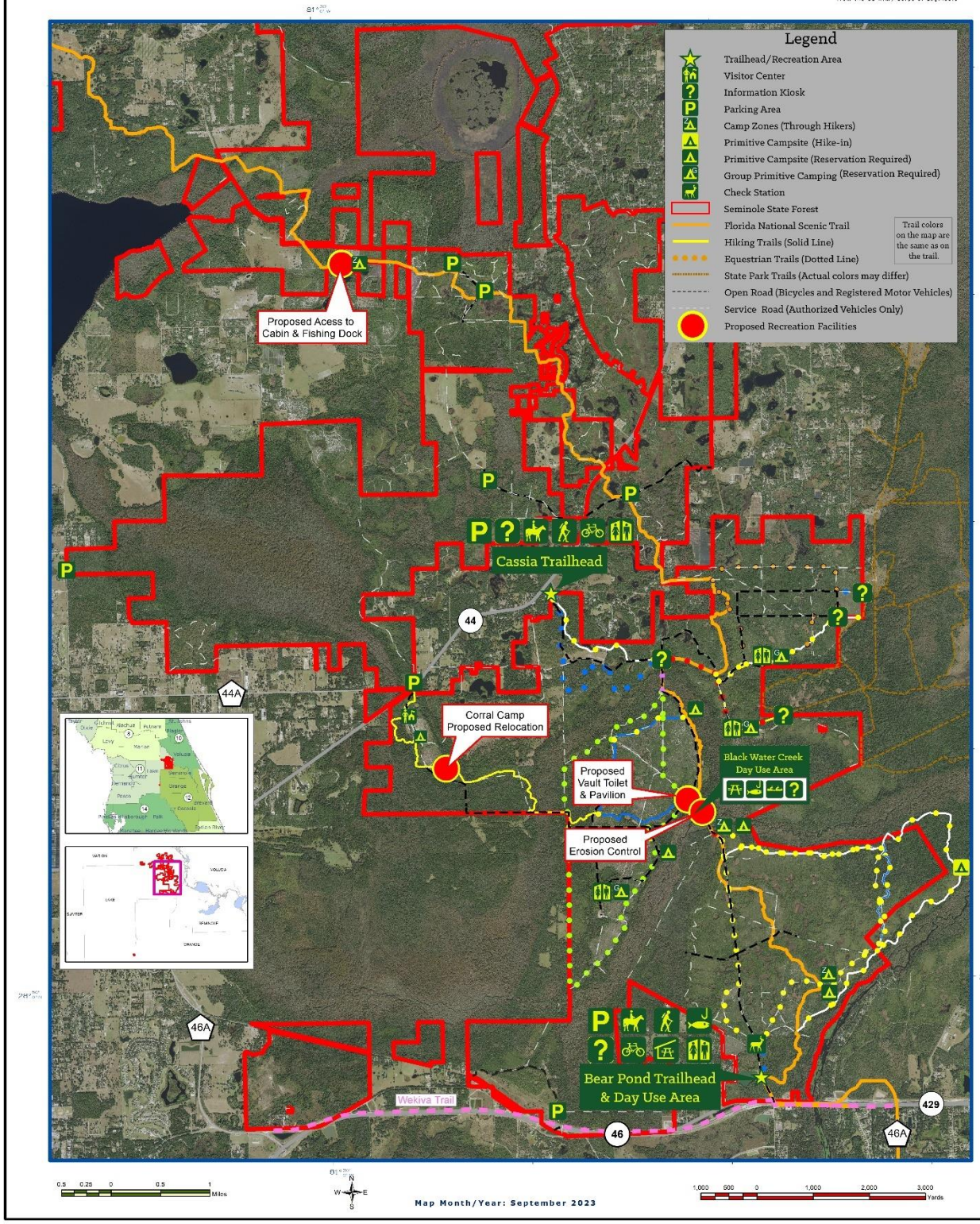
Map Month/Year: September 2023

Florida Forest Service

Seminole State Forest

Facilities, Recreation and Improvements Map (South)

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



Map Month/Year: September 2023

Exhibit E

Seminole State Forest Parcels Map

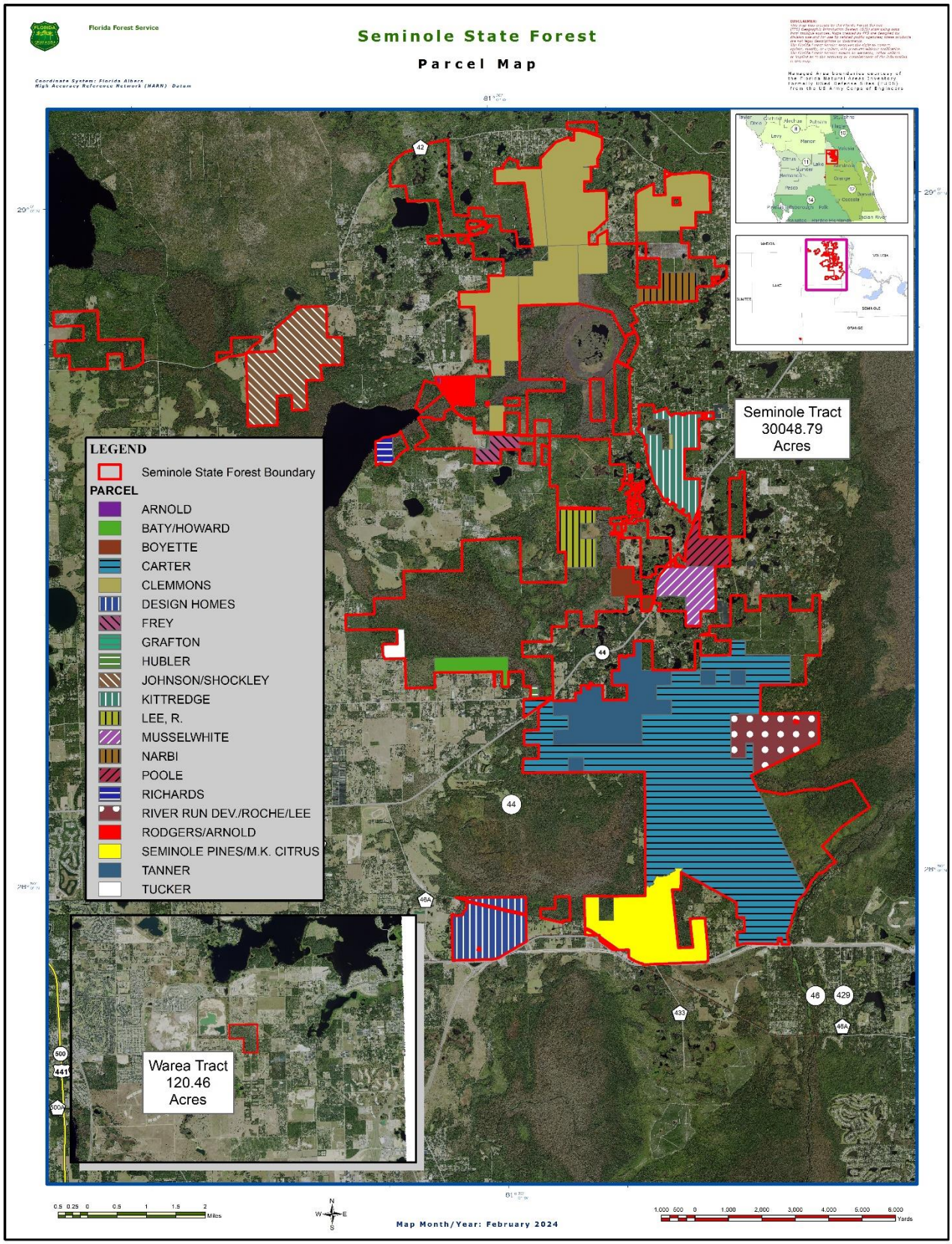

Florida Forest Service
Seminole State Forest
Parcel Map
Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum
Seminole Tract
30048.79
Acres
Warea Tract
120.46
Acres
LEGEND
Seminole State Forest Boundary
PARCEL
ARNOLD
BATY/HOWARD
BOYETTE
CARTER
CLEMMONS
DESIGN HOMES
FREY
GRAFTON
HUBLER
JOHNSON/SHOCKLEY
KITTREDGE
LEE, R.
MUSSELWHITE
NARBI
POOLE
RICHARDS
RIVER RUN DEV./ROCHE/LEE
RODGERS/ARNOLD
SEMINOLE PINES/M.K. CITRUS
TANNER
TUCKER
Miles
Yards
Map Month/Year: February 2024

Exhibit F

Proximity to Significant Managed Lands

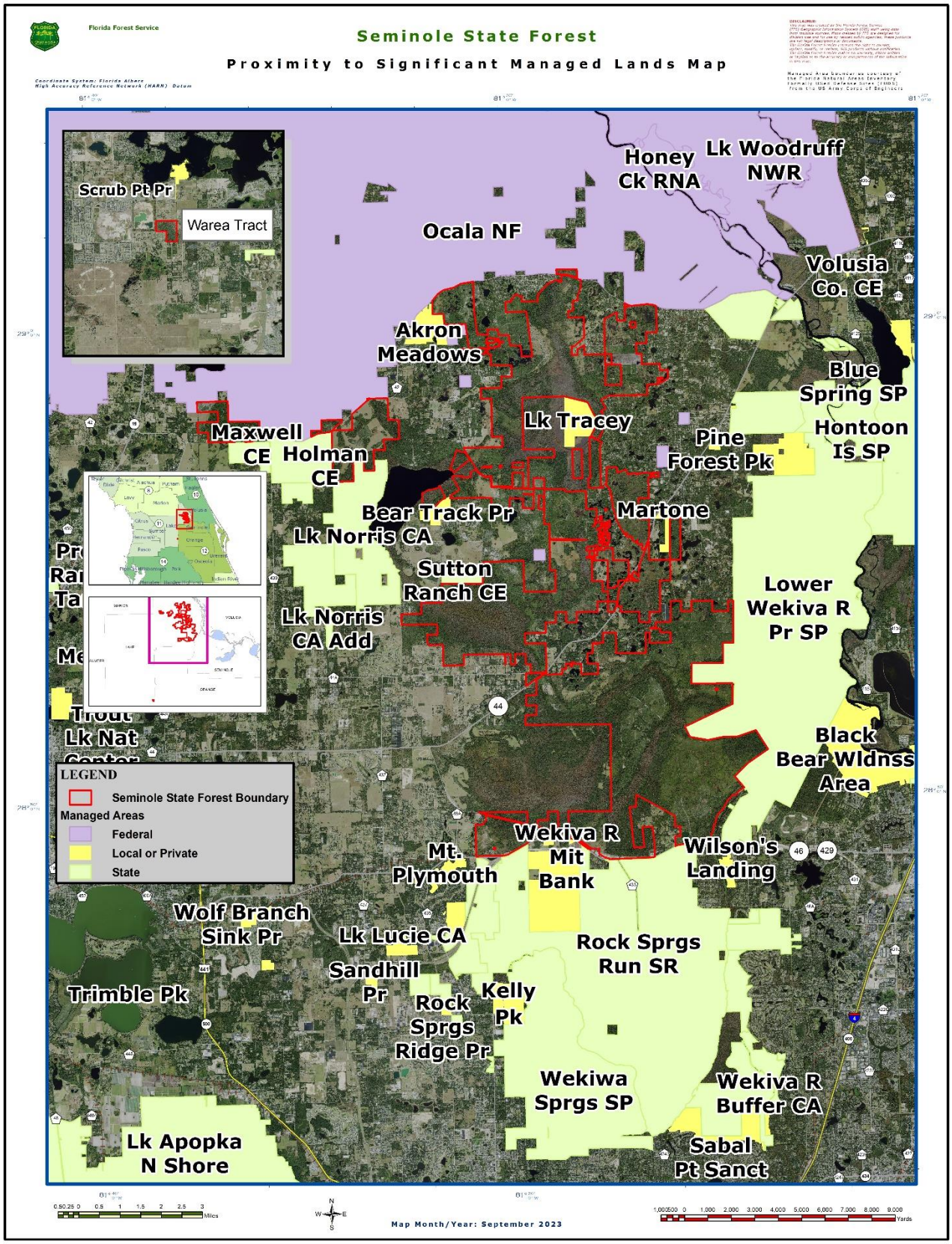

Florida Forest Service
Seminole State Forest
Proximity to Significant Managed Lands Map
Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum
Scrub Pt Pr
Warea Tract
Honey Ck RNA
Lk Woodruff NWR
Ocala NF
Volusia Co. CE
Akron Meadows
Blue Spring SP
Lk Tracey
Maxwell CE
Holman CE
Pine Forest Pk
Hontoon Is SP
Bear Track Pr
Lk Norris CA
Martone
Sutton Ranch CE
Lower Wekiva R Pr SP
Lk Norris CA Add
Lk Nat
Black Bear Wldnss Area
LEGEND
Seminole State Forest Boundary
Managed Areas
Federal
Local or Private
State
Wekiva R Mit Bank
Mt. Plymouth
Wilson's Landing
Wolf Branch Sink Pr
Lk Lucie CA
Rock Sprgs Run SR
Sandhill Pr
Trimble Pk
Kelly Pk
Rock Sprgs Ridge Pr
Wekiwa Sprgs SP
Wekiva R Buffer CA
Lk Apopka N Shore
Sabal Pt Sanct
Miles
Yards
Map Month/Year: September 2023

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 CompliancePermits@dos.myFlorida.com for project review information.

February 20, 2024

Florida Master Site File

Emily Marsh
State Lands Management Planner
Florida Forest Service
Florida Department of Agriculture and Consumer Services

In response to your inquiry of February 20, 2024, the Florida Master Site File lists 24 archeological sites, three resource groups and two standing structures on Seminole State Forest, Lake County.

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** CompliancePermits@dos.myFlorida.com

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

Sincerely,

Eman M. Vovsi
Data Base Analyst
Florida Master Site File
Eman.Vovsi@DOS.MyFlorida.com

Florida Master Site File

Created: 2/20/2024

AR=24
SS=2
CM=0
RG=3
BR=0
Total=29

Cultural Resource Roster

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
LA00264	AR	USFS 86-58 OCA				
LA00471	AR	PALM SPRINGS	NA			
LA00524	AR	USFS OCA 92-7	NONE <4 MI		Not Eligible	
LA02244	AR	FGT NEW SMYRNA LATERAL 1	CASSIA STATION		Insufficient Info	
LA02613	AR	01-18 OCALA			Not Eligible	
LA02615	AR	01-20 OCALA			Not Eligible	
LA02616	AR	01-21 OCALA			Not Eligible	
LA02760	AR	Cassia Station	NA			
LA02761	AR	South Loop Hill	NA			
LA02762	AR	Sulphur Ridge I	NA			
LA02772	AR	Sulphur Ridge II	NA			
LA02773	AR	Outskirts Hammock	NA			
LA02774	AR	Cassia Church Road	NA			
LA02775	SS	DOF BU351211	36242 UNKN TANNER LN UNKN, CASSIA	1883 Unspecified		
LA02776	AR	W.C.C. 1923 Camp	NA			
LA02777	AR	Triple Pond	NA			
LA02778	AR	Low Ridge Slough	NA			
LA02779	AR	Runway Hammock	NA			
LA02780	RG	Ponceannah	Paisley	Mixed District	Insufficient Info	
LA02781	AR	Brainard's Farm	NA			
LA02782	AR	Electric Fence	NA			
LA02783	SS	Carter House	28500 State 44 RD, Eustis	1938		
LA02957	RG	Seaboard Coast Line RR Grade	Eustis	Linear Resource - 1 Contrib Resources	Eligible	
LA04480	AR	Slater Lane	Altoona			
LA04506	AR	MJ1601	Paisley			
LA04507	AR	MJ1608	Paisley			
LA04508	AR	Blue Horse Trail, Southern Loop	Cassia			
LA04520	AR	Wekiva Relocation Site 1	Sanford		Not Eligible	
LA04921	RG	CR 42		Linear Resource	Not Eligible	

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 June 2021)

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

A. Historic Property Definition

Historic properties include archaeological sites and historic structures as well as other types of resources. Chapter 267, Florida Statutes states: " *'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 Chapter 267, *F.S.* and state policy related to historic properties, state agencies of the executive branch must provide the Division of Historical Resources (Division) the opportunity to comment on any undertakings with the potential to affect historic properties that are listed, or eligible for listing, in the National Register of Historic Places, 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 undertaking. (267.061(2)(a))

State agencies must consult with the Division when, as a result of state action or assistance, a historic property will be demolished or substantially altered in a way that will adversely affect the property. State agencies must take timely steps to consider feasible and prudent alternatives to the adverse effect. If no feasible or prudent alternatives exist, the state agency must take timely steps to avoid or mitigate the adverse effect. (267.061(2)(b))

State agencies must consult with Division to establish a program to locate, inventory and evaluate all historic properties under ownership or controlled by the agency. (267.061(2)(c))

State agencies are responsible for preserving historic properties under their control. State agencies are directed to use historic properties available to the agency when that use is consistent with the historic property and the agency's mission. State agencies are also directed to pursue preservation of historic properties to support their continued use. (267.061(2)(d))

C. Statutory Authority

The full text of Chapter 267, F.S. and additional information related to the treatment of historic properties is available at:

https://dos.myflorida.com/historical/preservation/compliance-and-review/regulations-guidelines/

D. Management Implementation

Although the Division sits on the Acquisition and Restoration Council and approves land management plans, these plans are conceptual and do not include detailed project information. Specific information for individual projects must be submitted to the Division for review and comment.

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. The Division's recommendations may include, but are not limited to: approval of the project as submitted, recommendation for a cultural resource assessment survey by a qualified professional archaeologist, and modifications to the proposed project to avoid or mitigate potential adverse effects.

Projects such as additions or alterations to historic structures as well as new construction must also be submitted to the Division for review. Projects involving structures fifty years of age or older must be submitted to the Division for a significance determination**.** In rare cases, structures under fifty years of age may be deemed historically significant.

Adverse effects to historic properties must be avoided when possible, and if avoidance is not possible, additional consultation with the Division is necessary to develop a mitigation plan. Furthermore, managers of state property should make preparations for locating and evaluating historic properties, both archaeological sites and historic structures.

E. Archaeological Resource Management (ARM) Training

The ARM Training Course introduces state land managers to the nature of archaeological resources, Florida archaeology, and the role of the Division in managing state-owned archaeological resources. Participants gain a better understanding of the requirements of state and federal laws with regard to protecting and managing archaeological sites on state managed lands. Participants also receive a certificate recognizing their ability to conduct limited monitoring activities in accordance with the Division's Review Procedure, thereby reducing the time and money spent to comply with state regulations. Additional information regarding the ARM Training Course is available at:

https://dos.myflorida.com/historical/archaeology/education/arm-training-courses/

F. Matrix for Ground Disturbance on State Lands

The matrix is a tool designed to help streamline the Division's Review Procedure. The matrix allows state land managers to make decisions about balancing ground disturbance and stewardship of historic resources. The matrix establishes types of undertakings that are either minor or major disturbances and then guides the land manager to consult the Division, conduct ARM-trained project monitoring, or proceed with the project. Additional information regarding the matrix is available at:

https://dos.myflorida.com/historical/archaeology/education/dhr-matrix-for-ground-disturbance-on-state-lands/

G. Human Remains Treatment

Chapter 872, *Florida Statutes* makes it illegal to willfully and knowingly disturb human remains. In the event human remains are discovered, cease all activity in the area that may disturb the remains. Leave the bones and nearby items in place. Immediately notify law enforcement or the local district medical examiner of the discovery and follow the provisions of Chapter 872, FS. Additional information regarding the treatment of human remains and cemeteries is available at:

https://dos.myflorida.com/historical/archaeology/human-remains/
https://dos.myflorida.com/historical/archaeology/human-remains/abandoned-cemeteries/what-are-the-applicable-laws-and-regulations/

H. Division of Historical Resources Review Procedure

Projects on state owned or controlled properties may submit projects to the Division for review using the streamlined State Lands Consultation Form. The form provides instructions to submit projects for review and outlines the necessary information for the Division to complete the review process. The State Lands Consultation Form and additional information about the Division's review process is available at:

https://dos.myflorida.com/historical/preservation/compliance-and-review/state-lands-review/

* * *

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

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

StateLandsCompliance@dos.myflorida.com

Phone: (850) 245-6333
Toll Free: (800) 847-7278
Fax: (850) 245-6435

Exhibit I

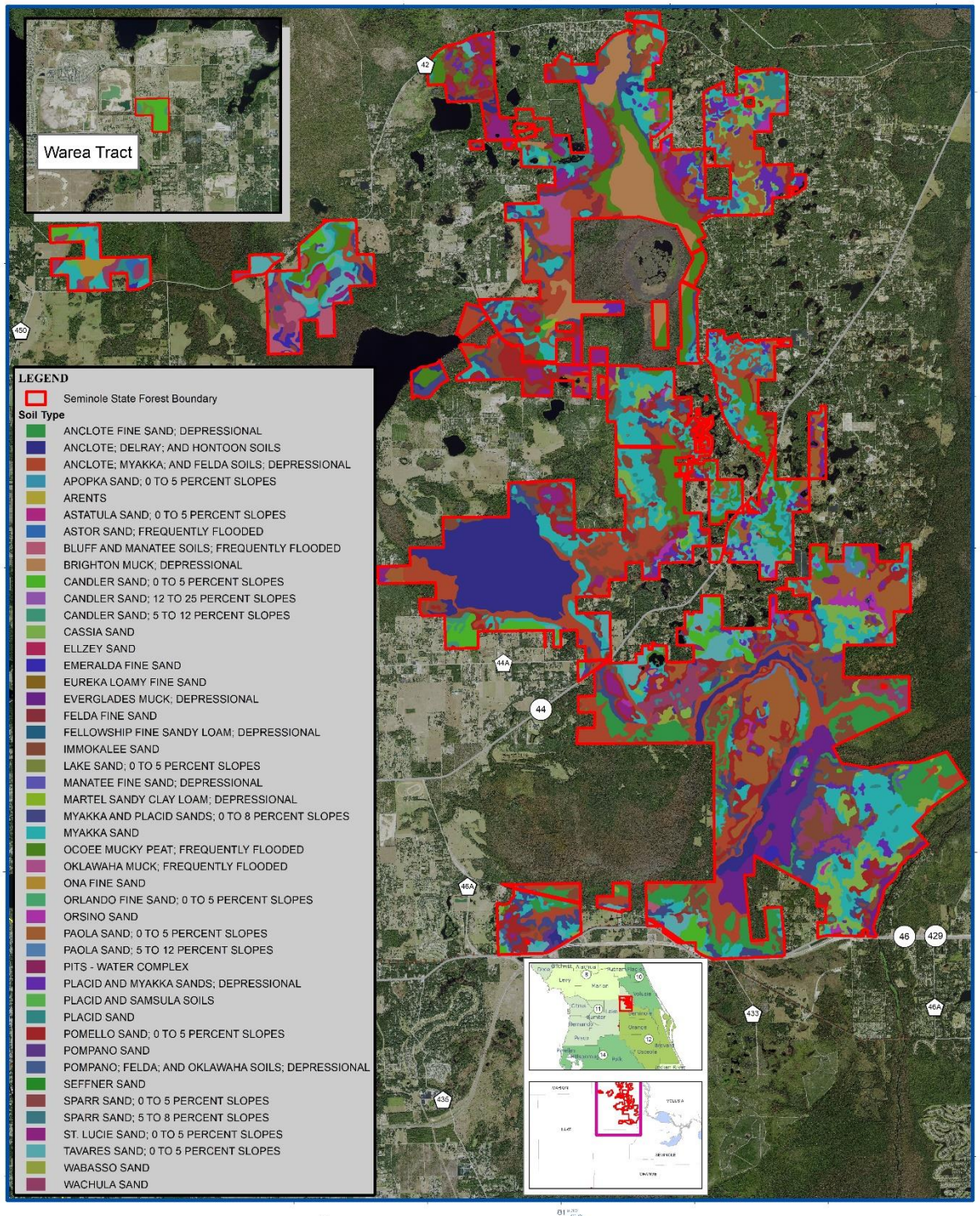
Soil Types Maps and Descriptions

Florida Forest Service

Seminole State Forest

Soils Map

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



LEGEND

Seminole State Forest Boundary

Soil Type

- ANCLOTE FINE SAND; DEPRESSIONAL
- ANCLOTE; DELRAY; AND HONTOON SOILS
- ANCLOTE; MYAKKA; AND FELDA SOILS; DEPRESSIONAL
- APOPKA SAND; 0 TO 5 PERCENT SLOPES
- ARENTS
- ASTATULA SAND; 0 TO 5 PERCENT SLOPES
- ASTOR SAND; FREQUENTLY FLOODED
- BLUFF AND MANATEE SOILS; FREQUENTLY FLOODED
- BRIGHTON MUCK; DEPRESSIONAL
- CANDLER SAND; 0 TO 5 PERCENT SLOPES
- CANDLER SAND; 12 TO 25 PERCENT SLOPES
- CANDLER SAND; 5 TO 12 PERCENT SLOPES
- CASSIA SAND
- ELLZEY SAND
- EMERALDA FINE SAND
- EUREKA LOAMY FINE SAND
- EVERGLADES MUCK; DEPRESSIONAL
- FELDA FINE SAND
- FELLOWSHIP FINE SANDY LOAM; DEPRESSIONAL
- IMMOKALEE SAND
- LAKE SAND; 0 TO 5 PERCENT SLOPES
- MANATEE FINE SAND; DEPRESSIONAL
- MARTEL SANDY CLAY LOAM; DEPRESSIONAL
- MYAKKA AND PLACID SANDS; 0 TO 8 PERCENT SLOPES
- MYAKKA SAND
- OCOEE MUCKY PEAT; FREQUENTLY FLOODED
- OKLAWAHA MUCK; FREQUENTLY FLOODED
- ONA FINE SAND
- ORLANDO FINE SAND; 0 TO 5 PERCENT SLOPES
- ORSINO SAND
- PAOLA SAND; 0 TO 5 PERCENT SLOPES
- PAOLA SAND; 5 TO 12 PERCENT SLOPES
- PITS - WATER COMPLEX
- PLACID AND MYAKKA SANDS; DEPRESSIONAL
- PLACID AND SAMSULA SOILS
- PLACID SAND
- POMELLO SAND; 0 TO 5 PERCENT SLOPES
- POMPANO SAND
- POMPANO; FELDA; AND OKLAWAHA SOILS; DEPRESSIONAL
- SEFFNER SAND
- SPARR SAND; 0 TO 5 PERCENT SLOPES
- SPARR SAND; 5 TO 8 PERCENT SLOPES
- ST. LUCIE SAND; 0 TO 5 PERCENT SLOPES
- TAVARES SAND; 0 TO 5 PERCENT SLOPES
- WABASSO SAND
- WACHULA SAND

0.5 0.25 0 0.5 1 1.5 2 Miles

N W E S

1,000 500 0 1,000 2,000 3,000 4,000 5,000 6,000 Yards

Map Month/Year: September 2023

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)

Lake County Area, Florida

Map Unit: 1—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: Tavares (5%)

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

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.

Map Unit: 2—Sparr sand, 5 to 12 percent slopes

Component: Sparr (90%)

The Sparr component makes up 90 percent of the map unit. Slopes are 5 to 12 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 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 22 inches during July, August. Organic matter content in the surface horizon is about 2 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 (10%)

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

Map Unit: 3—Anclote fine sand

Component: Anclote (90%)

The Anclote component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions, 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 occasionally flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during March, April, May, June, June, 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: Myakka (10%)

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

Map Unit: 4—Anclote and Myakka soils

Component: Anclote (35%)

The Anclote component makes up 35 percent of the map unit. Slopes are 0 to 2 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 January, February, March, April, May, June, July, August, September, October, November, December. 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: Myakka (30%)

The Myakka component makes up 30 percent of the map unit. Slopes are 0 to 2 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 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 frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 5 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: Felda (20%)

The Felda component makes up 20 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 low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is moderate. This soil is not flooded. It is occasionally ponded. A seasonal zone of water saturation is at 6 inches during May, June, July, August, September, October. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 3w. 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: Oklawaha, freq. flooded (5%)

Generated brief soil descriptions are created for major soil components. The Oklawaha, freq. flooded soil is a minor component.

Component: Brighton, depressional (5%)

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

Component: Manatee, depressional (5%)

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

Map Unit: 5—Apopka sand, 0 to 5 percent slopes

Component: Apopka (80%)

The Apopka component makes up 80 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 well drained. Water movement in the most restrictive layer is moderately 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 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: Sparr (6%)

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

Component: Candler (5%)

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

Component: Jumper (5%)

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

Component: Jonesville (4%)

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

Map Unit: 6—Apopka sand, 5 to 12 percent slopes

Component: Apopka (80%)

The Apopka component makes up 80 percent of the map unit. Slopes are 5 to 12 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 well drained. Water movement in the most restrictive layer is moderately 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: Kendrick (7%)

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

Component: Apopka (7%)

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

Component: Kendrick, thin subsurface (6%)

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

Map Unit: 7—Astatula sand, 0 to 5 percent slopes

Component: Astatula (90%)

The Astatula 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 or sandy 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 very 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 6s. 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, very deep loamy substratum (5%)

Generated brief soil descriptions are created for major soil components. The Candler, very deep loamy substratum 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: 8—Candler 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, knolls 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 (5%)

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

Component: Millhopper (5%)

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

Map Unit: 9—Candler sand, 5 to 12 percent slopes

Component: Candler (85%)

The Candler component makes up 85 percent of the map unit. Slopes are 5 to 12 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 very 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 6s. 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: Apopka (6%)

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

Component: Kendrick (5%)

Generated brief soil descriptions are created for major soil components. The Kendrick 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: Pompano (1%)

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

Map Unit: 10—Candler sand, 12 to 40 percent slopes

Component: Candler (90%)

The Candler component makes up 90 percent of the map unit. Slopes are 12 to 40 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 excessively drained. Water movement in the most restrictive layer is very 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 7s. 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: Kendrick (5%)

Generated brief soil descriptions are created for major soil components. The Kendrick 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.

Map Unit: 11—Brighton muck, depressional

Component: Brighton, depressional (95%)

The Brighton, depressional component makes up 95 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of woody 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 March, April, May, June, July, August, September, October. 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: Ocoee, freq. flooded (2%)

Generated brief soil descriptions are created for major soil components. The Ocoee, freq. flooded soil is a minor component.

Component: Placid, depressional (2%)

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

Component: Oklawaha, freq. flooded (1%)

Generated brief soil descriptions are created for major soil components. The Oklawaha, freq. flooded soil is a minor component.

Map Unit: 12—Cassia sand

Component: Cassia (90%)

The Cassia component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on rises 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 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 22 inches during June, July. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 6s. 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: Immokalee, non-hydric (10%)

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

Map Unit: 13—Emeralda fine sand

Component: Emeralda (90%)

The Emeralda component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of clayey 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 low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is high. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 7 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: Felda (5%)

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

Component: Martel (5%)

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

Map Unit: 14—Eureka loamy fine sand, 0 to 2 percent slopes

Component: Eureka, hydric (75%)

The Eureka, hydric component makes up 75 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 clayey marine deposits. Depth to a root restrictive layer, abrupt textural change, is 11 to 14 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during June, July, August, September, October, November. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 3w. 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: Eureka (15%)

The Eureka component makes up 15 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 clayey marine deposits. Depth to a root restrictive layer, abrupt textural change, is 11 to 14 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 15 inches during June, July, August, September, October, November. Organic matter content in the surface horizon is about 3 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: Paisley (5%)

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

Component: Eaton (5%)

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

Map Unit: 15—Felda fine sand

Component: Felda (80%)

The Felda component makes up 80 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 low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during May, June, July, August, September, October. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 3w. 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: Felda, depressional (10%)

The Felda, depressional component makes up 10 percent of the map unit. Slopes are 0 to 2 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 poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is moderate. This soil is not flooded. It is occasionally ponded. A seasonal zone of water saturation is at 0 inches during June, July, August, September. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 3w. 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: Wabasso, non-hydric (10%)

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

Map Unit: 16—Fellowship fine sandy loam, depressional

Component: Fellowship (100%)

The Fellowship component makes up 100 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of clayey 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 low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is high. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 6 percent. Nonirrigated land capability classification is 5w. 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.

Map Unit: 17—Arents

Component: Arents (100%)

The Arents component makes up 100 percent of the map unit. Slopes are 0 to 5 percent. This component is on fills, flats on marine terraces on coastal plains. The parent material consists of altered 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 moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 0 percent. 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.

Map Unit: 18—Martel sandy clay loam

Component: Martel (90%)

The Martel component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of clayey alluvium. 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 very low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is high. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 8 percent. Nonirrigated land capability classification is 5w. 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: Oklawaha, freq. flooded (5%)

Generated brief soil descriptions are created for major soil components. The Oklawaha, freq. flooded soil is a minor component.

Component: Everglades, depressional (5%)

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

Map Unit: 19—Bluff and Manatee soils, frequently flooded

Component: Bluff (30%)

The Bluff component makes up 30 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains on marine terraces on coastal plains. The parent material consists of clayey alluvium. 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 very low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is high. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during June, July, August, September. Organic matter content in the surface horizon is about 8 percent. Nonirrigated land capability classification is 5w. 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: Manatee (25%)

The Manatee component makes up 25 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains 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 moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is frequently 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 7 percent. Nonirrigated land capability classification is 5w. 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: Felda (15%)

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

Component: Emeralda (15%)

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

Component: Anclote (15%)

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

Map Unit: 20—Immokalee sand

Component: Immokalee, non-hydric (70%)

The Immokalee, non-hydric component makes up 70 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 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 12 inches during July, August. Organic matter content in the surface horizon is about 3 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: Immokalee, hydric (20%)

The Immokalee, hydric component makes up 20 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces, 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 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 3 inches during June, July, August, September. 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: Placid, depressional (5%)

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

Component: Wabasso, hydric (5%)

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

Map Unit: 21—Lake sand, 0 to 5 percent slopes

Component: Lake (80%)

The Lake component makes up 80 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridges, marine terraces, coastal plains. The parent material consists of eolian deposits or sandy fluvial or 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 very 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. 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: Astatula (10%)

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

Component: Apopka (10%)

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

Map Unit: 26—Manatee fine sand, depressional

Component: Manatee, depressional (90%)

The Manatee, depressional component makes up 90 percent of the map unit. Slopes are 0 to 2 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 moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during March, April, May, June, July, August, September, October. Organic matter content in the surface horizon is about 7 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: Martel (10%)

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

Map Unit: 28—Myakka-Myakka, wet, sands, 0 to 2 percent slopes

Component: Myakka (75%)

The Myakka 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 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 12 inches during June, July, August, September. 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: Myakka, wet (15%)

The Myakka, wet component makes up 15 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 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 3 inches during June, July, August, September. 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: Basinger (5%)

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

Component: EauGallie (4%)

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

Component: Placid, depressional (1%)

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

Map Unit: 29—Myakka and Placid sand, 2 to 8 percent slopes

Component: Myakka (60%)

The Myakka component makes up 60 percent of the map unit. Slopes are 2 to 8 percent. This component is on seeps on hills 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 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 3 inches during June, July, August, September. Organic matter content in the surface horizon is about 5 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: Placid (30%)

The Placid component makes up 30 percent of the map unit. Slopes are 2 to 8 percent. This component is on seeps on hills 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 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, September. Organic matter content in the surface horizon is about 6 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: Immokalee, non-hydric (10%)

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

Map Unit: 30—Lochloosa sand

Component: Lochloosa (85%)

The Lochloosa 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 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 moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 48 inches during May, June, July, August, September, October. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 2w. 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: Sparr (10%)

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

Component: Kendrick (5%)

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

Map Unit: 31—Ocoee mucky peat

Component: Ocoee, freq. flooded (90%)

The Ocoee, freq. flooded component makes up 90 percent of the map unit. Slopes are 0 to 2 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 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, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 50 percent. Nonirrigated land capability classification is 3w. 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: Brighton, depressional (10%)

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

Map Unit: 32—Oklawaha muck

Component: Oklawaha, freq. flooded (90%)

The Oklawaha, freq. flooded component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of herbaceous organic material over loamy and clayey 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 very low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is high. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 88 percent. Nonirrigated land capability classification is 3w. 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: Brighton, depressional (10%)

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

Map Unit: 33—Ona-Ona, wet, fine sand, 0 to 2 percent slopes

Component: Ona (75%)

The Ona 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 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 12 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 3 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: Ona, wet (12%)

The Ona, wet component makes up 12 percent of the map unit. Slopes are 0 to 2 percent. This component is on sloughs 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 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 8 inches during July, August, September. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 3w. 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: Myakka (5%)

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

Component: Immokalee (4%)

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

Component: Basinger, hydric (4%)

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

Map Unit: 34—Orlando fine sand, 0 to 5 percent slopes

Component: Orlando (95%)

The Orlando component makes up 95 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridges, coastal plains. The parent material consists of sandy marine deposits over fluviomarine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is 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. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 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 (3%)

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

Component: Seffner (2%)

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

Map Unit: 35—Paola sand, 0 to 5 percent slopes

Component: Paola (85%)

The Paola component makes up 85 percent of the map unit. Slopes are 0 to 3 percent. This component is on ridges 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 excessively drained. Water movement in the most restrictive layer is very 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 6s. 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: Apopka (6%)

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

Component: Astatula (5%)

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

Component: Pomello (4%)

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

Map Unit: 36—Paola sand, 5 to 12 percent slopes

Component: Paola (95%)

The Paola component makes up 95 percent of the map unit. Slopes are 5 to 12 percent. This component is on ridges 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 excessively drained. Water movement in the most restrictive layer is very 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 7s. 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: Paola, 0 to 5 percent (5%)

Generated brief soil descriptions are created for major soil components. The Paola, 0 to 5 percent soil is a minor component.

Map Unit: 37—Ellzey sand

Component: Ellzey, non-hydric (70%)

The Ellzey, non-hydric component makes up 70 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces, 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 moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during July, August. Organic matter content in the surface horizon is about 4 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: Ellzey, hydric (20%)

The Ellzey, hydric component makes up 20 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces, 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 moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during June, July, August, September. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 3w. 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: Wabasso, non-hydric (5%)

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

Component: Wabasso, hydric (5%)

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

Map Unit: 38—Placid sand, frequently ponded, 0 to 2 percent slopes

Component: Placid (80%)

The Placid component makes up 80 percent of the map unit. Slopes are 0 to 2 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 moderate. 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 April, May, June, July, August, September, October. Organic matter content in the surface horizon is about 6 percent. Nonirrigated land capability classification is 3w. 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: Myakka, hydric (10%)

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

Component: Adamsville (10%)

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

Map Unit: 39—Seffner sand

Component: Seffner (90%)

The Seffner component makes up 90 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 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 12 inches during July, August. Organic matter content in the surface horizon is about 3 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: Felda (10%)

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

Map Unit: 40—Placid and Myakka sands, depressional

Component: Placid (55%)

The Placid component makes up 55 percent of the map unit. Slopes are 0 to 2 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 moderate. 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, February, March, April, May, June, July, August, September, October, November, December. 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: Myakka (35%)

The Myakka component makes up 35 percent of the map unit. Slopes are 0 to 2 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 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 frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 5 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: Ellzey, hydric (5%)

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

Component: Wabasso, hydric (5%)

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

Map Unit: 41—Pomello sand, 0 to 5 percent slopes

Component: Pomello (85%)

The Pomello 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 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 very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during June, July, August, September, October, November. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 6s. 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: Immokalee (5%)

Generated brief soil descriptions are created for major soil components. The Immokalee 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: St. Lucie (3%)

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

Component: Satellite (3%)

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

Map Unit: 42—Pompano sand

Component: Pompano, non-hydric (60%)

The Pompano, non-hydric component makes up 60 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 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 not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during May, June, July, August, September, October. Organic matter content in the surface horizon is about 3 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: Pompano, hydric (20%)

The Pompano, hydric component makes up 20 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 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 not flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during June, July, August, September. Organic matter content in the surface horizon is about 3 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: Wabasso, non-hydric (10%)

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

Component: Anclote (10%)

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

Map Unit: 43—St. Lucie sand, 0 to 8 percent slopes

Component: St. Lucie (85%)

The St. Lucie component makes up 85 percent of the map unit. Slopes are 0 to 8 percent. This component is on ridges on marine terraces on coastal plains. The parent material consists of sandy eolian deposits and/or 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 very 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 7s. 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: Pomello (8%)

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

Component: Paola (5%)

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

Component: Orsino (2%)

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

Map Unit: 44—Swamp

Component: Organic soil (51%)

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

Component: Mineral soil (49%)

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

Map Unit: 45—Tavares 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 57 inches during June, July, August, September, October, November, December. 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 0 within 30 inches of the soil surface.

Component: Apopka (6%)

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

Component: Candler (4%)

Generated brief soil descriptions are created for major soil components. The Candler 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: Zolfo (2%)

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

Map Unit: 46—Orsino sand

Component: Orsino (90%)

The Orsino 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 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 very 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 33 inches during July, August. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 6s. 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: Apopka (10%)

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

Map Unit: 48—Wabasso sand

Component: Wabasso, non-hydric (70%)

The Wabasso, non-hydric component makes up 70 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 moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during July, August. Organic matter content in the surface horizon is about 3 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: Wabasso, hydric (20%)

The Wabasso, hydric component makes up 20 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 low. 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 3 inches during June, July, August, September. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 3w. 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: Immokalee, non-hydric (5%)

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

Component: Felda (5%)

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

Map Unit: 49—Wauchula sand

Component: Wauchula, non-hydric (70%)

The Wauchula, non-hydric component makes up 70 percent of the map unit. Slopes are 0 to 2 percent. This component is on rises 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 July, August. Organic matter content in the surface horizon is about 3 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: Wauchula, hydric (20%)

The Wauchula, hydric component makes up 20 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 3 inches during June, July, August, September. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 3w. 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: Immokalee, non-hydric (10%)

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

Map Unit: 50—Borrow Pits

Component: Borrow pits (70%)

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

Component: Aquents (30%)

Generated brief soil descriptions are created for major soil components. The Aquents 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.

Ocala National Forest Area, Florida

Map Unit: 12—Astatula and Tavares sands, 0 to 5 percent slopes

Component: Astatula (50%)

The Astatula component makes up 50 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 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 6s. 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 (40%)

The Tavares component makes up 40 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 59 inches during May, June, July, August, September, October. 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: Duette, Loamy sand substratum (5%)

Generated brief soil descriptions are created for major soil components. The Duette, Loamy sand substratum 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.

Map Unit: 13—Astatula and Candler sands, flora rich, 0 to 5 percent slopes

Component: Astatula, flora rich (55%)

The Astatula, flora rich component makes up 55 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 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 6s. 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, flora rich (30%)

The Candler, flora rich component makes up 30 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridges on marine terraces on coastal plains, knolls on marine terraces on coastal plains. The parent material consists of sandy 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 6s. 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: Apopka (8%)

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

Component: Tavares (7%)

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

Map Unit: 18—Orsino fine sand, 0 to 5 percent slopes

Component: Orsino (85%)

The Orsino 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 very 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 73 inches during June, July, August, September, October, November, December. 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: Astatula (5%)

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

Component: Paola (5%)

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

Component: Immokalee (5%)

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

Map Unit: 27—Myakka-Myakka, wet, fine sands, 0 to 2 percent slopes

Component: Myakka (70%)

The Myakka component makes up 70 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods, 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 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 12 inches during June, July, August, September, October, November. 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: Myakka, wet (15%)

The Myakka, wet component makes up 15 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods, 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 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 6 inches during 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: Placid (5%)

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

Component: EauGallie (5%)

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

Component: Basinger (5%)

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

Map Unit: 28—Immokalee fine sand, 0 to 2 percent slopes

Component: Immokalee (90%)

The Immokalee component makes up 90 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 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, October, November. 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: Basinger (4%)

Generated brief soil descriptions are created for major soil components. The Basinger 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: Pomello (2%)

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

Component: Wabasso (2%)

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

Component: Margate (1%)

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

Component: Placid (1%)

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

Map Unit: Ax—Astor sand

Component: Astor (90%)

The Astor component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions 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 not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 7 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: Sellers (10%)

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

Map Unit: Ba—Basinger sand

Component: Basinger (100%)

The Basinger component makes up 100 percent of the map unit. Slopes are 0 to 2 percent. This component is on drainageways on marine terraces on coastal plains, 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 poorly drained. Water movement in the most restrictive layer is very 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 3 inches during June, July, August, September, October, November. Organic matter content in the surface horizon is about 1 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.

Map Unit: De—Delks sand

Component: Delks (100%)

The Delks component makes up 100 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 marine deposits over clayey marine deposits. Depth to a root restrictive layer, cemented horizon, is 18 to 30 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low. 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 12 inches during July, August, September. 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.

Map Unit: Ma—Made land

Component: Made land (100%)

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

Map Unit: Po—Pomello sand

Component: Pomello (85%)

The Pomello 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 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 36 inches during June, July, August, September, October, November. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 6s. 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: St. Johns (5%)

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

Component: Myakka, non-hydric (5%)

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

Component: Sellers (5%)

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

Map Unit: Sa—St. Johns sand, 0 to 2 percent slopes

Component: St. Johns (90%)

The St. Johns component makes up 90 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 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 3 inches during July, August. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 3w. 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: Myakka (10%)

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

Map Unit: Sp—Sellers and Pamlico soils

Component: Sellers (40%)

The Sellers component makes up 40 percent of the map unit. Slopes are 0 to 2 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 3 inches during January, February, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 7 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: Pamlico (30%)

The Pamlico component makes up 30 percent of the map unit. Slopes are 0 to 2 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 moderate. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 3 inches during January, February, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 55 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: Everglades (15%)

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

Component: Astor (15%)

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

Map Unit: Ss—Sellers sand

Component: Sellers (100%)

The Sellers component makes up 100 percent of the map unit. Slopes are 0 to 2 percent. This component is on drainageways on marine terraces on coastal plains, 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 3 inches during January, February, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 7 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.

Data Source Information

Soil Survey Area: Lake County Area, Florida
Survey Area Data: Version 20, Jun 8, 2020

Soil Survey Area: Ocala National Forest Area, Florida
Survey Area Data: Version 20, Jun 9, 2020

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

November 2, 2020

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

RE: Seminole State Forest

Dear Ms. Anderson:

Thank you for your inquiry regarding the surface water quality classifications and Outstanding Florida Waters (OFW) for Seminole State Forest in Lake County. Based on our review, the surface waters within and adjacent to the State Forest are classified as Class III waters according to rule 62-302.400, Florida Administrative Code (FAC).

According to subsection 62-302.700(9), FAC, five OFWs are at least partially within the state forest and two more are adjacent to the State Forest. OFWs within the State Forest are: Wekiva River System Special Water OFW, Wekiva River Aquatic Preserve, Lower Wekiva State Reserve (now State Park), Wekiva-Ocala Connector, and Seminole Springs/Woods OFW (acquisition). Adjacent OFWs include: Rock Springs Run State Reserve and BMK Ranch. An additional OFW, Lake Dorr, which is within the Ocala National Forest, is about 0.7 miles away from the State Forest (see map 1). There is a smaller section of the State Forest (inset map) about 28 miles south of the main state forest area. The nearest OFWs are Clermont Chain of Lakes and Lake Louisa State Park over 3.5 miles away.

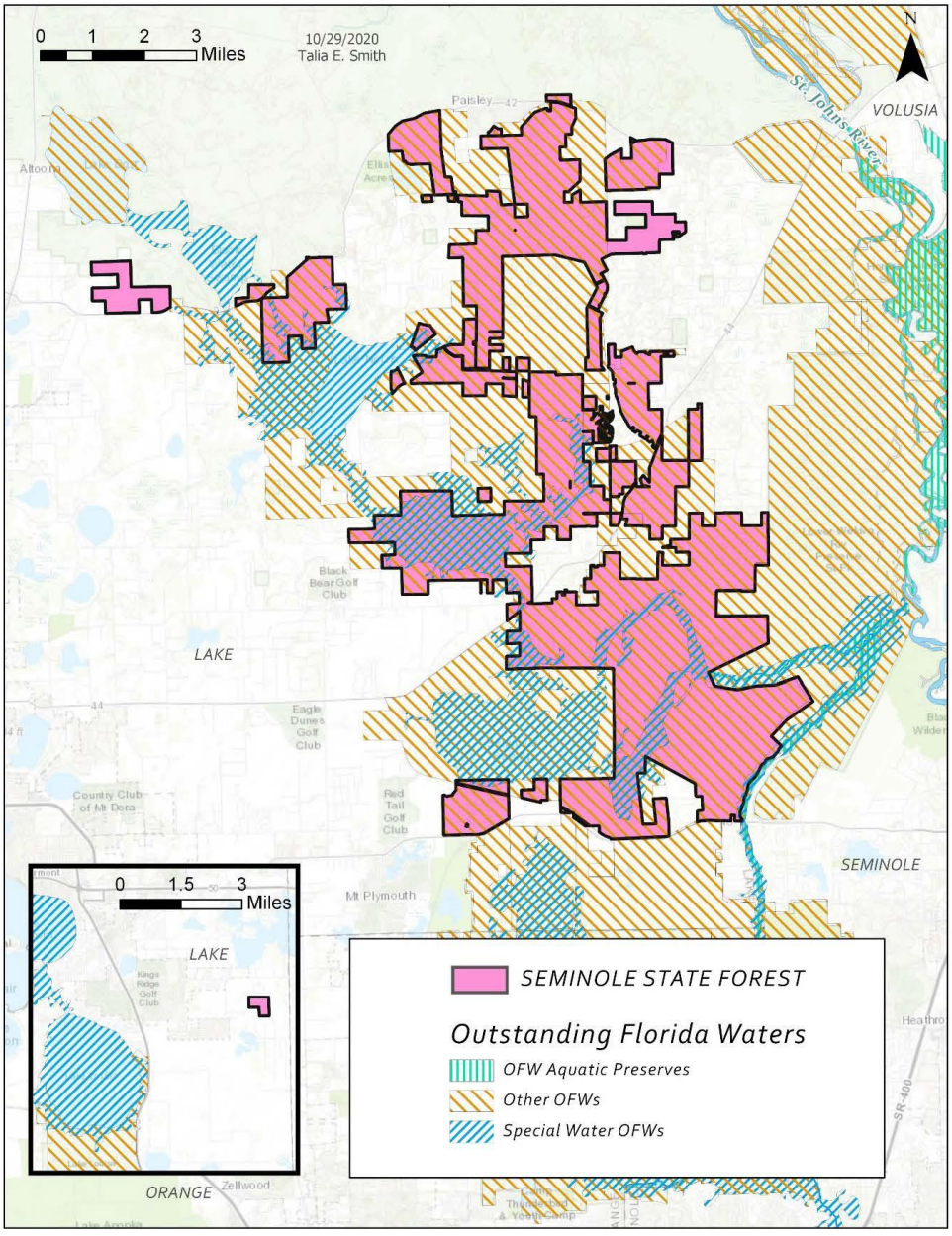
According to the Florida Natural Areas Inventory Managed Areas data layer, there are also several other parcels on, adjacent, or nearby that are considered conservation lands at a Federal, State, or Local level (see map 2). However, these have not been designated as OFWs other than as described above.

If you have any questions or need additional information about this response, please feel free to contact me via E-mail at Janet.Klemm@FloridaDEP.gov or by phone at 850-245-8427 or contact Talia E. Smith via E-mail at Talia.E.Smith@FloridaDEP.gov or by phone at 850-245-8068.

Sincerely,

Janet Klemm
Standards Development Section

Seminole State Forest and OFWs Map 1:



Seminole State Forest and Conservation lands Map 2:

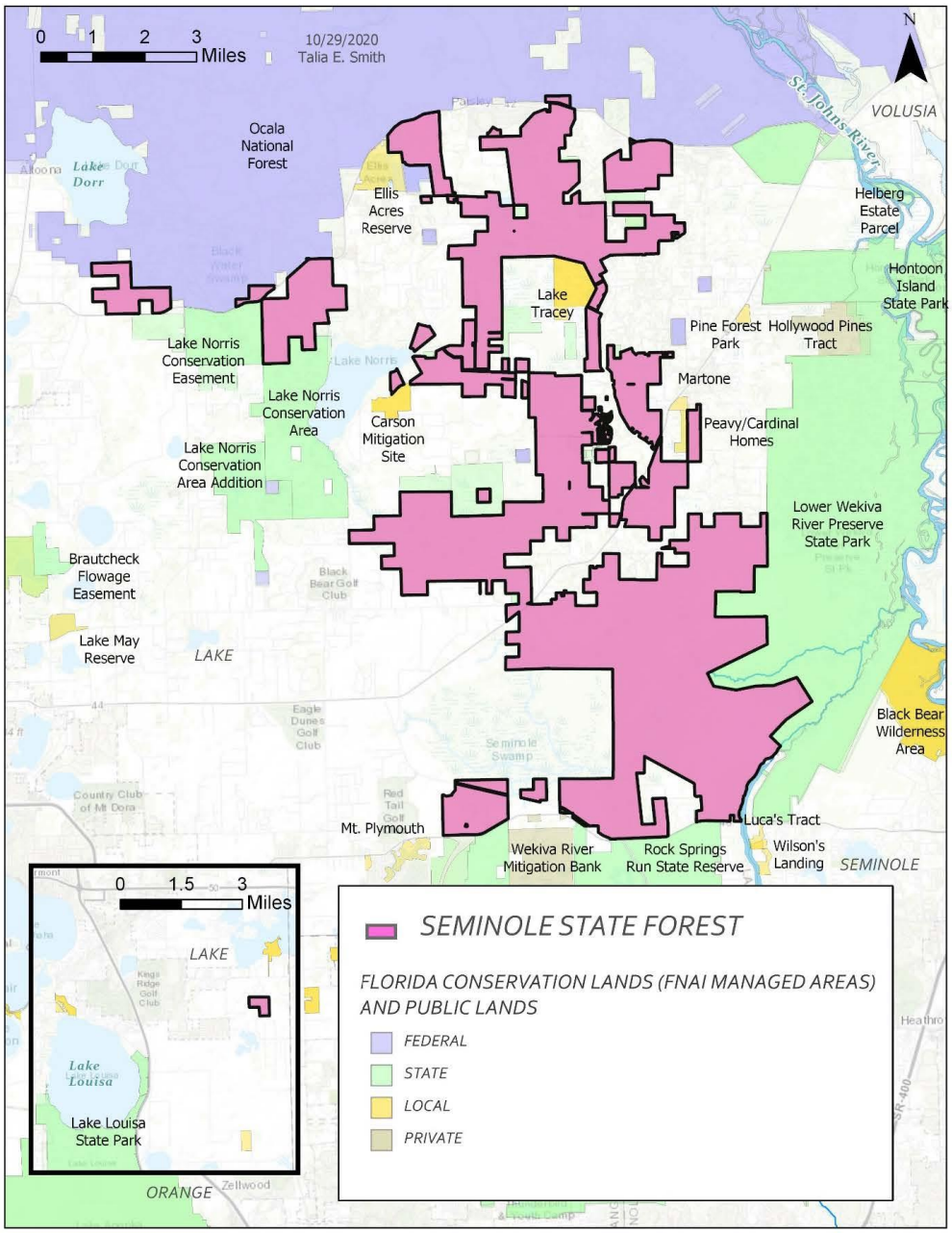


Exhibit K

Water Resources and BMAP Map

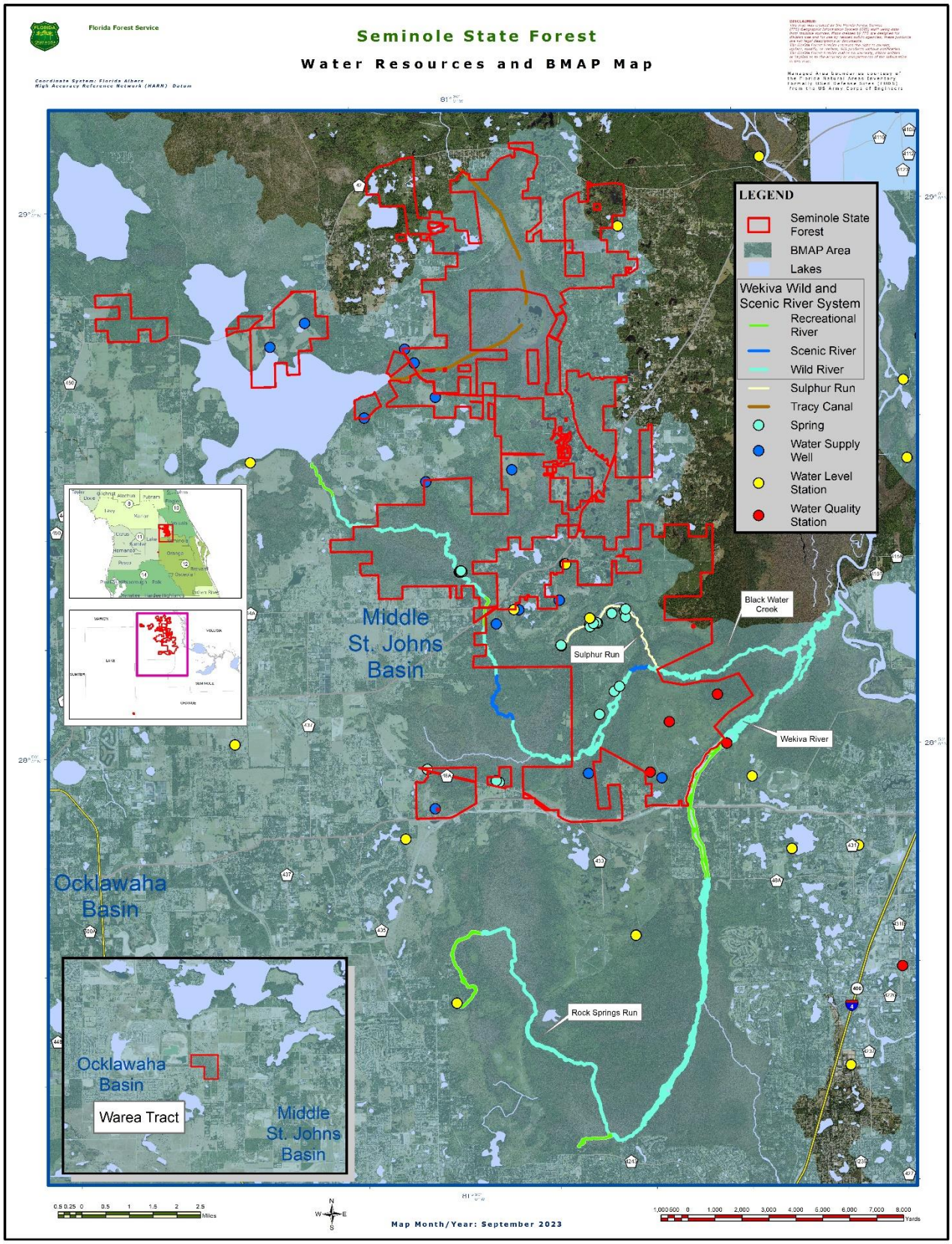

Florida Forest Service
Seminole State Forest
Water Resources and BMAP Map
Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum
LEGEND
Seminole State Forest
BMAP Area
Lakes
Wekiva Wild and Scenic River System
Recreational River
Scenic River
Wild River
Sulphur Run
Tracy Canal
Spring
Water Supply Well
Water Level Station
Water Quality Station
Middle St. Johns Basin
Black Water Creek
Sulphur Run
Wekiva River
Ocklawaha Basin
Rock Springs Run
Ocklawaha Basin
Warea Tract
Middle St. Johns Basin
Miles
Yards
Map Month/Year: September 2023

Exhibit L

Florida Natural Areas Inventory
Managed Area Tracking Record

Seminole and Warea Tracts

FLORIDA Natural Areas INVENTORY

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

June 10, 2021

Patti Anderson
Florida Department of Agriculture & Consumer Services
Florida Forest Service
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). At your request we have produced the following report for your project area.

The purpose of this Standard Data Report is to provide objective scientific information on natural resources located in the vicinity of a site of interest, in order to inform those involved in project planning and evaluation. This Report makes no determination of the suitability of a proposed project for this location, or the potential impacts of the project on natural resources in the area.

Project: Seminole State Forest - Main

Date Received: 6/4/2021

Location: Lake 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.

Element Occurrences

A search of our maps and database indicates that we currently have many 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.

Federally Listed Species

Our data indicate federally listed species are present on or very near this site, specifically Eastern Indigo Snake (*Drymarchon couperi*), Red-cockaded Woodpecker (*Dryobates borealis*), Wood Stork (*Mycteria americana*), and Florida Scrub-Jay (*Aphelocoma coerulescens*) (see enclosed map and tables for details). This statement should not be interpreted as a legal determination of presence or absence of federally listed species on a property.

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.

Florida Resources and Environmental Analysis Center

Institute of Science and Public Affairs

The Florida State University

*Several of the species and natural communities tracked by the Inventory are considered **data sensitive**. Occurrence records for these elements contain information that we consider sensitive due to collection pressures, extreme rarity, or at the request of the source of the information. The Element Occurrence Record has been labeled "Data Sensitive." We request that you not publish or release specific locational data about these species or communities without consent from the Inventory. If you have any questions concerning this please do not hesitate to call.*

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.

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.

CLIP

The enclosed map shows natural resource conservation priorities based on the Critical Lands and Waters Identification Project. CLIP is based on many of the same natural resource data developed for the Florida Forever Conservation Needs Assessment, but provides an overall picture of conservation priorities across different resource categories, including biodiversity, landscapes, surface waters, and aggregated CLIP priorities (that combine the individual resource categories). CLIP is also based primarily on remote sensed data and is not intended to be the definitive authority on natural resources on a site.

For more information on CLIP, visit http://www.fnai.org/clip.cfm .

Florida Scrub-jay Survey – U.S. Fish and Wildlife Service

This survey was conducted by staff and associates of the Archbold Biological Station from 1992 to 1996. An attempt was made to record all scrub-jay (*Aphelocoma coerulescens*) groups, although most federal lands were not officially surveyed. Each map point represents one or more groups.

This data layer indicates that there are potential scrub-jay populations on or very near your site. For additional information:

Fitzpatrick, J.W., B. Pranty, and B. Stith, 1994, Florida scrub jay statewide map, 1992-1993. U. S. Fish and Wildlife Service Report, Cooperative Agreement no. 14-16-004-91-950.

Managed Areas

Portions of the site appear to be located within the Seminole State Forest, 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.

Land Acquisition Projects
This site appears to be located within the Wekiva-Ocala Greenway Florida Forever BOT Project, which is part of the State of Florida's Conservation and Recreation Lands land acquisition program. For more information on this Florida Forever Project, contact the Florida Department of Environmental Protection, Division of State Lands.

Florida Forever Board of Trustees (BOT) projects are proposed and acquired through the Florida Department of Environmental Protection, Division of State Lands. The state has no specific land management authority over these lands until they are purchased.

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. **The maps contain sensitive environmental information, please do not distribute or publish without prior consent from FNAI.** FNAI data may not be resold for profit.

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) 681-9364 Fax
www.fnai.org

FLORIDA Natural Areas INVENTORY

Seminole State Forest - Main

Site boundaries are approximate.

Lake County

CLIP v4.0 Resource Priorities

Biodiversity Resource Category
- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

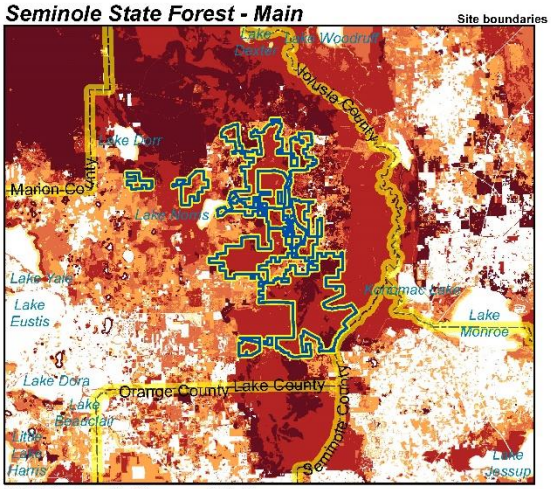
Landscape Resource Category
- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

Surface Water Resource Category
- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

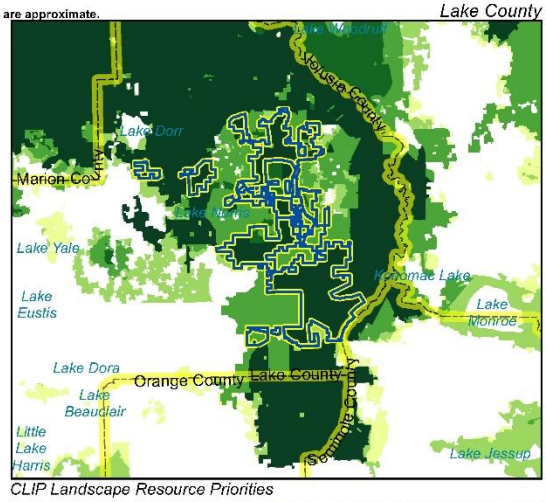
Aggregated CLIP Priorities
- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5
- Site Boundary

Map should not be interpreted without accompanying documents.

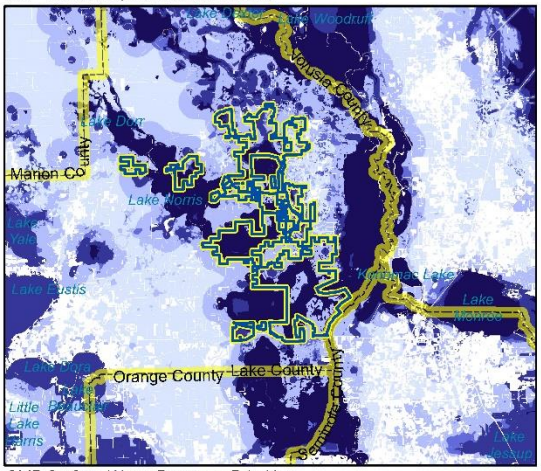
Critical Lands and Waters Identification Project (CLIP) is a cooperative effort between the FSU Florida Natural Areas Inventory, UF Center for Landscape Conservation Planning, and FL Fish & Wildlife Conservation Commission, with additional funding from FL Dept of Environmental Protection and US Fish & Wildlife Service.



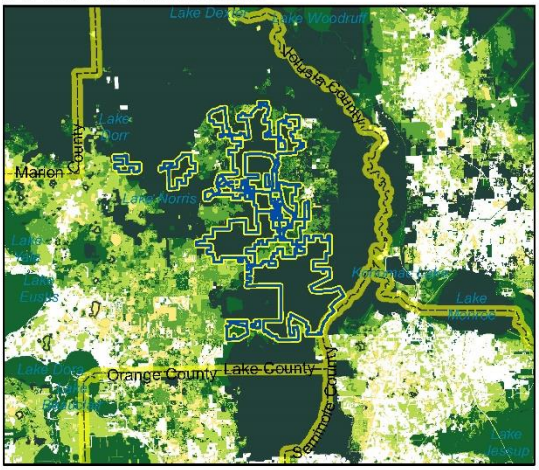
CLIP Biodiversity Resource Priorities



CLIP Landscape Resource Priorities



CLIP Surface Water Resource Priorities



CLIP Aggregated Resource Priorities

0 5 10 20 30 Miles

Map produced by KAB
6/10/2021

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

FLORIDA Natural Areas INVENTORY

Florida Natural Areas Inventory

Managed Area Element Summary

Seminole State Forest

SCIENTIFIC NAME	COMMON NAME	Global rank	State rank	Federal status	State status
PLANTS					
Bonamia grandiflora	Florida bonamia	G3	S3	T	E
Carex chapmannii	Chapman's sedge	G3	S3	N	T
Clitoria fragrans	scrub pigeon-wing	G2G3	S2	T	E
Coelorachis tuberculosa	Piedmont jointgrass	G3	S3	N	T
Eriogonum longifolium var. gnaphalifolium	scrub buckwheat	G4T3	S3	T	E
Hasteola robertiorum	Florida hasteola	G1	S1	N	E
Nolina brittoniana	Britton's beargrass	G3	S3	E	E
Paronychia chartacea var. chartacea	paper-like nailwort	G3T3	S3	T	E
Polygala lewtonii	Lewton's polygala	G2	S2	E	E
Prunus geniculata	scrub plum	G3	S3	E	E
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	T
Salix floridana	Florida willow	G2	S2	N	E
Stylisma abdita	scrub stylisma	G3	S3	N	E
Warea amplexifolia	clasping warea	G1	S1	E	E
AMPHIBIANS					
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Notophthalmus perstriatus	Striped Newt	G2G3	S2	N	N
REPTILES					
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Plestiodon reynoldsi	Sand Skink	G3	S3	T	FT
Sceloporus woodi	Florida Scrub Lizard	G2G3	S2S3	N	N
BIRDS					
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Aphelocoma coerulescens	Florida Scrub-Jay	G2?	S2	T	FT
Haliaeetus leucocephalus	Bald Eagle	G3	S2	E, PT	FE
		G5	S3	N	N
MAMMALS	Southeastern Fox Squirrel				
Sciurus niger niger	Florida Black Bear	G5T5	S3	N	N
Ursus americanus floridanus		G5T4	S4	N	N
INVERTEBRATES	Lace-winged Roadside Skipper				
Amblyscirtes aesculapius	Florida Pearly Eye	G3G4	S3S4	N	N
Enodia portlandia floralae	Berner's Microcaddisfly	G4TU	SU	N	N
Hydroptila berneri	Wakulla Springs Vari-colored	G4G5	S3	N	N
Hydroptila wakulla	Microcaddisfly	G2	S2	N	N
Oxyethira pescadori	Pescador's Bottle-Cased Caddisfly	G3G4	S3	N	N
Hypotrichia spissipes	Florida Hypotrichia Scarab Beetle	G3G4	S3S4	N	N
Ischyrus dunedinensis	Three Spotted Pleasing Fungus Beetle	G2G3	S2S3	N	N
Romulus globosus	Round-Necked Romulus Long-Horned Beetle	G1G2	S1S2	N	N
Trigonopeltastes floridana	Scrub Palmetto Flower Scarab Beetle	G2G3	S2S3	N	N

Note: *Summary includes all documented and likely species occurrence records currently in the FNAI database.*

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

Florida Natural Areas Inventory

Managed Area Element Summary

SCIENTIFIC NAME	COMMON NAME	Global rank	State rank	Federal status	State status
Black Bear Wilderness Area					
MAMMALS					
Ursus americanus floridanus	Florida Black Bear	G5T4	S4	N	N
Blue Spring State Park					
PLANTS					
Cucurbita okeechobeensis	Okeechobee gourd	G1	S1	E	E
REPTILES					
Crotalus adamanteus	Eastern Diamondback Rattlesnake	G3	S3	N	N
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
BIRDS					
Haliaeetus leucocephalus	Bald Eagle	G5	S3	N	N
MAMMALS					
Ursus americanus floridanus	Florida Black Bear	G5T4	S4	N	N
INVERTEBRATES					
Aphaostracon asthenes	Blue Spring Hydrobe Snail	G1	S1	N	N
Crangonyx sulphurium	Sulphurous Cave Amphipod	G1	S1	N	N
Floridobia parva	Pygmy Siltsnail	GH	SH	N	N
OTHER ELEMENTS					
Manatee Aggregation Site		GNR	SNR	N	N
Hollywood Pines Tract					
MAMMALS					
Ursus americanus floridanus	Florida Black Bear	G5T4	S4	N	N
Hontoon Island State Park					
REPTILES					
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
BIRDS					
Aramus guarauna	Limpkin	G5	S3	N	N
Pandion haliaetus	Osprey	G5	S3S4	N	N
MAMMALS					
Ursus americanus floridanus	Florida Black Bear	G5T4	S4	N	N
Lake Beresford Park					
MAMMALS					
Ursus americanus floridanus	Florida Black Bear	G5T4	S4	N	N
Lower Wekiva River Preserve State Park					

Note: *Summary includes all documented and likely species occurrence records currently in the FNAI database.*

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FLORIDA Natural Areas INVENTORY

Florida Natural Areas Inventory

Managed Area Element Summary

SCIENTIFIC NAME	COMMON NAME	Global rank	State rank	Federal status	State status
PLANTS					
Carex chapmannii	Chapman's sedge	G3	S3	N	T
Cucurbita okeechobeensis	Okeechobee gourd	G1	S1	E	E
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	T
AMPHIBIANS					
Lithobates capito	Gopher Frog	G2G3	S3	N	N
REPTILES					
Alligator mississippiensis	American Alligator	G5	S4	SAT	FT(S/A)
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
BIRDS					
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Aramus guarauna	Limpkin	G5	S3	N	N
Haliaeetus leucocephalus	Bald Eagle	G5	S3	N	N
Mycteria americana	Wood Stork	G4	S2	T	FT
Pandion haliaetus	Osprey	G5	S3S4	N	N
MAMMALS					
Podomys floridanus	Florida Mouse	G3	S3	N	N
Ursus americanus floridanus	Florida Black Bear	G5T4	S4	N	N
INVERTEBRATES					
Enodia portlandia floralae	Florida Pearly Eye	G4TU	SU	N	N
Stenacron floridense	A Mayfly	G3G4	S3S4	N	N
OTHER ELEMENTS					
Bird Rookery		G5	SNR	N	N

Note: *Summary includes all documented and likely species occurrence records currently in the FNAI database.*

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FLORIDA Natural Areas INVENTORY

FNAI ELEMENT OCCURRENCE REPORT on or near

Seminole State Forest - Main

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
ALLIMISS*105	*Alligator mississippiensis*	American Alligator	G5	S4	SAT	FT(S/A)	1994-08-30	IN BLACKWATER CREEKS MEANDERING THROUGH A PREDOMINATELY HARDWOOD SWAMP LANDSCAPE.	SIX ADULTS SEEN IN THE WEKIVA RIVER, FOUR IN BLACKWATER CREEK.
ALLIMISS*14	*Alligator mississippiensis*	American Alligator	G5	S4	SAT	FT(S/A)	1984	MOUTH OF SPRING RUN IN LAGOONS OF BOTH PARKS, IN RIVER.	SMALL POPULATION.
ANTIPRAT*19	*Antigone canadensis pratensis*	Florida Sandhill Crane	G5T2	S2	N	ST	1979	No general description given	1979: ca. 2-3 pairs in 1979, maybe more north and east of here (PNDNES02FLUS).
ANTIPRAT*60	*Antigone canadensis pratensis*	Florida Sandhill Crane	G5T2	S2	N	ST	2006-03-19	2006-03-19: depression marsh (F06FNA18FLUS).	2006-03-19: Possible nest. 1 bird hunkered down with other bird standing beside it (F06FNA18FLUS).
ANTIPRAT*61	*Antigone canadensis pratensis*	Florida Sandhill Crane	G5T2	S2	N	ST	2006-03-21	2006-03-21: depression marsh (F06FNA18FLUS).	2006-03-21: Possible nest. shallow mound of piled up vegetation (F06FNA18FLUS).
APHECOER*127	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	1981-04-05	2 M OAK SCRUB	1981-04-05: 3 SCRUB JAYS
APHECOER*128	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	1981-04-05	1-2 M OAK SCRUB WITH SCATTERED SLASH PINES (U81COX01). A LANDSCAPE OF LOGGED OUT SCRUBBY FLATWOODS AND MESIC FLATWOODS (F94REE01).	3 SCRUB JAYS (U81COX01).
APHECOER*129	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	1981-04-01	MOSTLY OAK SCRUB, MIXED WITH PONDS AND SLASH PINES, BEING DEVELOPED	1981-04-01: 12 SCRUB JAYS
APHECOER*130	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	1981-04-01	1981-04-01: 1-2 meter oak scrub (U81COX01FLUS).	1981-04-01: 2 Scrub Jays (U81COX01FLUS).
APHECOER*131	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	1981-04-01	1-2 M OAK SCRUB	1981-04-01: 3 SCRUB JAYS
APHECOER*133	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	1981-04-05	1-2 M OAK SCRUB (U81COX01). 1995: SOME BEING CLEARED (PNDREE04).	1981-04-05: 3 SCRUB JAYS.
APHECOER*143	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	1981-03-31	OAK SCRUB	1981-03-31: 2 SCRUB JAYS
APHECOER*144	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	1981-10-03	PASTURE WITH A FEW SCRUB OAKS AND SAND PINES	1981-10-03: 1-2 SCRUB JAYS
APHECOER*145	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	2004-08-04	1981: MIXED OAK, PALMETTO, AND SAND PINE SCRUB (PNDCOX01FLUS).	2004-08-04: no jays seen on site for a few years (PNDMUL02FLUS). 1981-03-31: 2 Scrub Jays (PNDCOX01FLUS).

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Tallahassee, FL 32303
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APHECOER*147	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	1981-06-12	2-3 M OAK SCRUB, SURROUNDED BY SAND PINE SCRUB	1981-06-12: 2 SCRUB JAYS
APHECOER*233	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	1981-04-01	6 M SAND PINES; SAND PINE SCRUB.	1981-04-01: 3 SCRUB JAYS.
APHECOER*235	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	2004-08-04	SCRUB; OAK SCRUB, PALMETTO SCRUB, SAND PINE SCRUB (PNDCOX01FLUS).	2004-08-04: no jays seen on site for a few years (PNDMUL02FLUS). 1981-03-31: 12 SCRUB JAYS (PNDCOX01FLUS).
APHECOER*509	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	2009	2009: scrub (U09RIS01FLUS).	2009: 11 territories with 22 birds (U09RIS01FLUS).
APHECOER*510	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	2009	2009: scrub (U09RIS01FLUS).	2009: 8 territories with 19 birds (U09RIS01FLUS).
APHECOER*511	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	2009	2009: scrub (U09RIS01FLUS).	2009: 1 territory with 3 birds (U09RIS01FLUS).
APHECOER*512	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	2009	2006-03-19: scrub in need of burn (F06FNA18FLUS).	2009: 3 territories with 6 birds (U09RIS01FLUS). 2006-03-19: 2 or 3 birds (F06FNA18FLUS).
APHECOER*513	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	2009	2009: scrub (U09RIS01FLUS).	2009: 2 territories with 4 birds (U09RIS01FLUS).
APHECOER*514	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	2009	Scrub	2009: 1 territory with 2 birds (U09RIS01FLUS). 2006-03-27: 4 birds observed (F06FNA18FLUS).
APHECOER*515	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	2009	2006-03-27: scrub (F06FNA18FLUS).	2009: 3 territories with 5 birds (U09RIS01FLUS). 2006-03-27: 2 birds observed (F06FNA18FLUS).
APHECOER*516	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	2009	2006-03-21: scrub (F06FNA18FLUS).	2009: 6 territories with 14 birds (U09RIS01FLUS). 2006-03-21: 2 birds observed (F06FNA18FLUS).

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APHECOER*519	*Aphelocoma coerulescens*	Florida Scrub-Jay	G2?	S2	T	FT	2009-09-23	2009-09-23: surrounding area is sand pine scrub; sand pine removal is ongoing; apparently pristine sinkhole lake is also on property (PNDNES03FLUS).	2009-09-23: 2 jays observed in northwest scrub, 1, presumably a female, emitted a clicking call; not a thorough survey (PNDNES03FLUS). 2008: TNC Jay Watch data report 4 jay families with 11 adults and 6 juveniles (PNDDUB01FLUS). 2007: TNC Jay Watch data report 4 jay families with 10 adults and 3 juveniles (PNDDUB01FLUS). 2006: TNC Jay Watch data report 3 adults at FH2, 2 adults at FH3, and 2 adults at FH4 (U06JAY01FLUS).
ARAMGUAR*19	*Aramus guarauna*	Limpkin	G5	S3	N	N	1994-08-30	1994-08-30: a blackwater creek that meanders through a hardwood swamp (F94REE01FLUS).	1994-08-30: seen foraging (F94REE01FLUS).
ATHEFLOR*100	*Athene cunicularia floridana*	Florida Burrowing Owl	G4T3	S3	N	ST	1995-05-24	Improved pasture - bahia grass heavily grazed by cattle; scattered oaks and persimmon.	11 individuals observed from one area, 2 pairs observed with juvenile birds; cattle lease owner says there are 10 pairs of owls at the site (U95SMA01FLUS).
ATHEFLOR*18	*Athene cunicularia floridana*	Florida Burrowing Owl	G4T3	S3	N	ST	1999-12-22	1999: Urban; occupied lot, acant lot. Agricultural; pasture. 1987: Agricultural area (U87OME01FLUS). 1986: sandhill/improved pasture (U86JON02FLUS).	Observed at 18 locations between 1983 and 1999.
BASISWAM*83	Basin swamp		G4	S3	N	N	2004	A VIRTUALLY UNDEVELOPED SHORELINE DOMINATED BY MATURE SCENIC TAXODIUM DISTICHUM/PANICUM HEMITOMUM-PONTEDERIA CORDATA-NUPHAR LUTEA SUBSP. ADVENA-MIKANIA SCANDENS.	2010: Prior to the 2010 natural community reclassification effort this EO had been known as Strand swamp EO number 16 (see U10FNA01FLUS for updated community descriptions). 2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-05-22) (U05FNA02FLUS). ASSOCIATED FLORA: DOMINANT: NUPHAR LUTEA SUBSP. ADVENA (LOCAL), PANICUM HEMITOMUM (LOCAL), TAXODIUM DISTICHUM; ABUNDANT: PONTEDERIA CORDATA (LOCAL), MIKANIA SCANDENS (LOCAL), SAGITTARIA LANCIFOLIA, FRAXINUS CAROLINIANA (LOCAL); COMMON: TILANDSIA USNEOIDES, MYRICA CERIFLUA.

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BAYGALL**5	Baygall		G4	S4	N	N	2004	SEVERAL IN FLATWOODS (SMALL).	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1979?) (U05FNA02FLUS). DOMINATED BY GORDONIA LASIANTHUS & MAGNOLIA VIRGINIANA.
BIRDROOK*120	Bird Rookery		G5	SNR	N	N	1987-06-27	FLOODPLAIN SWAMP, OVERSTORY DOMINATED BY RED MAPLE, SWAMP ASH, BALD CYPRESS.	1987: WOODSTORK ROOKERY OBSERVED BY WALT THOMSON (NESTS, 15-20 INDIVIDUALS, ADULT AND JUVENILE).
BLACSTRE*36	Blackwater stream		G4	S3	N	N	2004	A SECOND-ORDER RIVER FLOWING INTO ANOTHER BLACKWATER "CREEK" (ST. JOHN'S RIVER) AND FED (IN IT'S LOWER REACHES) BY A PRISTINE THIRD-ORDER BLACKWATER STREAM (BLACKWATER CREEK). FLOWS THROUGH EXTENSIVE, YOUNG GROWTH FLOODPLAIN SWAMP.	2004: extant based on aerial photography (PNDJAC01FLUS). 1994: ASSOCIATED FLORA: DOMINANT: ALTERNANTHERA PHILOXEROIDES (LOCAL), NUPHAR LUTEA SUBSP. ADVENA (LOCAL); ABUNDANT: EICHHORNIA CRASSIPES, CORNUS FOEMINA (LOCAL); COMMON: AMELOPSIS ARBOREA, MYRICA CERIFLUA, PANICUM (RIGIDULUM?), PANICUM HEMITOMOM, SALIX CAROLINIANA
CARECHAP*12	*Carex chapmannii*	Chapman's sedge	G3	S3	N	T	1994-10-18	A SABAL PALMETTO-NYSSA SYLVATICA VAR. BIFLORA/CORNUS FOEMINA/DRYOPTERIS LUDOVICIANA DOMINATED HYDRIC HAMMOCK OCCUPYING A FRESH AND SALINE SPRING/SEEP RUN THROUGH A MESIC AND SCRUBBY FLATWOODS-XERIC HAMMOCK-SAND PINE SCRUB LANDSCAPE. pH 6.8 MUCK. ASSOCIATED FLORA: PRESENT: ACER RUBRUM VAR. TRILOBUM, CHASMANTHIUM LAXUM, WOODWARDIA VIRGINICA, TILIA CAROLINIANA, MYRICA CERIFERA, RHAPIDOPHYLLUM HYSTRIX.	VEGETATIVE ONLY. COMMON AND CLONAL.

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CARECHAP*9	*Carex chapmannii*	Chapman's sedge	G3	S3	N	T	1994-05-22	ON A PEATY, SOUTHWEST-FACING SLOPE IN A SABAL PALMETTO/CARPINUS CAROLINIANA/ILLICIUM PARVIFLORUM/VITIS ROTUNDIFOLIA VAR. MUNSONIANA DOMINATED HYDRIC HAMMOCK, BEGINNING 1/10TH MILE FROM A SULPHUR SPRING.	REESE (5-22-94): SANDY PEAT, ph 4.0 NEAR SURFACE. FAVORS FILTERED LIGHT IN CANOPY GAPS. ON THE UPLAND/WETLAND BOUNDARY BETWEEN HYDRIC HAMMOCK AND MESIC MIXED FOREST. ASSOCIATED FLORA: QUERCUS LAURIFOLIA, PINUS ELLIOTTII, SABAL PALMETTO, WOODWARDIA VIRGINIANA, SCLERIA TRIGLOMERATA, CARPINUS CAROLINIANA.
CENTAREN*16	*Centrosema arenicola*	sand butterfly pea	G2Q	S2	N	E	1961-08-19	BUSHES ALONG ROADSIDE	COLL. BY MOORE (S.N.) 19 AUG. 1961 (FLAS). FLRS. BLUE,FREQUENT, CLIMBING ON BUSHES.
CENTAREN*24	*Centrosema arenicola*	sand butterfly pea	G2Q	S2	N	E	2017-07-28	Historically used for cattle ranching, recent acquisition under management and being restored by Lake County Public Resources Department.	At least one plant observed in flower.
COELTUBE*17	*Coelorachis tuberculosa*	Piedmont jointgrass	G3	S3	N	T	1994-08-20	A SINGLE PERMANENT WATER DEPRESSION OF TANNIC-STAINED WATER WITH NUMEROUS, DISTINCT, UNDISTURBED PLANT COMMUNITIES SURROUNDING IT, INCL. A HYPERICUM REDUCTUM/RHYNCHOSPORA MICROCEPHALA-FIMBRISTYLIS AUTUMNALIS-SCLERIA RETICULARIS ZONE CONTAINING THE EO. ASSOCIATED FLORA: COMMON: EUPATORIUM LEPTOPHYLLUM, ANDROPOGON GLOMERATUS VAR. GLAUCOPSIS, DROSERA CAPILLARIS.	A FEW HUNDRED FRUITING PLANTS AROUND A 25' CIRCULAR POOL.

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COELTUBE*18	*Coelorachis tuberculosa*	Piedmont jointgrass	G3	S3	N	T	1994-07-29	A PERMANENT, CLEAR WATER, DEPRESSIONAL POND IN A XERIC SCRUB LANDSCAPE. E.O OCCUPIES TWO DISTINCT PLANT COMMUNITIES: AN UNUSUAL OCCURRENCE IN A NYMPHAEA ODORATA-NUPHAR LUTEA SUBSP. ADVENA-FIMBRISTYLIS AUTUMNALIS ZONE AND IN A HYPERICUM REDUCTUM/RHYNCHOSPORA (MICROCEPHALA?)-DROSERA CAPILLARIS-FUIRENA SCIRPOIDEA ZONE.	WHITE SATURATED SAND. ASSOCIATED FLORA: EUPATORIUM LEPTOPHYLLUM, LYCOPODIELLA APPRESSA, AND PANICUM HEMITOMOM.
COELTUBE*20	*Coelorachis tuberculosa*	Piedmont jointgrass	G3	S3	N	T	1994-09-20	IN A SHALLOW DEPRESSIONAL LAKE SURROUNDED BY PINUS CLAUSA-DOMINATED SCRUB ON THE NORTH, EAST, AND SOUTH, AND A PAVED ROAD ON THE WEST. WHITE HYDRIC SAND. ASSOCIATED FLORA: DOMINANT: PANICUM HEMITOMUM; ABUNDANT: RHYNCHOSPORA MICROCARPA; COMMON: RHYNCHOSPORA INUNDATA, EUPATORIUM LEPTOPHYLLUM, PLEUCHEA ROSEA.	LOCALIZED AND OCCASIONAL, SLIGHTLY UNDER 100 PLANTS (EST.). IN LATE FRUITING STAGE.
COELTUBE*22	*Coelorachis tuberculosa*	Piedmont jointgrass	G3	S3	N	T	1994-07-12	AN UPLAND SANDHILL LAKE WITH A FLUCUATING WATER TABLE AND THREE DISTINCT HERBACEOUS PLANT COMMUNITIES. ASSOCIATED FLORA: DOMINANT: FUIRENA SCIRPOIDES; COMMON: CENTELLA ASIATICA; OCCASIONAL: ERIOCAULON COMPRESSUM, PLUCHEA ROSEA, HYPERICUM FASCICULATUM.	OCCASIONAL (4 PLANTS) ON TRANSITION BETWEEN SATURATED AND MOIST WHITE SAND SOILS ALONG LAKE SHORE, LOCALLY FREQUENT (ELEVEN PLANTS) WHERE CHARCOAL IS PRESENT FROM PAST CAMPFIRES.

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COELTUBE*23	*Coelorachis tuberculosa*	Piedmont jointgrass	G3	S3	N	T	1994-07-12	IN A MOIST, LOW GRADIENT SLOPE AREA OF A SHALLOW, FLUCUATING WATER LEVEL LAKE IN A SANDY SOIL LANDSCAPE. ALSO FOUND ON A NATURAL "CAUSEWAY" (BEACH) BETWEEN THE N-MOST LAKES. pH 4.2, MUCKY SAND. ASSOCIATED FLORA: ABUNDANT: ANDROPOGON GLOMERATUS VAR. GLAUCOPSIS, DICHANTHELIUM ERECTIFOLIUM; COMMON: LYCOPODIELLA APPRESSA, EUPATORIUM LEPTOPHYLLUM; OCCASIONAL: PLUCHEA ROSEA.	POPULATION IN "THE HUNDREDS."

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COELTUBE*24	*Coelorachis tuberculosa*	Piedmont jointgrass	G3	S3	N	T	1994-07-28	AN UPLAND LAKE WITH NUMEROUS DISTINCT PLANT COMMUNITIES, IN A XERIC SCRUB HABITAT WITH A SHALLOW GRADIENT SHORELINE AND SEASONALLY FLUCUATING WATER LEVELS. SURROUNDED BY A NARROW ZONE OF WET AND MESIC FLATWOODS, THEN SAND PINE SCRUB, EXCEPT FOR SHALLOW WETLAND EXTENSIONS WHERE APPARENTLY DOMINATED BY PINUS ELLIOTTII/HYPERICUM FASCICULATUM. ON WHITE PLACID SERIES HYDRIC SANDS. ASSOCIATED FLORA: ABUNDANT: SCLERIA RETICULATA (LOCAL), DROSERA CAPILLARIS; COMMON: FUIRENA SCIRPOIDEA (LOCAL), LYCOPODIELLA APPRESSA (LOCAL), RHYNCHOSPORA TRACYI, DICANTHELIUM ERECTIFOLIUM; OCCASIONAL: ANDROPOGON GLOMERATUS VAR. GLOMERATUS, EUPATORIUM LEPTOPHYLLUM.	OCCURRENCE ON SITE.

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COELTUBE*25	*Coelorachis tuberculosa*	Piedmont jointgrass	G3	S3	N	T	1994-07-28	1992: NATURAL, PERMANENT-WATER, CLEAR, SANDY-BOTTOM SANDHILL UPLAND LAKE IN A XERIC UPLAND LANDSCAPE. THE LITTORAL ZONE (SHALLOW WATER) IS DOMINATED BY FUIRENA SCIRPOIDEA-ERIOCAULON COMPRESSUM-XYRIS SMALLIANA; THE MOIST EXPOSED SANDY MARGIN BY SYNGONANTHUS FLAVIDULUS AND XYRIS ELLIOTTII. UPSLOPE FROM EXPOSED SAND IS A HYPERICUM FASCICULATUM-EUPATORIUM LEPTOPHYLLUM-ANDROPOGO N ZONE. THIS THEN BREAKS RATHER SHARPLY UPSLOPE INTO A SERENOA REPENS-LYONIA LUCIDA-QUERCUS GEMINATA-MYRICA CERIFERA-GAYLUSSACIA FRONDOSA-PERSEA BORBONIA ZONE. UPSLOPE IS A LONGLEAF PINE (PINUS PALUSTRIS SANDHILL/SCRUB UPLAND WHICH SURROUNDS SITE (PNDORZ01). 1994: FLOATING MARSH ZONE DOMINATED BY NYMPHAEA ODORATA. ON WHITE, PLACID SERIES HYDRIC SAND. ON AN ELEVATIONAL CONTOUR JUST ABOVE INUNDATION ZONE. FRUITING. ASSOCIATED FLORA: HYPERICUM FASCICULATUM, RHEXIA MARIANA, XYRIS ELLIOTTII, CENTELLA ASIATICA, DROSERA CAPILLARIS, EUPATORIUM LEPTOPHYLLUM, DICANTHELIUM	No EO data given

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								ERECTIFOLIUM, PLEUCEA ROSEA, LYOCOPODIELLA APPRESSA, PINUS ELLIOTTII, ANDROPOGON GLOMERATUS VAR. GLOMERATUS.	
CROTADAM*174	*Crotalus adamanteus*	Eastern Diamondback Rattlesnake	G3	S3	N	N	1995-05-20	Longleaf and oak hammock.	1995-05-20: One adult snake observed (U95LOW01).
DEPRMARS*119	Depression marsh		G4	S4	N	N	2004	A LEVEL, EVEN-AGED, SEASONALLY WET PLAIN DOMINATED BY PINUS ELLIOTTII/LYONIA LUCIDA-SERENOA REPENS/ARISTIDA BEYRICHIANA. INCLUDES DEPRESSION MARSHES DOMINATED BY AMPHICARPHUM MUHLENBERGIANUM, PANICUM HEMITOMOM, AND SPARTINA BAKERII. GRADES INTO YOUNG SCRUBBY FLATWOODS DOMINATED BY QUERCUS CHAPMANNII-QUERCUS MYRTIFOLIA/LICANIA MICHAUXII-ARISTIDA BEYRICHIANA-SPOROBOLUS JUNCEA WHERE FIRE HAS BEEN EXCLUDED AND SOILS ARE DRIER.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-06-21) (U05FNA02FLUS). MUCK SOIL OVER SAND. ASSOCIATED FLORA: DOMINANT: AMPHICARPHUM MUHLENBERGIANUM, PANICUM HEMITOMOM; ABUNDANT: SPARTINA BAKERII (LOCAL); COMMON: HYPERICUM MYRTIFOLIUM, ANDROPOGON GLOMERATUS VAR. GLAUCOPSIS, EUPATORIUM MOHRII, EUTHAMNIA MINOR, CENTELLA ASIATICA, SYNGONANTHUS FLAVIDULUS, XYRIS ELLIOTII.

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FLORIDA Natural Areas INVENTORY

FNAI ELEMENT OCCURRENCE REPORT on or near

Seminole State Forest - Main

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
DEPRMARS*120	Depression marsh		G4	S4	N	N	2004	A LEVEL, EVEN-AGED, SEASONALLY WET PLAIN DOMINATED BY PINUS ELLIOTTII/LYONIA LUCIDA-SERENOA REPENS/ARISTIDA BEYRICHIANA. INCLUDES DEPRESSION MARSHES DOMINATED BY AMPHICARPHUM MUHLENBERGIANUM, PANICUM HEMITOMOM, AND SPARTINA BAKERII. GRADES INTO YOUNG SCRUBBY FLATWOODS DOMINATED BY QUERCUS CHAPMANNII-QUERCUS MYRTIFOLIA/LICANIA MICHAUXII-ARISTIDA BEYRICHIANA-SPOROBOLUS JUNCEA WHERE FIRE HAS BEEN EXCLUDED AND SOILS ARE DRIER.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-06-21) (U05FNA02FLUS). MUCK SOIL OVER SAND. ASSOCIATED FLORA: DOMINANT: AMPHICARPHUM MUHLENBERGIANUM, PANICUM HEMITOMOM; ABUNDANT: SPARTINA BAKERII (LOCAL); COMMON: HYPERICUM MYRTIFOLIUM, ANDROPOGON GLOMERATUS VAR. GLAUCOPSIS, EUPATORIUM MOHRII, EUTHAMNIA MINOR, CENTELLA ASIATICA, SYNGONANTHUS FLAVIDULUS, XYRIS ELLIOTII.
DEPRMARS*172	Depression marsh		G4	S4	N	N	2004	A PERMANENT WATER PEATY DEPRESSION OF TANNIC-STAINED WATER. SURROUNDED BY LOGGED OUT, REGROWTH LOW OAK AND SAND PINE SCRUB.	2010: Prior to the 2010 natural community reclassification effort this EO had been known as Bog EO number 7 (see U10FNA01FLUS for updated community descriptions). 2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-08-20) (U05FNA02FLUS). ASSOCIATED FLORA: ABUNDANT: EUPATORIUM LEPTOPHYLLUM, RHYNCHOSPORA MICROCEPHALA, ELEOCHARIS ELONGATA (LOCAL), RHEXIA CUBENSIS, HYPERICUM FASCICULATUM (LOCAL); COMMON: COELORACHIS TUBERCULOSA, ANDROPOGON GLOMERATUS VAR. GLAUCOPSIS.
DRYMCOUP*323	*Drymarchon couperi*	Eastern Indigo Snake	G3	S2?	T	FT	1937-01-09	No general description given	MUSEUM SPECIMEN: A. CARR, 9 JAN 1937, UF 47367.

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DRYMCOUP*528	*Drymarchon couperi*	Eastern Indigo Snake	G3	S2?	T	FT	1999 – 2000	2009-09-23: surrounding area is sand pine/oak scrub undergoing sand pine removal (PNDNES03FLUS).	1999-2000: Mr. Fred Hunter said that he observed a 5-6 foot indigo snake in 1999-2000 (PNDNES03FLUS); K. NeSmith and C. Kindell toured property with Mr. Hunter on 23 September 2009 and took GPS point at the location indicated by Mr. Hunter (U09NES01FLUS).
DRYOBORE*142	*Dryobates borealis*	Red-cockaded Woodpecker	G3	S2	E, PT	FE	2019	Sandhill	Five to 13 active colonies in the late 1970s and early 1980s (UNDBAK02FLUS, U83UFS01FLUS). 30 to low 40 clusters in ca. 2015-2019 (U17RAM01FLUS, U19NES01FLUS). Inactive but suitable clusters decreasing from 23 in 2012 (U17RAM01FLUS, U13NES01FLUS).
DS*34100	*Data Sensitive Element*	Data Sensitive	G4TU	SU	N	N	2011-07-02	Data Sensitive	Data Sensitive
DS*34830	*Data Sensitive Element*	Data Sensitive	G3G4	S3S4	N	N	2009-07-04	Data Sensitive	Data Sensitive
EGRECAER*290	*Egretta caerulea*	Little Blue Heron	G5	S4	N	ST	1989-05-23	Willows in wet prairie.	1989/05/23: J.A. Hovis, GFC, observation. Surveyed from helicopter. Site also visited by plane on 04/10/89. "Total" = G (includes CAEG, LBHE).
EGRECAER*291	*Egretta caerulea*	Little Blue Heron	G5	S4	N	ST	1988-06-10	Rock quarry	1988/06/10: R. Sullivan, GFC, observation. CAEG young in downy and feathered stages. LBHE young in feathered and flying/ready stages. No nest obs. on ANHI. "Total" (nests?) = D.
ERIOGNAP*84	*Eriogonum longifolium var. gnaphalifolium*	scrub buckwheat	G4T3	S3	T	E	1988-08-07	N/A	2008-01-10: No plants found (F08FNA01FLUS). 1988-08-07: Specimen taken [fl& fr] (Daubenmire and Daubenmire). 1981-07-09: Specimen taken [fl& fr] (Daubenmire and Daubenmire).
EUPHBERR*6	*Euphyes berryi*	Berry's Skipper	G2	S2	N	N	2006-07	2007-08-22: No description provided by observers (N07KEI01FLUS).	2006-07: One adult was seen on the Rock Springs Run State Reserve (N07KEI01FLUS).

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FLOOMARS*16	Floodplain marsh		G3	S3	N	N	2004	PALM SAVANNAH, BY CONFLUENCE OF WEKIVA & ST. JOHN'S RIVERS; 2 PATCHES (SEE MAP FROM U79DRP03). REESE (1994): SIMPLY A PC WITHIN A LARGE AREA OF OVERLY DENSE PINUS ELLIOTTII CONVERTED WET FLATWOODS.	2010: Prior to the 2010 natural community reclassification effort this EO had been known as Wet flatwoods EO number 7 (see U10FNA01FLUS for updated community descriptions). 2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994) (U05FNA02FLUS). CORD GRASS & OCCASIONAL CABBAGE PALMS (U79DRP03). REESE (1994): SABAL PALMETTO/SPARTINA BAKERI BICULTURE. UNGRAZED IN RECENT YEARS; BURNED.
FLOOSWAM*21	Floodplain swamp		G4	S4	N	N	2004	ALONG BLACKWATER CREEK AND WEKIVA RIVER, TO ST. JOHN'S RIVER. A YOUNG TO OCCASIONAL MATURE HARDWOOD SWAMP GRADING INTO WET AND MESIC FLATWOODS AND "HYDRIC HAMMOCKS."	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-08-30) (U05FNA02FLUS). DEPARTMENT OF NATURAL RESOURCES (1979): 2ND GROWTH TAXODIUM DISTICHUM (30-40 FT TALL), FRAXINUS PAUCIFLORA, CARYA AQUATICA, ULMUS AMERICANA VAR. FLORIDANA, ACER RUBRUM AND CORNUS FOEMINA (UNDINT01). ALSO BLACK GUM, SWEET GUM, CABBAGE PALM, BUTTONBUSH, DAHOON HOLLY, AM. HORNBEAM (U79DRP03). REESE (1994): AVERAGE DBH <=18". ASSOCIATED FLORA: DOMINANT: TAXODIUM DISTICHUM, SABAL PALMETTO, NYSSA SYLVATICA VAR. BIFLORA; ABUNDANT: ULMUS AMERICANA; COMMON: TOXICODENDRON RADICANS, OPLISMENUS SETARIUS, PERSEA PALUSTRIS, ACER RUBRUM VAR. TRILOBUM, CARPINUS CAROLINIANA.

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FLOOSWAM*8	Floodplain swamp		G4	S4	N	N	2004	1983: SURROUNDS BLACKWATER STREAM, RIVER FLOODPLAIN, HYDRIC HAMMOCK ISLANDS WITH SHELL MOUNDS; 6 PANDION HAL., 3 ARAMUS GUA. PIC. AND 3 FLOCKS EUDOCIMUS ALB. OBSERVED. 1994: A LARGE, YOUNG GROWTH HARDWOOD DOMINATED FLOODPLAIN SWAMP WITH YDRIC HAMMOCK AND SHELL MOUND ISLANDS, THREE MAJOR ABANDONED MEANDER CHANNELS (A.K.A. RIVER FLOODPLAIN LAKES), AND BLACKWATER STREAMS (U95REE01FLUS).	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1983-01-05) (U05FNA02FLUS). 1983: SURROUNDED BY FLOODPLAIN SWAMP W/ TAXODIUM DIS.- FRAXINUS PRO. -ULMUS AME.-ACER RUB>SABAL PAL (+OS SP.) >CORNUS FOEMINA>CRINUM AME. OS & MS SP. W/ TILLANDSIA SPP., EPIDENDRON SP., ENCYCLIA SP., POLYPODIUM POL, PHLEBODIUM AUR. & PSILOTUM NUDUM. 1994: TAXODIUM DISTICHUM <= 21" DBH, OTHER HARDWOODS AVE. 14" DBH. ASSOCIATED FLORA: DOMINANT: BLECHNUM SERRULATUM (LOCAL); ABUNDANT: TAXODIUM DISTICHUM, TILLANDSIA BARTRAMII, FRAXINUS CAROLINIANA, NYSSA SYLVATICA VAR. BIFLORA; COMMON: SABAL PALMETTO, SALIX CAROLINIANA, QUERCUS LAURIFOLIA, TAILLANDSIA USNEOIDES, POLYPODIUM POLYPODIOIDES VAR. MICHAUXIANUM, ACER RUBRUM VAR. TRILOBUM, THALIA GENICULATA (LOCAL), PHORADENDRON LEUCARPUM, SAMBUCUS CANADENSIS (LOCAL AND ECOTONAL), MYRICA CERIFLUA (U95REE01FLUS).
GOPHPOLY*1350	*Gopherus polyphemus*	Gopher Tortoise	G3	S3	C	ST	2005-12-05	2005-12-05: Xeric hammock and scrub communities (F06FNA18FLUS).	2005-12-05: 2 active burrows and 1 inactive nearby, observed incidentally during natural community survey (F06FNA18FLUS).
GOPHPOLY*1351	*Gopherus polyphemus*	Gopher Tortoise	G3	S3	C	ST	2005-12-06	2005-12-06: scrub and sandhill communities with moderate fire suppression (F06FNA18FLUS).	2005-12-06: 2 large active burrows observed incidentally during natural community survey (F06FNA18FLUS).

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GOPHPOLY*1382	*Gopherus polyphemus*	Gopher Tortoise	G3	S3	C	ST	2009-05-13	2009-05-13: Tortoises observed in open area along unpaved roadside with paspalum grasses and other small forbs. Surrounding area is mesic flatwoods and scrub (F09MCA01FLUS, PNDMCA02FLUS).	2009-05-13: One large adult and one juvenile aproximately 7 inches observed foraging along roadside (F09MCA01FLUS).
GOPHPOLY*1390	*Gopherus polyphemus*	Gopher Tortoise	G3	S3	C	ST	2009-09-23	2009-09-23: area is timbered sand pine/oak scrub with lots of tree fall remaining; will eventually be burned with help from The Nature Conservancy (PNDNES03FLUS).	2009-09-23: K. NeSmith observed one small, recently inactive, burrow approximately 4 inches wide in scrubby area in the southeastern part of the Hunter Property (PNDNES03FLUS, U09NES01FLUS).
GOPHPOLY*90	*Gopherus polyphemus*	Gopher Tortoise	G3	S3	C	ST	1983	1983: PARTICULARLY IN SANDHILLS.	1983: REGULARLY OBSERVED, BUT NO POP. ESTIMATE.
GOPHPOLY*931	*Gopherus polyphemus*	Gopher Tortoise	G3	S3	C	ST	1994-09-15	in a cut-over, young and open Pinus clausa-Quercus myrtifolia/Lyonia ferruginea-L. lucida/Smilax auriculata/Aristida beyrichiana/Cladina-Cladonia dominated scrub. white St. Lucie sand.	1994-09-15: one active burrow (F94REE01FLUS).
GOPHPOLY*955	*Gopherus polyphemus*	Gopher Tortoise	G3	S3	C	ST	1994-09-09	A XERIC LANDSCAPE OF SAND PINE SCRUB AND SANDHILL WITH A PAVED ROAD AND A DEPRESSION MARSH ON THE WEST AND A FORESTED SLOPE LEADING TO A HYDRIC HAMMOCK ON THE EAST. RESIDENTIAL DEVELOPMENT DEFINES THE NORTH BORDER AND GRAZED SANDHILL THE SOUTH.	IN YELLOW ASTATULA AND WHITE ST. LUCIE SERIES SANDS. MORE ABUNDANT IN FORMER WHERE JUST LESS THAN 100 ACTIVE BURROWS WERE SEEN IN A COMPREHENSIVE SURVEY. SCATTERED ON NORTHERN BOUNDARY OF SITE ON LATTER SOIL WHERE THREE ACTIVE BURROWS WERE SEEN IN A LIMITED SURVEY.
GOPHPOLY*956	*Gopherus polyphemus*	Gopher Tortoise	G3	S3	C	ST	1994-06-21	A LONGLEAF PINE PLANTATION THAT IS KEPT OPEN BY BRUSHHOGGING.	NUMEROUS ACTIVE BURROWS IN NEWLY BRUSHHOGGED AREA, AS VIEWED FROM ALONG PAVED ROAD.
GOPHPOLY*959	*Gopherus polyphemus*	Gopher Tortoise	G3	S3	C	ST	1995-01-29	EDGE OF SAND PINE SCRUB.	1 ACTIVE BURROW IN ST. LUCIE SAND.

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GOPHPOLY*972	*Gopherus polyphemus*	Gopher Tortoise	G3	S3	C	ST	1994-07-12	IN A CLEARED POWERLINE RIGHT-OF-WAY THROUGH A MATURE, FIRE EXCLUDED PINUS CLAUSA (51 YRS. OLD) -QUERCUS GEMINATA-QUERCUS CHAPMANII-QUERCUS MYRTIFOLIA/LYONIA FERRUGINEA DOMINATED SCRUB.	ONE ACTIVE BURROW SEEN.
GOPHPOLY*982	*Gopherus polyphemus*	Gopher Tortoise	G3	S3	C	ST	1994-09-20	A FIRE EXCLUDED DRY LANDSCAPE OF COW PASTURE INTERMIXED WITH "XERIC" HAMMOCKS, PINE-OUT SANDHILLS, BAYGALLS, HYDRIC HAMMOCKS, AND DEPRESSION SWAMPS.	SINGLE ACTIVE BURROWS SEEN IN ASTATULA SAND IN EACH OF FOLLOWING HABITATS: PASTURE ADJACENT TO XERIC HAMMOCK, OPEN PASTURE, AND GROWN OVER SANDHILL.
GOPHPOLY*985	*Gopherus polyphemus*	Gopher Tortoise	G3	S3	C	ST	1994-06-21	A PINUS CLAUSA DOMINATED SCRUB LANDSCAPE WITH A HISTORY OF HEAVY PAST LOGGING AND FRAGMENTED BY SAND ROADS.	IN ST. LUCIE SERIES SAND. NO BURROW COUNT MADE.
GOPHPOLY*992	*Gopherus polyphemus*	Gopher Tortoise	G3	S3	C	ST	1994-06-13	A MATURE, FIRE EXCLUDED SCRUBBY FLATWOODS DOMINATED BY PINUS CLAUSA-PINUS ELLIOTTII (LOCAL)-QUERCUS CHAPMANII/SERENOA REPENS-CERATIOLA ERICOIDES (LOCAL)/ARISTIDA BEYRICHIANA.	ONE ACTIVE BURROW SEEN IN A RECONNAISSANCE SURVEY.
HALILEUC*1210	*Haliaeetus leucocephalus*	Bald Eagle	G5	S3	N	N	2003	2005-07-12: Source does not provide a description.	Nest status: Active, 2003, 2002, 2001, 2000, 1999;(U03FWC01FLUS)
HALILEUC*1223	*Haliaeetus leucocephalus*	Bald Eagle	G5	S3	N	N	2001	2005-07-12: Source does not provide a description.	Nest status: Active, 2001, 2000, 1999; Not active, 2003, 2002;(U03FWC01FLUS)
HALILEUC*1241	*Haliaeetus leucocephalus*	Bald Eagle	G5	S3	N	N	2003	2005-07-12: Source does not provide a description.	Nest status: Active, 2003; Unknown status or not assessed, 2002, 2001, 2000, 1999;(U03FWC01FLUS)
HALILEUC*1597	*Haliaeetus leucocephalus*	Bald Eagle	G5	S3	N	N	2003	2005-07-12: Source does not provide a description.	Nest status: Active, 2003, 2002, 2001, 2000, 1999;(U03FWC01FLUS)

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HALILEUC*663	*Haliaeetus leucocephalus*	Bald Eagle	G5	S3	N	N	1996	No general description given	Nest status 1999-2003: Inactive - 2002; Unknown/not assessed - 2003, 2001, 2000, 1999; Status 1995-98: Active - 1996, 1995; Inactive - 1998, 1997; (U03FWC01FLUS). Previous data (note different format) NEST; 1995: ACTIVE, PRODUCED 0 YOUNG; 1994: INACTIVE; 1993: PRODUCED 2 YOUNG; 1992: PRODUCED 2 YOUNG; 1991: PRODUCED 2 YOUNG; 1990: PRODUCED 2 YOUNG; 1989: PRODUCED 2 YOUNG.
HALILEUC*773	*Haliaeetus leucocephalus*	Bald Eagle	G5	S3	N	N	2003	No general description given	Nest status 1999-2003: Continuously active; Status 1995-98: Active - 1998, 1997, 1995; Inactive - 1996; (U03FWC01FLUS). Previous data (note different format) NEST; 1995: PRODUCED 1 YOUNG; 1994: PRODUCED 2 YOUNG; 1993: PRODUCED 2 YOUNG; 1992: PRODUCED 1 YOUNG.
HASTROBE*1	*Hasteola robertiorum*	Florida hasteola	G1	S1	N	E	2006-03-29	Hydric hammock	Thousands of plants found in 1994 and over 500 in 1999; 6 plants noted close to same area in quick survey in 2006 (F06FNA18FLUS).
HESPSTRA*3	*Hesperia meskei straton*	Eastern Meske's Skipper	G3G4T3	S2S3	N	N	1996-07	1996-07: No description provided by observers (N07KEI01FLUS).	1996-07: Two adults seen at Rock Springs Run State Reserve (N07KEI01FLUS).
HYDRBERN*19	*Hydroptila berneri*	Berner's Microcaddisfly	G4G5	S3	N	N	2007-05-09	2007-05-09: No description given other than that it was near a river (U09RAS01FLUS). 2003-06-23: No description given (U06RAS01FLUS).	2007-05-09: Four specimens were collected using a 15 watt black light over an alcohol-filled white pan (U09RAS01FLUS, U08RAS01FLUS). 2003-06-23: An unknown number of specimens were collected at the Pine Road/Blackwater Creek site using ultraviolet light (U06RAS01FLUS).

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HYDRHAMM*49	Hydric hammock		G4	S4	N	N	2004	A YOUNG TO LOCALLY MATURE SABAL PALMETTO-ULMUS AMERICANA/CARPINUS CAROLINIANA/VITIS ROTUNDIFOLIA VAR. MUNSONIANA HYDRIC HAMMOCK ON SLOPES SURROUNDING A LARGE BASIN MARSH, WHICH HAS HISTORICALLY BEEN HEAVILY LOGGED THROUGH MUCH OF ITS ACREAGE.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-09-20) (U05FNA02FLUS). pH 4.0 SANDY PEAT. ASSOCIATED FLORA: DOMINANT: SABAL PALMETTO; ABUNDANT: ULMUS AMERICANA, CARPINUS CAROLINIANA, ILLICIUM PARVIFLORUM (LOCAL), VITIS ROTUNDIFOLIA VAR. MUNSONIANA; COMMON: ARISAEMA TRIPHYLLUM, LIQUIDAMBAR STYRACIFLUA, MAGNOLIA VIRGINIANA, NYSSA SYLVATICA VAR. BIFLORA, OSMUNDA CINNOMOMEA, PARTHANOCISSUS QUINQUEFOLIA, QUERCUS LAURIFOLIA, QUERCIS NIGRA, SCLERIA TRIGLOMERATA, CHASMANTHIUM LAXUM, DICANTHELIUM ERECTIFOLIUM, HABENARIA REPENS, WOODWARDIA AREOLATA, ITEA VIRGINICA, GORDONIA LASIANTHUS, RAPIDOPHYLLUM HYSTRIX (LOCAL).

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HYDRHAMM*50	Hydric hammock		G4	S4	N	N	2004	A SABAL PALMETTO-NYSSA SYLVATICA VAR. BIFLORA/CORNUS FOEMINA-ITEA VIRGINICA/DRYOPTERIS LUDOVICIANA-OPLISMENUS SETARIUS-DICANTHELIUM COMMUTATUM DOMINATED SWAMP IN A CHANNEL WITH A FRESH AND SALINE SPRING/SEEP RUN THROUGH A MESIC AND SCRUBBY FLATWOODS-XERIC HAMMOCK-SAND PINE SCRUB LANDSCAPE. IT IS LOCALLY DOMINATED BY MAGNOLIA VIRGINIANA/SABAL PALMETTO-ACER RUBRUM VAR. TRILOBUM/CORNUS FOEMINA-MYRICA CERIFULA/LEUCOTHOE RACEMOSA WHERE THE SWAMP IS ON QUAKING MUCK. HAS ISOLATED AREAS OF SALINE SEEPAGE.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1999-11-02) (U05FNA02FLUS). pH 6.8 (TO 7.2 NEAR SALINE SEEPS), SEEPAGE FED MUCK AND QUAKING MUCK. AVERAGE TREES: SABAL PALMETTO 11.5" (UP TO 18"), QUERCUS LAURIFOLIA 13.5", JUNIPERUS VIRGINIANA 10.5", MAGNOLIA VIRGINIANA UP TO 18", SALIX FLORIDANA 2.5". ASSOCIATED FLORA: COMMON: ACER RUBRUM VAR. TRILOBUM, CEPHALANTHUS OCCIDENTALIS, LIQUIDAMBAR STYRACIFLUA, PHANOPYRUM GYMNOCARPON, VITUS ROTUNDIFOLIA VAR. MUNSONIANA, WOODWARDIA VIRGINICA, ARUNDINARIA GIGANTEA (LOCAL).
HYDRWAKU*6	*Hydroptila wakulla*	Wakulla Springs Vari-colored Microcaddisfly	G2	S2	N	N	2003-06-23	2003-06-23: No description given (U06RAS01FLUS).	2003-06-23: An unknown number of specimens were collected on 2003-06-23 using ultraviolet light (U06RAS01FLUS).
HYPOSPIS*3	*Hypotrichia spissipes*	Florida Hypotrichia Scarab Beetle	G3G4	S3S4	N	N	1994 pre	1994-Pre :No description given (B94DEY01FLUS).	1994-Pre: This species was collected at this site (B94DEY01FLUS).

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ILLIPARV*13	*Illicium parviflorum*	star anise	G2	S2	N	E	1994-06-14	ON A PEATY, SOUTHWEST-FACING SLOPE IN A HYDRIC HAMMOCK, BEGINNING 1/10TH MILE FROM A SULPHUR SPRING.	REESE (5-22-94): SANDY PEAT, ph 4.0 NEAR SURFACE. FAVORS FILTERED LIGHT, OCCAS. IN CANOPY GAPS, OCCAS. IN CLOSED CANOPY. ALMOST EXCLUSIVELY ON THE UPLAND/WETLAND BOUNDARY BETWEEN HYDRIC HAMMOCK AND MESIC MIXED FOREST. RARELY ON THE HYDRIC HAMMOCK AND BASIN SWAMP ECOTONE. OCCAS. SOLELY WITHIN THE HYDRIC HAMMOCK ZONE. THOUSANDS OF INDIVIDUALS IN DISTINCT COLONIES. FIVE PERCENT OF THE LARGEST SHRUBS (TO 3 METERS) IN BUD. HIGH PLANT DENSITY WITH THIS SPECIES COMMONLY BEING THE UNDERSTORY DOMINANT WHERE IT OCCURS. ASSOCIATED WITH: CARPINUS CAROLINIANA, SABAL PALMETTO (REPLACES IT AS DOMINANT), WOODWARDIA VIRGINICA, W. AREOLATA, QUERCUS LAURIFOLIA, DRYOPTERIS LUDOVICIANA, ARISAEMA TRIPHYLLA, VITIS ROTUNDIFOLIA VAR. MUNSONIANA, GELSEMIUM SEMPERVIRENS, CHASMANTHIUM LAXUM, OSMUNDA CINNAMOMEA, MAGNOLIA VIRGINIANA, NYSSA SYLVATICA VAR. BIFLORA, AND CAREX CHAPMANII. REESE (6-13-1994): ONLY 3 FLOWERS FOUND IN TEN MINUTE SEARCH OF EASTERN END OF POPULATION - ALL OPEN.
ISCHDUNE*2	*Ischyrus dunedinensis*	Three Spotted Pleasing Fungus Beetle	G2G3	S2S3	N	N	1994 pre	1994-Pre: No description given (B94DEY01FLUS).	1994-Pre: This specimen was collected at this site (B94DEY01FLUS).
LITHCAPI*129	*Lithobates capito*	Gopher Frog	G2G3	S3	N	N	1996-09-12	No general description given	Adult sitting in middle of sand road that runs through pasture. DRJ reports this as odd behavior making identification suspect.
LITHCAPI*143	*Lithobates capito*	Gopher Frog	G2G3	S3	N	N	1994-08-04	1994-08-04: abandoned county road embankment with adjacent habitat of sandhill and sand pine scrub (PNDSMA01FLUS).	1994-08-04: two adult frogs observed (PNDSMA01FLUS).

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LITHCAPI*183	*Lithobates capito*	Gopher Frog	G2G3	S3	N	N	2000-05	2000: Blihovde (2000) described the habitat as highly disturbed former sandhill with dense wiregrass and longleaf pine; recovering in part due to intensive prescribed fire program instituted by state since purchased in 1991; local depression marsh suitable for frog breeding (U00BLI01FLUS).	2000-1999: Blihovde used nocturnal visual censuses to study frog habitat use and movements at two study plots; 19% of burrows (mostly tortoise but also pocket gopher) were used by frogs, which used 1-4 burrows apiece (U00BLI01FLUS).
MESIFLAT*208	Mesic flatwoods		G4	S4	N	N	2004	A LEVEL, EVEN-AGED, SEASONALLY WET PLAIN DOMINATED BY PINUS ELLIOTTII/LYONIA LUCIDA-SERENOA REPENS/ARISTIDA BEYRICHIANA. INCLUDES DEPRESSION MARSHES DOMINATED BY AMPHICARPHUM MUHLENBERGIANUM, PANICUM HEMITOMOM, AND SPARTINA BAKERII. GRADES INTO YOUNG SCRUBBY FLATWOODS DOMINATED BY QUERCUS CHAPMANNII-QUERCUS MYRTIFOLIA/LICANIA MICHAUXII-ARISTIDA BEYRICHIANA-SPOROBOLUS JUNCEA WHERE FIRE HAS BEEN EXCLUDED AND SOILS ARE DRIER.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-06-21) (U05FNA02FLUS). PINUS ELLIOTTII <=14" DBH. ASSOCIATED FLORA: DOMINANT: PINUS ELLIOTTII, LYONIA LUCIDA, SERENOA REPENS, ARISTIDA BEYRICHIANA; COMMON: PINUS SEROTINA, PTERIDIUM AQUILINUM, LICANIA MICHAUXII.
MONOHYPO*3	*Monotropa hypopithys*	pinesap	G5	S1	N	E	1979-12-11	Upland Forest.	Specimen was observed flowering.
MYCTAMER*39	*Mycteria americana*	Wood Stork	G4	S2	T	FT	1987-06-27	FLOODPLAIN SWAMP, OVERSTORY DOMINATED BY RED MAPLE, SWAMP ASH, BALD CYPRESS.	WALT THOMSON OBSERVED 15-20 INDIV. (ADULTS AND JUVENILES) NESTS ON 27 JUNE, 1987.
NAJAFILI*35	*Najas filifolia*	narrowleaf naiad	G3	S2	N	T	1997	Lacustrine	Species present (U18DEP01FLUS). Not found during targeted survey in 2018 (U19FNA04FLUS).

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NECTTAVA*26	*Nectopsyche tavara*	Tavares White Miller Caddisfly	G3	S3	N	N	2007-05-09	2007-05-09: No description given other than that the locality was near a river (U09RAS01FLUS).	2007-05-09: Three specimens were collected using a 15 watt black light over an alcohol-filled white pan (U09RAS01FLUS, U08RAS01FLUS).
NOTOPERS*110	*Notophthalmus perstriatus*	Striped Newt	G2G3	S2	N	N	2010-01 – 2010-06	Depression marsh	Species observed (A17FAR01FLUS).
NOTOPERS*111	*Notophthalmus perstriatus*	Striped Newt	G2G3	S2	N	N	2006	Depression marsh	Species observed (A17FAR01FLUS).
NOTOPERS*112	*Notophthalmus perstriatus*	Striped Newt	G2G3	S2	N	N	2006	Depression marsh	Species observed (A17FAR01FLUS).
NOTOPERS*113	*Notophthalmus perstriatus*	Striped Newt	G2G3	S2	N	N	2010	Depression marsh	Species observed (A17FAR01FLUS).
OECEPARV*5	*Oecetis parva*	Little Oecetis Longhorned Caddisfly	G2	S2	N	N	2007-05-09	2007-05-09: No description given other than that the locality was near a river (U09RAS01FLUS).	2007-05-09: Five specimens were collected using a 15 watt black light over an alcohol-filled white pan (U09RAS01FLUS, U08RAS01FLUS).
OECEPORT*6	*Oecetis porteri*	Porter's Long-horn Caddisfly	G3G4	S2S3	N	N	2007-05-09	2007-05-09: No description given other than that the locality was near a river (U09RAS01FLUS).	2007-05-09: One specimen was collected using a 15 watt black light over an alcohol-filled white pan (U09RAS01FLUS, U08RAS01FLUS).
OXYEPESC*13	*Oxyethira pescadori*	Pescador's Bottle-Cased Caddisfly	G3G4	S3	N	N	2003-06-23	2007-05-09: No description given other than that it was near a river (U09RAS01FLUS). 2003-06-23: No description given (U06RAS01FLUS).	2007-05-09: Four specimens were collected using a 15 watt black light over an alcohol-filled white pan (U09RAS01FLUS, U08RAS01FLUS). 2003-06-23: Two specimens were collected at the Pine Road/Blackwater Creek site using ultraviolet light (U06RAS01FLUS).
OXYEPESC*26	*Oxyethira pescadori*	Pescador's Bottle-Cased Caddisfly	G3G4	S3	N	N	2007-05-09	2007-05-09: No description given other than that the locality was near a river (U09RAS01FLUS).	2007-05-09: Thirty-one specimens were collected using a 15 watt black light over an alcohol-filled white pan (U09RAS01FLUS, U08RAS01FLUS).
PANDHALI*106	*Pandion haliaetus*	Osprey	G5	S3S4	N	N	1987-05-28	RIVER SWAMP	1987-05-28: D.E. Runde, GFC, observation. "Total" = B (includes GREG, GBHE, OSPREY).
PHYLELON*14	*Phyllophaga elongata*	Elongate June Beetle	G3	S3	N	N	1938-08-26	1938-08-26: No description given (B89WOO01FLUS).	1938-08-26: One specimen was collected by Hubbell and Friauf (B89WOO01FLUS).
PITUMELA*138	*Pituophis melanoleucus*	Pine Snake	G4	S3	N	ST	1951-12-26	No general description given	SPEC. COLL. 26 DEC. 1951 BY W. AUFFENBERG (#2434).

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PLESREYN*150	*Plestiodon reynoldsi*	Sand Skink	G3	S3	T	FT	2009-11-10	2009-09-23: surrounding area is sand pine scrub with wide fire lane (put in by Division of Forestry) (PNDNES03FLUS).	Questionable but reported occurrence based solely on "tracks." However, given an elevation of only 55 to 60 feet, Paul Moler (PNDMOL01FLUS) believes it unlikely that the sand skink occurs there (P. Moler, pers. comm. to D. Jackson, 2014-02-10; U14MOL17FLUS). 2009-11-10: T. Ostertag observed sand skink tracks in sandy fireline/road on west boundary of the Hunter Property (U10DUB01FLUS, PNDOST01FLUS).
PODOFLOR*62	*Podomys floridanus*	Florida Mouse	G3	S3	N	N	1993-07	Sand Pine Scrub/Scrubby Flatwoods.	1993-07: 1 adult female captured (U93SMA01FLUS).
PTERECRI*123	*Pteroglossaspis ecristata*	giant orchid	G2G3	S2	N	T	2005-11-09	2005-11-09: Paspalum notatum pasture with pines and live oaks, and mesic flatwoods at edge of hydric hammock (F06FNA18FLUS).	2005-11-09: 6-10 plants with old fruit stalks (F06FNA18FLUS).
PTERECRI*124	*Pteroglossaspis ecristata*	giant orchid	G2G3	S2	N	T	2005-11-09	2005-11-09: pasture (F06FNA18FLUS).	2005-11-09: 2 old fruiting stalks and 1 leaf (F06FNA18FLUS).
PTERECRI*143	*Pteroglossaspis ecristata*	giant orchid	G2G3	S2	N	T	2014-04-24	Scrubby flatwoods with Pinus palustris, Serenoa repens, Lyonia lucida, and Aristida stricta. The canopy is very open and the habitat appears to receive consistent prescribed fire.	One plant observed with flower stalk from last year.
PTERECRI*97	*Pteroglossaspis ecristata*	giant orchid	G2G3	S2	N	T	2009-07-04	2009-07-04: Sandhill on roadside with slash pine, turkey oak, palmettos, and wiregrass (U09COO01FLUS).	2009-07-04: 1 flowering plant observed (U09COO01FLUS).
PTERWELA*9	*Pteronotropis welaka*	Bluenose Shiner	G3G4	S3S4	N	ST	2012-04-10	Caught at multiple locationsin Wekiva River in Vallisneria americana (U12TUT01FLUS) 	2012: Kevin Johnson, Joel Andreas, and Virginia Oros collected 11 individuals at multiple locations in Vallisinaria americana (U12TUT01FLUS). 1956-04-07: 24 SPECIMENS COLLECTED BY S. T. TUCKER AND S. BATEMAN (TU 12467) ON 7 APRIL 1956. RANGING IN STANDARD LENGTH FROM 23-44 MM.
ROMUGLOB*4	*Romulus globosus*	Round-Necked Romulus Long-Horned Beetle	G1G2	S1S2	N	N	1994 pre	1994-Pre: No description given (B94DEY01FLUS).	1994-Pre: This species was collected at this site, the earliest collection date being 10 May and the latest was 27 July (B94DEY01FLUS).

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SALIFLOR*13	*Salix floridana*	Florida willow	G2	S2	N	E	1994-10-18	OCCUPIES QUAKING MUCK MICROHABITATS THAT ARE SCATTERED WITHIN SWAMP WITH A MORE STABLE MUCK SUBSTRATE. THIS NATURAL COMMUNITY DOES NOT PRESENTLY FIT IN THE FNAI NC CLASSIFICATION SYSTEM. IT IS DOMINATED BY MAGNOLIA VIRGINIANA/SABAL PALMETTO-ACER RUBRUM VAR. TRILOBUM/CORNUS FOEMINA-MYRICA CERIFULA/LEUCOTHOE RACEMOSA. THE SWAMP HAS ISOLATED AREAS OF SALINE SEEPAGE (ALTHOUGH NOT ASSOCIATED WITH SALIX FLORIDANA). IT LIES IN A DRAINAGE CHANNEL WITH AN ABRUPT DROP FROM UPLANDS OF LANDSCAPE OF MESIC FLATWOODS, SHRUBBY FLATWOODS AND SAND PINE SCRUB. pH 6.8 SEEPAGE SATURATED, SOGGY, QUAKING MUCK. ASSOCIATED FLORA: HASTEOLA ROBERTIORUM, CLADIUM JAMESCIENSE, BOEHMERIA CYLINDRICA, BIDENS MITIS, CIRSIUM MUTICUM, SOLIDAGE SEMPERVIRENS, CARDIMINE BULBOSA, PILEA PUMILA, CAREX LEPTALEA. SUPPORTS TILLANDSIA BARTRAMII.	FOUR SUB-TREES NOTED ON A DETAILED SURVEY OF THREE AREAS. LESS THAN OR EQUAL TO 2.5" D.B.H.

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SANDHILL*161	Sandhill		G3	S2	N	N	2004	A xeric landscape of sand pine scrub and sandhill with a paved road and a depression marsh on the west and a forested slope leading to a hydric hammock on the east. Residential development defines the north border and grazed sandhill the south. The sandhill is dominated by Quercus laevis-Q. incana-Pinus palustris/Aristida beyrichiana.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-09-09) (U05FNA02FLUS). Yellow Astutula series sand. Young, even-aged 5" d.b.h. (max.) Quercus laevis, with good Pinus palustris reproduction from 10" d.b.h. ave. canopy trees. Associated flora: Common: Serenoa repens, Carphephorus corymbosus, Chapmannia floridana, Eriogonum tomentosum, Pityopsis graminifolia, Quercus myrtifolia, Stillingia sylvatica, Pteridium aquilinum, Pinus clausa.
SANDHILL*165	Sandhill		G3	S2	N	N	2004	A QUERCUS LAEVIS/ARISTIDA BEYRICHIANA DOMINATED SANDHILL, GRADES INTO XERIC HAMMOCK ON THE EAST, MESIC FLATWOODS AND DEPRESSION MARSHES ON THE WEST.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-08-21) (U05FNA02FLUS). YELLOW ASTATULA SERIES SAND. ASSOCIATED FLORA: DOMINANT: ARISTIDA BEYRICHIANA, QUERCUS LAEVIS; ABUNDANT: ANDROPODON VIRGINICUS VAR. GLAUCUS; COMMON: SORGHASTRUM SECUNDUM, TILLANDSIA USNEOIDES, LIATRIS TENUIFOLIA VAR. TENUIFOLIA, PITYOPSIS GRAMINIFOLIA, CNIDOSCOLUS STIMULOSA, LICANIA MICHAUXII, PINUS CLAUSA, VACCINIUM STAMINIUM, QUERCUS INCANA, EUPATORIUM COMPOSITIFOLIUM.

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SANDHILL*193	Sandhill		G3	S2	N	N	2004	A REGROWTH TO YOUNG QUERCUS LAEVIS (<=9-10" D.B.H., AVE. 7")-MATURE PINUS PALUSTRIS (12-14" AVE.)/SERENOA REPENS/LICANIA MICHAUXII-ARISTIDA BEYRICHIANA/CLADINA & CLADONIA LICHENS SANDHILL SURROUNDED BY 5 ACRE SUBDIVISION LOTS, OLD FARMS AND AN EXTENSIVE FORESTED WETLAND ON THE NORTH. THE NORTH BDRY. HAS A NARROW TRANSITION BETWEEN SCRUBBY FLATWOODS AND MESIC FLATWOODS TO HYDRIC HAMMOCK AND BASIN SWAMP. pH 4.2 YELLOW AND YELLOW-BROWN ASTATULA SERIES SAND. ASSOCIATED FLORA: DOMINANT: ARISTIDA BEYRICHIANA, LICANIA MICHAUXII, PINUS PALUSTRIS, QUERCUS LAEVIS; ABUNDANT: TILLANDSIA USNEOIDES; COMMON: CHAPMANIA FLORIDANA, ERIOGONUM TOMENTOSUM, SORGHASTRUM SUBSECUNDUM, ARISTIDA PATULA, ANDROPOGON GLOMERATUS VAR. GLOMERATUS, CROTON ARGYRANTHEMUS, OPUNTIA HUMIFUSA, SMILAX AURICULATA, SPOROBOLUS JUNCEUS, VITIS ROTUNDIFOLIA VAR. MUNSONSIANA.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1999-11-03) (U05FNA02FLUS). 1999-11-03: Good quality ground cover, mature LLP to 16 inch DBH with lots of saplings and seedlings. Occurrence is fairly uniform throughout. A fire two years ago in SW corner killed many turkey oaks and stimulated the ground cover suggesting the quality of the occurrence if fire were applied throughout. Gopherus polyphemus were found throughout and there LLP cones eaten, apparently by fox squirrels, although none were seen. The only exotic was a single Cinnamomum camphora on western edge. Fire is badly needed to maintain quality (PNDBLA06FLUS).

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SANDHILL*26	Sandhill		G3	S2	N	N	2005	2005: 230 acres in the extreme southern portion of Lower Wekiva Rvier Preserve State Park G05DRP01FLUS)1979: CA. 300 ACRES IN S PORTION OF AREA.	2005: off site oaks dominate in many areas. In need of restoration (G05DRP01FLUS) 1979: DOMINATED BY PINUS PALUSTRIS & QUERCUS LAEVIS. ALSO QUERCUS INCANA & QUERCUS VIRGINIANA. DOMINANT GROUNDCOVER IS ARISTIDA STRICTA. ALSO SPARKLEBERRY, BEARGRASS, GOPHER-APPLE & SAW PALMETTO.
SANDLAKE*23	Sandhill upland lake		G3	S2	N	N	2004	1994: NATURAL, PERMANENT-WATER, CLEAR, SANDY-BOTTOM SANDHILL UPLAND LAKE IN XERIC UPLAND LANDSCAPE. THE LITTORAL ZONE (SHALLOW WATER) IS DOMINATED BY FUIRENA SCIRPOIDEA-ERIOCAULON COMPRESSUM-XYRIS SMALLIANA; THE MOIST EXPOSED SANDY MARGIN BY SYNGONANTHUS FLAVIDULUS AND XYRIS ELLIOTTII. UPLSOPE FROM EXPOSED SAND IS A HYPERICUM FASCICULATUM-EUPATORIUM LEPTOPHYLLUM-ANDROPOGON ZONE. THIS THEN BREAKS RATHER SHARPLY UPSLOPE INTO A SERENOA REPENS-LYONIA LUCIDA-QUERCUS GEMINATA-MYRICA CERIFERA-GAYLUSSACIA FRONDOSA-PERSEA BORBONIA ZONE. UPSLOPE IS A LONGLEAF PINE (PINUS PALUSTRIS SANDHILL/SCRUB UPLAND WHICH SURROUNDS SITE (PNDORDZ). 1994: FLOATING MARSH ZONE DOMINATED BY NYMPHAEA ODORATA (U95REE01).	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-08-30) (U05FNA02FLUS). 1992: PLACID SERIES SAND (TYPIC HUMAQUEPTS). CHARACTERISTIC SPECIES OF MOIST SAND SHORE MARGIN: DROSERA CAPILLARIS, ERIOCAULON COMPRESSUM, LACHNOCAULON MINUS, LYCOPODIUM APPRESSUM, RHYNCHOSPORA MICROCEPHALA, UTRICULARIA CORNUTA, AND U. SUBULATA (PNDORZ01).

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SANDLAKE*26	Sandhill upland lake		G3	S2	N	N	2004	1994-08-20: a clearwater pond with widely flucuating water levels. Four distinct plant communities: wettest; Nymphaea odorata/Nuphar lutea subsp. advena, Fimbristylis autumnalis; low shore; Rhynchospora microcephala/Eupatorium leptophyllum/Panicum hemitomum-Drosera capillaris-Hypericum reductum-Fuirena scirpoidea-Lycopodella apressa; upper shore; Amphicarphum muhlenbergiana-Opuntia humufusa-Centrella asiatica; Prairie: Andropogon brachystachyus. Surrounded by logged scrub dominated by Quercus geminata-Pinus clausa/Serenoa repens (U95REE01FLUS).	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-08-20) (U05FNA02FLUS). 1994-08-20: sand with high organic content. No abundances noted for flora (U95REE01FLUS).
SANDLAKE*35	Sandhill upland lake		G3	S2	N	N	2004	A small, depressional permanent water pond surrounded on three sides by a Pinus clausa-Quercus geminata/Serenoa repens scrub, and on the west by a paved road and cleared land. The pond consists of three zones dominated by either Amphicarpum muhlenbergianum (driest), Panicum hemitomum, or Nelumbo lutea subsp. advena (wettest).	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1999-11-06) (U05FNA02FLUS). White hydric sand. Associated flora: Abundant: Eupatorium leptophyllum; Common: Centella asiatica, Hypericum myrtifolium, Rhexia cubensis, Rhynchospora inundata (local), R. microcarpa (local), Dicanthelium aciculare, and Pleucea rosea.

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FLORIDA Natural Areas INVENTORY

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SANDLAKE*38	Sandhill upland lake		G3	S2	N	N	2004	AN UPLAND SANDHILL LAKE WITH A FLUCUATING WATER TABLE AND THREE DISTINCT HERBACEOUS PLANT COMMUNITIES (SEE EO DATA). SURROUNDED BY A NARROW SCRUBBY FLATWOODS ZONE DOMINATED BY PINUS ELLIOTTII-QUERCUS GEMINATA-Q. MYRTIFOLIA/SERENOA REPENS-SMILAX AURICULATA/AMPHICARPUM MUHLENBERGIANUM-LACNOC AULON CAROLINIANA, THENCE BY PINUS CLAUSA-QUERCUS GEMINATA DOMINATED UPLANDS.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-07-12) (U05FNA02FLUS). ASSOCIATED FLORA: DOMINANT: AMPHICARPA MUHLENBERGIANUM, NUPHAR LUTEA SUBSP. ADVENA, SYNGONANTHES FLAVIDULUS, DROSERA CAPILLARIS, ELEOCHARIS ELONGATA, ERIOCAULON COMPRESSUM; ABUNDANT: CENTELLA ASIATICA, FUIRENA SCIRPOIDEA (LOCALLY DOMINANT); COMMON: LYCOPODIELLA APPRESSA (LOCAL), XYRIS ELLIOTII (LOCALLY ABUNDANT)HYPERICUM FASCICULATUM (LOCALLY ABUNDANT), ANDROPOGON GLOMERATUS VAR. GLAUCOPSIS, DICANTHELIUM ERICTIFOLIUM, EUPATORIUM LEPTOPHYLLUM, NYMPHOIDES AQUATICA.
SANDLAKE*39	Sandhill upland lake		G3	S2	N	N	2004	A TYPICAL MULTI-ZONAL, SHALLOW, FLUCUATING WATER LEVEL LAKE IN A SANDY SOIL LANDSCAPE (SEE DOMINANTS BELOW). PINUS ELLIOTTII IS INVADING AND DOMINATES AT THE HIGH WATER MARK AND ABOVE, WITH LOGGED OVER PINUS CLAUSA-QUERCUS SCRUB IN THE HIGHEST ELEVATIONS. MUCKY SAND, pH 4.2.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-05-11) (U05FNA02FLUS). ASSOCIATED FLORA: DOMINANT: AMPHICARPUM MUHLENBERGIANUM (LOCAL), EUPATORIUM LEPTOPHYLLUM (LOCAL), FUIRENA SCIRPOIDEA (LOCAL), NUPHAR LUTEA SUBSP. ADVENA (LOCAL); ABUNDANT: ANDROPOGON GLOMERATUS VAR. GLAUCOPSIS (LOCAL), DICANTHELIUM ERECTIFOLIUM, DROSERA CAPILLARIS (LOCAL), ELEOCHARIS ELONGATA, ERICAULON COMPRESSUM, LYCOPODIELLA APPRESSA (LOCAL), COELORACHIS TUBEROSA (LOCAL), XYRIS ELLIOTII, XYRIS SMALLIANA (LOCAL), UTRICULARIA CORNUTA (LOCAL).

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SANDLAKE*41	Sandhill upland lake		G3	S2	N	N	2004	AN UPLAND LAKE WITH NUMEROUS DISTINCT PLANT COMMUNITIES, IN A XERIC SCRUB HABITAT WITH A SHALLOW GRADIENT SHORELINE AND SEASONALLY FLUCUATING WATER LEVELS. SURROUNDED BY A NARROW ZONE OF WET AND MESIC FLATWOODS, THEN SAND PINE SCRUB, EXCEPT FOR SHALLOW WETLAND EXTENSIONS WHERE APPARENTLY DOMINATED BY PINUS ELLIOTTII/HYPERICUM FASCICULATUM.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-07-28) (U05FNA02FLUS). WHITE, HYDRIC TO MESIC SHORELINE SANDS. LOCALLY DOMINANT FLORA: AMPHICARPUM MUHLENBERGIANUM, ANDROPOGON GLOMERATUS VAR. GLAUCOPSIS, CENTELLA ASIATICA, FUIRENA SCIRPOIDEA, HYPERICUM FASCICULATUM, PINUS ELLIOTTII, SERENOA REPENS; ABUNDANT: DROSERA CAPILLARIS, LACHNOCAULON MINUS, LYONIA MARIANA (LOCAL), XYRIS ELLIOTTII.
SCELWOOD*232	*Sceloporus woodi*	Florida Scrub Lizard	G2G3	S2S3	N	N	1994-06-14	A xeric landscape of sand pine scrub and sandhill with a paved road and a depression marsh on the west and a forested slope leading to a hydric hammock on the east. Residential development defines the north border and grazed sandhill the south (F94REE01FLUS).	Two adult lizards observed (F94REE01FLUS).
SCIUNIGE*248	*Sciurus niger niger*	Southeastern Fox Squirrel	G5T5	S3	N	N	2014-04-24	Sandhill with Pinus palustris, Quercus laevis, and Aristida stricta.	2014-04-24: adult observed (F14SUR04FLUS).
SCIUNIGE*4	*Sciurus niger niger*	Southeastern Fox Squirrel	G5T5	S3	N	N	1983?	IN SANDHILLS.	REGULARLY OBSERVED, BUT NO POP. ESTIMATE.
SCIUNIGE*93	*Sciurus niger niger*	Southeastern Fox Squirrel	G5T5	S3	N	N	1994-03-30	Slash pine plantation - 30 years old, formerly flatwoods site, hardwood encroachment to a great degree.	1 individual with nest.
SCRUB**** (X)147	Scrub		G2	S2	N	N	1981-04-05	1981: OAK SCRUB (U81COX01). 1995: SOME BEING CLEARED (PNDREE04).	1981: 1-2 M OAKS AT SITE.

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SCRUB****1019	Scrub		G2	S2	N	N	1999-11-02	This scrub island is surrounded by hydric hammock and two creeks. It falls rapidly in all directions towards the wetlands. Roads surround the island and cut through the middle.	Species composition is typical of central Fl scrubs off of Lake Wales Ridge. Nothing very rare was found except for scrub holly and scrub bay. Very dense scrub with closed canopy of sand pine, pines to 40 feet. In the NE corner there is a small area of xeric hamock and the SW corner becomes more of a scrubby flatwoods, but the majority of mapped area is scrub. Species list is attached in GMF. Eight scrub jay families formerly were in this scrub but none were found in 1999. NE corner was burned in 1997.
SCRUB****141	Scrub		G2	S2	N	N	2004	1981: OAK SCRUB. 1994: A QUERCUS MYRTIFOLIA-QUERCUS CHAPMANII-QUERCUS GEMINATA-PINUS CLAUSA (LOCAL)/SABAL ETONIA-SERENOA REPENS/SMILAX AURICULATA/LICNIA MICHAUXII-GALACTIA ELLIOTTII-LIATRIS TENUIFOLIA DOMINATED SCRUB IN A LANDSCAPE WITH SCATTERED UPLAND SANDHILL LAKES AND FRINGING SCRUBBY FLATWOODS (PNDREE04).	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1999-11-02) (U05FNA02FLUS). 1981: 2 M OAKS AT SITE. 1994: PINUS CLAUSA REPEATEDLY LOGGED WHEN IT ATTAINS 13-15.5" DBH (31-54 YRS. OLD). YOUNG QUERCUS SP. AVERAGE LESS THAN 12' TALL. ASSOCIATED FLORA: PRESENT: ASIMINA OBOVATA, BEFARIA RACEMOSA, GAYLUSSACIA DUMOSA, LYONIA FERRUGINEA, LYONIA FRUTICOSA, LYONIA LUCIDA, PERSEA BORBONIA VAR. HUMULIS, PITYOPSIS GRAMINIFOLIA, VACCINIUM SP. (PNDREE04).
SCRUB****142	Scrub		G2	S2	N	N	2004	1981: OAK SCRUB (U81COX01). 1994: MOSAIC OF LOGGED OUT, REGROWTH PINUS CLAUSA DOMINATED SCRUB, PINUS ELLIOTTII-QUERCUS SP. DOMINATED SCRUBBY FLATWOODS AND MESIC FLATWOODS, WITH AN EO RANK C TAXODIUM DISTICHUM-NYSSA SYLVATICA VAR. BIFLORA-GORDONIA LASIANTHES-SABAL PALMETTO/SERENOA REPENS STRAND SWAMP AND HYDRIC HAMMOCK (F94REE01).	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-11-09) (U05FNA02FLUS). 1981: 1-2 M OAKS WITH SCATTERED SLASH PINES (U81COX01).

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Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
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FNAI ELEMENT OCCURRENCE REPORT on or near

Seminole State Forest - Main

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
SCRUB****143	Scrub		G2	S2	N	N	1994-07-12	1981: MOSTLY OAK SCRUB WITH PONDS, BEING DEVELOPED (U81COX01). 1994: A WET FLATWOODS/DEPRESSION MARSH/SCRUBBY FLATWOODS/SCRUB LANDSCAPE THAT HAS BEEN GRADED WITH PAVED SUBDIVISION ROADS (PNDREE04).	1981: OCCURRENCE AT SITE; MOSTLY OAKS MIXED WITH PONDS AND SLASH PINES, BEING DEVELOPED (U81COX01). 1994: NO DATA. YOUNG REGROWTH SCRUB WITH HISTORICAL HEAVY LOGGING (PNDREE04).
SCRUB****145	Scrub		G2	S2	N	N	1994-09-22	OAK SCRUB (U81COX01). SMALL SHRUB OR SCRUBBY FLATWOOD REMNANTS WITHIN A LARGE PASTURED RANCH. THESE ARE PROBABLY REMNANTS OF A FORMER MECHANICAL REMOVAL OF SHRUB OAKS (F94REE01).	1-2 M OAKS (U81COX01). STUNTED OAK WITH SERENOA REPENS AS THE PREDOMINATING GROUND COVER (F94REE01).
SCRUB****155	Scrub		G2	S2	N	N	2004	OAK SCRUB, SURROUNDED BY SAND PINE SCRUB	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1981-06-12) (U05FNA02FLUS). 2-3 M OAKS, SURROUNDED BY SAND PINES
SCRUB****233	Scrub		G2	S2	N	N	2004	SAND PINES.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1981-04-01) (U05FNA02FLUS). 6 M SAND PINES.

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Tallahassee, FL 32303
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SCRUB****289	Scrub		G2	S2	N	N	2004	In a cut-over, young and open (esp. in local areas of older woods) Pinus clausa-Quercus myrtifolia/Lyonia ferruginea-L. lucida/Smilax auriculata/Aristida beyrichiana/Cladina-Cladonia dominated scrub. Dominates a landscape that includes lower quality Mesic Flatwoods and Basin Swamp.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-09-15) (U05FNA02FLUS). White St. Lucie sand. Mostly 12.5" d.b.h. (25-35 yr. old.?) Pinus clausa in a mosiac of historic cutting blocks. Associated flora: Common: Ceratiola ericoides (local), Galactia elliotii, Garberia heterophylla (to locally abundant), Liatris tenuifolia (local), Pityopsis graminifolia (local), Quercus geminata, Quercus minima; Occasional: Vaccinium (darrowii or myrsinites), Gaylussacia dumosa, G. frondosa, Licania michauxii, Persea borbonia var. humulis, Solidago odorata var. chapmanii, Tillandsia usenioides, Vaccinium corymbosum, Pteridium aquilinum, Andropogon glomeratus var. hirsuitus, Ilex glabra, Andropogon virginicus var. glaucopsis.
SCRUB****592	Scrub		G2	S2	N	N	2004	DENSE SAND PINE/OAK SCRUB; DOMINATED BY SAND PINE OF ALL AGES, WITH SCATTERED OAKS. ROSEMARY IN OPENINGS WITH PALMETTO AND PERSEA OCCURING THROUGHOUT. WHITE SAND.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1987-11-04) (U05FNA02FLUS).

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SCRUFLAT*139	Scrubby flatwoods		G2	S2?	N	N	2004	A LEVEL, EVEN-AGED, SEASONALLY WET PLAIN DOMINATED BY PINUS ELLIOTTII/LYONIA LUCIDA-SERENOA REPENS/ARISTIDA BEYRICHIANA. INCLUDES DEPRESSION MARSHES DOMINATED BY AMPHICARPHUM MUHLENBERGIANUM, PANICUM HEMITOMOM, AND SPARTINA BAKERII. GRADES INTO YOUNG SCRUBBY FLATWOODS DOMINATED BY QUERCUS CHAPMANNII-QUERCUS MYRTIFOLIA/LICANIA MICHAUXII-ARISTIDA BEYRICHIANA-SPOROBOLUS JUNCEA WHERE FIRE HAS BEEN EXCLUDED AND SOILS ARE DRIER.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-06-21) (U05FNA02FLUS). ASSOCIATED FLORA: DOMINANT: LICANIA MICHAUXII; ABUNDANT: ARISTIDA BEYRICHIANA, QUERCUS CHAPMANNII, QUERCUS MYRTIFOLIA (LOCAL); COMMON: SERENOA REPENS, PINUS PALUSTRIS, PTEROCAULON PYCNOSTACHYUM, LYONIA LUCIDA, GALACTIA REGULARIS.
SCRUFLAT*28	Scrubby flatwoods		G2	S2?	N	N	2004	A COUPLE PATCHES, LARGEST BETWEEN BLACKWATER CREEK& WEKIVA RIVER. REESE (1994): A TOP SLOPES ADJACENT TO BLACKWATER CREEK WHERE THERE HAS BEEN HEAVY PAST LOGGING OF PINE AND PROBABLY MECHANICAL CLEARING.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-08-30) (U05FNA02FLUS). UNDISTURBED PORTIONS DOMINATED BY PINUS PALUSTRIS, QUERCUS GEMINATA, Q. MYRTIFOLIA, Q. CHAPMANII, BUT MUCH REPLANTED WITH PINUS ELLIOTTII. (UNDINT01) ALSO SAND PINE, RUSTY LYONIA, SAW PALMETTO (U79DRP03). REESE (1994): ASSOCIATED FLORA: DOMINANT: SERENOA REPENS, ARISTIDA BEYRICHIANA, QUERCUS MYRTIFOLIA (AVE. 8" DBH) (LOCAL); ABUNDANT: PINUS ELLIOTTII (AVE. 8-10" DBH), ILEX GLABRA; OCCASIONAL: LYONIA FERRUGINEA, PINUS PALUSTRIS, VACCINIUM (DARROW?), GAYLUSSACIA TOMENTOSA, OSMUNDA CINNOMOMEA (LOCAL).

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Tallahassee, FL 32303
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Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
SCRUFLAT*29	Scrubby flatwoods		G2	S2?	N	N	2005	2005: 149 acres (G05DRP01FLUS). 1979:A COUPLE PATCHES, LARGEST BETWEEN BLACKWATER CREEK& WEKIVA RIVER.	2005: highly degraded, fire suppressed (G05DRP01FLUS). 1979?: UNDISTURBED PORTIONS DOMINATED BY PINUS PALUSTRIS, QUERCUS GEMINATA, Q. MYRTIFOLIA, Q. CHAPMANII, BUT MUCH REPLANTED WITH PINUS ELLIOTTII. (UNDINT01) ALSO SAND PINE, RUSTY LYONIA, SAW PALMETTO (U79DRP03).
SELOFLOR*7	*Selonodon floridensis*	Florida Cebrionid Beetle	G2G4	S2S4	N	N	1985-05-23	1985-05-23: No description given (B99GAL01FLUS).	1985-05-23: One specimen was collected (B99GAL01FLUS).
STENFLOR*31	*Stenacron floridense*	A Mayfly	G3G4	S3S4	N	N	1999-01-11	1999-01-11: No description given (U09DEP01FLUS).	1999-01-11: Staff from the Florida Department of Environmental Protection collected this species (U09DEP01FLUS).
TRIGFLOR*2	*Trigonopeltastes floridana*	Scrub Palmetto Flower Scarab Beetle	G2G3	S2S3	N	N	1994 pre	1994-Pre: No description given (B94DEY01FLUS).	1994-Pre: This species was collected at this site (B94DEY01FLUS).

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Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
WETFLAT*10	Wet flatwoods		G4	S4	N	N	2004	VARIOUS PATCHES THROUGHOUT MOST OF AREA (SEE MAP IN U79DRP03). REESE AND BRANHAM/REESE AND ORZELL (1994): MOSTLY LOGGED OUT AND MECHNICALLY CLEARED SOUTH OF RIVER - IN EARLY SUCCESSION. PLANTED TO PINUS ELLIOTTII TO NORTH OF CREEK WHERE MIXED WITH LIQUIDAMBAR STYRACIFLUA.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-08-30) (U05FNA02FLUS). ORIGINALLY DOMINATED BY PINUS SEROTINA, BUT MOST OF AREA REPLANTED IN PINUS ELLIOTTII. UNDERSTORY OF ILEX GLABRA, LYONIA SP., SERENOA REPENS. ALSO MYRICA CERIFERA, VACCINIUM SP. (BOTH SOURCES). REESE & BRANHAM/REESE & ORZELL: ASSOCIATED FLORA: DOMINANT: PINUS ELLIOTTII, MYRICA CERIFULA, XYRIS CAROLINIANA; PRESENT: ARISTIDA STRICTA, NYPERICUM CISTIFOLIUM, HYPERICUM REDUCTUM, HYPERICUM TETRAPETALUM, ILEX GLABRA, LYONIA LUCIDA, PINUS SEROTINA, PTERIDIUM AQUILINUM, PTEROCAULON PYCNOSTACHYUM, QUERCUS MYRTIFOLIUM, RHEXIA MARIANA, RHEXIA NASHII, RHEXIA PETIOLATA, SARRACENIA MINOR, SYNGONANTHUS FLAVIDULUS, VACCINIUM MYRSINITES, WOODWARDIA VIRGINICA, XYRIS ELLIOTTII, GALACTIA ELLIOTTII, GAYLUSSACIA NANA, JUNCUS SCIRPOIDES, LIATRIS TENUIFOLIA, FIMBRISTYLIS PUBERULA, SOLIDAGO ODORATA VAR. CHAPMANII, LUDWIGIA MARITIMA, ASTER TORTIFOLIUS, ASTER RETICULARIS, ASTER (WALTERI?), LECHEA TORREYI, POLYGALA SETACEA, IVA MICROCEPHALA.

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Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
WET FLAT*11	Wet flatwoods		G4	S4	N	N	2004	VARIOUS PATCHES THROUGHOUT MOST OF AREA (SEE MAP IN U79DRP03).	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1979?) (U05FNA02FLUS). ORIGINALLY DOMINATED BY PINUS SEROTINA, BUT MOST OF AREA REPLANTED IN PINUS ELLIOTTII. UNDERSTORY OF ILEX GLABRA, LYONIA SP., SERENOA REPENS. ALSO MYRICA CERIFERA, VACCINIUM SP. (BOTH SOURCES)
WET FLAT*12	Wet flatwoods		G4	S4	N	N	2005	1979: VARIOUS PATCHES THROUGHOUT MOST OF AREA (SEE MAP IN U79DRP03).	2005. According to map in 2005 management plan, this area is now ruderal (G05DRP01FLUS). 1979: ORIGINALLY DOMINATED BY PINUS SEROTINA, BUT MOST OF AREA REPLANTED IN PINUS ELLIOTTII. UNDERSTORY OF ILEX GLABRA, LYONIA SP., SERENOA REPENS. ALSO MYRICA CERIFERA, VACCINIUM SP. (BOTH SOURCES)
WET FLAT*9	Wet flatwoods		G4	S4	N	N	2004	VARIOUS PATCHES THROUGHOUT MOST OF AREA (SEE MAP IN U79DRP03).	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1979?) (U05FNA02FLUS). ORIGINALLY DOMINATED BY PINUS SEROTINA, BUT MOST OF AREA REPLANTED IN PINUS ELLIOTTII. UNDERSTORY OF ILEX GLABRA, LYONIA SP., SERENOA REPENS. ALSO MYRICA CERIFERA, VACCINIUM SP. (BOTH SOURCES)

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Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
XERIHAMM60	Xeric hammock		G3	S3	N	N	2004	A XERIC, HARDWOOD-PINE FOREST IN A CATENA BETWEEN SAND PINE SCRUB AND MESIC HARDWOOD FOREST ON A STEEP SLOPE JUST ABOVE A HYDRIC HAMMOCK.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1999-11-02) (U05FNA02FLUS). MATURE FOREST WITH QUERCUS VIRGINIANA AVE. 15" D.B.H. ASSOCIATED FLORA: PRESENT: PINUS ELLIOTTII, P. CLAUSA, P. PALUSTRIS, QUERCUS VIRGINIANA, Q. HEMISPHERICA, Q. LAURIFOLIA, Q. MYRTIFOLIA, TILANDSIA USNEOIDES, PTERIDIUM AQUILLINUM, SERENOA REPENS, ILEX OPACA VAR. OPACA, VITIS ROTUNDIFOLIA VAR. MUNSONIANA, PERSEA BORBONIA VAR. HUMULIS, RHYNCHOSPORA MEGALOCARPA, LYONIA FERRIGINEA, OPUNTIA HUMULIS, PITYOPSIS GRAMINIFOLIA, PASPALUM SETACEAE, DICANTHELIUM PORTORICENSE, D. ENSIFOLIUM, D. COMMUTATUM.

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

FLORIDA Natural Areas INVENTORY

Florida Natural Areas Inventory

Aggregated Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Documented					
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Aphelocoma coerulescens	Florida Scrub-Jay	G2?	S2	T	FT
Basin swamp		G4	S3	N	N
Carex chapmannii	Chapman's sedge	G3	S3	N	T
Coelorachis tuberculosa	Piedmont jointgrass		S3	N	T
Drymarchon couperi	Eastern Indigo Snake		S2?	T	FT
Gopherus polyphemus	Gopher Tortoise		S3	C	ST
Haliaeetus leucocephalus	Bald Eagle	G5	S3	N	N
Hasteola robertiorum	Florida hasteola	G1	S1	N	E
Hydroptila berneri	Berner's Microcaddisfly	G4G5	S3	N	N
Illicium parviflorum	star anise	G2	S2	N	E
Nectopsyche tavara	Tavares White Miller Caddisfly	G3	S3	N	N
Notophthalmus perstriatus	Striped Newt	G2G3	S2	N	N
Oecetis parva	Little Oecetis Longhorned Caddisfly	G2	S2	N	N
Oxyethira pescadori	Pescador's Bottle-Cased Caddisfly	G3G4	S3	N	N
Plestiodon reynoldsi	Sand Skink	G3	S3	T	FT
Podomys floridanus	Florida Mouse		S3	N	N
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	T
Salix floridana	Florida willow	G2	S2	N	E
Sandhill upland lake		G3	S2	N	N
Sceloporus woodi	Florida Scrub Lizard	G2G3	S2S3	N	N
Scrub		G2	S2	N	N
Scrubby flatwoods			S2?	N	N
Xeric hammock		G3	S3	N	N
Likely					
Alligator mississippiensis	American Alligator	G5	S4	SAT	FT(S/A)
Aramus guarauna	Limpkin		S3	N	N
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Baygall		G4	S4	N	N
Blackwater stream			S3	N	N
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Depression marsh		G4	S4	N	N
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Euphyes berryi	Berry's Skipper	G2	S2	N	N
Floodplain swamp		G4	S4	N	N
Hesperia meskei straton	Eastern Meske's Skipper	G3G4T3	S2S3	N	N
Hydric hammock		G4	S4	N	N
Hydroptila wakulla	Wakulla Springs Vari-colored Microca	G2	S2	N	N
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Mesic flatwoods		G4	S4	N	N
Mycteria americana	Wood Stork		S2	T	FT
Pteronotropis welaka	Bluenose Shiner	G3G4	S3S4	N	ST
Sandhill		G3	S2	N	N
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Upland hardwood forest		G5	S3	N	N
Ursus americanus floridanus	Florida Black Bear	G5T4	S4	N	N
Wet flatwoods		G4	S4	N	N

Potential

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.

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FLORIDA Natural Areas INVENTORY

Florida Natural Areas Inventory

Aggregated Biodiversity Matrix Report

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Agrimonia incisa	incised groove-bur	G3	S2	N	T
Amblyscirtes aesculapius	Lace-winged Roadside Skipper	G3G4	S3S4	N	N
Asplenium x heteroresiliens	Morzenti's spleenwort	G2	S1	N	N
Bird Rookery		G5	SNR	N	N
Bonamia grandiflora	Florida bonamia	G3	S3	T	E
Calamintha ashei	Ashe's savory		S3	N	T
Calopogon multiflorus	many-flowered grass-pink	G2G3	S2S3	N	T
Coleataenia abscissa	cutthroatgrass	G3	S3	N	E
Conradina grandiflora	large-flowered rosemary		S3	N	T
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S1	N	N
Cucurbita okeechobeensis	Okeechobee gourd	G1	S1	E	E
Deeringothamnus rugelii	Rugel's pawpaw		S1	E	E
Egretta caerulea	Little Blue Heron	G5	S4	N	ST
Enodia portlandia floralae	Florida Pearly Eye	G4TU	SU	N	N
Eriogonum longifolium var. gnaphalifolium	scrub buckwheat	G4T3	S3	T	E
Hartwrightia floridana	hartwrightia	G2	S2	N	T
Heterodon simus	Southern Hognose Snake		S2S3	N	N
Hypotrichia spissipes	Florida Hypotrichia Scarab Beetle	G3G4	S3S4	N	N
Ischyrus dunedinensis	Three Spotted Pleasing Fungus Beetl	G2G3	S2S3	N	N
Lampropeltis extenuata	Short-tailed Snake	G3	S3	N	ST
Lechea cernua	nodding pinweed		S3	N	T
Litsea aestivalis	pondspice	G3?	S2	N	E
Lupinus aridorum	scrub lupine	G3T1	S1	E	E
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Monotropa hypopithys	pinesap	G5	S1	N	E
Monotropsis reynoldsiae	pygmy pipes	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat		S2	N	N
Nolina atopocarpa	Florida beargrass	G3	S3	N	T
Peucaea aestivalis	Bachman's Sparrow		S3	N	N
Pituophis melanoleucus	Pine Snake	G4	S3	N	ST
Platanthera integra	yellow fringeless orchid	G3G4	S3	N	E
Polygala lewtonii	Lewton's polygala	G2	S2	E	E
Romulus globosus	Round-Necked Romulus Long-Hornec	G1G2	S1S2	N	N
Selonodon floridensis	Florida Cebrionid Beetle	G2G4	S2S4	N	N
Trichechus manatus	West Indian Manatee	G2G3	S2	T	FT
Trigonopeltastes floridana	Scrub Palmetto Flower Scarab Beetle		S2S3	N	N
Vicia ocalensis	Ocala vetch	G2	S2	N	E
Warea amplexifolia	clasping warea	G1	S1	E	E
Warea carteri	Carter's warea		S1	E	E

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

FLORIDA Natural Areas INVENTORY

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

June 10, 2021

Patti Anderson
Florida Department of Agriculture & Consumer Services
Florida Forest Service
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). At your request we have produced the following report for your project area.

The purpose of this Standard Data Report is to provide objective scientific information on natural resources located in the vicinity of a site of interest, in order to inform those involved in project planning and evaluation. This Report makes no determination of the suitability of a proposed project for this location, or the potential impacts of the project on natural resources in the area.

Project: Seminole State Forest – Warea Tract

Date Received: 6/4/2021

Location: Lake County

Based on the information available, this site appears to be located in a significant region of natural areas and habitat for several rare species.

Element Occurrences

A search of our maps and database indicates that we currently have many 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.

Federally Listed Species

Our data indicate federally listed species are present on or very near this site, specifically Lewton's polygala (*Polygala lewtonii*), clasping warea (*Warea amplexifolia*), scrub plum (*Prunus geniculata*), Sand Skink (*Plestiodon reynoldsi*), Florida bonamia (*Bonamia grandiflora*), scrub pigeon-wing (*Clitoria fragrans*), scrub buckwheat (*Eriogonum longifolium var. gnaphalifolium*) and paper-like nailwort (*Paronychia chartacea var. chartacea*) (see enclosed map and tables for details). This statement should not be interpreted as a legal determination of presence or absence of federally listed species on a property.

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

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Institute of Science and Public Affairs

The Florida State University

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.

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.

CLIP

The enclosed map shows natural resource conservation priorities based on the Critical Lands and Waters Identification Project. CLIP is based on many of the same natural resource data developed for the Florida Forever Conservation Needs Assessment, but provides an overall picture of conservation priorities across different resource categories, including biodiversity, landscapes, surface waters, and aggregated CLIP priorities (that combine the individual resource categories). CLIP is also based primarily on remote sensed data and is not intended to be the definitive authority on natural resources on a site.

For more information on CLIP, visit http://www.fnai.org/clip.cfm .

Managed Areas

Portions of the site appear to be located within the Seminole State Forest, 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.

Land Acquisition Projects

This site appears to be located within the Lake Wales Ridge Ecosystem Florida Forever BOT Project, which is part of the State of Florida's Conservation and Recreation Lands land acquisition program. For more information on this Florida Forever Project, contact the Florida Department of Environmental Protection, Division of State Lands.

Florida Forever Board of Trustees (BOT) projects are proposed and acquired through the Florida Department of Environmental Protection, Division of State Lands. The state has no specific land management authority over these lands until they are purchased.

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. **The maps contain sensitive environmental information, please do not distribute or publish without prior consent from FNAI.** FNAI data may not be resold for profit.

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) 681-9364 Fax
www.fnai.org

FLORIDA Natural Areas INVENTORY

Seminole State Forest - Warea Tract

Site boundaries are approximate.

Lake County

CLIP v4.0 Resource Priorities

Biodiversity Resource Category
- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

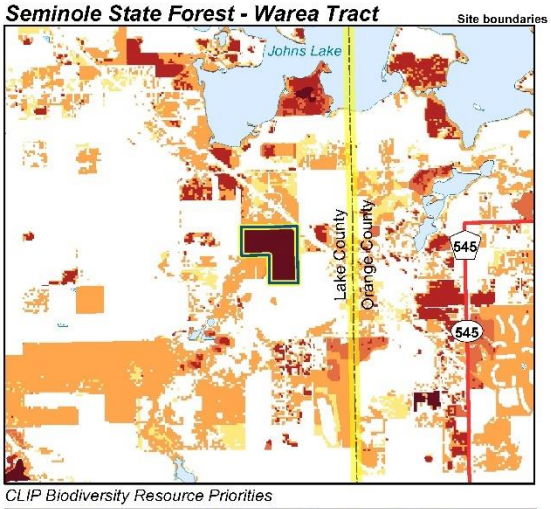
Landscape Resource Category
- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

Surface Water Resource Category
- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

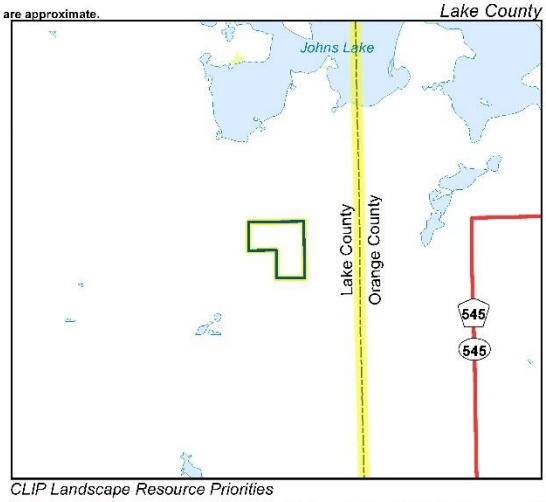
Aggregated CLIP Priorities
- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5
- Site Boundary

Map should not be interpreted without accompanying documents.

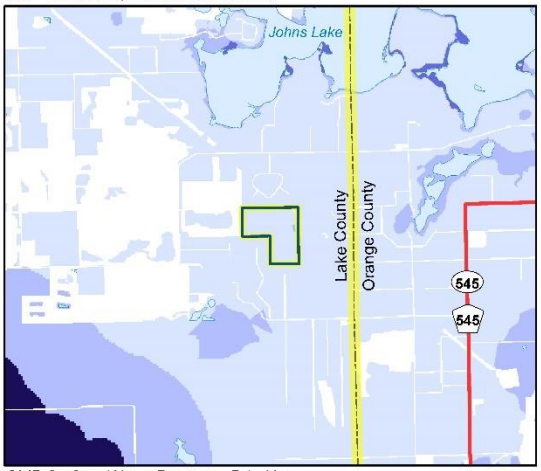
Critical Lands and Waters Identification Project (CLIP) is a cooperative effort between the FSU Florida Natural Areas Inventory, UF Center for Landscape Conservation Planning, and FL Fish & Wildlife Conservation Commission, with additional funding from FL Dept of Environmental Protection and US Fish & Wildlife Service.



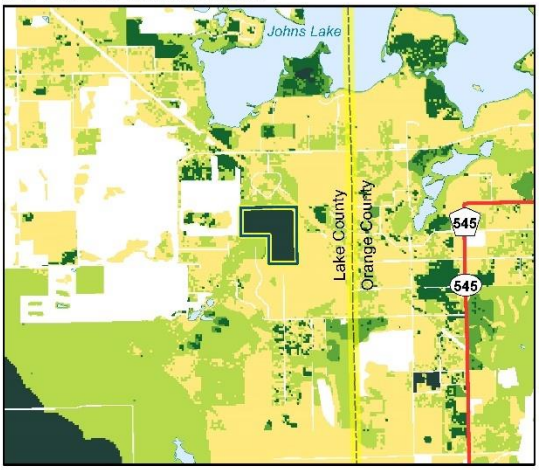
CLIP Biodiversity Resource Priorities



CLIP Landscape Resource Priorities



CLIP Surface Water Resource Priorities



CLIP Aggregated Resource Priorities

0 0.5 1 2 3 4 Miles

Map produced by KAB
6/10/2021

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

FLORIDA Natural Areas INVENTORY

Florida Natural Areas Inventory

Managed Area Element Summary

Seminole State Forest

SCIENTIFIC NAME	COMMON NAME	Global rank	State rank	Federal status	State status
PLANTS					
Bonamia grandiflora	Florida bonamia	G3	S3	T	E
Carex chapmannii	Chapman's sedge	G3	S3	N	T
Clitoria fragrans	scrub pigeon-wing	G2G3	S2	T	E
Coelorachis tuberculosa	Piedmont jointgrass	G3	S3	N	T
Eriogonum longifolium var. gnaphalifolium	scrub buckwheat	G4T3	S3	T	E
Hasteola robertiorum	Florida hasteola	G1	S1	N	E
Nolina brittoniana	Britton's beargrass	G3	S3	E	E
Paronychia chartacea var. chartacea	paper-like nailwort	G3T3	S3	T	E
Polygala lewtonii	Lewton's polygala	G2	S2	E	E
Prunus geniculata	scrub plum	G3	S3	E	E
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	T
Salix floridana	Florida willow	G2	S2	N	E
Stylisma abdita	scrub stylisma	G3	S3	N	E
Warea amplexifolia	clasping warea	G1	S1	E	E
AMPHIBIANS					
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Notophthalmus perstriatus	Striped Newt	G2G3	S2	N	N
REPTILES					
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Plestiodon reynoldsi	Sand Skink	G3	S3	T	FT
Sceloporus woodi	Florida Scrub Lizard	G2G3	S2S3	N	N
BIRDS					
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Aphelocoma coerulescens	Florida Scrub-Jay	G2?	S2	T	FT
Haliaeetus leucocephalus	Bald Eagle	G3	S2	E, PT	FE
		G5	S3	N	N
MAMMALS	Southeastern Fox Squirrel				
Sciurus niger niger	Florida Black Bear	G5T5	S3	N	N
Ursus americanus floridanus		G5T4	S4	N	N
INVERTEBRATES	Lace-winged Roadside Skipper				
Amblyscirtes aesculapius	Florida Pearly Eye	G3G4	S3S4	N	N
Enodia portlandia floralae	Berner's Microcaddisfly	G4TU	SU	N	N
Hydroptila berneri	Wakulla Springs Vari-colored	G4G5	S3	N	N
Hydroptila wakulla	Microcaddisfly	G2	S2	N	N
Oxyethira pescadori	Pescador's Bottle-Cased Caddisfly	G3G4	S3	N	N
Hypotrichia spissipes	Florida Hypotrichia Scarab Beetle	G3G4	S3S4	N	N
Ischyrus dunedinensis	Three Spotted Pleasing Fungus Beetle	G2G3	S2S3	N	N
Romulus globosus	Round-Necked Romulus Long-Horned Beetle	G1G2	S1S2	N	N
Trigonopeltastes floridana	Scrub Palmetto Flower Scarab Beetle	G2G3	S2S3	N	N

Note: *Summary includes all documented and likely species occurrence records currently in the FNAI database.*

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

FNAI ELEMENT OCCURRENCE REPORT on or near

Seminole State Forest – Warea Tract

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
BONAGRAN*51	*Bonamia grandiflora*	Florida bonamia	G3	S3	T	E	2012-10-03	Pre-2012: Fire excluded sandhill. 2012-10-03: High quality, recently burned sandhill habitat (U13JEN02FLUS)	Plants are widely scattered across the Warea Tract and have been observed many times between 1989 and 2012. The two sites north of Marsh Road were not relocated after subsequent searches.
CHIOPYGM*70	*Chionanthus pygmaeus*	pygmy fringe tree	G2	S2S3	E	E	2012-04-10	Xeric hammock with heavy disturbances including fire exclusion and ORV trail. Quercus geminata 5-10m tall.	1 plant 50cm tall, E edge of sand road. Plants vegetative.
CLITFRAG*67	*Clitoria fragrans*	scrub pigeon-wing	G2G3	S2	T	E	2012-10-03	1998-04-03: Open sandhill with the ground gently sloping (abruptly in a couple of places). Widely scattered mature Pinus palustris grow over abundant Quercus geminata and Q. laevis. Occasional thickets of Q. geminata cover large areas. The open shrub stratum is mainly Serenoa repens with occasional Ceratiola ericoides (locally abundant). The diverse groundcover includes Aristida stricta, Licania michauxii, and Pteridium aquilinum. Leaf litter covers the ground under the trees while sandy clearings are throughout the tract (F98SCH23FLUS).	Variable number of plants observed over many years from 1998 to 2012.
DRYMCOUP*454	*Drymarchon couperi*	Eastern Indigo Snake	G3	S2?	T	FT	1991	CHICARDI (1991): "SANDHILL-SCRUB" DOMINATED BY QUERCUS LAEVIS-Q. INCANA-Q. GEMINATA-PINUS PALUSTRIS/CERATIOLA ERICOIDES-PRUNUS GENICULATA-SABAL PALMETTO/ARISTIDA BEYRICHIANA-MIXED FORBS.	ONE MATURE INDIVIDIAL. WITHIN THE SCRUB NC TYPE.

1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
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FNAI ELEMENT OCCURRENCE REPORT on or near

Seminole State Forest – Warea Tract

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
DRYMCOUP*455	*Drymarchon couperi*	Eastern Indigo Snake	G3	S2?	T	FT	1991	1998-04-03: Open sandhill with the ground gently sloping (abruptly in a couple of places). The sandhill has not burned in many years allowing the oaks to dominate sections of the tract. Widely scattered mature Pinus palustris grow over abundant Quercus geminata and Q. laevis. Occasional thickets of Q. geminata cover large areas. The open shrub stratum is mainly Serenoa repens with occasional Ceratiola ericoides (locally abundant). The diverse groundcover includes Aristida stricta, Licania michauxii, and Pteridium aquilinum. Leaf litter covers the ground under the trees while sandy clearings are throughout the tract (F98SCH23FLUS).	1998-10-23, 04-03, 03-13, 1997-10-23: No indigo snakes observed during pedestrian surveys. Open sandhill habitat remains intact (F98SCH23FLUS, F97SCH40FLUS). 1991: One mature individual seen on site (U91CHI07FLUS).
ERIOGNAP*110	*Eriogonum longifolium var. gnaphalifolium*	scrub buckwheat	G4T3	S3	T	E	2007-07-31	2007-07-31: In ruderal area along fenceline (F08FNA01FLUS).	2007-07-31: Two vegetative and 4 flowering individuals occupying a 4 m wide area along fenceline (F08FNA01FLUS).
ERIOGNAP*77	*Eriogonum longifolium var. gnaphalifolium*	scrub buckwheat	G4T3	S3	T	E	2012-04-10	Sandhill	2012: One plant was documented at NW site (F12FNA02FLUS). 2010-07-27: Original plants at NW site not found but 5 plants were introduced to site and were observed, some with bloom spikes (U10FNA03FLUS). No plants could be located at the SE site in 2010 (U10FNA03FLUS) and 1994 (F94REE01FLUS) surveys for this species in the same location that Chicardi (U91CHI07FLUS) reported 50-100 in 1991.
ERIOGNAP*83	*Eriogonum longifolium var. gnaphalifolium*	scrub buckwheat	G4T3	S3	T	E	2012-10-03	2012-10-03: High quality, recently burned sandhill habitat	Plants observed in 4 discreete areas within this tract several times between 1991 and 2013. Then original area, which was first documented in 1991 has not been relocated but three more very small populations have been documented since.

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(850) 224-8207
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FLORIDA Natural Areas INVENTORY

FNAI ELEMENT OCCURRENCE REPORT on or near

Seminole State Forest – Warea Tract

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
GOPHPOLY*944	*Gopherus polyphemus*	Gopher Tortoise	G3	S3	C	ST	1994-09-29	A small, remnant fire excluded sandhill to xeric hammock here. The sandhill is dominated by Quercus geminata-Q. Laevis/Serenoa repens/Aristida beyrichiana-Tillandsia usneoides. The xeric hammock is dominated by Quercus geminata with a sparse understory. This site is surrounded by abandoned citrus groves, excep timmediately south which is land that was recently cleared.	1994: occasional active burrows (U95REE01FLUS).
GOPHPOLY*951	*Gopherus polyphemus*	Gopher Tortoise	G3	S3	C	ST	1994-07-22	Chicardi (1991): "sandhill-scrub" dominated by Quercus laevis-Q. Incana-Q. Geminata-Pinus palustris/Ceratiola ericoides-Prunus geniculata-Sabal palmetto/Aristida beyrichiana-mixed forbs. Reese (1991) a fire excluded, young sandhill dominated by heterogeneous mixtures of pinus palustris, Quercus laevis, Q. Incana and Q. Geminata. Successional to xeric hammock dominated by Q. Geminata, Q. Myrtifolia, and Q. Chapmanii. Surrounded on west, north and east by mesic hardwood forest thence upland sandhill lake, and south by citrus orchards.	1994-07-22: Four active burrows noted in sandhill only based on limited survey (U95REE01FLUS). 1991: 206 active and inactive burrows (U91CHI07FLUS).

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FNAI ELEMENT OCCURRENCE REPORT on or near

Seminole State Forest – Warea Tract

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
GOPHPOLY*994	*Gopherus polyphemus*	Gopher Tortoise	G3	S3	C	ST	1998-10-23	1998-04-03: Open sandhill with the ground gently sloping (abruptly in a couple of places). The sandhill has not burned in many years allowing the oaks to dominate sections of the tract. Widely scattered mature Pinus palustris grow over abundant Quercus geminata and Q. laevis. Occasional thickets of Q. geminata cover large areas. The open shrub stratum is mainly Serenoa repens with occasional Ceratiola ericoides (locally abundant). The diverse groundcover includes Aristida stricta, Licania michauxii, and Pteridium aquilinum. Leaf litter covers the ground under the trees while sandy clearings are throughout the tract (F98SCH23FLUS).	1998-04-03: Burrows occasional and widespread, tending to occur in herbaceous openings. 10 active burrows counted in N-S transect along top of ridge. Many additional inactive and abandoned burrows also present (F98SCH23FLUS). 1991: 620 active and inactive burrows and 381 gopher tortoises estimated on site after walking 15 transects, each ca 250 m long (U91CHI07FLUS).
HALILEUC*924	*Haliaeetus leucocephalus*	Bald Eagle	G5	S3	N	N	2002	Xeric Hammock (EO.057).	Nest status 1999-2003: Active - 2002, 2001, 2000, 1999; Inactive - 2003;Status 1995-98: Continuously active. (U03FWC01FLUS). Previous data (note different format) Nest; 1995: Produced 2 young.

1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
(850) 681-9364 Fax
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MESIHAMM*52	Mesic hammock		G3	S3?	N	N	2004	PRIMARILY A XERIC HAMMOCK DOMINATED BY QUERCUS GEMINATA, Q. MYRTIFOLIA, AND Q. CHAPMANII. HAS A MODERATELY SMALL AREA OF SANDHILL DOMINATED BY QUERCUS LAEVIS, PINUS PALUSTRIS, Q. GEMINATA, AND Q. INCANA/ARISTIDA BEYRICHIANA IN CENTER. SURROUNDED ON LOWER SLOPES BY MESIC HARDWOOD FORESTS DOMINATED BY Q. VIRGINIANA/SERONA REPENS/VITUS ROTUNDIFOLIA VAR. MUNSONIANA/TILLANSIA USNEOIDES. LOWEST SLOPES ARE A RAPIDLY DEVELOPING UPLAND SANDHILL LAKE WITH A FLUCUATING WATER LEVEL AND FOUR DISTINCT P.C.'S: A DRAW-DOWN ZONE SAND "BEACH" DOMINATED BY AMPHICARPUM MUHLENBERGIANUM; A 'WET PRAIRIE-LIKE" LOWER ZONE DOMINATED BY SPARTINA BAKERII OR LOCALLY BY EUPATORIUM LEPTOPHYLLUM; A WET MEADOW ZONE DOMINATED BY DIODIA VIRGINIANA, PANICUM HEMITOMUM, AND FUIRENA SCIRPOIDEA; AND AN EMERGENT MARSH DOMINATED BY PANICUM HEMITOMUM, POLYGONUM PUNCTATUM, SAGITTARIA LANCIFOLIA, AND (LOCALLY) CENTELLA ASIATICA. REPORTEDLY ALSO HAS A SMALL DEPRESSION MARSH. S BOUNDARY IS FORMER ORANGE GROVE.	2010: Prior to the 2010 natural community reclassification effort this EO had been known as Upland hardwood forest EO number 52 (see U10FNA01FLUS for updated community descriptions). 2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-07-22) (U05FNA02FLUS). QUERCUS VIRGINIANA 20-28" DBH. ASSOCIATED FLORA: DOMINANT: QUERCUS VIRGINIANA, SERENOA REPENS, TILLANDSIA USNEOIDES, TILLANDSIA RECURVATA; ABUNDANT: PSYCHOTRIA NERVOSA, CAMPSIS RADICANS; COMMON: CAREX GLAUCESCENS, QUERCUS HEMISPHERICA, CALLICARPA AMERICANA, SMILAX AURICULATA.

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NAJAFILI*21	*Najas filifolia*	narrowleaf naiad	G3	S2	N	T	2007	Lacustrine	Species present (U18DEP01FLUS)
NOLIBRIT*108	*Nolina brittoniana*	Britton's beargrass	G3	S3	E	E	2011-07-28	Sandhill	Population originally reported in 2008 as two discrete areas with 26 plants at the western point. The eastern area was revisited in 2011 and was >10 plants.
PAROCHAR*158	*Paronychia chartacea var. chartacea*	paper-like nailwort	G3T3	S3	T	E	2013-10-12	2013-10-12: fire suppressed but high quality sandhill. 2010-07-27: In high quality more open and scrubby sandhill burned in Dec. 2007 (U10JEN01FLUS). 2008: Sandhill (PNDNIP01FLUS).	2013-10-12: a total of 263 plants seen at roughly the same points as in 2008. 2010-07-27: 70 male and female plants in flower. Only a small portion of the EO was surveyed on this date (U10JEN01FLUS). 2008: 477 plants (U08MAR01FLUS).
PHYLOKEE*10	*Phyllophaga okeechobea*	Diurnal Scrub June Beetle	G2	S2	N	N	1961-04-18	1961-04-18: No description given (B89WOO01FLUS).	1961-04-18: One specimen was collected in a Citrus sp. plant by W.P.Henderson (B89WOO01FLUS).
PITUMELA*240	*Pituophis melanoleucus*	Pine Snake	G4	S3	N	ST	2013-05-29	2013-05-29: The area surrounding the Heartwood Marsh Road observation has been heavily disturbed by agriculture for years, and more recently supports increasing amounts of residential development and an abundance of roads; very little native upland remains.	2013-05-29: B. Gugliotti photographed 58.5 cm specimen dead on Heath Marsh Road (U13GUG01FLUS).
PLESREYN*118	*Plestiodon reynoldsi*	Sand Skink	G3	S3	T	FT	1991	CHICARDI (1991): "SANDHILL-SCRUB" DOMINATED BY QUERCUS LAEVIS-Q. INCANA-Q. GEMINATA-PINUS PALUSTRIS/CERATIOLA ERICOIDES-PRUNUS GENICULATA-SABAL PALMETTO/ARISTIDA BEYRICHIANA-MIXED FORBS.	CHICARDI (1991): POPULATION ESTIMATED AT 300-400 INDIVIDUALS ON THIS SITE AND LAKE CO. PNA #2. REPRODUCING. REESE (1994): NO INDIVIDUALS NOTED USED GOPHER TORTOISE BURROW MOUTH SAND RAKING TECHNIQUE.

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PLESREYN*119	*Plestiodon reynoldsi*	Sand Skink	G3	S3	T	FT	2016-08-26	Summary: 1998-04-03: Open sandhill with the ground gently sloping (abruptly in a couple of places). Additional Description of Warea Tract from 1998: The sandhill has not burned in many years allowing the oaks to dominate sections of the tract. Widely scattered mature Pinus palustris grow over abundant Quercus geminata and Q. laevis. Occasional thickets of Q. geminata cover large areas. The open shrub stratum is mainly Serenoa repens with occasional Ceratiola ericoides (locally abundant). The diverse groundcover includes Aristida stricta, Licania michauxii, and Pteridium aquilinum. Leaf litter covers the ground under the trees while sandy clearings are throughout the tract (F98SCH23FLUS).	Based on multiple records extending from 1991-2016. Seems to be a locally dense population.
PLESREYN*189	*Plestiodon reynoldsi*	Sand Skink	G3	S3	T	FT	2016-08-26	Xeric upland habitat	Based on capture of 2 individuals on 2016-08-26 (U16MOL07FLUS).
PODOFLOR*64	*Podomys floridanus*	Florida Mouse	G3	S3	N	N	1991	Sandhill and scrub	Presence determined by tracks only. Population estimated at 250-300 individuals on this and Lake PNA #2 (U91CHI07FLUS)
POLYLEWT*37	*Polygala lewtonii*	Lewton's polygala	G2	S2	E	E	2013	Found in open areas of fire suppressed sandhill. Sandhill, "sandhill-scrub" and xeric hammock are present.	Plants abundant and scattered over two sites. Observed from 1991 to 2012. Most recent 2013 survey reported more than 100 plants with good and improving viability due to presribed burning (U18PET02FLUS). South population extirpated by the establishment of a citrus grove (F12FNA02FLUS).

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(850) 681-9364 Fax
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Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
PRUNGENI*102	*Prunus geniculata*	scrub plum	G3	S3	E	E	2004	CHICARDI (1991): "SANDHILL-SCRUB" DOMINATED BY QUERCUS LAEVIS-Q. INCANA-Q. GEMINATA-PINUS PALUSTRIS/CERATIOLA ERICOIDES-PRUNUS GENICULATA-SABAL PALMETTO/ARISTIDA BEYRICHIANA-MIXED FORBS. REESE (1994): FIRE EXCLUDED SANDHILL DOMINATED BY QUERCUS. LAEVIS AND SANDHILL SUCCEEDING TO XERIC HAMMOCK DOMINATED BY Q. GEMINATA AND Q. MYRTIFOLIA. YELLOW, ASTATULA SERIES SOIL. ASSOCIATED FLORA: COMMON: SERENOA REPENS; ABUNDANT TO LOCALLY COMMON: ARISTIDA BEYRICHIANA; OCCASIONAL: CARPHEPHORUS CORYMBOSUS, DIOSPYROS VIRGINIANA, Q. INCANA, LECHEA SP.	2004: Two (2) plants in sand road (U04COX02FLUS).CHICARDI (1991): OVER 500 PLANTS FROM THIS SITE AND LAKE CO. PNA #64. LISTED AS A DOMINANT SHRUB. CONFINED TO THE SANDHILL NC. REESE (1994): TWO POPULATIONS OF ONE AND TWO SHRUBS, RESPECTIVELY. VEGETATIVE ONLY. FOUND 1) ALONG A DIRT TWO-TRACK, 2) IN SANDHILL.

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PRUNGENI*103	*Prunus geniculata*	scrub plum	G3	S3	E	E	2007-10-30	2007-10-30: Probably close to 50 plants in leaf; widely scattered in pine plantation and ruderal regeneration clearing. Severe disturbance from clearing and impoundment (F08FNA01FLUS). 2007-07-31: Overgrown scrub with two plants along fenceline, with Licania michauxii, Yucca filamentosa, Monarda citriodora. Moderate disturbance from woody encroachment and dumping of organic landscape debris (F08FNA01FLUS). 2004-09-20: Sites are private 2.5-5 acre parcels. Most being developed (U04COX02FLUS - Appendix A). 1994-04-07: FOUND ALONG A GRADED SAND ROAD IN AREAS THAT HAVE BEEN RECENTLY GRADED. ALSO IN A DISTURBED, OVERGROWN SANDHILL TRANSITIONAL TO SAND PINE SCRUB. AREA IS BEING CONVERTED TO A SUBDIVISION (U95REE01FLUS).	2007-10-30: Probably close to 50 plants in pine plantation (F08FNA01FLUS). 2007-07-31: Overgrown scrub with two plants along fenceline (F08FNA01FLUS). 2004-09-20: 75 -100+ plants on Black Bear Lane (U04COX01FLUS).

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PRUNGENI*74	*Prunus geniculata*	scrub plum	G3	S3	E	E	2011-07-28	Open sandhill with the ground gently sloping (abruptly in a couple of places). The sandhill has not burned in many years allowing the oaks to dominate sections of the tract. Widely scattered mature Pinus palustris grow over abundant Quercus geminata and Q. laevis. Occasional thickets of Q. geminata cover large areas. The open shrub stratum is mainly Serenoa repens with occasional Ceratiola ericoides (locally abundant). The diverse groundcover includes Aristida stricta, Licania michauxii, and Pteridium aquilinum. Leaf litter covers the ground under the trees while sandy clearings are throughout the tract.	Plants abundant and scattered throughout this site and have been observed many times between 1989 and 2011.
SANDHILL*151	Sandhill		G3	S2	N	N	2004	A SMALL, REMNANT FIRE EXCLUDED SANDHILL TO XERIC HAMMOCK SERE. THE SANDHILL IS DOMINATED BY QUERCUS GEMINATA-Q. LAEVIS/SERENOA REPENS/ARISTIDA BEYRICHIANA-TILLANDSIA USNEOIDES. THE XERIC HAMMOCK IS DOMINATED BY QUERCUS GEMINATA WITH A SPARCE UNDERSTORY. THIS SITE IS SURROUNDED BY ABANDONED CITRUS GROVES, EXCEPT IMMEDIATELY SOUTH WHICH IS LAND THAT WAS RECENTLY CLEARED.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-09-29) (U05FNA02FLUS). YELLOW ASTATULA SERIES SAND. ASSOCIATED FLORA: DOMINATE: QUERCUS GEMINATA, SERENOA REPENS; ABUNDANT: QUERCUS LAEVIS, SELAGINELLA ARENICOLA (LOCAL), TILLANDSIA USNEOIDES; COMMON: ARISTIDA PURPURASCENS VAR. TENUISPICA, BALDUNIA ANGUSTIFOLIA, LIATRIS TENUIFOLIA VAR. QUADRIFLORA, RHYNCHELYTRUM REPENS, TEPHROSIA CHRYSOPHYLLA

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Suite 200-C
Tallahassee, FL 32303
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(850) 681-9364 Fax
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SANDHILL*50	Sandhill		G3	S2	N	N	1998-10-23	1998-04-03: The sandhill has not burned in many years allowing the oaks to dominate much of the tract. The Q. geminata form xeric hammock at the S end and a few other locations, reaching 30-50 ft and 20 inch dbh. A depression on the W edge is dominated by Ceratiola and has abundant Bonamia grandiflora. A stand of large Pinus palustris (50-70 ft tall) is at the SW corner. Another depression in the NW section has a few large Pinus clausa. The hilly land surrounding the site was formerly entirely citrus groves. Active mature groves are on the S half of the E side. Planted pines dominate the remaining sides, with dense P. clausa (10-15 ft) to the E, P. elliottii (10-15 ft) on the W, and P. palustris (5-12 ft) on the S. The N side is a mowed weedy field being prepared for a subdivision. A very large active sand mine is 0.5 mi to the W (F98SCH23FLUS). 1994-07-22: Sandhill is integrated with xeric hammock (U95REE01FLUS).	1998-04-03: Open sandhill on a N-S ridge with the ground gently (abruptly in a couple of places) sloping to the E and W. Widely scattered mature Pinus palustris (50 ft tall and up to 16 inch dbh) form a very sparse canopy. Abundant Quercus geminata and Q. laevis form the subcanopy. Occasional thickets of Q. geminata cover large areas. The open shrub stratum is mainly Serenoa repens with occasional Ceratiola ericoides (locally abundant). The diverse groundcover includes Aristida stricta, A. gyrans, Cladina lichens, Licania michauxii, Pityopsis graminifolia, Pteridium aquilinum, Selaginella arenicola, and Stipa avenacioides. The vines Smilax auriculata and Vitis rotundifolia are widespread. Leaf litter covers the ground under the trees while sandy clearings are scattered throughout the tract. The rare Warea amplexifolia appears to be restricted to the more open N end. Prunus geniculata and Gopherus polyphemus are widespread. Little recent disturbance is evident but old pine stumps indicate past logging (F98SCH23FLUS). 1989-10-02: Sandhill (perhaps near scrub on E side) with longleaf pine/wiregrass, probably logged in last 50 years (U87MUL01FLUS).

1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
(850) 681-9364 Fax
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SCIUNIGE*101	*Sciurus niger niger*	Southeastern Fox Squirrel	G5T5	S3	N	N	1991	1998-04-03: Open sandhill with the ground gently sloping (abruptly in a couple of places). The sandhill has not burned in many years allowing the oaks to dominate sections of the tract. Widely scattered mature Pinus palustris grow over abundant Quercus geminata and Q. laevis. Occasional thickets of Q. geminata cover large areas. The open shrub stratum is mainly Serenoa repens with occasional Ceratiola ericoides (locally abundant). The diverse groundcover includes Aristida stricta, Licania michauxii, and Pteridium aquilinum. Leaf litter covers the ground under the trees while sandy clearings are throughout the tract (F98SCH23FLUS).	1998-10-23, 04-03, 03-13, 1997-10-23: No fox squirrels observed during pedestrian surveys. Open sandhill habitat remains intact (F98SCH23FLUS). 1991: Two indivduals seen foraging on site. Numerous shredded longleaf pine cones found (U91CHI07FLUS).
SELOFLOR*6	*Selonodon floridensis*	Florida Cebrionid Beetle	G2G4	S2S4	N	N	1969-05-02	1969-05-02: No description given (B99GAL01FLUS).	1969-05-02: One male and one female specimen were collected (B99GAL01FLUS).
STYLABDI*48	*Stylisma abdita*	scrub stylisma	G3	S3	N	E	2012-10-03	Fire-excluded sandhill.	Small population scattered around habitat in 8 discrete areas each only having a very small number of plants. Population has been observed several times from 2001-2012.
STYLABDI*59	*Stylisma abdita*	scrub stylisma	G3	S3	N	E	2012-04-10	Sandhill with heavy disturbances including fire exclusion and ORV trail.	5 vegetative plants with stems to 15cm long.

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WAREAMPL*6	*Warea amplexifolia*	clasping warea	G1	S1	E	E	2016	Fire excluded sandhill.	This species has been documented from 1989 to 2016 in this area as scattered small clumps of plants. In 2016, 8,793 plants were counted. In 2013 200-300 plants were noted everywhere where it had been found previously except along the central part of the western boundary line which was not surveyed. In 2012, 1,158 plants were observed. No plants were found at six points inland from the road in the NE corner where 18 plants had been found in 2008- woody encroachment noted in this area. In 2006, 53 plants counted; 2005, 2,034 plants counted; 2004, 0 plants counted.

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XERIHAMM57	Xeric hammock		G3	S3	N	N	2004	PRIMARILY A XERIC HAMMOCK DOMINATED BY QUERCUS GEMINATA, Q. MYRTIFOLIA, AND Q. CHAPMANII. HAS A MODERATELY SMALL AREA OF SANDHILL DOMINATED BY QUERCUS LAEVIS, PINUS PALUSTRIS, Q. GEMINATA, AND Q. INCANA/ARISTIDA BEYRICHIANA IN CENTER. SURROUNDED ON LOWER SLOPES BY MESIC HARDWOOD FORESTS DOMINATED BY Q. VIRGINIANA/SERONA REPENS/VITUS ROTUNDIFOLIA VAR. MUNSONIANA/TILLANSIA USNEOIDES. LOWEST SLOPES ARE A RAPIDLY DEVELOPING UPLAND SANDHILL LAKE WITH A FLUCUATING WATER LEVEL AND FOUR DISTINCT P.C.'S: A DRAW-DOWN ZONE SAND "BEACH" DOMINATED BY AMPHICARPUM MUHLENBERGIANUM; A 'WET PRAIRIE-LIKE" LOWER ZONE DOMINATED BY SPARTINA BAKERII OR LOCALLY BY EUPATORIUM LEPTOPHYLLUM; A WET MEADOW ZONE DOMINATED BY DIODIA VIRGINIANA, PANICUM HEMITOMUM, AND FUIRENA SCIRPOIDEA; AND AN EMERGENT MARSH DOMINATED BY PANICUM HEMITOMUM, POLYGONUM PUNCTATUM, SAGITTARIA LANCIFOLIA, AND (LOCALLY) CENTELLA ASIATICA. REPORTEDLY ALSO HAS A SMALL DEPRESSION MARSH. S BOUNDARY IS FORMER ORANGE GROVE.	2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-07-22) (U05FNA02FLUS). ASTATULA SERIES SAND. ASSOCIATED FLORA: DOMINANT: QUERCUS GEMINATA; ABUNDANT: TILLANDSIA USNEOIDES; COMMON: QUERCUS HEMISPHERICA, VACCINIUM SP., QUERCUS CHAPMANII.

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XERIHAMM64	Xeric hammock		G3	S3	N	N	1998-10-23	1998-04-03: The site has not burned in many years allowing the oaks to dominate much of the tract. Open sandhill still is found over most of the area. The hilly land surrounding the site was formerly entirely citrus groves and is now mostly pine plantation. Active mature groves are only on the S half of the E side. The N side is a mowed weedy field being prepared for a subdivision (F98SCH23FLUS).	1998-04-03: Quercus geminata are very large at the S end and a few other pockets, forming xeric hammock with a nearly closed canopy. These oaks reach 30-50 ft and 20-24 inch dbh. The open shrub stratum is mainly Serenoa repens. Leaf litter covers the ground under the trees, with clumps of Aristida stricta persisting. Little recent disturbance is evident but old pine stumps indicate past logging (F98SCH23FLUS).

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

Florida Natural Areas Inventory

Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Matrix Unit ID: 40329					
Documented					
Clitoria fragrans	scrub pigeon-wing	G2G3	S2	T	E
Polygala lewtonii	Lewton's polygala	G2	S2	E	E
Prunus geniculata	scrub plum	G3	S3	E	E
Warea amplexifolia	clasping warea	G1	S1	E	E
Likely					
Mycteria americana	Wood Stork	G4	S2	T	FT
Plestiodon reynoldsi	Sand Skink	G3	S3	T	FT
Upland hardwood forest		G5	S3	N	N
Potential					
Agrimonia incisa	incised groove-bur	G3	S2	N	T
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Bonamia grandiflora	Florida bonamia	G3	S3	T	E
Calamintha ashei	Ashe's savory	G3	S3	N	T
Calopogon multiflorus	many-flowered grass-pink	G2G3	S2S3	N	T
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Chionanthus pygmaeus	pygmy fringe tree	G2	S2S3	E	E
Coelorachis tuberculosa	Piedmont jointgrass	G3	S3	N	T
Coleataenia abscissa	cutthroatgrass	G3	S3	N	E
Conradina brevifolia	short-leaved rosemary	G2Q	S2	E	E
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Eriogonum longifolium var. gnaphalifolium	scrub buckwheat	G4T3	S3	T	E
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N
Hartwrightia floridana	hartwrightia	G2	S2	N	T
Heterodon simus	Southern Hognose Snake	G2	S2S3	N	N
Lampropeltis extenuata	Short-tailed Snake	G3	S3	N	ST
Lechea cernua	nodding pinweed	G3	S3	N	T
Liatris ohlingerae	Florida blazing star	G2	S2	E	E
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Lupinus aridorum	scrub lupine	G3T1	S1	E	E
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Myotis austroriparius	Southeastern Bat	G4	S3	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Nolina brittoniana	Britton's beargrass	G3	S3	E	E
Notophthalmus perstriatus	Striped Newt	G2G3	S2	N	N
Paronychia chartacea var. chartacea	paper-like nailwort	G3T3	S3	T	E
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Phyllophaga okeechobea	Diurnal Scrub June Beetle	G2	S2	N	N
Podomys floridanus	Florida Mouse	G3	S3	N	N
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	T
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE

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

Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Salix floridana	Florida willow	G2	S2	N	E
Sceloporus woodi	Florida Scrub Lizard	G2G3	S2S3	N	N
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Selonodon floridensis	Florida Cebrionid Beetle	G2G4	S2S4	N	N
Ursus americanus floridanus	Florida Black Bear	G5T4	S4	N	N
Warea carteri	Carter's warea	G1	S1	E	E
Matrix Unit ID: 40330					
Documented					
Prunus geniculata	scrub plum	G3	S3	E	E
Warea amplexifolia	clasping warea	G1	S1	E	E
Likely					
Bonamia grandiflora	Florida bonamia	G3	S3	T	E
Mycteria americana	Wood Stork	G4	S2	T	FT
Paronychia chartacea var. chartacea	paper-like nailwort	G3T3	S3	T	E
Plestiodon reynoldsi	Sand Skink	G3	S3	T	FT
Polygala lewtonii	Lewton's polygala	G2	S2	E	E
Sandhill		G3	S2	N	N
Sandhill upland lake		G3	S2	N	N
Potential					
Agrimonia incisa	incised groove-bur	G3	S2	N	T
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Calamintha ashei	Ashe's savory	G3	S3	N	T
Calopogon multiflorus	many-flowered grass-pink	G2G3	S2S3	N	T
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Chionanthus pygmaeus	pygmy fringe tree	G2	S2S3	E	E
Clitoria fragrans	scrub pigeon-wing	G2G3	S2	T	E
Coelorachis tuberculosa	Piedmont jointgrass	G3	S3	N	T
Coleataenia abscissa	cutthroatgrass	G3	S3	N	E
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Eriogonum longifolium var. gnaphalifolium	scrub buckwheat	G4T3	S3	T	E
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N
Hartwrightia floridana	hartwrightia	G2	S2	N	T
Heterodon simus	Southern Hognose Snake	G2	S2S3	N	N
Lampropeltis extenuata	Short-tailed Snake	G3	S3	N	ST
Lechea cernua	nodding pinweed	G3	S3	N	T
Liatris ohlingerae	Florida blazing star	G2	S2	E	E
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Lupinus aridorum	scrub lupine	G3T1	S1	E	E
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Myotis austroriparius	Southeastern Bat	G4	S3	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N

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Florida Natural Areas Inventory

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Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Nolina brittoniana	Britton's beargrass	G3	S3	E	E
Notophthalmus perstriatus	Striped Newt	G2G3	S2	N	N
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Phyllophaga okeechobea	Diurnal Scrub June Beetle	G2	S2	N	N
Podomys floridanus	Florida Mouse	G3	S3	N	N
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	T
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Salix floridana	Florida willow	G2	S2	N	E
Sceloporus woodi	Florida Scrub Lizard	G2G3	S2S3	N	N
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Selonodon floridensis	Florida Cebrionid Beetle	G2G4	S2S4	N	N
Ursus americanus floridanus	Florida Black Bear	G5T4	S4	N	N
Warea carteri	Carter's warea	G1	S1	E	E

Matrix Unit ID: 40699

Documented

Bonamia grandiflora	Florida bonamia	G3	S3	T	E
Clitoria fragrans	scrub pigeon-wing	G2G3	S2	T	E
Eriogonum longifolium var. gnaphalifolium	scrub buckwheat	G4T3	S3	T	E
Nolina brittoniana	Britton's beargrass	G3	S3	E	E
Paronychia chartacea var. chartacea	paper-like nailwort	G3T3	S3	T	E
Polygala lewtonii	Lewton's polygala	G2	S2	E	E
Prunus geniculata	scrub plum	G3	S3	E	E
Stylisma abdita	scrub stylisma	G3	S3	N	E
Warea amplexifolia	clasping warea	G1	S1	E	E
Xeric hammock		G3	S3	N	N

Likely

Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Mycteria americana	Wood Stork	G4	S2	T	FT
Plestiodon reynoldsi	Sand Skink	G3	S3	T	FT
Sandhill		G3	S2	N	N
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Scrub		G2	S2	N	N
Upland hardwood forest		G5	S3	N	N

Potential

Agrimonia incisa	incised groove-bur	G3	S2	N	T
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Calamintha ashei	Ashe's savory	G3	S3	N	T
Calopogon multiflorus	many-flowered grass-pink	G2G3	S2S3	N	T
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Chionanthus pygmaeus	pygmy fringe tree	G2	S2S3	E	E
Coelorachis tuberculosa	Piedmont jointgrass	G3	S3	N	T
Coleataenia abscissa	cutthroatgrass	G3	S3	N	E
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N

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Florida Natural Areas Inventory

Biodiversity Matrix Report

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Hartwrightia floridana	hartwrightia	G2	S2	N	T
Heterodon simus	Southern Hognose Snake	G2	S2S3	N	N
Lechea cernua	nodding pinweed	G3	S3	N	T
Liatris ohlingerae	Florida blazing star	G2	S2	E	E
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Lupinus aridorum	scrub lupine	G3T1	S1	E	E
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Notophthalmus perstriatus	Striped Newt	G2G3	S2	N	N
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Phyllophaga okeechobea	Diurnal Scrub June Beetle	G2	S2	N	N
Podomys floridanus	Florida Mouse	G3	S3	N	N
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	T
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Salix floridana	Florida willow	G2	S2	N	E
Sceloporus woodi	Florida Scrub Lizard	G2G3	S2S3	N	N
Selonodon floridensis	Florida Cebrionid Beetle	G2G4	S2S4	N	N
Ursus americanus floridanus	Florida Black Bear	G5T4	S4	N	N
Warea carteri	Carter's warea	G1	S1	E	E
Matrix Unit ID: 40700					
Documented					
Bonamia grandiflora	Florida bonamia	G3	S3	T	E
Clitoria fragrans	scrub pigeon-wing	G2G3	S2	T	E
Eriogonum longifolium var. gnaphalifolium	scrub buckwheat	G4T3	S3	T	E
Gopherus polyphemus	Gopher Tortoise	G3	S3	C	ST
Nolina brittoniana	Britton's beargrass	G3	S3	E	E
Paronychia chartacea var. chartacea	paper-like nailwort	G3T3	S3	T	E
Polygala lewtonii	Lewton's polygala	G2	S2	E	E
Prunus geniculata	scrub plum	G3	S3	E	E
Sandhill		G3	S2	N	N
Stylisma abdita	scrub stylisma	G3	S3	N	E
Warea amplexifolia	clasping warea	G1	S1	E	E
Likely					
Drymarchon couperi	Eastern Indigo Snake	G3	S2?	T	FT
Mycteria americana	Wood Stork	G4	S2	T	FT
Plestiodon reynoldsi	Sand Skink	G3	S3	T	FT
Sandhill upland lake		G3	S2	N	N
Sciurus niger niger	Southeastern Fox Squirrel	G5T5	S3	N	N
Potential					
Agrimonia incisa	incised groove-bur	G3	S2	N	T
Antigone canadensis pratensis	Florida Sandhill Crane	G5T2	S2	N	ST
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	ST
Calamintha ashei	Ashe's savory	G3	S3	N	T
Calopogon multiflorus	many-flowered grass-pink	G2G3	S2S3	N	T

Definitions: *Documented - Rare species and natural communities documented on or near this site.*
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(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
Centrosema arenicola	sand butterfly pea	G2Q	S2	N	E
Chionanthus pygmaeus	pygmy fringe tree	G2	S2S3	E	E
Coelorachis tuberculosa	Piedmont jointgrass	G3	S3	N	T
Coleataenia abscissa	cutthroatgrass	G3	S3	N	E
Dryobates borealis	Red-cockaded Woodpecker	G3	S2	E, PT	FE
Gymnopogon chapmanianus	Chapman's skeletongrass	G3	S3	N	N
Hartwrightia floridana	hartwrightia	G2	S2	N	T
Heterodon simus	Southern Hognose Snake	G2	S2S3	N	N
Lechea cernua	nodding pinweed	G3	S3	N	T
Liatris ohlingerae	Florida blazing star	G2	S2	E	E
Lithobates capito	Gopher Frog	G2G3	S3	N	N
Lupinus aridorum	scrub lupine	G3T1	S1	E	E
Matelea floridana	Florida spiny-pod	G2	S2	N	E
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3?	S3?	N	N
Myotis austroriparius	Southeastern Bat	G4	S3	N	N
Nemastylis floridana	celestial lily	G2	S2	N	E
Neofiber alleni	Round-tailed Muskrat	G2	S2	N	N
Notophthalmus perstriatus	Striped Newt	G2G3	S2	N	N
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Phyllophaga okeechobea	Diurnal Scrub June Beetle	G2	S2	N	N
Podomys floridanus	Florida Mouse	G3	S3	N	N
Pteroglossaspis ecristata	giant orchid	G2G3	S2	N	T
Rostrhamus sociabilis	Snail Kite	G4G5	S2	E	FE
Salix floridana	Florida willow	G2	S2	N	E
Sceloporus woodi	Florida Scrub Lizard	G2G3	S2S3	N	N
Selonodon floridensis	Florida Cebrionid Beetle	G2G4	S2S4	N	N
Ursus americanus floridanus	Florida Black Bear	G5T4	S4	N	N
Warea carteri	Carter's warea	G1	S1	E	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
Listed Species Occurrence Records

Florida Fish and Wildlife Conservation Commission

Commissioners
Robert A. Spottswood
Chairman
Key West

Michael W. Sole
Vice Chairman
Tequesta

Rodney Barreto
Coral Gables

Steven Hudson
Fort Lauderdale

Gary Lester
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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
32399-1600
Voice: 850-488-4676

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

MyFWC.com

June 8, 2021

Patti Anderson
3125 Conner Boulevard
Suite I-258, Mail Stop C-25
Tallahassee, FL 32399

Dear Patti:

This letter is in response to your request for listed species occurrence records and critical habitats for your project (Seminole State Forest and Warea Tract) located in Lake County, Florida. 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 area. Records of Florida black bear, Sand skink, Scrub pigeon-wing, Lewton's polygala, Clasping warea, Florida bonamia, Southeastern-fox squirrel, Gopher tortoise, Scrub plum, Scrub buckwheat, Scrub stylisma, Britton's beargrass, Paper-like nailwort, Scrub jay, Burrowing owl, Striped newt, Eastern Indigo snake and Bald eagle were found on, or within a 1-mile distance of, the property. SHCAs were found for Florida black bear, Cooper's hawk, Florida mouse and Scrub jay within a 1-mile distance of, the property. Enclosed are 8.5 x 11 maps prioritized SHCA's, species richness, priority wetlands for listed species, species locations and land cover for the project site and surrounding area.

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).

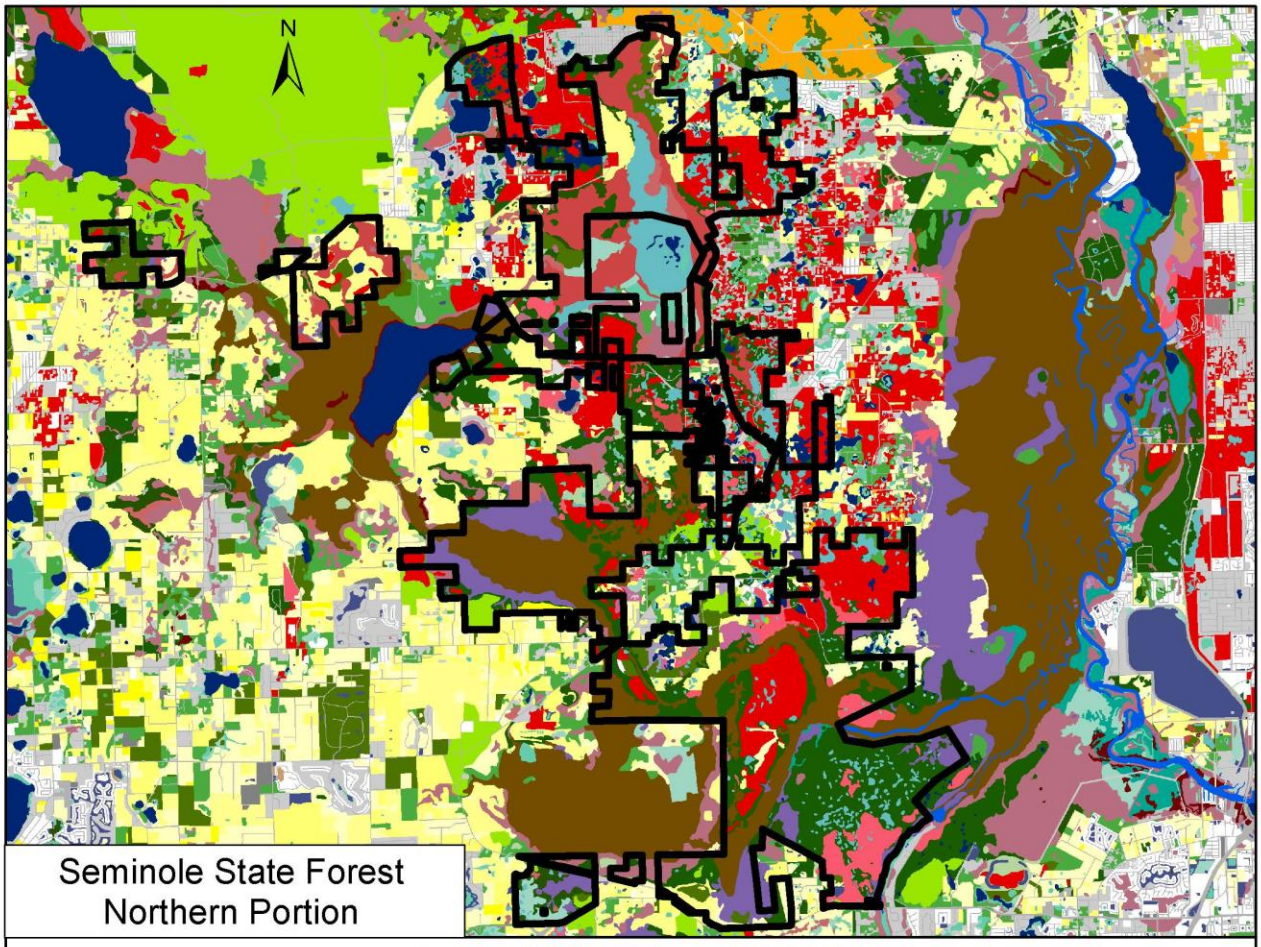
Please credit the Florida Fish and Wildlife Conservation Commission in any publication or presentation of these data. If you have any questions or further requests, please contact me at (850) 488-0588 or gisrequests@myfwc.com.

Sincerely,

Steven Nicholl

Steven Nicholl

Environmental Specialist I/GIS Technician
Center for Spatial Analysis
Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
100 8th Avenue S.E.
St. Petersburg, FL 33701



Seminole State Forest
Northern Portion

Cooperative Land Cover -- State Classes

- 1110 - Hardwod Forested Uplands
- 1120 - Mesic Hammock
- 1150 - Xeric Hammock
- 1210 - Scrub
- 1213 - Sand Pine Scrub
- 1240 - Sandhill
- 1311 - Mesic Flatwoods
- 1312 - Scrubby Flatwoods
- 1800 - Cultural - Terrestrial
- 1821 - Low Intensity Urban
- 1822 - High Intensity Urban
- 1840 - Transportation
- 1850 - Communication
- 1860 - Utilities
- 1870 - Extractive
- 1880 - Bare Soil/Clear Cut
- 1500 - Shrub and Brushland
- 1600 - Coastal Uplands
- 1830 - Rural
- 18331 - Cropland/Pasture
- 183313 - Improved Pasture
- 18332 - Orchards/Groves
- 18333 - Tree Plantations
- 18334 - Vineyard and Nurseries
- 18335 - Other Agriculture
- 3000 - Lacustrine
- 3100 - Natural Lakes and Ponds
- 3200 - Cultural - Lacustrine
- 4000 - Riverine
- 4100 - Natural Rivers and Streams
- 2232 - Hydric Hammock
- 1400 - Mixed Hardwood-Coniferous
- 2100 - Freshwater Non-Forested Wetlands
- 2110 - Prairies and Bogs
- 2120 - Marshes
- 2121 - Isolated Freshwater Marsh
- 2123 - Floodplain Marsh
- 2200 - Freshwater Forested Wetlands
- 2211 - Cypress
- 22131 - Dome Swamp
- 22132 - Basin Swamp
- 2215 - Floodplain Swamp
- 2220 - Other Coniferous Wetlands
- 2221 - Wet Flatwoods
- 2231 - Baygall
- 2300 - Non-vegetated Wetland

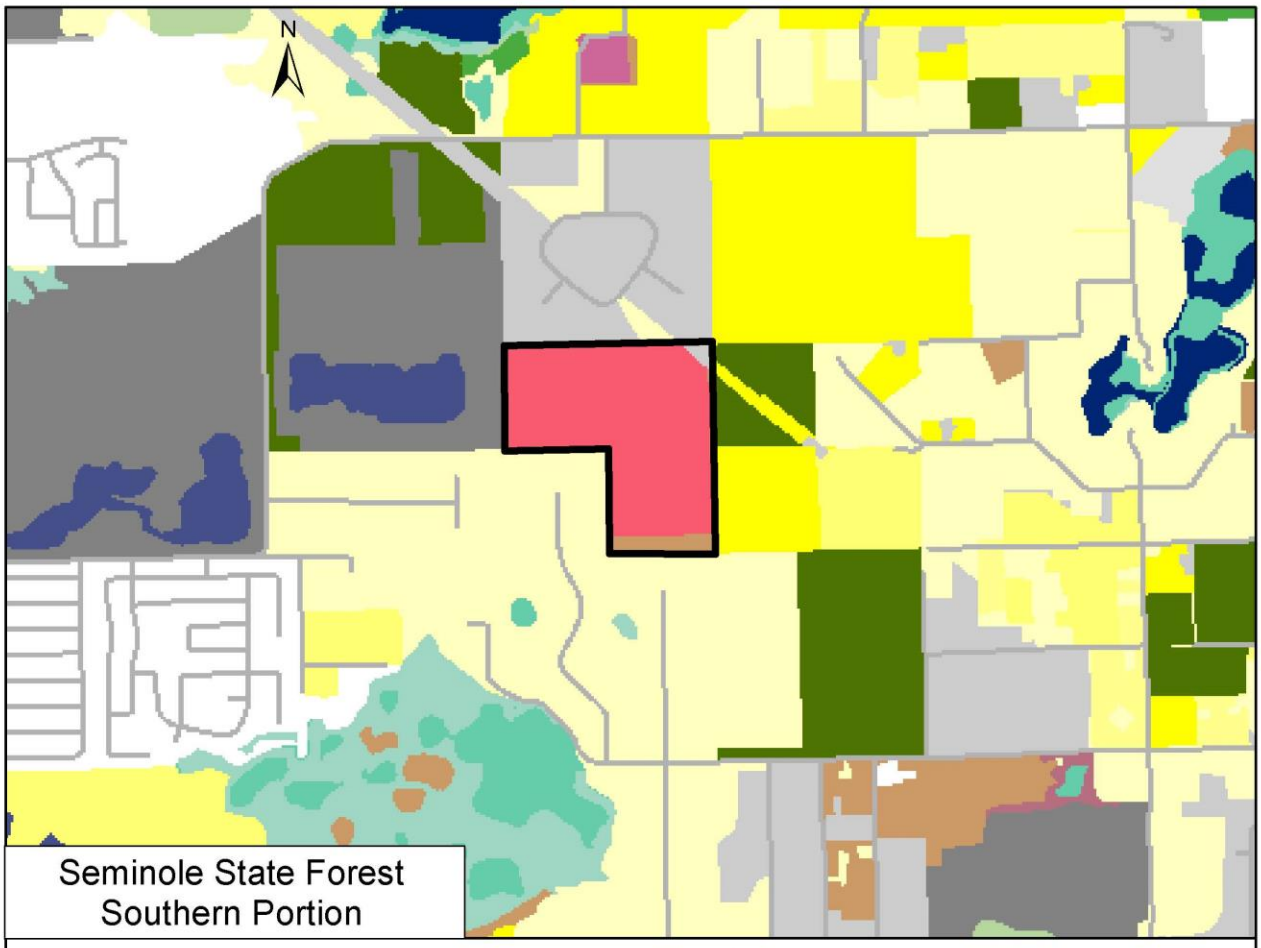
Miles

0 1.5 3 4.5 6

Florida Fish and Wildlife Conservation Commission

MyFWC.com

FWC ID: 2021_6506 June 4, 2021



Cooperative Land Cover -- State Classes

- 1110 - Hardwod Forested Uplands
- 1150 - Xeric Hammock
- 1240 - Sandhill
- 1312 - Scrubby Flatwoods
- 1400 - Mixed Hardwood-Coniferous
- 1500 - Shrub and Brushland
- 2100 - Freshwater Non-Forested Wetlands
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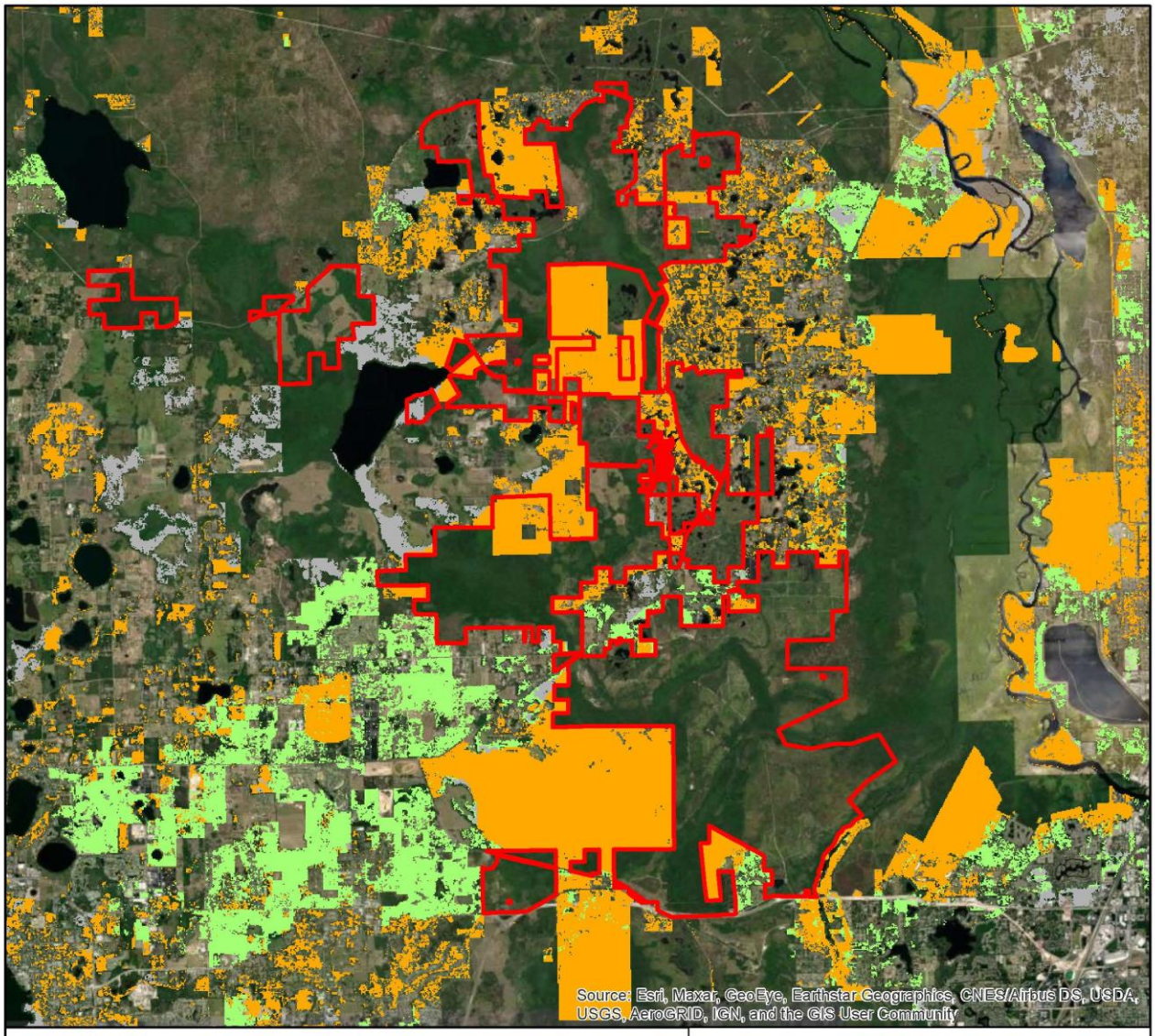
- 18332 - Orchards/Groves
- 18333 - Tree Plantations
- 18334 - Vineyard and Nurseries
- 1840 - Transportation
- 1860 - Utilities
- 1870 - Extractive
- 1880 - Bare Soil/Clear Cut

Miles
0 0.25 0.5 0.75 1

Florida Fish and Wildlife Conservation Commission
MyFWC.com

FWC ID: 2021_6506 June 4, 2021



Prioritized SHCA's

Priority 1
Priority 2
Priority 3
Priority 4
Priority 5

Approximate site boundary

N

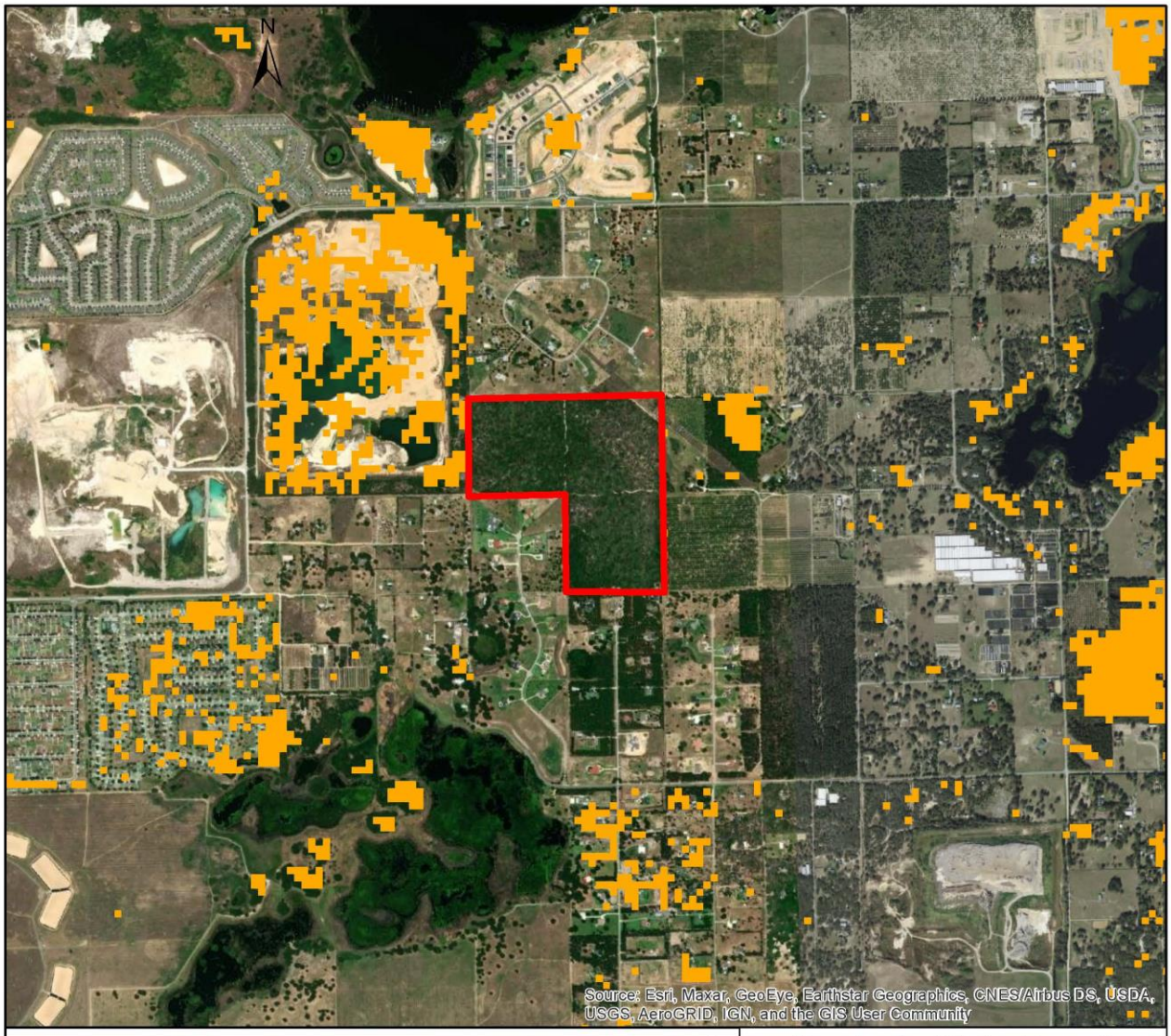
Seminole State Forest Northern Portion

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.

Miles
0 1.5 3 4.5 6

Florida Fish and Wildlife Conservation Commission
MyFWC.com

FWC ID: 2021_6506 June 4, 2021



Prioritized SHCA's

Priority 1
Priority 2
Priority 3
Priority 4
Priority 5

Approximate site boundary

N

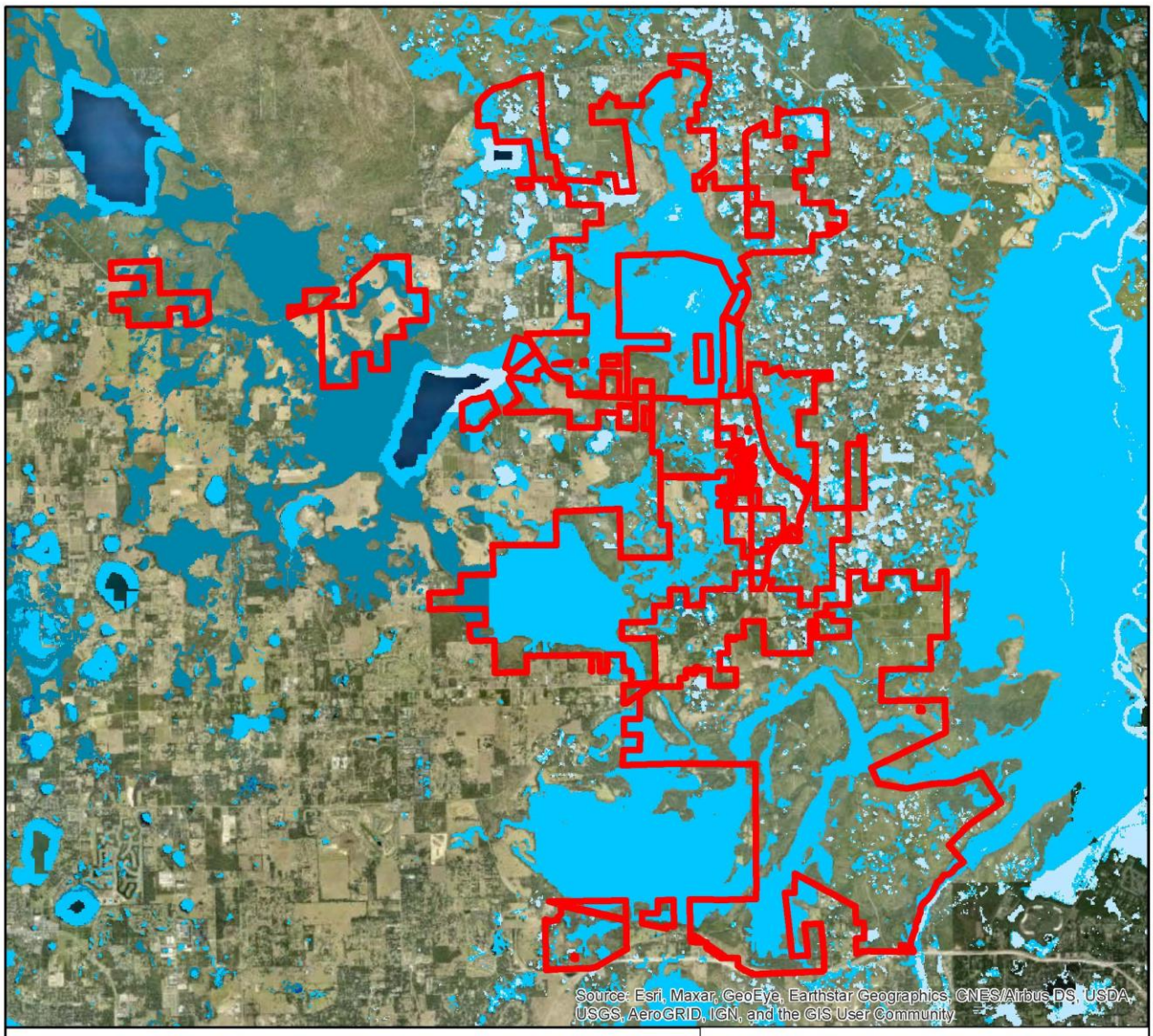
Seminole State Forest Southern Portion

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.

Miles
0 0.25 0.5 0.75 1

Florida Fish and Wildlife Conservation Commission
MyFWC.com

FWC ID: 2021_6506 June 4, 2021



Priority Wetlands

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

State Forest site boundary

N

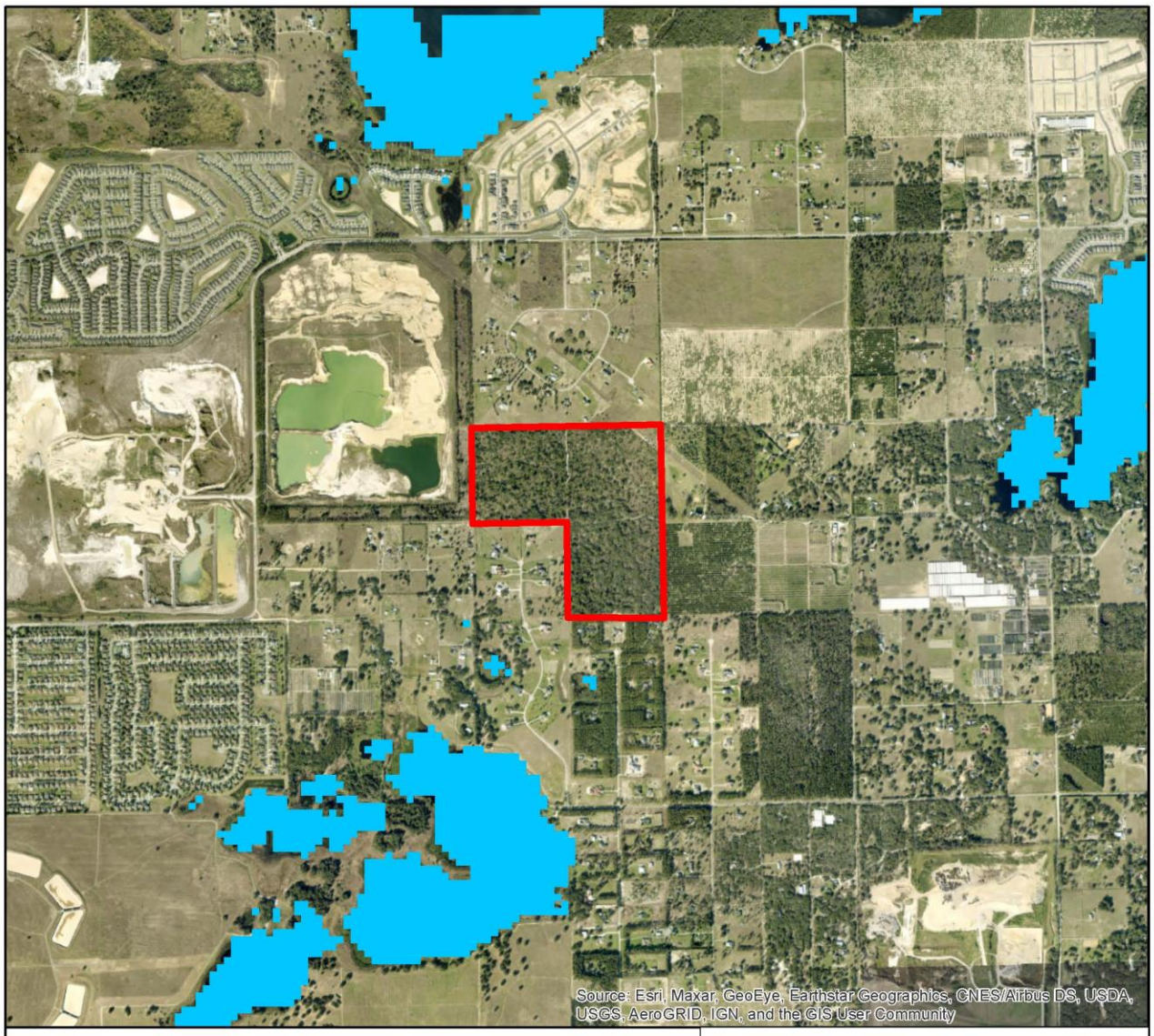
Seminole State Forest
Northern Portion

This raster dataset identifies Florida wetlands important to wetland-dependent vertebrates listed by the State of Florida as endangered, threatened, or species of special concern. The dataset also ranks the relative importance of wetland areas based on species richness of the selected vertebrate species.

Florida Fish and Wildlife Conservation Commission
MyFWC.com

Miles
0 1.5 3 4.5 6

FWC ID: 2021_6532 December 21, 2021



Priority Wetlands

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

State Forest site boundary

N

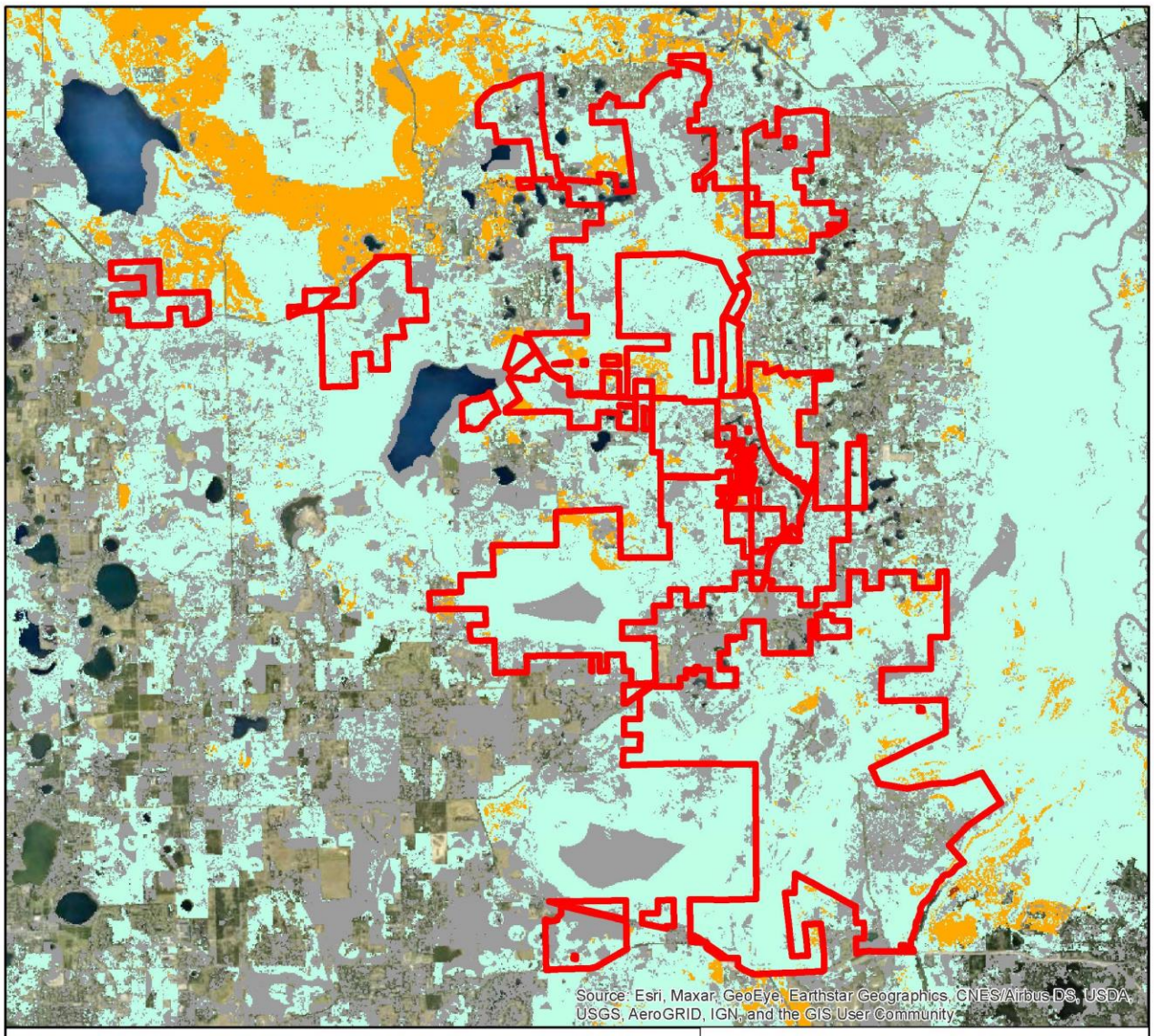
Seminole State Forest
Southern Portion

This raster dataset identifies Florida wetlands important to wetland-dependent vertebrates listed by the State of Florida as endangered, threatened, or species of special concern. The dataset also ranks the relative importance of wetland areas based on species richness of the selected vertebrate species.

Florida Fish and Wildlife Conservation Commission
MyFWC.com

Miles
0 0.3 0.6 0.9 1.2

FWC ID: 2021_6532 December 21, 2021



Species Richness

1 - 3
4 - 6
7 - 9
10 - 13

State Forest site boundary

N

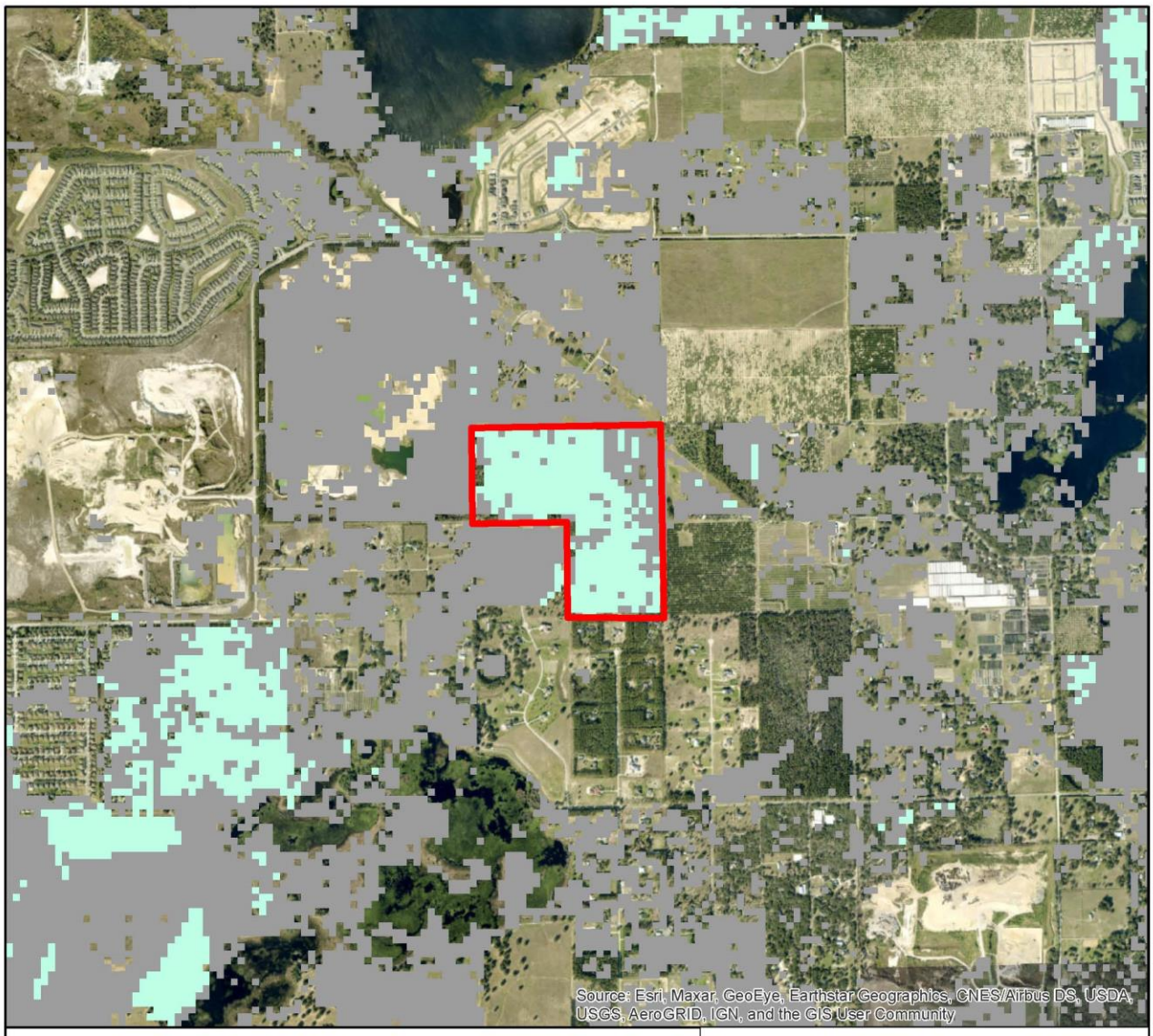
Seminole State Forest
Northern Portion

This dataset represents the richness of potential habitat for selected focal species in Florida. Potential habitat includes areas that have been occupied by the species and areas where occupancy is unknown based on available occurence records. We combined the potential habitats generated for Florida into a single grid layer indicating diversity. Pixel cell value indicates the total number of species potential habitat identified at the specific location.

Florida Fish and Wildlife Conservation Commission
MyFWC.com

Miles
0 1.5 3 4.5 6

FWC ID: 2021_6532 December 21, 2021



Species Richness

1 - 3
4 - 6
7 - 9
10 - 13

State Forest site boundary

N

Seminole State Forest
Southern Portion

This dataset represents the richness of potential habitat for selected focal species in Florida. Potential habitat includes areas that have been occupied by the species and areas where occupancy is unknown based on available occurence records. We combined the potential habitats generated for Florida into a single grid layer indicating diversity. Pixel cell value indicates the total number of species potential habitat identified at the specific location.

Florida Fish and Wildlife Conservation Commission
MyFWC.com

Miles
0 0.3 0.6 0.9 1.2

FWC ID: 2021_6532 December 21, 2021

Exhibit N

Twelve-Year Fire History

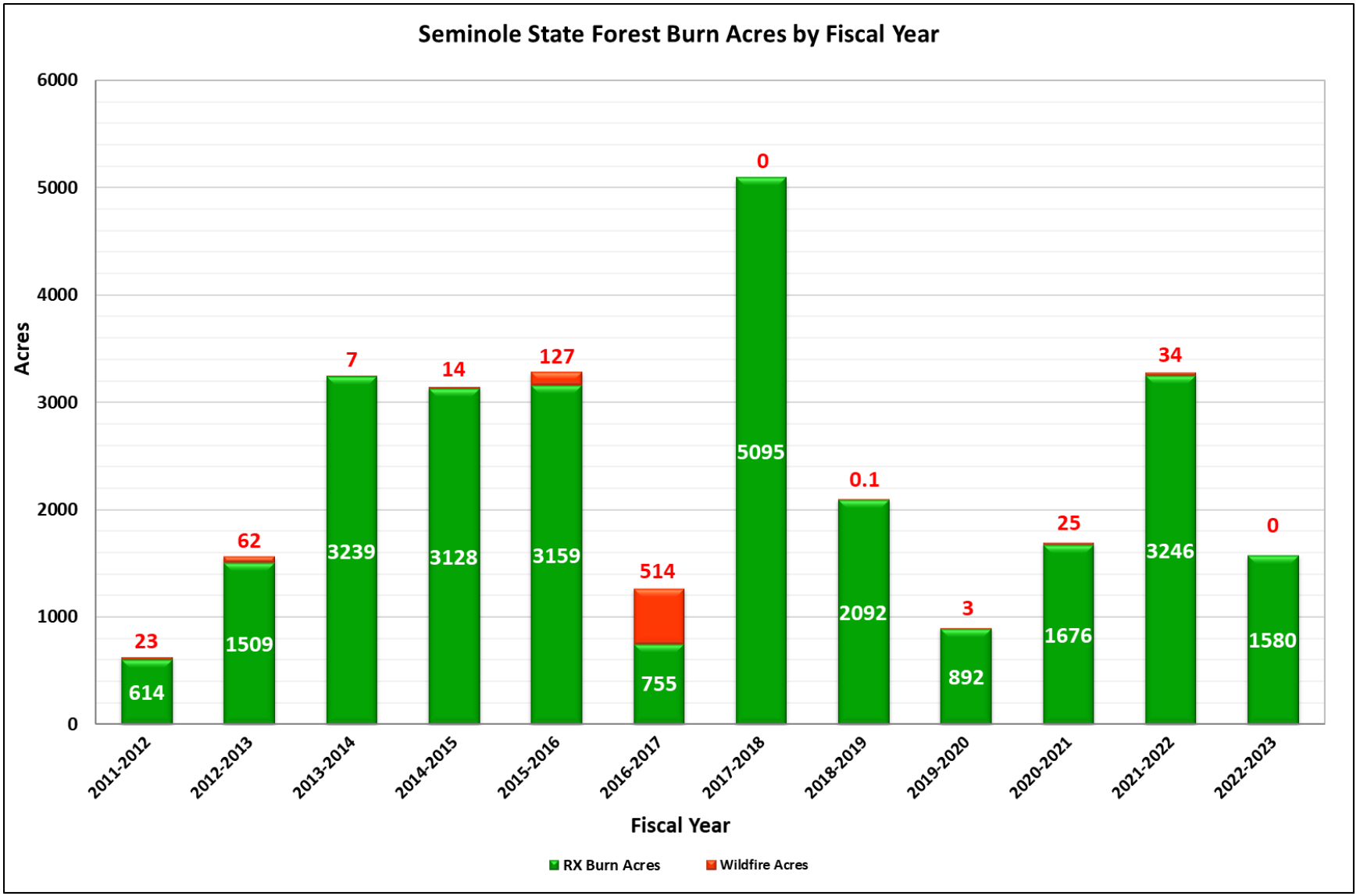

Seminole State Forest Burn Acres by Fiscal Year
Acres
6000
5000
4000
3000
2000
1000
0
2011-2012
2012-2013
2013-2014
2014-2015
2015-2016
2016-2017
2017-2018
2018-2019
2019-2020
2020-2021
2021-2022
2022-2023
23
614
62
1509
7
3239
14
3128
127
3159
514
755
0
5095
0.1
2092
3
892
25
1676
34
3246
0
1580
Fiscal Year
RX Burn Acres
Wildfire Acres

Exhibit O

Invasive Species Map

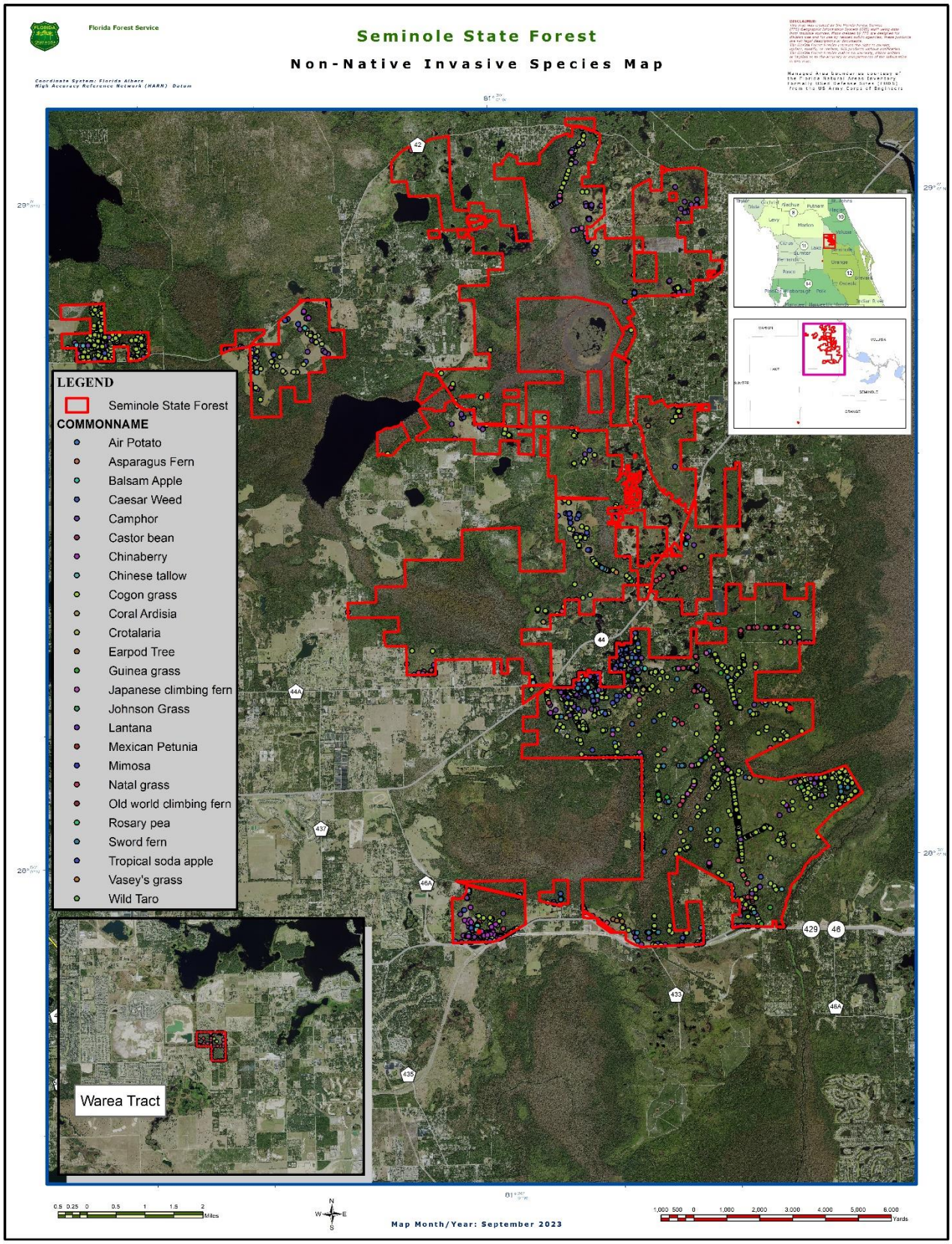

Florida Forest Service
Seminole State Forest
Non-Native Invasive Species Map
Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum
LEGEND
Seminole State Forest
COMMONNAME
Air Potato
Asparagus Fern
Balsam Apple
Caesar Weed
Camphor
Castor bean
Chinaberry
Chinese tallow
Cogon grass
Coral Ardisia
Crotalaria
Earpod Tree
Guinea grass
Japanese climbing fern
Johnson Grass
Lantana
Mexican Petunia
Mimosa
Natal grass
Old world climbing fern
Rosary pea
Sword fern
Tropical soda apple
Vasey's grass
Wild Taro
Warea Tract
0.5 0.25 0 0.5 1 1.5 2
Miles
N
W
E
S
1,000 500 0 1,000 2,000 3,000 4,000 5,000 6,000
Yards
Map Month/Year: September 2023

Exhibit P

Current FNAI Natural Communities
and
Cover Type Map

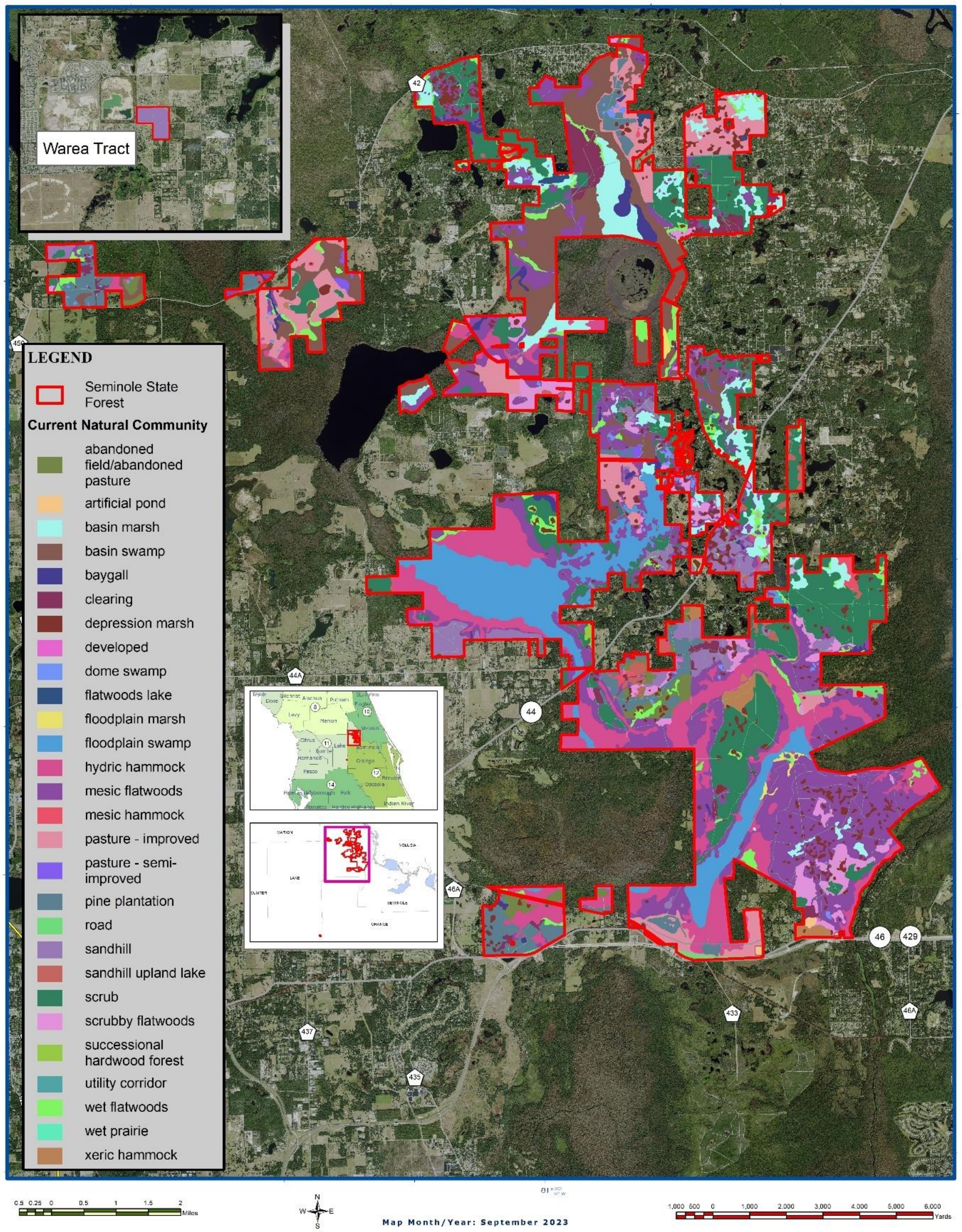
Florida Forest Service

Seminole State Forest

Current Natural Communities Types Map

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

Managed Area boundaries courtesy of the Florida Natural Areas Inventory
Formally Used Defense Sites (FUDS) from the US Army Corps of Engineers



Map Month/Year: September 2023

Exhibit Q

Historic FNAI Natural Communities
and
Cover Type Map

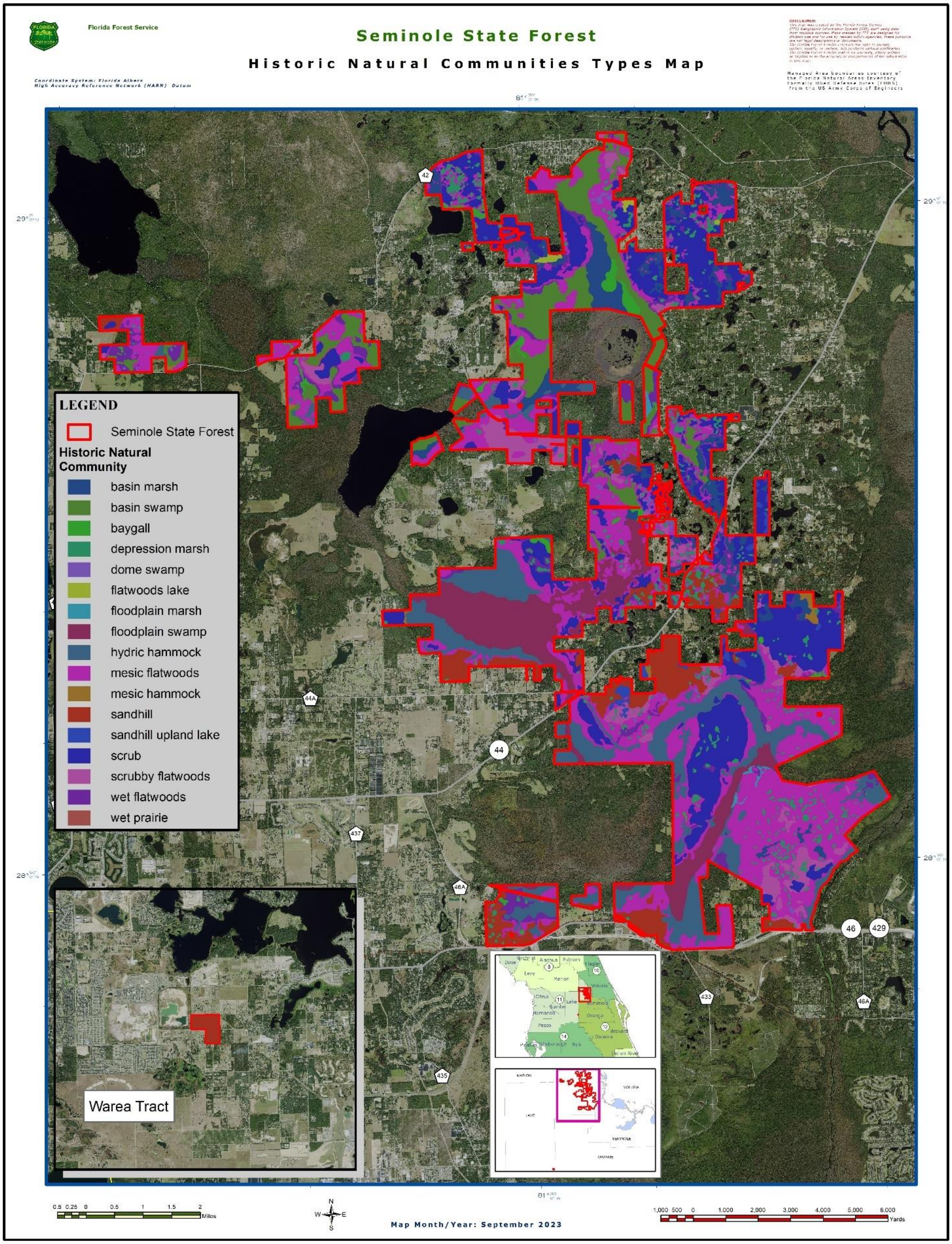

Florida Forest Service
Seminole State Forest
Historic Natural Communities Types Map
Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum
DISCLAIMER:
Managed Area boundaries courtesy of
the Florida Natural Areas Inventory
Formally USed Defense Sites (FUDS)
from the US Army Corps of Engineers
LEGEND
Seminole State Forest
Historic Natural Community
basin marsh
basin swamp
baygall
depression marsh
dome swamp
flatwoods lake
floodplain marsh
floodplain swamp
hydric hammock
mesic flatwoods
mesic hammock
sandhill
sandhill upland lake
scrub
scrubby flatwoods
wet flatwoods
wet prairie
Warea Tract
42
44A
44
437
46A
46
429
433
46A
435
0.5 0.25 0 0.5 1 1.5 2
Miles
1,000 500 0 1,000 2,000 3,000 4,000 5,000 6,000
Yards
Map Month/Year: September 2023

Exhibit R

FDEP Florida Forever Land Acquisition Project

2021 Florida Forever Five-Year Plan

Wekiva-Ocala Greenway

Summary of Recommendations and Status
as of
December 2020

Division of State Lands
Florida Department of Environmental Protection

Wekiva-Ocala Greenway

Critical Natural Lands Project
Lake, Orange, Seminole, Volusia

Project-at-a-Glance

Year Added to Priority List	1995
Project Acres	81,975
Acquired Acres	59,707
Cost of Acquired Acres	$184,290,225
Remaining Project Acres	22,268
2019 Assessed Value of Remaining Acres	$153,012,398

Purpose for State Acquisition

The springs, rivers, lakes, swamps, and uplands stretching north from Orlando to the Ocala National Forest are an important refuge for the Florida black bear, as well as other wildlife such as the bald eagle, swallow-tailed kite, Florida scrub jay, and wading birds. The Wekiva-Ocala Greenway will protect these animals and the Wekiva and St. Johns River basins by protecting natural corridors connecting Wekiwa Springs State Park, Rock Springs Run State Reserve, the Lower Wekiva River State Reserve, and Hontoon Island State Park with the Ocala National Forest. It will also provide the people of the booming Orlando area with a large, nearby natural area in which to enjoy camping, fishing, swimming, hiking, canoeing, and other recreational pursuits. The Florida National Scenic Trail, a cross-Florida hiking and non-motorized trail, is also planned to cross this project. The trail is a congressionally designated national scenic trail.

Manager(s)

Division of Recreation and Parks (BMK Ranch, Seminole Springs, St. Johns River and portions of the Wekiva-Ocala Connector); Florida Forest Service (Seminole Springs and portions of the Wekiva-Ocala Connector).

General Description

This project provides an important link between Ocala National Forest and the extensive state holdings along the Wekiva River. It is habitat for many rare animal species including the Florida black bear, the Florida sandhill crane, bald eagle, Eastern indigo snake, Florida scrub jay, Sherman's fox squirrel, Florida scrub lizard and gopher tortoise. It incorporates most of the forested wetlands along the St. Johns and Wekiva Rivers between Orlando and the Ocala National Forest. The St. Johns River site consists of three large bottomlands and adjacent uplands between three existing state ownerships. The Seminole Springs/Woods site is reported to have 50-75 springs within its boundary. The Wekiva-Ocala Connector site provides a wildlife movement corridor between the Ocala National Forest and the other portions of the project along the Wekiva River.

FNAI Element Occurrence Summary

FNAI Elements	Score
Florida scrub-jay	G2?/S2
Swallow-tailed kite	G5/S2
Florida black bear	G5T4/S4
Okeechobee gourd	G1/S1
Striped newt	G2G3/S2
Red-cockaded woodpecker	G3/S2
Eastern indigo snake	G3/S2?
Gopher tortoise	G3/S3
Bald eagle	G5/S3
Florida hasteola	G1/S1
Seminole Spring siltsnail	G1/S1
Florida willow	G2/S2

32 rare species are associated with the project

Public Use

The project sites are designated as state reserves or preserves and state forests, offering opportunities for canoeing, hiking, fishing and camping.

Acquisition Planning

1994

On November 18, 1994, the Land Acquisition Advisory Council (LAAC) approved combining the Seminole Springs/Woods, Wekiva-Ocala Connector, St. Johns River, and BMK Ranch projects and renaming the project Wekiva-Ocala Greenway. Based on GIS, the approximate total project acreage was 67,585 acres. Seminole Springs/Woods: Seminole Springs—core tracts include Strawn Tract, M.S. Carter (acquired), and Brumlick parcels (acquired through eminent domain).

The Strawn tract is the largest and most significant ownership remaining to be acquired. Wekiva-Ocala Connector: Core Tracts West—Maxwell and Holman (acquired), Shockley (acquired), Harper (acquired by SJRWMD 2,228 acres/2.1 million), Alger Enterprises (acquired), Fisch (acquired by SJRWMD), Southland Gardens (contingent upon the acquisition of Harper and Fisch), Clemmons (acquired), Blaskovic (acquired), Kittridge (acquired). Core Tracts East—Stetson University (acquired), Stein, Lenholt Farms, Francolino (acquired), Jung (acquired), and Hollywood Pines, Inc. St. Johns River: New Garden Coal, the largest ownership, was acquired in 2005. The BMK Ranch parcel has been acquired. On October 30, 1995, the LAAC approved a fee-simple, ± 5,616-acre addition to the project boundary. It was sponsored by Eastern Marketing Inc., representative for several owners and consisted of multiple landowners and parcels. All tracts were designated as essential. In addition, the project phasing was removed. On October 30, 1996, the LAAC approved a fee-simple, 425-acre addition to the project boundary. It was sponsored by the Division of State Lands, consisted of seven landowners (Jung, Hollywood Pines, Miranda Trust, Overstreet, New Garden Coal, Seminole Springs, and Fisch) and 12 parcels. Other acquisitions in the Wekiva Basin are Wekiva Buffers, Wekiva Springs State Park, Rock Springs Run, Lower Wekiva River State Park, Hontoon Island State Recreation Area, and Blue Spring State Park. These acquisitions total 18,400 acres.

1997

On July 18, 1997, the LAAC approved a fee-simple, 128-acre addition to the project boundary. It was sponsored by the landowner, Conway Kittredge, who already has 20 acres in the current project boundary. Any portion of the addition that is not needed for resource protection or management will be surplused.

1998

On December 3, 1998, the Land Acquisition and Management Advisory Council (LAMAC) approved a fee-simple, 1,507-acre addition to the project boundary. It was sponsored by the Division of Recreation and Parks and consisted of 20 parcels. At the time of the boundary addition, the parcels were owned by Neighborhood Lakes LTD and Lake Lerla LTD Partnership and were designated as essential parcels. They were subsequently purchased by BARN, LLC. These parcels were acquired in a transaction approved by the Board of Trustees on 12/19/2006. The total acquisition area contained 1,584 acres.

2001

On December 6, 2001, the Acquisition and Restoration Council (ARC) approved a fee-simple, 5,455- acre addition to the project boundary. It was sponsored by the Wekiva Basin Working Group, consisted of 14 sites, multiple landowners and parcels, and 13 tracts.

2004

On June 4, 2004, the ARC approved a less-than-fee, 572-acre addition to the project boundary. The property was owned by Robert Maxwell and consisted of two parcels. The boundary amendment was sponsored by the owner's representative, Roland Pacetti Realty.

2006

On August 15, 2006, the Board of Trustees approved the purchase of a conservation easement covering these two parcels.

On December 8, 2006, the ARC approved a fee-simple77-acre addition in Lake County (a.k.a. the Ellis and Windsor tracts) to the project boundary. It was sponsored by The Nature Conservancy (TNC), consisted of two parcels with two owners (Natalie Windsor and Jerry Ellis). The Division of Recreation and Parks (DRP) will manage the 17-acre Windsor tract as part of the Lower Wekiva River Preserve State park. The 60-acre Ellis tract will be managed by the FFS as part of the Seminole State Forest.

2007

On December 14, 2007, ARC approved a fee-simple 675-acre addition, known as the Pine Plantation Addition, to the project boundary. It was sponsored by Henry Dean Esq. and consisted of five parcels and four landowners. The Division of Recreation and Parks agreed to manage the parcels. The parcels have been designated essential. Approximately 421 acres of this addition have been purchased and are being managed as part of the Greenway.

2008

On September 30, 2008, the Board of Trustees approved the purchase of 385 acres from Project Orlando LLC; Pinestraw Partners LLC; and Herscho Properties, Inc. This acquisition was for a portion of the Pine Plantation property.

On November 20, 2008, the Board of Trustees approved a 36-acre purchase from Project Orlando LLC which was part of the boundary amendment that included the Pine Plantation property.

On October 3, 2008, from the Division of State Lands (DSL) Florida Forever funds a 345-acre parcel was purchased from Palmer ownership in Pine Plantation for $24,930,304 (About 40 acres in the SE corner of the Palmer parcel was acquired by the Orlando-Orange County Expressway Authority for a future conveyance to Orange County for a park).

In November 2008, DSL Florida Forever funds were used to buy 35.7 acres of the Project Orlando, LLC ownership. DRP will manage this site.

2009

On March 27, 2009, 307.17 acres were purchased from the OOCEA for BARN, LLP parcel (reimbursement of $10M paid by the Authority—Neighborhood Lakes, Phase II).

2011

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

In calendar year 2017, a total of 236.26 acres in this project were acquired using Florida Forever program funding.

2020

On December 11, 2020, the ARC approved an addition of 9 acres (Wekiva River Islands) in Seminole County and a 170-acre parcel (St. Johns Riverbend) in Volusia County to the project boundary.

The 4.6-acre "Arnold" parcel was acquired in September 2020 at a cost of $253,300 and will be managed by the FFS as part of Seminole State Forest.

Coordination

Florida Communities Trust (FCT), Lake County Water Authority, SJRWMD, DOT, Orlando-Orange County Expressway Authority, and TNC are all acquisition partners in this project.

Management Policy Statement

The primary goals of management of the Wekiva-Ocala 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; to provide areas, including recreational trails, for natural-resource-based recreation; and to preserve significant archaeological or historical sites.

Management Prospectus

Qualifications for state designation

The large size, variety of forest resources, and diversity of the former Seminole Springs project and the western Wekiva-Ocala Connector make them highly desirable for management as a

state forest. The quality of resources on the remainder of the project make them suitable for state preserves.

Manager

The FFS proposes to manage the Seminole Springs and western connector portions of the project. The remainder will be managed by the DRP. The DRP may elect to assume management of the western portion of the Strawn property later if it is purchased.

Conditions affecting intensity of management

On the portion to be managed by the FFS, there are no known disturbances that will require extraordinary attention, so the level of management intensity is expected to be typical for a state forest. The portion to be managed by the DRP, the BMK Ranch (acquired), is a high-need management area, while the Eastern Connector of the former Wekiva-Ocala Connector project and the former St. Johns River project are low-need management areas. The BMK Ranch is expected to have a higher level of recreational use and development compatible with resource management than the other properties.

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

About 8,000 acres have been purchased by the State of Florida and the SJRWMD and have been assigned to the FFS for management as the Seminole State Forest (SSF). The FFS is currently providing for public access for low-intensity, non-facilities-related outdoor recreation. Initial activities include securing the site, providing public and fire management access, inventorying resources, and removing trash. The project'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 this property 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, wherever 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 DRP will promote recreation and environmental education. For the DRP, within the first year after acquisition, management activities will concentrate on site security, natural and cultural resource protection, and the development of a plan for long-term public use and resource management.

Revenue-generating potential

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 low. The DRP expects no significant revenue to be generated initially. After acquisition, it will probably be several years before any significant public facilities are developed on the BMK Ranch properties, and public facilities will probably not be a major emphasis on the eastern connector properties. The amount of any future revenue will depend on the nature and extent of public use and facilities.

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. The DRP recommends no local governments or others for management of its project area.

Management Cost Summary

DRP	1996/97	1997/98
Source of Funds	SPTF/LATF/CARL	SPTF/LATF/CARL
Salary	$0	$0
OPS	$425	$425
Expense	$5,739	$5,739
OCO	$0	$0
FCO	$38,798	$0
TOTAL	$44,962	$6,164

Source: Management Prospectus as originally submitted

Management Cost Summary

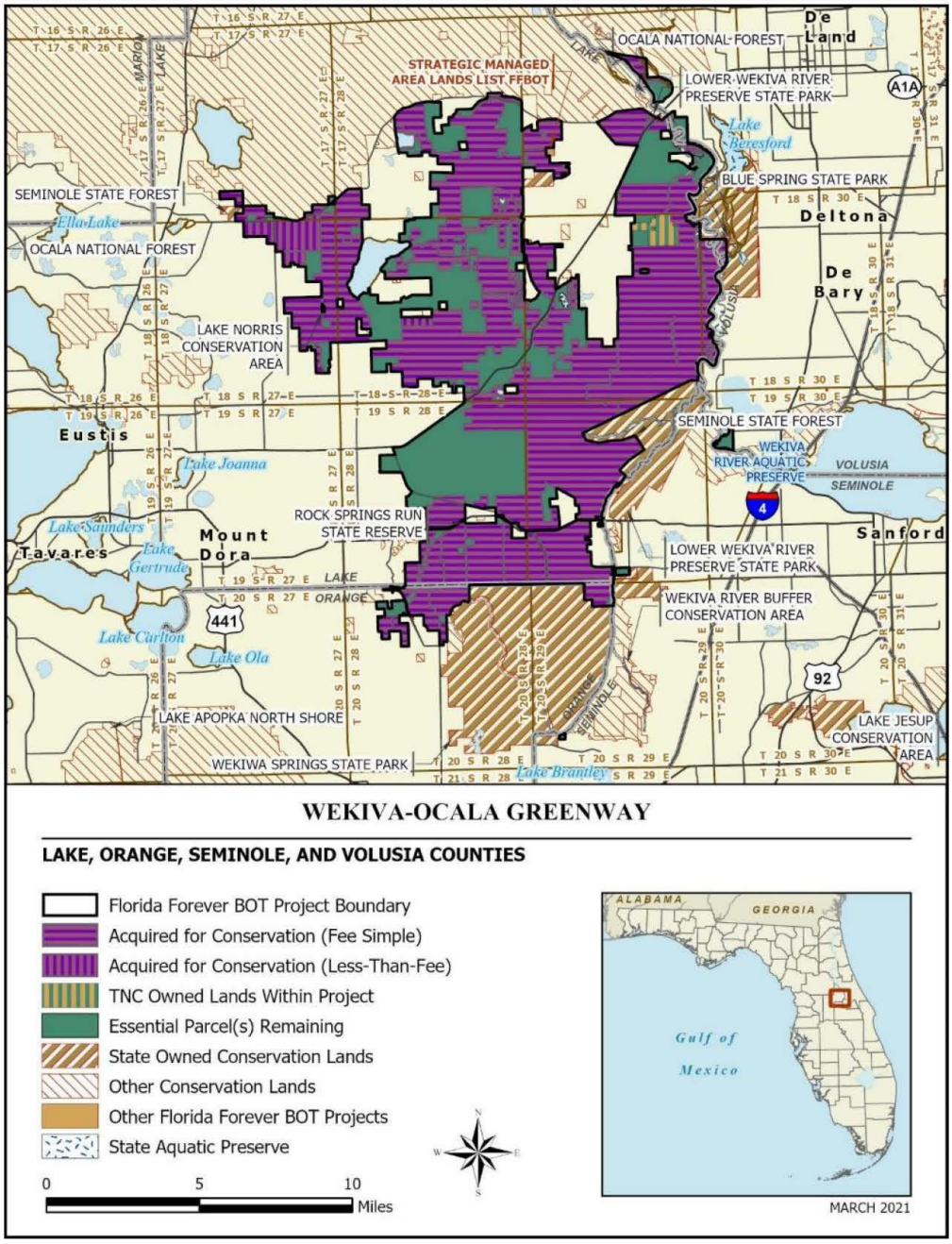
FFS (Seminole State Forest)	1995/96	1996/97
Source of Funds	CARL	CARL
Salary	$35,440	$64,440
OPS	$0	$4,500
Expense	$22,600	$40,225
OCO	$0	$29,270
FCO	$0	$0
TOTAL	$58,040	$138,435

Source: Management Prospectus as originally submitted

Management Cost Summary

FFS (Wekiva-Ocala Connector: West Corridor)	Startup	Recurring
Source of Funds	CARL	CARL
Salary	$28,140	$28,140
OPS	$0	$0
Expense	$20,000	$15,000
OCO	$90,400	$4,500
FCO	$0	$0
TOTAL	$138,540	$47,640

Source: Management Prospectus as originally submitted



Map 1: FNAI, January 2021

Exhibit S

Land Management Reviews
(2014 and 2019)

2014 Land Management Review Team Report for Seminole State Forest

Table of Contents

1. Introduction

Section 259.036, F.S. requires a periodic on-site review of conservation and recreation lands titled in the name of the Board of Trustees to determine (1) whether the lands are being managed for the purposes for which they were acquired and (2) whether they are being managed in accordance with their land management plan adopted pursuant to s. 259.032, F.S. In case where the managed areas exceed 1,000 acres in size, such a review must be scheduled at least every five years. In conducting this review, a statutorily constructed review team "shall evaluate the extent to which the existing management plan provides sufficient protection to threatened or endangered species, unique or important natural or physical features, geological or hydrological functions or archaeological features. The review shall also evaluate the extent to which the land is being managed for the purposes for which it was acquired and the degree to which actual management practices, including public access, are in compliance with the adopted management plan."

The land management review teams are coordinated by the Division of State Lands and consist of representatives from the Division of Recreation and Parks (DEP), the Florida Forest Service (DACS), the Fish and Wildlife Conservation Commission, the local government in which the property is located, the DEP District in which the parcel is located, the local soil and water conservation district, a conservation organization member, and a local private land manager.

Each Land Management Review Report is divided into three sections. Section 1 provides the details of the property being reviewed as well as the overall results of the report. Section 2 provides details of the Field Review, in which the Review Team inspects the results of management actions on the site. Section 3 provides details of the Land Management Plan Review, in which the team determines the extent to which the Management Plan provides for and documents adequate natural and recreational resource protection.

Finally, each report may also contain an Appendix that lists individual team member comments. This is a compilation of feedback, concerns or other thoughts raised by individual team members, but not necessarily indicative of the final consensus reached by the Land Management Review Team.

1.1. Property Reviewed in this Report

Name of Site: Seminole State Forest
Managed by: Florida Forest Service
Acres: 27,064.25 **County(ies):** Lake County
Purpose(s) for Acquisition:
Acquisition Program(s): **Original Acquisition Date:** __/__/__
Area Reviewed: Entire Property **Last Management Plan Approval Date:** 6/15/11
Review Date: 8/19/14

Agency Manager and Key Staff Present:

- Joe Bishop, Manager
- Michael Penn
- Keith Mousel
- Ralph Risch

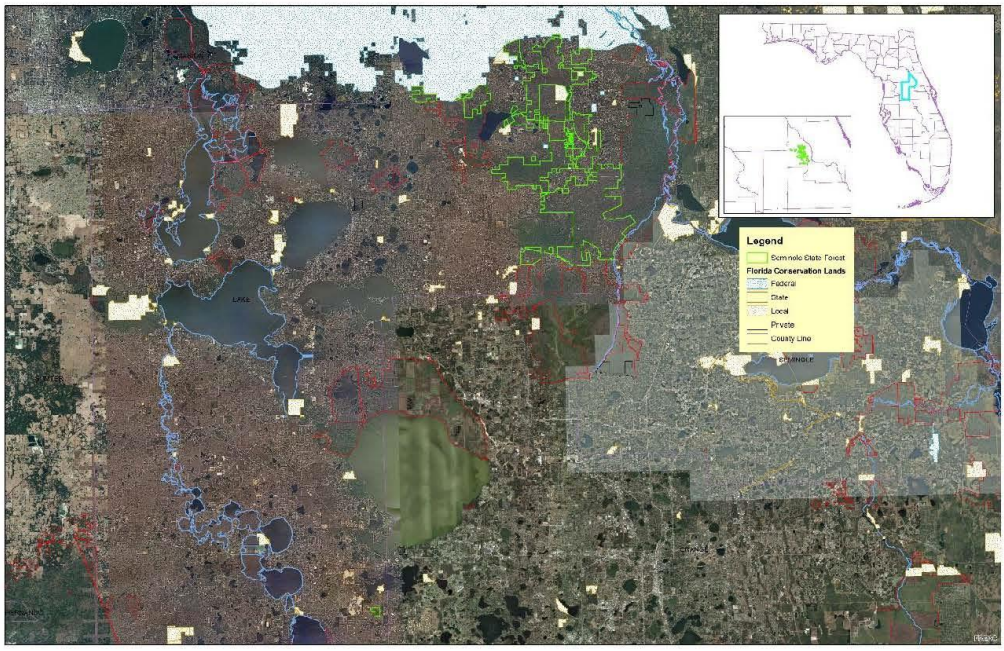
Review Team Members Present (voting)

- DRP: Paul Lammardo
- FWC: Jean Marie Conner
- FFS: Bill Korn
- DEP:
- SWCD:
- Local gov't: Wendy Poag
- Conservation organization: Peg Urban
- Private land manager: Brannen Willis

Other Non-Team Members Present (attending)

- Keith Singleton, DEP/DSL
- Mike Wisenbaker, DOS/DHR

1.2 Property Map



1.3. Overview of Land Management Review Results

Is the property managed in accordance with the purposes for which it was acquired?

Yes = 6, No = 0

Are the management practices, including public access, in compliance with the management plan?

Yes = 6, No = 0

Table 1 shows the average scores received for each applicable category of review. *Field Review* scores refer to the adequacy of management actions in the field, while *Management Plan Review* scores refer to adequacy of discussion of these topics in the management plan. Scores range from 1 to 5 with 5 signifying excellence. For a more detailed key to the scores, please see *Appendix A*.

Table 1: Results at a glance.

Major Land Management Categories	Field Review	Management Plan Review
Natural Communities / Forest Management	4.44	4.20
Prescribed Fire / Habitat Restoration	4.00	4.56
Hydrology	3.86	3.28
Imperiled Species	4.25	3.84
Exotic / Invasive Species	3.78	3.92
Cultural Resources	4.10	4.00
Public Access / Education / Law Enforcement	3.55	3.53
Infrastructure / Equipment / Staffing	2.17	N/A

Color Code (See Appendix A for detail)

Excellent	Above Average	Below Average	Poor

1.3.1 Consensus Commendations for the Managing Agency

The following commendations resulted from discussion and vote of the review team members:

1. The team commends the FFS staff, who are intimately involved with the management of this challenging property, for their persistence and dedication to increase the application of fire to reach desired future conditions of the natural communities. (6+, 0-)

2. The team commends the FFS for their diligent efforts to prevent and treat invasive plants which has achieved a maintenance or stable condition for the majority of exotic species. (6+, 0-)

3. The team commends the local FWC and FFS staff on their ongoing efforts to provide a diverse program of public hunting, which includes a very successful and meaningful mobility-impaired hunt experience every year. (6+, 0-)

4. The team commends the FFS biologist and local staff for their extraordinary efforts to monitor listed species, especially the Florida scrub jay population, which has included regular ongoing surveys, banding, and habitat mapping. (6+, 0-)

5. The team commends the FFS manager and staff for their overall management efforts to enhance the quality of scrub habitat at this forest. (6+, 0-)

6. The team commends the FFS and FWC on their continued outreach program "Welcome to the Woods", which introduces the public to the recreational opportunities at Seminole State Forest. (6+, 0-)

7. The team commends the overall FFS and FWC staff who have done an excellent job of managing the property with the resources available. (6+, 0-)

1.3.2. Consensus Recommendations to the Managing Agency

The following recommendations resulted from a discussion and vote of review team members. The next management plan update should include information about how these recommendations have been addressed:

1. The team recommends that FFS continue efforts to assess the need to establish a permanent field biologist position, an onsite forest office building, and any special equipment needs. It is suggested this be a multi-use structure for staff such as offices and facilities for fire crews. (6+, 0-)

   Managing Agency Response:

   Local staff continually request that the current OPS Biologist II position be established as a career service position. New position funding has not been available.

   Fixed capital funding has not been available to fulfill local staff requests for an onsite maintenance facility and field office. A Historic Resources Special Category Grant application was recently submitted to restore the Carter House to serve as a visitor's center and staff offices. This structure was built in 1938, and if restored and retrofitted to accommodate ADA access, would provide for local staff and forest visitors.

   Local staff will continue to request funding for special equipment as needed. The acquisition of the equipment will be dependent on available funding.

2. The team recommends that FFS pursue an additional field position (specifically a forest ranger) to assist in field work, as well as new equipment to keep up with maintenance (tractors, bushhogs, etc.). (6+, 0-)

   Managing Agency Response:

   Local staff continually request for the addition of a new Forest Ranger position to support prescribe burning, facility maintenance and the recreation program. New position funding has not been available. A Forest Ranger volunteer is currently active on the forest to assist with boundary maintenance, fire line preparation and prescribe burning.

   Requests for replacement equipment, to include the wheeled tractor and bushogs, have been made by local staff. The acquisition of any replacement equipment will be dependent on available funding.

3. The team recommends that FFS seek additional staff, such as park rangers, mainly to assist in day-to-day maintenance and operations. The team also recommends additional equipment, such as a roller chopper, which appears to be the bulk of mechanical treatments required on the forest (consider size of the rollerchopper to meet the objectives of the scope of the work). (6+, 0-)

   Managing Agency Response:

   Due to unavailable funding for previous requests for an additional Park Ranger, it was decided locally to focus on a new Forest Ranger position. This position would provide greater flexibility to support prescribe burning, facility maintenance and the recreation program.

   A small roller chopper is located on the forest and is still operational. A larger roller chopper would better assist with meeting scrub management objectives and will be considered for future acquisition requests. The current plan is to borrow a larger roller chopper from within the local district.

4. The team recommends that FFS seek a full-time Fire Manager to handle all aspects of burning, including pre- and post-fire activities. (6+, 0-)

   Managing Agency Response:

   FFS does not believe this is a position that is needed. We believe a combination of the Forestry Supervisor II who is responsible for the planning of Rx burns and the Lake County Forest Area Supervisor (FAS), who is responsible for implementing the prescribed burns, is adequate for the burn program on Seminole State Forest.

2. Field Review Details

2.1 Field Review Checklist Findings

The following items received high scores on the review team checklist, which indicates that management actions exceeded expectations.

1. **Natural Communities, specifically scrub, hydric hammock, floodplain swamp, basin swamp, basin marsh, scrubby flatwoods, depression marsh, baygall, flatwoods lake, sandhill upland lake, dome swamp, aquatic cove/springs-run stream, and blackwater stream**:
2. **Listed Species Protection and Preservation, animals, specifically scrub jay and black bear, plants, specifically hasteola and warea**:
3. **Natural Resources Survey/Monitoring Resources, specifically sport fish or their habitat monitoring, listed species or their habitat monitoring, fire effects monitoring, other habitat management effects monitoring, and invasive species survey and monitoring**:
4. **Cultural Resources, specifically cultural resource survey, and protection and preservation**:
5. **Prescribed Fire, specifically frequency and quality**:
6. **Forest Management, specifically timber inventory, timber harvesting, reforestation/afforestation and site preparation**:
7. **Non-Native, Invasive & Problem Species, specifically prevention and control of plants:**
8. **Surface Water Monitoring, specifically quality and quantity**:
9. **Public Access and Education, specifically roads, parking and boat access**:
10. **Environmental Education & Outreach, specially wildlife, interpretive facilities and signs and recreational opportunities**:
11. **Management Resources, specifically waste disposal**:

2.2. Items Requiring Improvement Actions in the Field

The following items received low scores on the review team checklist, which indicates that management actions noted during the Field Review were not considered sufficient (less than 3.0 score on average). Please note that overall good scores do not preclude specific recommendations by the review team requiring remediation. **The management plan update should include information on how these items have been addressed**:

1. **The maintenance condition of the Natural Communities, specifically upland mixed forest, floodplain marsh, and wet prairie received below average scores. The review team was asked to evaluate, based on their perspective, what percent of the natural community was in maintenance condition. The scores range from 1 to 5, with 1 being 0-20% in maintenance condition, 2 being 21-40%, 3 being 41-60%, 4 being 16-80% and 5 being 81-100%.**

M***anaging Agency Response:***

No team members scored any of these three communities as far as their maintenance condition was concerned. Rather, all team members scored these three as an "X" – inadequate information to score condition. No Agency Response necessary.

2. **Resource Protection, specifically signage, received a below average score. The review team was asked to evaluate, based on information provided by the managing agency, whether resource protection activities are sufficient to protect the property.**

Managing Agency Response:

Whenever comments from trail users are received that indicate signage or trail marking concerns, corrective action is promptly taken. A large printed aerial map clearly showing the location of all of the current recreational trails is displayed on the two trailhead kiosks. A reduced version of this map is also located on smaller kiosks at the entrance to the horse trails, and at three common trail intersections within the forest. The trails are periodically repainted with the appropriate blazes, and any signage is replaced as needed. The trail brochures and maps that are currently available are in the process of being updated. The older brochures are available online and periodically at the trailhead kiosks. Limited local printing of the old brochures is being done while awaiting production of the new brochures. Better efforts will be made to ensure that the older brochures are available at the kiosks. A QR code (Quick Response code) was placed on all of the kiosks to direct users to our website for additional information and trail maps.

2. Management Resources, specifically sanitary facilities, buildings, equipment, staff and funding, received below average scores. The review team was asked to evaluate, based on information provided by the managing agency, whether management resources are sufficient to adequately protect the property.

Managing Agency Response:

Portable restrooms are available at the two trailheads and primary maintenance facility. A composting toilet is located at Oaks Camp, one of the three primitive reservation campsites. Local staff has requested an improved vaulted style restroom to be located at the Bear Pond Trailhead, which has the highest number of forest users. If the Carter house receives appropriate funding, an additional restroom would be available for both staff and visitors. An evaluation will need to be completed to determine if other restroom facilities are needed at any of the other two reservation campsites or other locations. See recommendation responses above for comments regarding staff, buildings and equipment.

2.3. Field Review Checklist and Scores

Field Review Item	Reference #	Anonymous Team Members	Average

		1	2	3	4	5	6	7	8	
Natural Communities (I.A)										
Mesic Flatwoods	I.A.1		3	3	3	3	3			3.00
Scrub	I.A.2		4	4	4	4	4			4.00
Hydric Hammock	I.A.3		5	5	5	4	5			4.80
Floodplain Swamp	I.A.4		5	5	5	4	5			4.80
Basin Swamp	I.A.5		4	5	5	5	5			4.80
Sandhill	I.A.6	3	3	3	3	4	3			3.17
Basin Marsh	I.A.7		3	4	3	5	5			4.00
Scrubby Flatwoods	I.A.8		4	5	5	5	5			4.80
Depression Marsh	I.A.9		4	4	4	4	4			4.00
Baygall	I.A.10		5	X	5	5	5			5.00
Flatwoods Lake	I.A.11		5	5	5	5	5			5.00
Sandhill Upland Lake	I.A.12		5	5	5	5	5			5.00
Dome Swamp	I.A.13		4	X	4	4	5			4.25
Upland Mixed Forest	I.A.14	X	X	X	X	X	X			X
Floodplain Marsh	I.A.15		X	X	X	X	X			X
Wet Prairie	I.A.16		X	X	X	X	X			X
Aquatic Cove/Springs-Run Stream	I.A.17		4	X	4	X	5			4.33
Blackwater Stream	I.A.18		5	5	4	4	3			4.20
Wet Flatwoods	I.A.19		4	4	4		3			3.75
									Natural Communities Average Score	4.31
Listed species:Protection & Preservation (I.B)										
Animals	I.B.1	5	5	3	5	5	5			4.67
Scrub Jay	I.B.1.a		5	5	5	5	5			5.00
Black Bear	I.B.1.b	5	4	4	3	4	5			4.17
Gopher Tortoise	I.B.1.c	3	4	4	3	4	5			3.83
Sand Skink	I.B.1.d	3	4	4	3	4	5			3.83
Plants	I.B.2		4	4	4		5			4.25
Hasteola	I.B.2.a	4	4	3			5			4.00
Warea	I.B.2.b	4	5	3			5			4.25
									Listed Species Average Score	4.25
Natural Resources Survey/Management Resources (I.C)										
Sport fish or their habitat monitoring	I.C.1	5	4	3	4	X	5			4.20
Listed species or their habitat monitoring	I.C.2	4	5	5	4	3	4			4.17
Other non-game species or their habitat monitoring	I.C.3	4	5	4	3	3	4			3.83
Fire effects monitoring	I.C.4	5	4	5	5	5	5			4.83
Other habitat management effects monitoring	I.C.5	5	5	3	4	4	4			4.17
Invasive species survey / monitoring	I.C.6	3	5	5	4	4	4			4.17
Cultural Resources (Archeological & Historic sites) (II.A, II.B)										
Cultural Res. Survey	II.A	4	4		4	4	4			4.00
Protection and preservation	II.B	4	5		4	4	4			4.20
									Cultural Resources Average Score	4.10

Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A1	3	4	4	3	5	4			3.83
Frequency	III.A.2	4	5	4	3	4	5			4.17
Quality	III.A.3	4	4	5	2	5	4			4.00
								Resource Management, Prescribed Fire Average Score		4.00
Forest Management (III.C)										
Timber Inventory	III.C.1	5	5	5	5	5	5			5.00
Timber Harvesting	III.C.2	5	5	5	4	4	4			4.50
Reforestation/Afforestation	III.C.3	4	4	5	4	4	5			4.33
Site Preparation	III.C.4	4	4	5	4	5	5			4.50
								Forest Management Average Score		4.58
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.D.1.a	4	5	5	3	5	3			4.17
prevention - animals	III.D.1.b	3	4	3	3	5	3			3.50
prevention - pests/pathogens	III.D.1.c	3	4	4	3	5	3			3.67
Control										
control - plants	III.D.2.a	3	5	5	3	5	4			4.17
control - animals	III.D.2.b	3	4	3	3	5	3			3.50
control - pest/pathogens	III.D.2.c	3	3	5	3	5	3			3.67
								Non-Native, Invasive & Problem Species Average Score		3.78
Hydrologic/Geologic function Hydro-Alteration (III.E.1)										
Roads/culverts	III.E.1.a		4	4	3	4	4			3.80
Ditches	III.E.1.b		3	3	3	5	3			3.40
Hydro-period Alteration	III.E.1.c	3	3	3	X	5	4			3.60
Water Level Alteration	III.E.1.d	3	3	3	3		5			3.40
								Hydrologic/Geologic function, Hydro-Alteration Average Score		3.55
Ground Water Monitoring (III.E.2)										
Ground water quality	III.E.2.a	3	4	4		5	3			3.80
Ground water quantity	III.E.2.b	3	4	4		5	3			3.80
								Ground Water Monitoring Average Score		3.80
Surface Water Monitoring (III.E.3)										
Surface water quality	III.E.3.a	4	4	4		5	4			4.20
Surface water quantity	III.F.3.b	X	4	4		5	4			4.25
								Surface Water Monitoring Average Score		4.23
Resource Protection (III.F)										
Boundary survey	III.F.1	3	4	4	2	4	3			3.33
Gates & fencing	III.F.2	4	3		3	4	3			3.40
Signage	III.F.3		3	3	2	2	4			2.80
Law enforcement presence	III.F.4	4	3	3	3	2	3			3.00
								Resource Protection Average Score		3.13
Adjacent Property Concerns (III.G)										
Land Use										

Expanding development	III.G.1.a	4	3	4	3	3	3			3.33
Wekiva Parkway	III.G.1.b		4	4	3	3	3			3.40
Inholdings/additions	III.G.2	3	4	4	3	3	3			3.33
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	5	5	4	4	5	4			4.50
Parking	IV.1.b	3	5	4	4	5	4			4.17
Boat Access	IV.1.c	4	3	4	4	5	4			4.00
Environmental Education & Outreach										
Wildlife	IV.2.a	4	4	4	4	4	4			4.00
Invasive Species	IV.2.b	3	4	2	3	4	3			3.17
Habitat Management Activities	IV.2.c	3	4	2	4	4	4			3.50
Interpretive facilities and signs	IV.3	3	4	4	4	5	4			4.00
Recreational Opportunities	IV.4	4	5	5	4	5	4			4.50
Management of Visitor Impacts	IV.5	4	4	3	4	4	4			3.83
								Public Access & Education Average Score		3.96
Management Resources (V.1, V.2, V.3. V.4)										
Maintenance										
Waste disposal	V.1.a	4	4	4	4	5	5			4.33
Sanitary facilities	V.1.b	3	2	2	2	2	2			2.17
Infrastructure										
Buildings	V.2.a	2	1	2	2	1	1			1.50
Equipment	V.2.b	2	2	2	1	1	2			1.67
Staff	V.3	2	1	2	1	1	2			1.50
Funding	V.4	2	2	2	2	1	2			1.83
								Management Resources Average Score		2.17

Color Code:	Excellent	Above Average	Below Average	Poor	See Appendix A for detail
		Missing Vote	Insufficient Information		

3. Land Management Plan Review Details

3.1 Items Requiring Improvements in the Management Plan

The following items received low scores on the review team checklist, which indicates that the text noted in the Management Plan Review does not sufficiently address this issue (less than 3.0 score on average.). Please note that overall good scores do not preclude specific recommendations by the review team requiring remediation. The next management plan update should address the checklist items identified below:

1. **Natural Communities, specifically upland mixed forest, received a below average scores This is an indication that the management plan does not sufficiently address current or desired condition and/or future management actions to protect or restore.**

Managing Agency Response:

FNAI indicated that Seminole State Forest has two small areas of mixed upland forest that totals 59 acres. The management plan information regarding current condition and management actions will be sufficiently addressed in future plan updates.

2. **Ground Water monitoring, specifically ground water quantity, received a below average score. This is an indication that the management plan does not address ground water quantity in sufficient detail.**

Managing Agency Response:

The Florida Forest Hydrology section and the St. Johns River Water Management District will be consulted regarding ground water quantity monitoring needs on Seminole State Forest. Information obtained will be reviewed by local staff and considered during future management plan development.

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

Managing Agency Response:

Since the development of the management plan, small isolated parcels have been identified by local staff to be considered for surplus. These parcels are either surrounded by development or roadways, and cannot be adequately managed independently for the purpose for which they were acquired. The future management plan will provide a discussion to address these potential surplus parcels.

3.2 Management Plan Review Checklist and Scores

Plan Review Item	Reference #	Anonymous Team Members								Average
		1	2	3	4	5	6	7	8	
Natural Communities (I.A)										
Mesic Flatwoods	I.A.1	5	4	5	4	4	3			4.17
Scrub	I.A.2	5	5	5	5	5	3			4.67
Hydric Hammock	I.A.3	5	5	4	5	5	3			4.50
Floodplain Swamp	I.A.4	5	5	4	5	5	3			4.50
Basin Swamp	I.A.5	5	4	4	5	5	3			4.33
Sandhill	I.A.6	4	4	5	4	5	3			4.17

Basin Marsh	I.A.7	5	4	4	3	4	3			3.83
Scrubby Flatwoods	I.A.8	5	5	5	3	5	3			4.33
Depression Marsh	I.A.9	5	4	4	3	5	3			4.00
Baygall	I.A.10	5	5	3	2	5	3			3.83
Flatwoods Lake	I.A.11	5	5	4	2	5	3			4.00
Sandhill Upland Lake	I.A.12	5	5	4	2	5	3			4.00
Dome Swamp	I.A.13	5	4	3	2	5	3			3.67
Upland Mixed Forest	I.A.14	3	2	3			3			2.75
Floodplain Marsh	I.A.15	5	3	3			3			3.50
Wet Prairie	I.A.16	5	3	2			3			3.25
Aquatic Cove/Springs-Run Stream	I.A.17	5	4	3	5		3			4.00
Blackwater Stream	I.A.18	5	4	5	5		3			4.40
Wet Flatwoods	I.A.19	5	5	5	4		3			4.40
								Natural Communities Average Score		4.02
Listed species: Protection & Preservation (I.B)										
Animals	I.B.1	5	4	3	5	5	4			4.33
Scrub Jay	I.B.1.a		5	5	3	5	5			4.60
Black Bear	I.B.1.b	5	4	3	3	5	3			3.83
Gopher Tortoise	I.B.1.c	3	4	3	3	5	3			3.50
Sand Skink	I.B.1.d	3	4	3	3	5	3			3.50
Plants	I.B.2	3	4	3	4		3			3.40
Hasteola	I.B.2.a	3	5	4	3		4			3.80
Warea	I.B.2.b	3	5	3			4			3.75
								Listed Species Average Score		3.84
Natural Resources Survey/Management Resources (I.C)										
Sport fish or their habitat monitoring	I.C.1	4	4	2	2	5	5			3.67
Listed species or their habitat monitoring	I.C.2	3	4	3	4	5	4			3.83
Other non-game species or their habitat monitoring	I.C.3	3	4	3	3	5	4			3.67
Fire effects monitoring	I.C.4	3	4	3	4	5	5			4.00
Other habitat management effects monitoring	I.C.5	3	3	3	4	5	4			3.67
Invasive species survey / monitoring	I.C.6	3	4	4	4	5	4			4.00
Cultural Resources (Archeological & Historic sites) (II.A,II.B)										
Cultural Res. Survey	II.A	4	4	3	3	5	5			4.00
Protection and preservation	II.B	4	4	3	3	5	5			4.00
								Cultural Resources Average Score		4.00
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	3	5	5	5	5	5			4.67
Frequency	III.A.2	4	5	5	5	5	5			4.83
Quality	III.A.3	3	4	4	4	5	5			4.17
								Resource Management, Prescribed Fire Average Score		4.56
Forest Management (III.C)										
Timber Inventory	III.C.1	4	4	5	5	4	5			4.50
Timber Harvesting	III.C.2	4	4	5	4	4	5			4.33
Reforestation/Afforestation	III.C.3	4	4	5	4	5	5			4.50

Site Preparation	III.C.4	3	4	4	4	5	5			4.17
									Forest Management Average Score	4.38
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.E.1.a	3	4	4	4	5	5			4.17
prevention - animals	III.E.1.b	2	3	1	4	5	5			3.33
prevention - pests/pathogens	III.E.1.c	2	3	3	4	5	5			3.67
Control										
control - plants	III.E.2.a	3	5	4	4	5	5			4.33
control - animals	III.E.2.b	3	4	3	4	5	5			4.00
control - pest/pathogens	III.E.2.c	3	4	3	4	5	5			4.00
									Non-Native, Invasive & Problem Species Average Score	3.92
Hydrologic/Geologic function, Hydro-Alteration (III.E.1)										
Roads/culverts	III.F.1.a	2	4	3	3	5	4			3.50
Ditches	III.F.1.b	2	4	3	3	5	4			3.50
Hydro-period Alteration	III.F.1.c		4	3		5	4			4.00
Water Level Alteration	III.F.1.d		4	3	3		4			3.50
									Hydrologic/Geologic function, Hydro-Alteration Average Score	3.63
Ground Water Monitoring (III.E.2)										
Ground water quality	III.F.2.a	4	3	2		5	2			3.20
Ground water quantity	III.F.2.b	1	3	2		5	2			2.60
									Ground Water Monitoring Average Score	2.90
Surface Water Monitoring (III.E.3)										
Surface water quality	III.F.3.a	4	3	3		5	3			3.60
Surface water quantity	III.F.3.b	1	3	3		5	3			3.00
									Surface Water Monitoring Average Score	3.30
Resource Protection (III.F)										
Boundary survey	III.G.1	3	4	3	2	5	4			3.50
Gates & fencing	III.G.2	4	2		3	5	4			3.60
Signage	III.G.3	3	2		2	5	4			3.20
Law enforcement presence	III.G.4	4	3	4	2	3	4			3.33
									Resource Protection Average Score	3.41
Adjacent Property Concerns (III.G)										
Land Use										
Expanding development	III.H.1.a	3	3	4	3	3	3			3.17
Wekiva Parkway	III.H.1.b		3	3	3	4	3			3.20
Inholdings/additions	III.H.2	3	4	2	3	3	3			3.00
Discussion of Potential Surplus Land Determination	III.H.3	2	3	3	2	1	2			2.17
Surplus Lands Identified?	III.H.4	2	3	4	3	4	3			3.17
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	5	4	5	4	4	4			4.33
Parking	IV.1.b	3	4	5	4	4	4			4.00

Boat Access	IV.1.c	3	4	3	3	3	4			3.33
Environmental Education & Outreach										
Wildlife	IV.2.a	3	3	2	3	4	4			3.17
Invasive Species	IV.2.b	3	3	2	3	4	4			3.17
Habitat Management Activities	IV.2.c	3	3	2	3	4	4			3.17
Interpretive facilities and signs	IV.3	3	4	4	4	5	4			4.00
Recreational Opportunities	IV.4	4	5	5	3	4	4			4.17
Management of Visitor Impacts	IV.5	3	4	3	3	4	4			3.50
								Public Access & Education Average Score		3.65
Managed Area Uses (VI.A, VI.B)										
Existing Uses										
Wildlife Viewing	VI.A.1		5	5	4	5	5			4.80
Cattle Grazing	VI.A.2	3	4	3	3	3	3			3.17
Silviculture	VI.A.3	4	5	3	4	5	5			4.33
Hunting	VI.A.4	5	5		5	5	5			5.00
Hiking	VI.A.5	4	5	5	5	5	5			4.83
Equestrian Use	VI.A.6		5	4	5	5	3			4.40
Bicycling	VI.A.7	3	5	3	4	5	3			3.83
Fishing	VI.A.8	4	5	3	4	5	5			4.33
Kayaking/Canoeing	VI.A.9	4	5		5	5	5			4.80
Proposed Uses										

Color Code:	Excellent	Above Average	Below Average	Poor	See Appendix A for detail
		Missing Vote	Insufficient Information		

Appendix A: Scoring System Detail

Explanation of Consensus Commendations:

Often, the exceptional condition of some of the property's attributes impress review team members. In those instances, team members are encouraged to offer positive feedback to the managing agency in the form of a commendation. The teams develop commendations generally by standard consensus processes or by majority vote if they cannot obtain a true consensus.

Explanation of Consensus Recommendations:

Subsection 259.036(2), F.S., specifically states that the managing entity shall consider the findings and recommendations of the land management review. We ask team members to provide general recommendations for improving the management or public access and use of the property. The teams discuss these recommendations and develop consensus recommendations as described above. We provide these recommendations to the managing agency to consider when finalizing the required ten-year management plan update. We encourage the manager to respond directly to these recommendations and include their responses in the final report when received in a timely manner.

Explanation of Field Review Checklist and Scores, and Management Plan Review Checklist and Scores:

We provide team members with a checklist to fill out during the evaluation workshop phase of the Land Management Review. The checklist is the uniform tool used to evaluate both the management actions and condition of the managed area, and the sufficiency of the management plan elements. During the evaluation workshop, team members individually provide scores on each issue on the checklist, from their individual perspective. Team members also base their evaluations on information provided by the managing agency staff as well as other team member discussions. Staff averages these scores to evaluate the overall conditions on the ground, and how the management plan addresses the issues. Team members must score each management issue 1 to 5: 1 being the management practices are clearly insufficient, and 5 being that the management practices are excellent. Members may choose to abstain if they have inadequate expertise or information to make a cardinal numeric choice, as indicated by an "X" on the checklist scores, or they may not provide a vote for other unknown reasons, as indicated by a blank. If a majority of members failed to vote on any issue, that issue is determined to be irrelevant to management of that property or it was inadequately reviewed by the team to make an intelligent choice. In either case staff eliminated the issue from the report to the manager.

Average scores are interpreted as follows:

Scores 4.0 to 5.0 are *Excellent*

Scores 3.0 to 3.99 are *Above Average*

Scores 2.0 to 2.99 are *Below Average*

Scores 1.0 to 1.99 are considered *Poor*

2019 Land Management Review Team Report for Seminole State Forest

Table of Contents

1. Introduction

Section 259.036, F.S. requires a periodic on-site review of conservation and recreation lands titled in the name of the Board of Trustees to determine (1) whether the lands are being managed for the purposes for which they were acquired and (2) whether they are being managed in accordance with their land management plan adopted pursuant to s. 259.032, F.S. In cases where the managed areas exceed 1,000 acres in size, such a review must be scheduled at least every five years. In conducting this review, a statutorily constructed review team "shall evaluate the extent to which the existing management plan provides sufficient protection to threatened or endangered species, unique or important natural or physical features, geological or hydrological functions or archaeological features. The review shall also evaluate the extent to which the land is being managed for the purposes for which it was acquired and the degree to which actual management practices, including public access, are in compliance with the adopted management plan."

The land management review teams are coordinated by the Division of State Lands and consist of representatives from the Division of Recreation and Parks (DEP), the Florida Forest Service (DACS), the Fish and Wildlife Conservation Commission, the local government in which the property is located, the DEP District in which the parcel is located, the local soil and water conservation district or jurisdictional water management district, a conservation organization member, and a local private land manager.

Each Land Management Review Report is divided into three sections. Section 1 provides the details of the property being reviewed as well as the overall results of the report. Section 2 provides details of the Field Review, in which the Review Team inspects the results of management actions on the site. Section 3 provides details of the Land Management Plan Review, in which the team determines the extent to which the Management Plan provides for and documents adequate natural and recreational resource protection.

Finally, each report may also contain an Appendix that lists individual team member comments. This is a compilation of feedback, concerns or other thoughts raised by individual team members, but not necessarily indicative of the final consensus reached by the Land Management Review Team.

1.1. Property Reviewed in this Report

Name of Site: Seminole State Forest

Managed by: Department of Agriculture and Consumer Services, Florida Forest Service

Acres: 27,082 **County:** Lake

Purpose(s) for Acquisition: to protect and restore the natural and cultural values of the property and provide the greatest benefit to the citizens of the state.

Acquisition Program(s): CARL/P2000/FF/SOR **Original Acquisition Date:** 5/27/1993

Area Reviewed: Entire Property **Last Management Plan Approval Date:** 12/9/11

Review Date: 6/14/19

Agency Manager and Key Staff Present:

- Joseph Bishop, Manager
- Keith Mousel
- Ralph Risch
- Roy Cribb

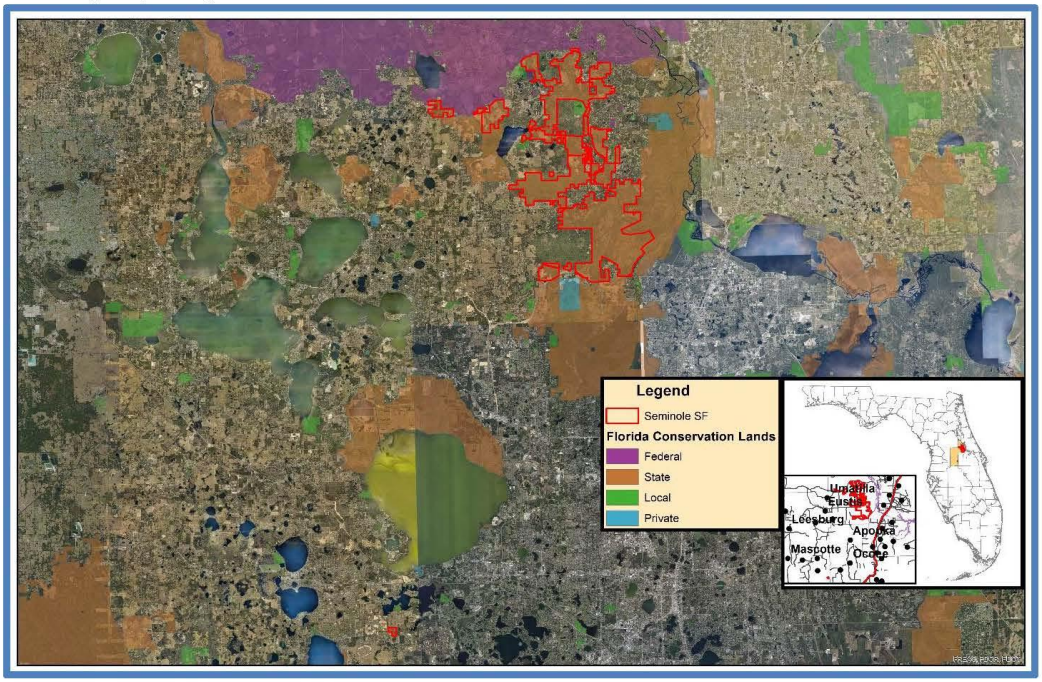
Review Team Members Present (voting)

- Chris Matson, DRP District
- Wendy Poag, Local Gov't.
- Tom O'Neil, FWC
- Brian Dailey, DEP District
- Heather Schmiege, FFS
- R. H. Davis, SJRWMD
- Patricia Burgos, Cons. Organization
- Private Land Manager, None

Other Non-Team Members Present (attending)

- Keith Singleton, DEP/DSL
- Jean-Marie Conner, FWC
- Harvey Piety, FWC
- Jennifer Fergren, Observer (FNPS)
- Barbara Howell, DEP/RCP

1.2 Property Map



1.3. Overview of Land Management Review Results

Is the property managed for purposes that are compatible with conservation, preservation, or recreation?

Yes = 7, No = 0

Are the management practices, including public access, in compliance with the management plan?

Yes = 7, No = 0

Table 1 shows the average scores received for each applicable category of review. *Field Review* scores refer to the adequacy of management actions in the field, while *Management Plan Review* scores refer to adequacy of discussion of these topics in the management plan. Scores range from 1 to 5 with 5 signifying excellence. For a more detailed key to the scores, please see *Appendix A*.

Table 1: Results at a glance.

Major Land Management Categories	Field Review	Management Plan Review
Natural Communities / Forest Management	4.45	4.25
Prescribed Fire / Habitat Restoration	4.04	3.05
Hydrology	4.18	3.95
Imperiled Species	4.59	3.68
Exotic / Invasive Species	4.14	4.07
Cultural Resources	4.83	4.29
Public Access / Education / Law Enforcement	4.61	4.27
Infrastructure / Equipment / Staffing	3.44	N/A

Color Code (See Appendix A for detail)

Excellent | Above Average | Below Average | Poor

1.3.1 Consensus Commendations for the Managing Agency

The following commendations resulted from discussion and vote of the review team members:

1. The team commends the Florida Forest Service (FFS) for successful scrub restoration efforts that have benefitted the scrub jay population. (7+, 0-)
2. The team commends the FFS for the phenomenal use of volunteers. (7+, 0-)
3. The team commends the FFS for the use of BMPs when considering timber sales in areas where threatened, rare or species of concern occur. (7+, 0-)
4. The team commends the FFS for maintaining prescribed fire over an extensive and challenging landscape with substantial property borders. (7+, 0-)
5. The team commends the FFS for the initiative to research giant orchids, monitoring, and reaction to fire study. (7+, 0-)
6. The team commends the FFS for the accomplishments of the FFS biologist inventorying flora, fauna, and fungi. (7+, 0-)
7. The team commends the FFS for providing improved restrooms, access, and parking for users of the forest. (7+, 0-)
8. The team commends the FFS for managing invasive plants well with few resources and a small budget. (7+, 0-)
9. The team commends the FFS for the good networking with law enforcement which has resulted in vigorous coverage and response. (7+, 0-)

1.3.2. Consensus Recommendations to the Managing Agency

The following recommendations resulted from a discussion and vote of review team members. The next management plan update should include information about how these recommendations have been addressed:

1. The team recommends that the FFS consider requesting assistance from St. Johns River Water Management District to model hydrologic effects of plugging Tracy Canal. (7+, 0-)

   Managing Agency Response:

   Local staff agree with the recommendation and will consider requesting assistance from St. Johns Water Management District.

2. The team recommends that the FFS elaborate in the next management plan on specific actions to protect gopher frog ponds and habitat. (7+, 0-)

   Managing Agency Response:

   Although the gopher frog is no longer a listed species, its breeding sites are often the same as those of the striped newt and many other amphibians. The current management plan does include management actions to protect native communities that provide breeding ponds and habitat for the gopher frog. Additional protection measures will be considered during the management plan revisions.

3. The team recommends that the FFS add giant orchid management to the next management plan. (6+, 0-, 1 abstain)

Managing Agency Response:

Since the development of the last management plan, significant populations of the giant orchid have been discovered on the forest. Research is currently being conducted to evaluate the orchid's response to fire. The FFS will evaluate the need for additional management actions and will better address this species in the upcoming management plan revision.

4. The team recommends that the FFS seek a full-time Fire Manager to handle prescribed fire, including pre- and post-fire activities. (4+, 2-, 1 abstain)

Managing Agency Response:

FFS does not believe this is a position that is needed. We believe a combination of the Forestry Supervisor II, who is responsible for the planning of Rx burns, and the Lake County Forest Area Supervisor (FAS), who is responsible for implementing the prescribed burns, is adequate for the burn program on Seminole State Forest.

5. The team recommends that the FFS consider working with cooperators to assess and prioritize potential groundcover restoration projects, and potentially create a timeline for one project during the next five years. (7+, 0-)

Managing Agency Response:

There are several areas on SSF that could benefit from groundcover restoration. It would be reasonable to identify a potential restoration project area and work with experienced cooperators or agencies to develop a restoration plan. The timeline would be determined by resource and funding availability.

6. The team recommends that the FFS continue to increase feral hog control in the state forest. (7+, 0-)

Managing Agency Response:

Current feral hog control has been limited to legal hunting on the Wildlife Management Areas (WMA),a non-paid agent conducting control efforts on some areas outside of the WMA, and allowing of harvest in cattle leases. Plans will soon be finalized to allow non-paid agents to eradicate hogs within the WMA during non-hunt periods. Other means to increase feral hog control will be considered.

7. The team recommends that the FFS fully fund the restoration of the Carter house as an office and visitor center and the replacement of the existing pole shed at the cache with an adequate structure for equipment needs into the next 20 years. (7+, 0-)

Managing Agency Response: *Fixed capital funding has not been available to restore the Carter House or allow construction of a maintenance facility at the cache location. Progress on the Carter House restoration has been moving forward with help from volunteers and support from fundraising events. Addition fundraising events are currently scheduled. Future funding requests will be submitted for the Carter House restoration project and maintenance facility.*

8. The team recommends that the FFS add FTE Biologist(s) at the State Forest. (7+, 0-)

   Managing Agency Response:

   Local staff continually request that the current OPS Biologist II position be established as a career service position. They will put a stronger emphasis on future requests. New position funding has not been available.

9. The team recommends that the FFS consider utilizing native plants that provide the same forage value as the nonnative food crops in the wildlife viewing areas. (7+, 0-)

   Managing Agency Response:

   The Florida Fish and Wildlife Conservation Commission has conducted and funded all wildlife viewing plantings. The wildlife biologist will research the availability of suitable native seed that could be used to replace the nonnative seed. Limited funding and availability may constrain the ability to use native seed.

2. Field Review Details

2.1 Field Review Checklist Findings

The following items received high scores on the review team checklist, which indicates that management actions exceeded expectations.

1. **Natural communities, specifically mesic flatwoods, hydric hammock, floodplain swamp, basin swamp, basin marsh, scrubby flatwoods, depression marsh, baygall, flatwoods lake, sandhill upland lake, upland mixed forest, floodplain marsh, aquatic cave/spring-run stream, blackwater stream, and wet flatwoods.**
2. **Listed species, animals and plants in general, and specifically scrub jay, black bear, gopher tortoise, sand skink, gopher frog, hasteola, warea, and giant orchid.**
3. **Natural resource survey/monitoring resources, specifically sport fish or their habitat monitoring, listed species or their habitat monitoring, other non-game species or their habitat monitoring, fire effects monitoring, other habitat management effects monitoring, and invasive species survey and monitoring.**
4. **Cultural Resources, specifically cultural resource survey, and protection and preservation.**
5. **Resource management (prescribed fire), specifically frequency, and quality.**
6. **Restoration, specifically scrub restoration Tracy East (300 acres).**
7. **Forest management, specifically timber inventory, timber harvesting, reforestation/afforestation, and site preparation.**
8. **Non-native, invasive, and problem species, specifically prevention and control of plants, animals, and pests/pathogens.**
9. **Hydro-alteration, specifically roads/culverts, hydro-period alteration, and water level alteration.**
10. **Ground Water Monitoring, specifically quality, and quantity.**

11. **Surface Water Monitoring, specifically quality, and quantity.**
12. **Resource protection, specifically boundary survey, gates and fencing, signage, and law enforcement presence.**
13. **Adjacent property concerns, land use, specifically inholdings and additions.**
14. **Public access, specifically roads, parking, and boat access.**
15. **Environmental education and outreach, specifically wildlife, invasive species, habitat management activities, interpretive facilities and signs, recreational opportunities, and management of visitor impacts.**
16. **Management resources, specifically waste disposal, and sanitary facilities.**

2.2. Items Requiring Improvement Actions in the Field

The following items received low scores on the review team checklist, which indicates that management actions noted during the Field Review were not considered sufficient (less than 3.0 score on average). Please note that overall good scores do not preclude specific recommendations by the review team requiring remediation. **The management plan update should include information on how these items have been addressed**:

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

   Managing Agency Response:

   The seven acres of historic wet prairie described by FNAI are ecotones between intact scrub and basin swamp. These linear areas are highly disturbed and have been used as travel corridors for cattle by the previous landowner and the current grazing lessee. The edges are shrubby and the centers are bahia grass strips. Restoration of this plant community may occur if restoration of the entire grazing lease is initiated.

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

   Managing Agency Response:

   Requests for additional staffing and funding will continue to be considered to support management needs. Perpetual management needs include T&E species management and monitoring, non-native invasive species control and facilities improvements and maintenance. See Managing Agency Responses above for comments regarding staff, facilities and equipment.

2.3. Field Review Checklist and Scores

Field Review Item	Reference #	Anonymous Team Members	Average

		1	2	3	4	5	6	7	8	
Natural Communities (I.A)										
Mesic Flatwoods	I.A.1	4	3	5	5	4	4	5		4.29
Scrub	I.A.2	2	4	5	4	4	3	5		3.86
Hydric Hammock	I.A.3	5	5	5	5	5	5	5		5.00
Floodplain Swamp	I.A.4	4	5	5	5	5	5	5		4.86
Basin Swamp	I.A.5	5	5	5	5	5	5	5		5.00
Sandhill	I.A.6	3	3	4	4	4	4	4		3.71
Basin Marsh	I.A.7	4	3	5	4	5	3	5		4.14
Scrubby Flatwoods	I.A.8	3	4	5	4	4	4	5		4.14
Depression Marsh	I.A.9	5	2	5	5	4	5	5		4.43
Baygall	I.A.10	x	5	5	5	4	5	5		4.83
Flatwoods Lake	I.A.11	5	5	5	5	5	5	5		5.00
Sandhill Upland Lake	I.A.12	5	4	5	5	5	4	5		4.71
Dome Swamp	I.A.13	x	3	3	3	x	3	4		3.20
Upland Mixed Forest	I.A.14	x	x	5	4	4	4	5		4.40
Floodplain Marsh	I.A.15	5	4	5	5	5	5	5		4.86
Wet Prairie	I.A.16	x	2	x	1	x	2	4		2.25
Aquatic Cave/Springs-Run Stream	I.A.17	5	5	5	5	5	5	5		5.00
Blackwater Stream	I.A.18	4	4	5	5	5	5	5		4.71
Wet Flatwoods	I.A.19	3	4	4	5	3	5	4		4.00
									Natural Communities Average Score	4.34
Listed species: Protection & Preservation (I.B)										
Animals	I.B.1		5	5	5	4	4	5		4.67
Scrub Jay	I.B.1.a	5	5	5	5	4	5	5		4.86
Black Bear	I.B.1.b	5	5	4	5	5	4	4		4.57
Gopher Tortoise	I.B.1.c	4	5	4	5	5	4	4		4.43
Sand Skink	I.B.1.d	4	5	4	5	x	5	4		4.50
Gopher Frog	I.B.1.e	5	5	4	5	4	4	5		4.57
Plants	I.B.2	4	5	4	5	5	4	5		4.57
Hasteola	I.B.2.a	5	5	4	5	5	4	4		4.57
Warea	I.B.2.b	x	5	4	5	4	4	4		4.33
Giant Orchid	I.B.2.c	5	5	5	4	5	5	5		4.86
									Listed Species Average Score	4.59
Natural Resources Survey/Management Resources (I.C)										
Sport fish or their habitat monitoring	I.C.1	5	4	4	5	4	5	5		4.57
Listed species or their habitat monitoring	I.C.2	5	5	5	4	4	5	5		4.71
Other non-game species or their habitat monitoring	I.C.3	5	4	4	5	5	5	5		4.71
Fire effects monitoring	I.C.4	5	4	5	5	5	5	5		4.86
Other habitat management effects monitoring	I.C.5	5	3	4	5	5	5	5		4.57
Invasive species survey / monitoring	I.C.6	5	5	5	4	5	5	5		4.86
Cultural Resources (Archeological & Historic sites) (II.A, II.B)										
Cultural Res. Survey	II.A	5	x	5	5	4	5	5		4.83
Protection and preservation	II.B	5	x	5	5	4	5	5		4.83

									Cultural Resources Average Score	4.83
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	3	3	3	5	4	3	5		3.71
Frequency	III.A.2	4	4	3	5	4	4	5		4.14
Quality	III.A.3	5	5	4	5	4	4	5		4.57
									Resource Management, Prescribed Fire Average Score	4.14
Restoration (III.B)										
Sandhill overstory restoration (47 acres)	III.B.1	5	4	4	3	3	4	4		3.86
Scrub restoration (Tracy East 300 acres)	III.B.2	5	x	5	3	3	4	4		4.00
									Restoration Average Score	3.93
Forest Management (III.C)										
Timber Inventory	III.C.1	4	5	5	5	5	5	5		4.86
Timber Harvesting	III.C.2	5	4	5	5	3	4	5		4.43
Reforestation/Afforestation	III.C.3	4	4	5	4	3	5	5		4.29
Site Preparation	III.C.4	5	4	5	5	4	5	5		4.71
									Forest Management Average Score	4.57
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.D.1.a	5	3	4	4	4	5	4		4.14
prevention - animals	III.D.1.b	5	3	3	4	5	4	4		4.00
prevention - pests/pathogens	III.D.1.c	5	3	4	4	4	5	4		4.14
Control										
control - plants	III.D.2.a	5	5	5	4	4	4	4		4.43
control - animals	III.D.2.b	5	3	4	4	4	4	4		4.00
control - pest/pathogens	III.D.2.c	5	3	4	4	4	5	4		4.14
									Non-Native, Invasive & Problem Species Average Score	4.14
Hydrologic/Geologic function Hydro-Alteration (III.E.1)										
Roads/culverts	III.E.1.a	4	4	4	3	4	5	5		4.14
Ditches	III.E.1.b	4	1	4	3	3	4	5		3.43
Hydro-period Alteration	III.E.1.c	4	4	5	4	4	4	5		4.29
Water Level Alteration	III.E.1.d	4	4	5	4	4	4	5		4.29
									Hydrologic/Geologic function, Hydro-Alteration Average Score	4.04
Ground Water Monitoring (III.E.2)										
Ground water quality	III.E.2.a	5	3	5	4	4	4	5		4.29
Ground water quantity	III.E.2.b	5	3	5	4	4	4	5		4.29
									Ground Water Monitoring Average Score	4.29
Surface Water Monitoring (III.E.3)										
Surface water quality	III.E.3.a	5	3	5	4	4	4	5		4.29
Surface water quantity	III.F.3.b	5	3	5	4	3	4	5		4.14
									Surface Water Monitoring Average Score	4.21
Resource Protection (III.F)										
Boundary survey	III.F.1	5	5	5	4	5	5	4		4.71
Gates & fencing	III.F.2	5	5	4	4	5	5	4		4.57
Signage	III.F.3	5	4	5	5	4	4	4		4.43

Law enforcement presence	III.F.4	5	5	5	5	4	4	4		4.57
									Resource Protection Average Score	4.57
Adjacent Property Concerns (III.G)										
Land Use										
Expanding development	III.G.1.a	5	3	4	2	3	4	4		3.57
Wekiva Parkway	III.G.1.b	5	3	4	2	3	3	5		3.57
Inholdings/additions	III.G.2	5	4	5	3	3	4	4		4.00
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	5	5	5	5	3	5	5		4.71
Parking	IV.1.b	5	5	5	5	4	5	5		4.86
Boat Access	IV.1.c	5	5	5	5	4	5	5		4.86
Environmental Education & Outreach										
Wildlife	IV.2.a	5	4	4	3	4	5	5		4.29
Invasive Species	IV.2.b	5	4	4	3	4	5	5		4.29
Habitat Management Activities	IV.2.c	5	5	4	4	4	5	5		4.57
Interpretive facilities and signs	IV.3	5	5	4	4	4	5	5		4.57
Recreational Opportunities	IV.4	5	5	5	5	5	5	5		5.00
Management of Visitor Impacts	IV.5	5	4		4	5	5	5		4.67
									Public Access & Education Average Score	4.65
Management Resources (V.1, V.2, V.3. V.4)										
Maintenance										
Waste disposal	V.1.a	5	4	5	4	5	5	5		4.71
Sanitary facilities	V.1.b	5	4	5	5	5	5	5		4.86
Infrastructure										
Buildings	V.2.a	1	2	3	3	4	5	3		3.00
Equipment	V.2.b			3	3	3	4	3		3.20
Staff	V.3	1	2	3	2	3	3	3		2.43
Funding	V.4	1	2	3	2	3	3	3		2.43
									Management Resources Average Score	3.44

Color Code:	Excellent	Above Average	Below Average	Poor	See Appendix A for detail
		Missing Vote	Insufficient Information		

3. Land Management Plan Review Details

3.1 Items Requiring Improvements in the Management Plan

The following items received low scores on the review team checklist, which indicates that the text noted in the Management Plan Review does not sufficiently address this issue (less than 3.0 score on average.). Please note that overall good scores do not preclude specific recommendations by the review team requiring remediation. The next management plan update should address the checklist items identified below:

1. ***Listed Species protection and preservation, specifically gopher frog and giant orchid, received below average scores. This is an indication that the management plan does not sufficiently address protection and preservation of listed species.***

   Managing Agency Response:

   The protection and preservation of listed species, such as gopher frog and giant orchids, will be considered when revising the management plan.

2. ***Restoration, specifically sandhill overstory restoration (47 acres), and scrub restoration (Tracy east 300 acres), received below average scores. The review team is asked to evaluate, based on their perspective, whether restoration efforts are adequate.***

   Managing Agency Response:

   The 47-acre sandhill restoration was not specifically addressed in the previous plan. This was a unique area that had a sand pine overstory rather than hardwood overstory. The restoration efforts to remove the sand pine and plant longleaf pine have been completed. Management actions in the revised plan will strive to incorporate management strategies for each of the sandhill restoration needs. The 300-acre scrub to the east of Lake Tracy is also a unique area. This area is where scrub species occur in disturbed areas of old pastures and scrub-jays are present. General management actions were provided in the current plan. Revisions to the management plan will consider the inclusion of specific management actions.

3. ***Adjacent Property Concerns, specifically discussion of potential surplus land determination, received a below average score. This is an indication that the management plan does not sufficiently address adjacent property.***

   Managing Agency Response:

   A discussion of the surplus land determination process will be included in the management plan update.

3.2 Management Plan Review Checklist and Scores

Plan Review Item	Reference #	Anonymous Team Members								Average
		1	2	3	4	5	6	7	8	
Natural Communities (I.A)										
Mesic Flatwoods	I.A.1		4	4	5	4	4	5		4.33
Scrub	I.A.2		5	4	5	5	4	5		4.67
Hydric Hammock	I.A.3		4	4	5	5	5	5		4.67
Floodplain Swamp	I.A.4		4	3	5	5	5	5		4.50
Basin Swamp	I.A.5		4	3	5	4	5	5		4.33
Sandhill	I.A.6		4	4	5	3	4	5		4.17
Basin Marsh	I.A.7		3	4	5	4	4	5		4.17
Scrubby Flatwoods	I.A.8		3	4	5	5	4	5		4.33
Depression Marsh	I.A.9		3	3	4	5	4	5		4.00

Baygall	I.A.10		2	4	5	4	5	5		4.17
Flatwoods Lake	I.A.11		3	3	5	5	5	5		4.33
Sandhill Upland Lake	I.A.12		3	3	5	5	5	5		4.33
Dome Swamp	I.A.13		3	3	5	3	4	5		3.83
Upland Mixed Forest	I.A.14		2	3	5	4	3	5		3.67
Floodplain Marsh	I.A.15		3	3	5	5	3	5		4.00
Wet Prairie	I.A.16		2	3	3	2	4	5		3.17
Aquatic Cave/Springs-Run Stream	I.A.17		3	3	5	4	5	5		4.17
Blackwater Stream	I.A.18		3	3	5	5	5	5		4.33
Wet Flatwoods	I.A.19		4	3	5	4	4	5		4.17
									Natural Communities Average Score	4.18
Listed species: Protection & Preservation (I.B)										
Animals	I.B.1	3	5	3	3	4	4	5		3.86
Scrub Jay	I.B.1.a		5	4	5	5	4	5		4.67
Black Bear	I.B.1.b		5	3	3	4	4	5		4.00
Gopher Tortoise	I.B.1.c	2	5	3	2	4	4	5		3.57
Sand Skink	I.B.1.d	2	5	3	2	4	4	5		3.57
Gopher Frog	I.B.1.e	2	2	3	2	3	4	4		2.86
Plants	I.B.2	2	5	3	5	4	4	4		3.86
Hasteola	I.B.2.a	5	5	3	5	5	4	5		4.57
Warea	I.B.2.b	5	5	3	5	4	4	5		4.43
Giant Orchid	I.B.2.c	2	2	1	1	1	2	1		1.43
									Listed Species Average Score	3.68
Natural Resources Survey/Management Resources (I.C)										
Sport fish or their habitat monitoring	I.C.1	4	4	3	5	4	4	5		4.14
Listed species or their habitat monitoring	I.C.2	4	4	4	4	5	4	5		4.29
Other non-game species or their habitat monitoring	I.C.3	4	4	3	4	5	4	5		4.14
Fire effects monitoring	I.C.4	4	4	4	4	5	5	5		4.43
Other habitat management effects monitoring	I.C.5	4	3	3	3	5	4	5		3.86
Invasive species survey / monitoring	I.C.6	4	4	4	4	5	5	5		4.43
Cultural Resources (Archeological & Historic sites) (II.A, II.B)										
Cultural Res. Survey	II.A	4	3	4	4	4	5	5		4.14
Protection and preservation	II.B	5	3	4	5	4	5	5		4.43
									Cultural Resources Average Score	4.29
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	3	4	4	5	4	5	5		4.29
Frequency	III.A.2	4	4	4	5	4	5	5		4.43
Quality	III.A.3	5	4	4	5	4	4	5		4.43
									Resource Management, Prescribed Fire Average Score	4.38
Restoration (III.B)										
Sandhill overstory restoration (47 acres)	III.B.1	1	2	3	1	2	2	1		1.71
Scrub restoration (Tracy East 300 acres)	III.B.2	1	2	3	1	2	2	1		1.71
									Restoration Average Score	1.71
Forest Management (III.C)										

Timber Inventory	III.C.1	5	5	4	5	5	5	5		4.86
Timber Harvesting	III.C.2	4	4	4	5	4	5	5		4.43
Reforestation/Afforestation	III.C.3	4	3	3	4	3	4	5		3.71
Site Preparation	III.C.4	4	5	3	4	5	4	5		4.29
								Forest Management Average Score		4.32
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.E.1.a	5	3	4	4	5	5	5		4.43
prevention - animals	III.E.1.b	5	3	3	3	4	4	5		3.86
prevention - pests/pathogens	III.E.1.c	5	2	4	4	4	5	5		4.14
Control										
control - plants	III.E.2.a	5	4	4	4	5	5	5		4.57
control - animals	III.E.2.b	4	4	3	3	4	4	5		3.86
control - pest/pathogens	III.E.2.c	1	2	4	4	4	5	5		3.57
								Non-Native, Invasive & Problem Species Average Score		4.07
Hydrologic/Geologic function, Hydro-Alteration (III.E.1)										
Roads/culverts	III.F.1.a	4		4	3	4	4	5		4.00
Ditches	III.F.1.b	5	4	4	3	3	4	5		4.00
Hydro-period Alteration	III.F.1.c	5	4	4	3	4	4	5		4.14
Water Level Alteration	III.F.1.d	5	4	4	3	4	4	5		4.14
								Hydrologic/Geologic function, Hydro-Alteration Average Score		4.07
Ground Water Monitoring (III.E.2)										
Ground water quality	III.F.2.a	5	3	3	3	4	4	5		3.86
Ground water quantity	III.F.2.b	5	3	3	3	4	4	5		3.86
								Ground Water Monitoring Average Score		3.86
Surface Water Monitoring (III.E.3)										
Surface water quality	III.F.3.a	5	3	4	3	4	4	5		4.00
Surface water quantity	III.F.3.b	5	3	4	3	3	4	5		3.86
								Surface Water Monitoring Average Score		3.93
Resource Protection (III.F)										
Boundary survey	III.G.1	5	4	4	4	5	5	5		4.57
Gates & fencing	III.G.2	5	4	2	4	5	5	5		4.29
Signage	III.G.3	4	4	4	4	4	5	5		4.29
Law enforcement presence	III.G.4	5	4	4	4	4	5	5		4.43
								Resource Protection Average Score		4.39
Adjacent Property Concerns (III.G)										
Land Use										
Expanding development	III.H.1.a	5	3	4	4	3	4	4		3.86
Wekiva Parkway	III.H.1.b	5	3	4	4	3	4	4		3.86
Inholdings/additions	III.H.2	4	4	4	4	3	4	5		4.00
Discussion of Potential Surplus Land Determination	III.H.3	2	4	2	1	3	3	5		2.86
Surplus Lands Identified?	III.H.4	5	4	5	4	4	5	5		4.57
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										

Roads	IV.1.a	5	3	4	5	4	4	5		4.29
Parking	IV.1.b	5	3	4	5	4	4	5		4.29
Boat Access	IV.1.c	5	3	4	5	4	5	5		4.43
Environmental Education & Outreach										
Wildlife	IV.2.a		4	3	3	4	4	5		3.83
Invasive Species	IV.2.b	5	4	3	3	4	4	5		4.00
Habitat Management Activities	IV.2.c	5	3	3	4	4	4	5		4.00
Interpretive facilities and signs	IV.3	5	4	2	4	4	4	5		4.00
Recreational Opportunities	IV.4	4	3	5	4	5	4	5		4.29
Management of Visitor Impacts	IV.5	3	4	4	4	5	4	5		4.14
								Public Access & Education Average Score		4.14
Managed Area Uses (VI.A, VI.B)										
Existing Uses										
Wildlife Viewing	VI.A.1	5	5	5	5	3	5	5		4.71
Cattle Grazing	VI.A.2	1	3	3	3	4	4	4		3.14
Silviculture	VI.A.3	4	3	5	3	4	5	4		4.00
Hunting	VI.A.4	4	5	5	4	5	5	5		4.71
Hiking	VI.A.5	5	5	5	5	4	5	5		4.86
Equestrian Use	VI.A.6	5	4	3	4	4	4	4		4.00
Bicycling	VI.A.7	5	3	4	4	4	5	4		4.14
Fishing	VI.A.8	5	5	4	4	5	5	4		4.57
Kayaking/Canoeing	VI.A.9	5	5	5	5	5	5	4		4.86

Color Code:	Excellent	Above Average	Below Average	Poor	See Appendix A for detail
		Missing Vote	Insufficient Information		

Appendix A: Scoring System Detail

Explanation of Consensus Commendations:

Often, the exceptional condition of some of the property's attributes impress review team members. In those instances, team members are encouraged to offer positive feedback to the managing agency in the form of a commendation. The teams develop commendations generally by standard consensus processes or by majority vote if they cannot obtain a true consensus.

Explanation of Consensus Recommendations:

Subsection 259.036(2), F.S., specifically states that the managing entity shall consider the findings and recommendations of the land management review. We ask team members to provide general recommendations for improving the management or public access and use of the property. The teams discuss these recommendations and develop consensus recommendations as described above. We provide these recommendations to the managing agency to consider when finalizing the required ten-year management plan update. We encourage the manager to respond directly to these recommendations and include their responses in the final report when received in a timely manner.

Explanation of Field Review Checklist and Scores, and Management Plan Review Checklist and Scores:

We provide team members with a checklist to fill out during the evaluation workshop phase of the Land Management Review. The checklist is the uniform tool used to evaluate both the management actions and condition of the managed area, and the sufficiency of the management plan elements. During the evaluation workshop, team members individually provide scores on each issue on the checklist, from their individual perspective. Team members also base their evaluations on information provided by the managing agency staff as well as other team member discussions. Staff averages these scores to evaluate the overall conditions on the ground, and how the management plan addresses the issues. Team members must score each management issue 1 to 5: 1 being the management practices are clearly insufficient, and 5 being that the management practices are excellent. Members may choose to abstain if they have inadequate expertise or information to make a cardinal numeric choice, as indicated by an "X" on the checklist scores, or they may not provide a vote for other unknown reasons, as indicated by a blank. If a majority of members failed to vote on any issue, that issue is determined to be irrelevant to management of that property or it was inadequately reviewed by the team to make an intelligent choice. In either case staff eliminated the issue from the report to the manager.

Average scores are interpreted as follows:

Scores 4.0 to 5.0 are *Excellent*

Scores 3.0 to 3.99 are *Above Average*

Scores 2.0 to 2.99 are *Below Average*

Scores 1.0 to 1.99 are considered *Poor*

Exhibit T

Compliance with Local Comprehensive Plan

Florida Forest Service
(850) 681-5800

The Conner Building
3125 Conner Boulevard
Tallahassee, Florida 32399-1650

Florida Department of Agriculture and Consumer Services
Commissioner Wilton Simpson

February 26, 2024

Lake County Office of Planning & Zoning
320 W. Main Street
Tavares, FL 32778
(352) 343-9641
pzinfo@lakecountyfl.gov

RE: Seminole State Forest 10-Year Land Management Plan

To Whom It May Concern,

Greetings from the Florida Forest Service (FFS). Attached is a copy of the Ten-Year Land Management Plan and Exhibits for Seminole State Forest, prepared in accordance with F.S. 253.034. Please review the draft plan at your earliest convenience and reply as to whether the plan is consistent with Lake County's Comprehensive Plan.

Please address all correspondence concerning the Management Plan on official letterhead to the above mailing address or via e-mail. I can be reached by telephone at (850) 681-5889 or by email at Emily.Marsh@fdacs.gov if you have any questions.

Thank you for assisting us in managing Seminole State Forest resources through a stewardship ethic to ensure they are available for future generations.

Sincerely,

Emily Marsh
State Lands Management Planner
Forest Management Bureau
Florida Forest Service

Exhibit U

State Forest Management Plan
Advisory Group Summary

Management Plan Advisory Group Public Hearing
Seminole State Forest
10-Year Land Management Plan

February 1, 2024
10:30 A.M.

Meeting Minutes

MPAG Members Present:

• Keith Mousel	Withlacoochee Forestry Center Manager, Florida Forest Service (FFS)
• Jean Marie Conner	Florida Fish and Wildlife Conservation Commission
• Brent Keith	Representing Rufus Davis of St. Johns River Water Management District
• Zeb Griffin	Lake County Florida Soil and Water Conservation District
• Nancy Prine	Friends of Wekiva and Wekiva Wild and Scenic River System Management Committee
• Jackie Baker	Local Property Owner
• Gary Rogers	Local Property Owner
• Wendy Poag	Representing Lake County Commissioner Campione, District 4

MPAG Members Not Present:

- None

FFS Staff:

• Alan Davis	Land Planning Coordinator
• Brian Camposano	Forest Management Assistant Bureau Chief
• Joe Bishop	Withlacoochee Center Forestry Supervisor II
• Joseph Whipple	OPS Biological Scientist II
• Emily Marsh	State Lands Management Planner

Guests:

- George Kansakis
- Bert McDonald
- Larry Gunnell
- Lee A. Musselman
- Sam Musgrove
- Marty Proctor
- Kim Hegstrom
- Ryan Oliver
- Roper Lar

Public Meeting Start Time: 10:34 A.M.

- Land Planning Coordinator, Alan Davis (FFS) opened the meeting by introducing himself and explained the purpose and statutory framework for the Seminole State Forest 10-Year Land Management Plan process. He explained that the Plan is not an annual work plan or detailed operational plan but provides general and conceptual guidance for management of Seminole State Forest (SSF) for the next 10-year period.

- Mr. Davis confirmed compliance with the Florida Sunshine Law advising 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 that both MPAG meetings are open to the public and proper notice was given. The meetings were advertised in the Leesburg Daily Commercial Newspaper on January 8, 2024; Florida Administrative Register, FFS webpage, as well as posted at the kiosks on Seminole State Forest. The meetings were announced at the Lake County Board of County Commissioners meeting on January 9, 2024. He noted that the draft plan goes through various approvals before and after the MPAG meetings but that the FFS Director is granted final authority on changes to the draft plan. He described the day's two meetings: The first meeting is informational and provides opportunity for public comment; the 1:00 p.m. Workshop meeting provides opportunity for the MPAG members to discuss the public input and to share their personal comments on the draft plan. The public is welcome to attend the Workshop, but participation is limited to MPAG members.
- Mr. Davis then requested MPAG Member introductions and attendance was taken.
- Mr. Davis asked the advisory group to elect an MPAG chairperson. Keith Mousel was elected to serve as chairperson.
- Mr. Davis reiterated the purpose of this meeting is to receive public input which would be later discussed in the Workshop. He acknowledged the in-person location and asked the FFS administrators to apprise of any persons attending. Nine (9) attendees were present.
- Mr. Davis then introduced Seminole State Forest Forestry Supervisor II Joe Bishop who presented a PowerPoint presentation of the 10-Year Plan. Mr. Davis asked if there were any clarifying questions regarding the presentation. Mrs. Hegstrom stated that she lives off of Brantley Branch Road and her property is adjacent to the trailhead. She has attempted to Visit the Visitor's Center but has found it to always be locked. She inquired if there are hours for the Visitor Center. She further stated that she is handicapped and walking to the Visitor's Center poses some access issues. Mr. Bishop stated that the Visitor's Center is typically open 8am-5pm, Monday through Friday. Mrs. Hegstrom stated that you can drive in. Mr. Bishop agreed. He further explained that the Visitor Center is a field office and a lot of FFS personnel work outside in the field. However, there is typically someone there from 8am-5pm. Mr. Bishop apologized for the inconvenience Mrs. Hegstrom has encountered and advised her to call the Visitor Center ahead of time to ensure someone is there. Mr. Bishop encouraged Mrs. Hegstrom to try again.
- Mrs. Hegstrom then stated that she is becoming handicapped with a disease that will render her unable to walk, but she is able to ride horses. She asked about any considerations to build a handicap ramp for equestrian riders along with some Aldo Leopold benches for mounting and dismounting horses safely. She further inquired if there was a local equestrian group that periodically meets. She stated that this would be a group she would like to join.
- Mrs. Hegstrom then inquired if there were any maps of the archeological resources and how does one access the knowledge regarding archeological resources. Mr. Davis stated that we will not identify where these resources are to prevent the public from digging up said archeological resources. He asked Mr. Bishop if this information is on the FFS webpage. Mr. Bishop stated that information regarding archeological resources can be found at the Visitor Center and on Tanner Lane.
- Mrs. Hegstrom stated that she kayaks on the river and inquired about access to the code. She stated that she does not want to use the internet to access this information. Mr. Bishop asked if she was referring to obtaining a State Forest Use Permit. Mrs. Hegstrom clarified that she is asking about the gate code. Mr. Bishop stated that she can call and that the code can be provided over the phone, but out of convenience, the permit can be displayed on her phone if using an email address. If not, she has the option to pick one up at the Visitor Center. Mrs. Hegstrom further asked if someone at the Visitor Center could help her. Mr. Bishop confirmed that to be true.
- Mrs. Hegstrom inquired if a pass can be bought at the Visitor Center. Mr. Bishop stated that all passes are bought online, but if there is a problem, to please call and the staff will assist.

- Mrs. Hegstrom inquired again if there is an equestrian committee that discusses horse trails and handicap accessibility. Mr. Bishop and Mr. Davis both stated that they will look into this and will provide Mrs. Hegstrom with that information soon. Mr. Davis stated that the Visitor Center can answer a lot of Mrs. Hegstrom's questions and concerns. He stressed to call ahead of time, and annual passes can be purchased through Reserve America. Mr. Camposano stated that when it comes to any of the passes for recreation, such as a day use pass, annual pass, reserving a campground, that is all done through Reserve America. There is a URL dedicated to FFS, but the staff at the office can assist Mrs. Hegstrom navigating the online purchase. FFS sells all their passes through that platform now because it is also used as the accounting system. Mr. Camposano stressed again that the staff can assist Mrs. Hegstrom with the process. He then stated that if she uses the state forest a lot, buying a onetime annual pass simplifies everything and is a more cost-effective option.
- Mrs. Hegstrom expressed her appreciation and acknowledged and thanked the field for the work that is being accomplished on SSF. She stated that she has been riding here for 25 years. Mr. Davis thanked Mrs. Hegstrom for her appreciation and asked if all of her questions were addressed. Mrs. Hegstrom stated yes.
- Mr. Musselman stated that he attended the last SSF MPAG 10 years prior. In that MPAG it was discussed to implement a canoe trail from Lake Norris to 44A. Aside from some gates on 44A, he inquired if this project was still in the works. Mr. Bishop explained while working with the Wild National Scenic River System (Wekiva River System), it was determined that that portion would stay wild. Instead of opening it up and trying to maintain it, it was better left as it was. FFS is not planning to move forward with a trail in that area. Instead, FFS implemented an interpretive trail on the main part of the river that is accessible from the center of the forest. Mr. Musselman asked if the project was completely off the table. Mr. Bishop stated yes, and that it is not in the plan as part of the committee member that works with the committee or in the SSF land management plan.
- Mr. Musselman stated that locals do not know where the Visitor Center is located since the Visitor Center moved a year ago. He acknowledged that there is signage but is unreadable as you drive down the highway. Mr. Davis stated that better signage is something to look into and he appreciated this being brought to our attention.
- Ms. Proctor thanked Mr. Bishop for his wonderful presentation. In reference to the 2011 land management plan, revenue producing activities mention the honor system. Ms. Proctor stated that the honor system doesn't work. Back then, the average annual recreational receipts came to $12,000. She inquired where she could obtain financial reports to show the state forest is losing money. She stated humans don't always do what they're asked, in going to Reserve America and/or the FDACS webpage. She stated that a $2 fee is per person and not per car. She has witnessed, on numerous occasions, people driving pass the iron rangers without any deposit. She also noted that Reserve America says the fee is $1.85, which is different from the $2 advertised. She inquired that is there a place where she can find where the revenue is coming out of expenses. Mr. Davis stated yes but would need to find out more information before providing that to her. Mr. Davis further stated that we are all human and that this is an honor system that is being used. At the end of the day, it comes down to self-accountability because FFS does not have the resources and staff to monitor who paid and who hasn't. Mr. Camposano stated that recreation revenue through the honor system is a lot more accurate nowadays with Reserve America's inception in 2017. FFS went completely online in 2020 or 2021 after the pandemic. The system allows us to track everything very accurately and that we are progressing in the right direction. He then stated that the financial information is available, but where it gets tricky is how we have to do day use passes. Day use passes are sold in one central location, out of Tallahassee. These day use passes are state-wide as opposed to being assigned to one specific state forest. He further stated that he is seeing revenue going in the right direction for FFS. There is a fine line between charging too much and being adamant, but at the end of the end, FFS is not the Park Service and we do not have the resources to monitor the gates and entrances like they do. Mr. Camposano acknowledged there are folks not paying their fees but then there are people that will pay their dues directly to the state office. In regard to the $1.85 charge, Mr. Camposano explained that the rule is set up to cover all the taxes. Therefore, the charge is still $2 but 15 cents is paying state tax. This is something that we

cannot circumvent. Mr. Camposano offered providing the State Recreation Coordinator's contact information or to also work with Mr. Bishop. Mr. Mousel explained that we were losing more money through the honor system prior to the launch of Reserve America due to the manpower to took to run each iron ranger. The policy was for two (2) people minimum to check the iron rangers and then they had to reconcile the paperwork. By going electronic, this has saved the field a lot of time. He then stated that they are seeing more responsible people taking advantage of the online system versus not having $2 to place in the iron rangers. He further stated that after the field reconciles the money, it is then taken to the bank. He used the example at Withlacoochee State Forest in which the closest bank is in Dade City, posing an hour of the field's time for the drive alone. Mr. Mousel stated that the electronic system has saved them and that they are seeing the trend going upwards. He stated that there is more revenue generated through the online system than through the honor system. Mr. Camposano reiterated that the honor system is still in place, but that it is online now. Mr. Mousel agreed. Mr. Davis agreed and added that the online system is much more efficient.

- Ms. Proctor inquired if there were more threatened and endangered species than the forty-one (41) animal ten (10) plant species listed in the 2011 plan. Mr. Bishop asked Ms. Proctor is she had a chance to review a copy of the updated draft land management plan to which Ms. Proctor shook her head. Mr. Bishop explained that the updated draft land management plan has an updated list of threatened and endangered species; though, Mr. Bishop did not know the exact number without looking at the plan. Mr. Davis asked Ms. Proctor if the number of species she was referring to was in the 2011 plan or the updated draft plan. Ms. Proctor confirmed she was referring to the 2011 plan. Mr. Davis stated that the same information is within each of our plans and that she can compare the lists between the 2011 plan and the updated draft plan. Ms. Marsh handed Ms. Proctor a copy of the updated plan and explained to her that this is a draft of the updated plan. She further stated that Table 5 provides the list of threatened and endangered species that Ms. Proctor is inquiring. Mr. Davis stated that she can use this copy to compare to see what was found within this last 10-year period.
- Mr. Kansakis stated that he represents the Friends of Seminole State Forest. He thanked Mr. Mousel and Mr. Bishop for initiating the first track chair system within the state forests, which became operation in March 2023. He stated that he's been able to expand the system at two (2) state parks and hoping to expand to all state parks across the state. Mr. Kansakis inquired about the plans, if any, to expand the trails available in SSF and all the other trails within the state forests. He further stressed that the Department of Environmental Protection (DEP) is looking to expand this program, using a piolet program at Blue Springs and DeLeon Springs State Park to offer this to the mobility impaired public across the state. This program is offered at no cost to the state. The volunteer group generates all the funds by private donations and volunteer work. It doesn't cost the state anything in funds or labor. Mr. Kansakis then thanked Mr. Bishop and Mr. Mousel. Mr. Davis thanked Mr. Kansakis for his positive comments. Mr. Bishop requested clarification of Mr. Kansakis' question. Mr. Kansakis stated that SSF only has one (1) tract; the 5K Tract and the loop around Bear Pond. He stated to Mr. Bishop that the two has discussed this before in regard to expanding it closer to Wekiva. He then inquired again what plans to expand the trails available and to make the track chair program available across all state forests. He then stated that this is a question for Mr. Bishop here at SSF and is a question for Mr. Mousel for the region. Mr. Davis stated that we have to look at the accessibility of where and how we can implement that throughout the state. We got two (2) state forests: Withlacoochee, which Mr. Mousel oversees both Withlacoochee and Seminole, but locally, obviously y'all have come to some kind of implementation of the program, but statewide, that is something that we need to talk more about. Mr. Kansakis inquired if this is something that we have talked about to help mobility impaired communities enjoy nature. Mr. Kansakis stressed that it is 13.7% of the population and the response from SSF and the two (2) state parks has been overwhelmingly positive. Mr. Camposano stated that from a statewide perspective, we welcome anyone who would want to be a vendor for FFS, who is willing to purchase, maintain, house these chairs, and utilize them as a vendor. We are not set up to do this on all of our state forests because it requires a lot more people and infrastructure on our side of things. He also stated that the state parks, in general, have trails that are better manicured and developed for those

purposes. He stressed that that is not to say that FFS does not, but FFS does have some rough trails across our state forest system which would not necessarily be suitable a track chair and would cost a lot of money to get the trails into some form of shape that that could be done easily. However, for places that are good trails for that, we welcome vendors who want to do that, but we as an agency, are not equipped to be able to do that. The Park Service may be better equipped to do that than we are. That is generally, the statewide perspective. Mr. Kansakis countered that his program is not a private vendor. Rather, a direct support group of the forest. He reiterated that the program does not cost FFS or the public a dime. The trail that was used was already there. The Friends, the volunteers, maintain the trail, private vendors donate the track chair, etc. He then stated that the program is modeled after the state program in Colorado, which has been wildly successful, and there hasn't been any discussion on the state level in Tallahassee about having increased accessibility for the mobility-impaired in the state forest. Mr. Camposano stated that we are always listening for suggestions for mobility-impaired wherever possible, but again, at this time, there's no discussion of the FFS implementing the Track Chair program for the state forest system. Mr. Mousel stated that he will speak for SSF and WSF on the topic. He stated that he would entertain Mr. Kansakis' idea, which is not the issue at hand. The issue is identifying any and all trail limitations to the track chair. He then explained that some trails would be a single tract and they're only wide enough for people to walk behind each other in a line. If Mr. Kansakis can provide FFS with certain parameters of how wide it is, Mr. Mousel can then point out which trails would meet those requirements. He continued with stating that most trails on WFS are maintained by the Florida Trails Association (FTA). Most trails there are mowed with a small farm tractor or other appropriate equipment. Thus, those trails may meet those capabilities for the track chairs. He then concluded by stating that there is no statewide discussion on expansion, but FFS is willing to expand it on SSF and WSF. Mr. Kansakis thanked Mr. Mousel for the clarification. He then stated that the director of DEP, Chuck Hatcher, was that the expansion of the Track Chair program to the state parks had to occur solely from their CSO (Citizens Support Organization) without any input, effort, and cost to the state park system. Just as Friends had to prove to FFS that they can do this; they can manage and operate the program without any cost to the state, the DEP for the state park system is asking for the same parameters. To that end, Friends of Seminole State Forest has been working with the Friends of Blue Springs and Friends of DeLeon Springs, and that is becoming the template in working with the support group for each entity, state park. Mr. Mousel stated that to expand this throughout the state and on the state forests, not every state forest is maintained by the Florida Trail Association. He suggests for Mr. Kansakis to discuss this with the user group that maintains trails in which he can relay the parameters for this program. Mr. Kansakis inquired if there is a list of direct support groups and not for profit that support each individual forest. Mr. Mousel stated that there are not a lot of support groups like the Friends of Seminole State Forest that could funnel money. Rather, it is just a mutual agreement between the FTA since they maintain the Florida trails and a lot of the secondary trails on the forest. Mr. Kansakis countered that he is not talking about the maintenance and establishment of trails, but he is talking about the implementation and funding for the program itself would have to come from the Friends of Withlacoochee. Mr. Mousel countered that Mr. Kansakis may need to develop a secondary direct support organization. Mr. Kansakis stated that is his question. He inquired again if there is a list of direct support groups for the state forest. Mr. Davis stated that for the good of the meeting, for FFS to attempt to work with Mr. Kansakis to get him the appropriate contacts throughout the state, per state forest, and then the local contacts can help guide Mr. Kansakis on who he needs to work with him for implementing the program on the state forests. Mr. Kansakis was satisfied with Mr. Davis's answer and then inquired if he were to contact Tallahassee, would they be able to provide him with a comprehensive list. Mr. Davis confirmed and then stated that locally, they would have a lot more information for him regarding who is maintaining the trail(s) or with different organization. Mr. Kansakis again stated that he is not talking about trail maintenance, rather about the implementation of the Track Chair program that would be the responsibility of the support group for that particular state forest. Mr. Davis again explained that that information would be held locally with managers, and they would know who the appropriate contact would be.

- Ms. Conner suggested to Mr. Kansakis to reach out to whoever is in charge of that particular state forest, for an example, Joe Bishop, here; and then in talking with Joe, because he is going to know, can ask the questions: "who is your CSO? Who are your Friends?". Mr. Kansakis asked her if that list would be available in Tallahassee. Ms. Conner answered that doesn't know if Tallahassee would have that master list but suggests to figure out which forest you are interested in first, and then touch base with the individual manager because they're going to know which trails are feasible. Mr. Davis restated that if Mr. Kansakis contacts him, then Mr. Davis can provide Mr. Kansakis with the appropriate contacts. Mr. Kansakis thanked Mr. Davis. Mr. Kansakis responded to Ms. Conner saying that he does and is doing what Ms. Conner suggested. He then clarified his initial question again by inquiring how we can increase the amount of trails at SSF to be handicapped accessible through the track chair and then what, if any, does the state provide. Ms. Conner restated that Mr. Kansakis can work with Mr. Bishop on which trails and the parameters for the track chairs. Mr. Kansakis stated that he does. Ms. Conner continued to state that a lot of the trails on SSF, the FTA, they will leave a tree to step over, which is kind of neat. She continued to state that working with Mr. Bishop and FTA will help determine which tracts are feasible. Do we want to cut those trees out? Do we want to apply for a track chair? Mr. Davis once more reiterated that the state office can help Mr. Kansakis get to where he wants to go. He then stated for the purposes of this 10-year plan, to move on, but Mr. Kansakis can work with the state office and with Mr. Bishop. Mr. Kansakis stated he did not see enough in the plan regarding activities offered at SSF, no track chair mentioned during the presentation, didn't see anything as far as discussed increasing the trails available to the mobility-impaired with the Track Chair program. He didn't see any of that, which was why he asked in the first place. Mr. Davis stated that that is great input and will be discussed during the second meeting and have something potentially incorporated into the plan. Mr. Kansakis stated that would be fantastic, and again, reiterated the program is of no cost to the state and the public really enjoys it, and that it makes the state look good. We can use this track chair to enjoy nature at no cost. It makes the state system look good. Mr. Davis agreed again and stated he understands what Mr. Kansakis is trying to say and appreciated his input.
- Mr. Davis stated that Mr. Kansakis was the last speaker and inquired if there was anyone else in the audience that would like to provide comment.
- Mr. McDonald introduced himself and stated he lives right next to the forest. He stated that he has an article from 1996 about the last MPAG involving the state forest people and the state people. He stated that they write, wonderful letter and plans and that in 1996 they had user group meetings ran by Fran Fanella, who was in charge of the state at the time, and once or twice year, they would invite the public, and all of the user groups to provide input before they wrote their 10-year plan. He continued to state that they are here this morning to speak, and that the MPAG committee is going to have a second meeting this afternoon from representatives of these groups but never is there an invitation for people to meet with the representatives and provide their input. He accused the state of slacking with his tax money and not providing the public with those opportunities. He then stated that there is very limited, almost non-existent, ADA compliant use in SSF, and amongst other forests such as Rock Springs. Commenting on Mrs. Hegstrom's difficulty in getting on and off her horse, he expressed that this is dumb and poor planning from the state. He further stated that he never heard Mr. Bishop mention the American Disabilities Act (ADA) and the federal requirement to comply in his presentation. He adamantly stated that this was important to be included in a ten-year proposal, unless they are just pipe dreams the state is just trying to appease the public with. He then stated that when he first moved next to the state forest, he was a young child. Now, at 80 years old, he stated he has less access to the forest than when he was a kid. He continued to say that people tell him constantly that they want to walk through SSF to get to Rock Springs Run or come in at Bear Lake, and even with hiking, they tell him he is not supposed to be there. He adamantly asked why not if his tax dollars pay for it and continue to pay for it. He upsettingly stated that he doesn't understand why anyone is charged to walk on state lands. He adamantly stated that it should be completely free, and that FFS has jobs like counting the blue jays and the gopher turtles and let the public teach their grandchildren to enjoy the forest because it's there, because their parents and grandparents paid for it to be there.

- Mr. McDonald then inquired about fishing off Blackwater Creek on Highway 44A and Highway 44 which has been closed off to parking on the side of the road making fishing in this location inaccessible. He then stated that he's fished in the river amongst thousands of others and now it is not right for them not being able to fish there. He adamantly stated that this is inhumane. People used to catch the fish and take them home to eat, but not now. He then mentioned the plan for the canoe access from Lake Norris to DeLeon River that was in the previous land management plan, but instead the river is clogged up with high density trees and is sometimes cut and left there by FFS so canoers and hikers cannot transport to get to one place or another. He demanded public access to publicly funded lands. He stated FFS cuts thousands of acres of trees a year, but the public isn't seeing the revenue that come from these products. He continued by mentioning Mr. Bishop's mentioning of cutting hardwoods and now we plant pines. Mr. McDonald stated that hardwood is a good thing. He likes Cypress trees. He likes Black gum. He likes Cedar and so does every person that grew up in Florida. He inquired why FFS is removing good and valuable resources just because they take 50, or 100 or 1,000 years to grow. Mr. McDonald then aggressively stated that we have something to cut down the pine tree, they haul it to a mill, they turn it into tissue and turn it into paper we write on, we produce 10-year programs on, and the benefit is lost because folks within FFS come and go. He continued to say that few of FFS personnel have been with the agency for 25, 30, 40 or 50 years. The old timers, the property owners have been here forever, and they haven't changed their property much; but FFS sure changes the property that the public pays with their tax dollars. Mr. McDonald continued to say that it's not fair and he doesn't like it. He wished FFS would allow the public to provide input into their plan before it's developed. Mr. Davis stated that FFS appreciated his comments. He reiterated that this is what this meeting is for: to take his comments in consideration and that the MPAG committee will discuss them when it is time to revise the plan during the second meeting. He stated that Mr. McDonald can attend the second meeting as well, but participation is limited to the MPAG members only. However, they will discuss what Mr. McDonald expressed and Mr. Davis again stated his appreciation for Mr. McDonald's comments. Mr. McDonald countered that he should not have to be at the second meeting and that the people who will be there that can't provide input. He then adamantly stated the public isn't there. Mr. Davis responded that the public is here right now and FFS is receiving your input right now like we would in the liaison meeting. In the next meeting is when we will have the discussion on the input we receive and revisions to the plan per your comments. Mr. McDonald stated that 20 years ago he heard the same song and dance.
- Mrs. Hegstrom stated her disappointment when she drove down Brantley Branch Road and saw the hardwood cut. She stated she doesn't understand why FFS cuts hardwood to plant pines, which really aren't that native to Florida. They've been planted in, so she understands Mr. McDonald's frustration. Someone stated that is not true regarding Ms. Hegstrom's statement about pine trees. Ms. Hegstrom reversed her stance and acknowledged she was wrong. She then stated that she's been riding in the woods for over 20 years and there used to be a lot more pretty places. Now all she hears is that FFS has to clear out all the trees and stuff for the blue jays. Several folks corrected Mrs. Hegstrom that this would be for the Scrub jays. Mrs. Hegstrom then stated that she doesn't understand why FFS does that either. She then stated that her brother asked her why she is attending today's meeting. She stated that she wanted to find out why FFS is cutting down all the trees. Mr. Davis stated that if that is the case, for Mrs. Hegstrom to reach out to FFS, because each tract is different; so, you get different natural communities that require different things and fire intervals. What was there historically, some of that stuff, such as the Xeric Hammock, took over the hardwoods, took over what a hundred years ago was native habitat, pine trees and native grasses and whatnot. So, if you do wonder why FFS is doing something, to ask us and we can provide you with a very good reason for it.
- Mr. Davis inquired if there were any more comments or questions from the public.
- A member of the public stated that she didn't know about this meeting because she doesn't get newspapers. The only reason she knew about this was meeting was because Ms. Baker told her about it. She then stated she was not sent anything, and she loves SSF, in which she puts a good amount of money and time into the forest with the equestrian center that abuts the forest. She stated that something needs to be planned for any meeting or groups like MPAG, where the public gets access to a mailing or a card to

put into everyone's mailbox announcing said meeting. She then inquired who really gets a newspaper. Mr. Davis explained that the meeting is advertised per statute, and that we also do some things outside of that to help fill in some of those gaps. He restated that the meeting was announce at the Lake County Board of County Commissioners meeting, it was on the state forests kiosks, it was in the local newspaper, it was on the Florida Administrative Register, and it was on our Florida Forest Service webpage. Outside of that, for FFS, it is not feasible to mail every single private property owner that's adjacent to a forest because that's tens of thousands, if not more than hundreds of thousands of people. Just the money and staffing in that alone is not feasible. Ms. Proctor agreed. Mr. Davis stated that the MPAG was advertised five (5) different ways per statute. FFS did everything they could do to help with that. Ms. Proctor added to notify head members of communities groups, such as the Casha Community Center over in Lake Mac. She stressed to notify those members so they can notify their members and neighbors. Mr. Davis stated that FFS's responsibility to do what we are required to do and then try to do what makes sense. All the other things are not required by statute, but we did because it made sense to us. He then requested the public to communicate with FFS and they will help in any way they can whether it's about these public meetings or about cutting the hardwoods, we can explain these things and provide good answers. Mr. Davis then apologized. Ms. Proctor stated that she is just thinking of better ways to get the word out to the public. Mr. Kansakis agreed with Ms. Proctor and expressed his understanding of following statutes. Then he stated that it is another thing to do the right thing. He understood that are costs that may not be cost-effective with mailing to residents, but he then stressed that he is the direct support group for the state forest, and he did not know anything about it, and that there was no email sent to the forty-four (44) volunteers of SSF that put their time, effort, and money into helping the forest. He continued to adamantly state no volunteer for SSF got an email and if there's volunteers associated with every forest; that if there's a meeting with every forest across the state, at least the volunteers for that particular forest should be informed as a broadcast email that we all get from SSF when they need a project done: we need a trail cleared, we need this done, we need work on the Visitor Center. They send out emails and doesn't cost them a thing to do that to get a response. Mr. Kansakis then stated that perhaps FFS should look at providing an email to the people that consistently and routinely support the forest since they have a vested interest in it. Mr. Davis stated he understands, but this is consistent with how FFS does it with every state forest, state-wide. Mr. Kansakis countered that things can change. Mr. Davis stated that there is no perfect system. He then encouraged the public to communicate with FFS and to ask questions so that we can help where we can. Mr. Kansakis stated that's what they're doing. Mr. Davis stated exactly and that FFS appreciates this being brought to attention.

- A member of the public inquired if the advertisement was posted in the Leesburg newspaper. Mr. Davis and Mr. Kansakis both stated it was advertised in the Leesburg Daily Commercial Newspaper to which Mr. Kansakis stated that no one gets it. Mr. Davis stated that it was advertised, per statute, in a local newspaper.
- Regarding the comments being addressed in the next meeting, Mr. Musselman inquired about the point of contact so he can know of anything that was addressed during the meeting. Mr. Davis stated that there is going to be another public meeting for this 10-year plan. It'll be at the Acquisition Restoration Council meeting, in June most likely. He then stated that they need one hundred (100) days lead time. It's due February 26th to them so it can be placed on the June meeting. It'll be posted per statute so if you want more information, to reach out to us and we'll get you the information. You can review the plan after the revisions are made. Mr. Musselman inquired who is the contact person. Mr. Davis responded with him being the point of contact. He then encouraged Mr. Mussleman to reach out to him. Mr. Davis then restated the plan will have a hundred (100) day window, and that the public is welcome to attend the ARC meeting in Tallahassee. Ms. Prine Asked if the ARC meeting was going to be in Tallahassee. Mr. Davis stated yes.
- Mr. Davis then thanked everyone for participating and adjourned the public hearing portion of the meetings.

Public Meeting End Time: 11:47 A.M.

Management Plan Advisory Group Workshop Meeting
Seminole State Forest
10-Year Land Management Plan

February 1, 2024
1:00 P.M.

Meeting Minutes

MPAG Members Present:

• Keith Mousel	Withlacoochee Forestry Center Manager, Florida Forest Service (FFS)
• Jean Marie Conner	Florida Fish and Wildlife Conservation Commission
• Brent Keith	Representing Rufus Davis of St. Johns River Water Management District
• Zeb Griffin	Lake County Florida Soil and Water Conservation District
• Nancy Prine	Friends of Wekiva and Wekiva Wild and Scenic River System Management Committee
• Jackie Baker	Local Property Owner
• Gary Rogers	Local Property Owner
• Wendy Poag	Representing Lake County Commissioner Campione, District 4

MPAG Members Not Present:

- None

FFS Staff:

• Alan Davis	Land Planning Coordinator
• Brian Camposano	Forest Management Assistant Bureau Chief
• Joe Bishop	Withlacoochee Center Forestry Supervisor II
• Joseph Whipple	OPS Biological Scientist II
• Emily Marsh	State Lands Management Planner

Guests:

- None

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

- Land Planning Coordinator, Alan Davis introduced himself and opened the SSF MPAG Workshop. He reminded the MPAG members of the Florida Sunshine law and that the purpose of the workshop is to review and discuss the draft and that any edits made to the draft would be presented to the FFS Director for approval. He noted that minutes will be recorded and emailed to the MPAG members and will be approved via negative response review. MPAG member appointment will terminate when the final draft is submitted to the Acquisition Restoration Council. Forestry Supervisor II Joe Bishop was available to make proposed changes to the draft during the page-by-page review.
- Mr. Davis asked if any MPAG members had comments regarding the public hearing conducted earlier. Ms. Poag inquired if public comments will be addressed during this time. Mr. Davis stated that is the MPAG Committee's decision. He then stated that any track changes made will be addressed. The committee will go page by page and it will be inputted into the appropriate section of the plan. Since the plan was sent out ahead of time so hopefully the input is there as far as what was received by the public today. Mr. Davis inquired again if there were any changes made to the plan they would like to see based on the public's input. Ms. Poag stated that she would like to address the ADA question(s). Mr. Keith inquired if Mrs. Hegstrom was talking about hitching posts

or about a full ramp? Several MPAG members stated that she was talking about a mounting block. Mr. Bishop clarified that a mounting block has steps and a platform. Ms. Baker added that the mounting block has steps and DEP has the specs of said mounting blocks. She then stated that she has one that she made, though it is not ADA compliant. Mr. Bishop stated that this is not something that needs to be in the plan. Rather, that is something the public can work with the field staff on for implementation. Mr. Mousel stated that the plan would state that FFS would follow ADA requirements and through the operational plan is where you would address one going in and where you want it, and it would follow the ADA requirements. Mr. Camposano stated that based on what we're talking about here, that level doesn't necessarily need to be in the plan. If you were going to construct an entire building or structure, then we would have to detail that in the plan due to ground disturbance. Just putting a block out there, having some steps to ensure we're ADA compliant, our plan says that we follow the American Disabilities Act. It is very plainly written in this plan. Mr. Griffin and Ms. Prine both inquired if it is. Mr. Camposano continued to explain that working with Joe with the implementation of the block is the best way forward. Ms. Prine stated she read the whole plan and saw no reference to ADA. Ms. Baker also stated she did not see anything about ADA in the plan. Mr. Bishop stated that it can be found on page 16 of the draft plan. Mr. Davis read the ADA statement within the plan: "FFS makes every effort to comply with applicable statutes, rules and ordinances when managing state forests. For an example, when public facilities are developed on state forests, all efforts made to comply with public law 101.336, the American Disabilities Act. He then stated that it is addressed. Specifically, everything we do. Ms. Prine stated that obviously that has not been done and inquired if that was correct. Mr. Davis stated that all FFS facilities are built to ADA specs, yes ma'am. Mr. Mousel clarified that all of our new facilities and renovations are built to ADA specs. Ms. Poag gave the example of the new SSF Visitor Center and how that is built to ADA specs, with a ramp going up. Ms. Prine agreed. Ms. Baker stated that Ms. Hegstrom should have called Mr. Bishop and ask about some sort of ADA mounting block because they are at DEP properties and have been there for a long time. Mr. Bishop stated that they are not a feature, and not every place has one. Ms. Baker said every DEP property does, but Water Management Districts do not. Some do, but most do not. Mr. Camposano stated that not all of FFS state forests have equal demands regarding equestrian use. Clearly there is a lot of demand here, but something we can look at doing here but is done at the local level. Mr. Mousel agreed and added that that falls under Mr. Bishop's operational recreational plan that can be added.

- Ms. Baker then stated that Mrs. Hegstrom has a little more than an ask. She then stated that Mrs. Hegstrom does travel to other states and has seen how different abilities have been addressed there. So even if older riders are having knee or hip issues, she can appreciate these challenges since it is difficult to get that leg over at times. She then clarified that Ms. Hegstrom was not asking for a box every quarter mile so that it could be accommodated. Rather, she was asking if it would be placed at the trailhead. She even suggested for an earthen berm that was more like a ramp, because taking steps is also tricky. So even if it was an ADA compliant mounting block, an earthen ramp works very well for those who can't step even. Ms. Poag stated that she hasn't seen that before and finds that very interesting and wonders if that idea is ADA compliant. Mr. Rogers stated that you would risk going against your ADA compliant specs. You would need so sort of ramp to be ADA compliant. Mr. Davis inquired a proposal to place into the plan or if this is a matter that can be handled locally. Ms. Baker stated that she likes the operational route. She continued to state that many of these issues seem to be operational and inquired how to get the general public to understand the method of getting their action items addressed. She explained that a lot of her notes are education related and we have lots of options with education. She expressed that she doesn't want Al to write an article on prescribed burning, but we're almost there. She summarized by stating that a great prescribed burning article is in place and that she was giving her overall thoughts on the public's comments. Mr. Davis stated that most of what has been expressed can be handled by picking up the phone, meeting with somebody or talking to somebody. Ms. Baker stated it can, but for some reason, and this goes back to having to give everything to people. Mr. Davis agreed. Ms. Baker stated that somehow, we have got to be able to get more information across to the general public. She continued by saying that is not necessarily Mr. Bishop's responsibility, other than making his phone number available. Mr. Mousel stated that for the purposes of this land management plan, we need to go through the plan page by page. Ms. Baker agreed and restated that she was giving a general comment related to educating the general

public on the operations of the forest and what the process is. That is a tough one. Mr. Davis stated that there is a section in the plan that talks about education opportunities and such which would be a good spot to put something. Mr. Camposano added that after listening to the last meeting and this meeting, FFS has liaison panels for every forest, or should have one for every forest. Over time, it's been a little uneven how they've been done across the state. That is the avenue, as the agency historically has identified as the best way to do exactly what Ms. Baker is talking about; where you get a representative of each landowner group or whoever wants to come, and they have a meeting once or twice a year to update the public, and lets you ask all the questions on restoration and cutting trees, recreation areas and gives FFS to opportunity to explain the operations that are happening on the forest. That's different from this meeting. This meeting looks at the plan, conceptually, for the next ten years while the other meeting can get a lot more in the weeds about the whys and the hows and what's going on right now and the immediate future. He concluded by stating that he will work with Mr. Bishop to create a liaison panel for SSF so that we can have that communication, and hopefully, avoid some of the concepts of lack of knowledge or communication about these topics. FFS doesn't want to cut anybody out, it's just not always practical. As Mr. Davis stated, this meeting was advertised 5 different ways. Could we have done a little bit more? Probably, and that is something we will look at for the future; especially when we're hearing that back directly. But these liaison panel meetings might be able to really take the edge off and really help folks know that they're being heard right away without having to wait for the next ten-year plan update. Ms. Baker agreed with Mr. Camposano. She stated that she believes a liaison committee will help alleviate user conflicts and said that a committee was established at one time, but covid eliminated a lot of processes. Ms. Poag stated that having a liaison committee is a great idea. She further stated that someone like Mr. McDonald, who was here 15 years ago, it would be a great idea to send a letter or email when these types of meetings are held; so, they can feel like they are a part of it. She further suggested for an email to be sent out to those whose comments were addressed, or to those who were angry or had the bad tone, or a phone call saying: "we heard you. This is what we would like to do. We would like to have a liaison meeting. This is what we're going to do about it". She stated that these individuals want to see what FFS is going to do about their concerns. If they aren't acknowledged, then they will keep showing up to the next ten-year meeting, and it's just going to compound. Ms. Poag stated that we should address them as a person that is next door. Mr. Camposano agreed that that is a better avenue, because the plan may not change a whole lot today. But the operational details of a lot of the comments that the comments were about, we can't write a 1,000-page book for a ten-year management plan. It's also not practical, so doing something like that is something he would like to see us do and we can start instituting something like that here in the not too distant future because alleviates some of these problems and let folks know they are being heard; so that way you can see on the ground, the practical application of things as opposed to conceptually in this plan. For an example, on page 16, take a type of revenue producing activity. That's a big deal ten-year thing and that needs to be listed in the plan. If that's happening, and if it's not happening, we need to take that out; so that is conceptually something, and if we get to something conceptual today, to add or change, we will do that. But otherwise, the operational discussions, having the liaison committee is probably the best way forward. Mr. Camposano concluded by stating that he will stop there since it's not getting us through the actual plan. Mr. Mousel stated for Mr. Davis to kick off the MPAG meeting. Mr. Davis stated that with all that being said, we will look at the educational section of the plan to see if we can incorporate something there and sounds like that will accommodate the majority of the public comment that needs to be addressed. Ms. Baker suggested that section to address the liaison committee meetings. Mr. Camposano stated that the language mentioning the liaison panel is already within the plan. It is just a matter of following through. Mr. Bishop stated, for clarification to the group, it is mentioned in the plan to keep the liaison committee going, but we have not, and that Mr. Camposano is saying that we are going to get back to those liaison committees. Mr. Davis inquired the group if everyone is ready to begin on page 1.

- Page 11: Ms. Conner stated that, currently that Peavy property and the Martone property is one, and that is the South Pine Lakes property that's owned by Lake County. The county doesn't recognize it as the previous landowners' names. Mr. Mousel agreed that the changed should be made. Mr. Bishop requested the updated name once more. Ms. Conner stated the property is called South Pine Lakes Reserve. Mr. Bishop stated that we have listed Northwest and West as the parcel distance, then inquired the correct location of the updated parcel.

Ms. Conner inquired the property that looks like the head of a hammer piece along 42 if that was considered Northwest. Mr. Bishop stated that it is considered West. Ms. Conner restated that the two properties are considered as one property and defaulted to Mr. Bishop in how he wanted to classify its direction. Mr. Bishop stated that the property is West because it physically lays due west of SSF. Mr. Mousel and Mr. Camposano both agreed.

- Mr. Griffin inquired about the Warea Tract if that has been a longtime piece of the state forest due to its distance from the rest of the state forest. Mr. Bishop stated that it is still a part of the forest and that it is being managed as a part of the state forest. He also stated that despite its distance to the rest of the state forest, that parcel gets more attention than anything else on the state forest, acre per acre because of the threatened and endangered species found on the site.
- Ms. Baker inquired how the Strong property is identified. Mr. Bishop stated that it is identified as Seminole Woods. Ms. Conner clarified that these parcels are nearby public lands properties and not private lands.
- Page 12: Mr. Keith stated that Pine Meadows Conservation area is a Lake County property that is now managed by Lake County. Mr. Bishop inquired if Lake County managed the parcel. Mr. Mousel inquired if Lake County owns or just manages the property. Mr. Keith stated that he is working off Mr. Davis's notes. He further stated that Lake County is the managing agency for the Pine Meadows Conservation area. Mr. Mousel stated he just wanted to make sure and is good with the change. Mr. Keith stated the Fly'n R Ranch Conservation Area is referred to as part of Sunnyhill because it is adjacent to Sunnyhill. He stated it is referred as the Sunnyhill Restoration Area South Tract. He further stated, if we decide to call this one as the Sunnyhill Restoration Area South Tract then, if you go down a little further where it says Sunnyhill Restoration Area, we call that the North Tract.
- Page 13: Mr. Keith inquired about one of the headers in Table 2 that need to be changed to Warea Tract from Seminole Tract as that area is still Seminole proper. For an example, Oakland Nature Preserve is down by Winter Gardens. He further inquired if that is the Warea Tract. Mr. Bishop and group caught the header typo on Table 2. Mr. Camposano stated that the header will be revised at a later date.
- Mr. Keith stated that he just noticed on Page 12 that DRP should be changed to DEP. Mr. Davis stated that DRP manages it, as it is a state park. Mr. Bishop stated yes. Mr. Camposano added that DRP is a division of DEP.
- Page 14: Ms. Prine inquired about having a map indicating where the different tracts are located. Ms. Baker agreed. Mr. Davis stated that these are not tracts. Rather, they are parcels that make up the larger tracts. Mr. Mousel stated these are ownership names. Mr. Bishop stated that these are the names of the parcels when the purchases were made. Ms. Baker stated that she understood, but for the future, like the Strong property, it would be nice to know. She then inquired if the RK Ranch is what Seminole used to be. Mr. Bishop stated that it used to be called the Sulfur Springs Ranch. Ms. Baker inquired where RK came from. Mr. Bishop stated he did not know. Ms. Prine stated that she doesn't know where the individual tracts are. Mr. Bishop stated that that is a valid concern. He explained that in the previous ten-year plan, they had a parcel map listed in the exhibits. It did not point out every parcel, but if we described it in the plan, then it was included on the map. Mr. Camposano inquired if Ms. Prine would like a parcel map, as FFS has the information to create one. Mr. Bishop stated that it is something that could be done. Mr. Davis advised Mr. Bishop to make a comment stating, "consider parcel / tract map". Prine then inquired where Carter is. She stated that as you read the text, the reader doesn't know what makes up the tract you are talking about. Mr. Davis stated that the tract map can help clear up some of that confusion, but per parcel, there could be 500 parcels within one tract. Ms. Prine stated that they all understand that, and they are trying to get more. Mr. Davis stated his appreciation. Mr. Camposano suggested the title of the map to be "Significant Parcels Map". Ms. Baker clarified Ms. Prine's request by stating if the parcel is being mentioned in the text as in how it's being managed, there is no reference to what tract it's in, which helps in knowing what the surrounding areas are. Mr. Mousel stated that information can be seen on the location map as well. Ms. Baker acknowledged said map. Mr. Camposano stated that they are referring to parcels not tracts because everything except the Warea Tract is within the Seminole Tract. Mr. Bishop explained that there are two tracts: Seminole Tract and Warea Tract. These references are for the parcels, but yes, the parcel names are in the plan, inserted in the text portions of the plan. Mr. Camposano stated that those parcels, at minimum, would be added onto the map. Mr. Mousel stated if we do that, then

we all understand that folks coming behind us, those names mean nothing. He then suggested that maybe the names should be taken out of the plan. Then, it really should just be referred to as Seminole and Warea. Mr. Bishop stated that where these references are stated in the plan, there is something unique to that parcel, and was the best way to describe the location. This I because we are mentioning what happened on the parcel and the history, such as hunting in one area and part of it was used for grazing; the most direct ties to the parcel map. He then inquired if we want to change that whole reference to some other kind of location map. Mr. Mousel stated that Mr. Bishop is confusing the parcel / tract altogether. Rather it should be Seminole or Warea, but the parcel doesn't mean anything. Ms. Prine inquired why doesn't FFS just simply say that this is the Seminole Tract or the Warea Tract on the parcel purchases table. Then FFS can add a column that tells where it is located. Mr. Camposano inquired if Ms. Prine meant if it's located within the Seminole or Warea Tract. Ms. Conner stated that it is already separated out. Ms. Prine stated she knows where the Warea Tract is. It's only one piece of property. So, it's very simple, but when you refer to a tract and is composed of all of these individual purchases, it is very confusing to those of us who are familiar with names such as Hunter, Carter, Rumlick or whatever. Mr. Mousel stated that it can be addressed in house and locally. Ms. Prine stated Mr. Bishop knows what to do here. Mr. Bishop stated that the best he is offering here is what he wrote down as a comment. To his understanding, if he mentions a parcel name because of some unique, identifying feature, then there should be a map to reference where that parcel is. Ms. Baker agreed. She then inquired to Mr. Bishop if he did not just state that he has that information a few minutes ago. Mr. Bishop stated that we can newly create it for this update plan, but the map was in the previous 10-year plan. Ms. Baker stated that, going with Mr. Mousel's suggestion, since it's going to be so long before there's another ten-year plan, why not do it this time and then next time when there's a new round of employees because a lot of us are aging out. Mr. Mousel stated that new people coming in aren't going to understand what those names mean. Ms. Baker stated that they don't understand a lot of stuff. Mr. Bishop stated that this a very simple fix. Mr. Mousel stated for Joe to handle it, we just have a timeline to follow.

- Ms. Conner stated that, as a land manager, if the plan is for land management use for all staff, it is helpful to know land use legacies and intact communities versus an old grazing lease, or somebody grows cedar trees for pencils. Those things are helpful and that is why they're mentioned in the plan. They do guide management and restoration activities. She then stated that she personally would hate to see them disappear altogether. Ms. Prine added that it bids respect to your elders. Ms. Conner stated history matters. Mr. Camposano stated that this forest is different than most of our forests in terms of how many parcels comprise the acquisitions. Creating the parcel map may make sense to this forest might not make sense for all of our forests because it might just be three or four major acquisition parcels, but in this case, he's not on the committee and urged everyone to come to a consensus. Mr. Mousel stated for Mr. Bishop to develop a map. Mr. Camposano stated there is consensus that a map will be developed of just the parcels that are mentioned in the plan, that way, the legacies are carried forward. Mr. Davis asked if everyone was good with that. The MPAG Committee agreed.
- Page 16: Ms. Conner inquired about the cattle grazing. She stated that most of the land management advisory group meetings that she has sat in on the last 15 years, were not discussing. Specifically, she inquired clarification and she read "there are additional tracts of land that have potential to become cattle grazing leases". She further inquired if this was a consensus made in past recommendations by the advisory group. She then stated that she understands the value of cattle grazing, but to increase and become cattle grazing leases instead of restoration work, she firmly disagreed. She then inquired if it is best served as a cattle lease in the next ten years, or is it best served as recharged and restoration project and that line is taken out. She further inquired if there is some pressure to have more cattle grazing leases. Ms. Prine inquired the value of cattle grazing versus restoration and from a budgetary constraint. She further inquired what it takes to restore, budget wise. She suggested the language to read "eventually cattle grazing will be phased out as budgetary restraints come in". Mr. Davis suggested to omit the sentence altogether as it doesn't bound or commit us to anything. He then clarified the statement meaning there are additional tracts for cattle grazing but are not being utilized. He reiterated that keeping or omitting the sentence does not bound us one way or the other. Rather, it is a matter of how the group sees it.

- Ms. Prine inquired the income of $37,000 but there is no reference in how that money is being used. Mr. Davis stated that the revenue goes into an incidental trust, which is a pot of money that is used for management along with other needs. Ms. Prine stated this is a point to seriously consider. Ms. Baker stated that the money is not coming back to SSF. Mr. Mousel clarified that the revenue is coming back to the Florida Forest Service in general. Part of that $37,000 does end up back in SSF but could not tell you want percentage. Ms. Prine stated $2.55. Mr. Davis inquired to Mr. Camposano if that is in statute. Any revenue that goes into that, FFS does not have any control over it. Ms. Prine stated they all understand that. Mr. Camposano added that FFS has a budget and a revenue goal every year in order to make it, so we're not taxed by losing positions or something else to make up for shortfalls in revenue, but it all goes into the incidental trust. He then stated that any revenue FFS takes in goes to Revenue and then FFS spends what their budget is for the next year or the current year, depending on what they get from the legislature. In that regard, it is a shell game with the legislature because all revenue that comes in, anywhere, goes into Revenue, and it's our revenue from FFS that as it comes back out into budgets, it could be a portion that comes back to SSF. Ms. Conner stated that none of the rest of them are called out. Tell me what the timber gets. Tell me what the recreation fee gets. Tell me what the apiary leases bring in. Tell me what the miscellaneous forest product sales bring in. Mr. Davis pointed out that these are leases, so there is a set amount annually, but the others you can't really account for because they fluctuate. Ms. Conner stated that it can be accounted. Mr. Mousel explained that timber harvesting fluctuates based on the markets. Mr. Davis stated that how many apiary leases fluctuate. Ms. Prine stated that it is just a big show game is what Mr. Davis is saying. Mr. Mousel stated that if you take it out, it does not mean you can't add cattle leases to it. Mr. Davis stated that is right. Ms. Conner inquired if that is because of having current cattle leases. She clarified her inquiry to be based on if someone who already has 3 current leases was to apply for a lease because it is not in the plan. She inquired if this landowner would be able to expand. Mr. Mousel stated that he wants to make sure that by striking out the language, it wouldn't limit FFS's options. Mr. Davis stated no, there is no restriction. Mr. Camposano stated that the only restriction would be if you explicitly said there will be no cattle leases on SSF, which he does not see that one surviving the director because we need to keep all of our revenue options open. However, we have to evaluate each one based on what is the best use of that land. Should it be restored? Should it be used for cattle as the cost of restoration that far exceed, if we allowed it to be grazed? Perhaps, that will help allow us to get it to a place to be restored quicker. Mr. Rogers inquired what Mr. Camposano meant by restoration work. He exemplified by stating if FFS was to go here and this would be longleaf pine plantation and is inquiring if that is what Mr. Camposano meant by restoration work and its cost. Mr. Mousel stated that it depends on what they decided what that community used to be. So, if it used to be scrub, how would you best restore scrub. If it was longleaf pine and wiregrass community, what is that next step; is it planting longleaf pine and then reintroducing? Mr. Davis stated that FFS tried to go back to the historic community. Mr. Rogers agreed and then stated that one avenue seems to be making FFS money and the other avenue is spending money if he is understanding the field correctly. Mr. Davis stated that down the road it will generate revenue once you've thinned it. Mr. Rogers inquired if this was merchantable timber we were discussing. Mr. Davis continued to state that it would decades to restore it. Mr. Rogers inquired that FFS is not going to harvest anything in the scrub. Mr. Griffin stated that the cattle leases go back to the history of the legacy of the property. There is a lot that goes back into the 1800s that still running cows today. It has its tradeoffs and there's still a lot of the community that likes to see cows running on certain pieces. Ms. Conner stated that there is a piece that they're running cows on that has historically been wet prairie, and it is so degraded by the cattle that it's not going to be that anymore, and that it's a community type that they don't have much of on the forest. She then inquired if FFS would pick the cows over the rare natural community. Mr. Rogers inquired Ms. Conner to show him how the cows are degrading the wet prairie. Ms. Conner stated that the cows eat the native vegetation that the delicious stuff, the delicious herbaceous things, the species that occur in these natural communities, first and foremost. Having had horses and goats and cattle, she can tell Mr. Rogers what they will pick first when you turn them out there in a natural community, from an edible and protein standpoint. That is her concern. She then stated that they are very selective. Mr. Davis inquired if there was a change in the plan. Mr. Mousel stated to Mr. Bishop to strike the sentence, and then inquired the group if they agree. The MPAG committee agreed.

- Page 19: Ms. Poag stated that she would love to change the budget and joked if she could place a "1" in front of it. Mr. Keith stated that IV.C. lists all the things the forest works to achieve and suggested to put in some language like "additional staff would be recommended" because if you look at all the things the Forester has to do, that is a lot of work for one person. So that would be a place to try to get another employee or assistant, a Forester I maybe, to avoid putting it all on one person. Mr. Davis stated that the plan reflects what we currently have outside of the ten-year land management plan. He stated that he wished it would be that easy to place it in there and get another position. However, he defaulted to the committee for a decision and to decide whether or not it would be beneficial to put in. Mr. Mousel noted that there is language at the end that asks for what should be done based on the land management review, towards the end of the plan. Mr. Davis expanded on Mr. Mousel's comment by stating the LMR will give a more detailed explanation of what happened in 5 years, and like Mr. Mousel mentioned, there are recommendations within it. So, there is opportunity for someone to say "Hey, my recommendation is to have more staffing and funding so we can do certain things"; so, there's other avenues for that, and Mr. Davis stated he is unsure if this would be the right one. Ms. Conner stated that she feels like the LMR committees all put that at the end of their LMRs, and we should. Mr. Davis inquired if anyone had a change on page 19. Ms. Prine stated yes. When you look at staffing, you have one Biologist II. When you read the entire report, you recognize that not only is this a state forest for timber and that kind of thing, but the threatened and endangered species focus so great on what we have here. A Biologist II in an OPS position is not parallel with the responsibility of the species of the land. Mr. Davis inquired to Mr. Camposano if we have considered changing the OPS Biologist position to an FTE position in the past but that it cannot happen. Mr. Camposano echoed Mr. Davis in stating that that conversion cannot happen. Ms. Prine inquired if SSF even has a Biologist right now. Mr. Mousel stated yes and pointed to Mr. Whipple. Mr. Camposano agreed with Ms. Prine and stated that he wanted to provide some additional context to the discussion. He stated that in a perfect world because this is something FFS has explored before. Ms. Prine stated that Mr. Camposano doesn't have to argue with her. Mr. Camposano stated that he is not arguing with her, he just wants to provide her with additional information. He continued to state that there are a lot of rare plants on this forest, and at the state office, we have our Plant Conservation Program. Mike Jenkins, our Plant Conservation Biologist, spends quite a bit of time on this forest and looks towards our partners with FWC for help with wildlife. We can't do it all, so that's where we go when we need other folks to help us with some biological management activities. He then inquired to Mr. Mousel that FWC stepped in when SSF didn't have a biologist to help with the scrub jay monitoring. Mr. Mousel stated that they can also call the Withlacoochee Biologist if needed too. Mr. Camposano agreed. Ms. Prine stated that she would like to say that this is her state forest, and this is the one she is focused on. She gets to come out and enjoy the entire site, mostly the scrub jays and the kestrels and other wonderful attributes of this forest. She stated that she is going to stand up for her forest and thinks SSF needs a Biologist that has greater standing, and maybe the folks from Withlacoochee and other state forests come to SSF and consult about forests and the state of SSF Biologists going to Withlacoochee or some other place. Ms. Prine concluded by stating that she is standing up for her biologist. Ms. Baker stated, in regard to what Ms. Prine was saying, made her think of the biologist and how the biologist ends up being the ambassador. Perhaps, that is something for FFS to think about. Ms. Conner agreed. Mr. Davis again inquired of any proposed changes to the plan. Ms. Baker stated to add another biologist. Mr. Mousel stated that the plan is not the avenue to add a position. Ms. Poag inquired if there is a different way to put something in the plan, maybe this is the way. She stated that maybe by describing how shortfalls and goals, and FFS recognizes those goals, when staff recognizes the shortfalls and the goals in the plan, FFS has a plan for meeting those shortfalls to achieve those goes. Ms. Poag inquired if that is part of all state forest plans, so that when FFS recognizes, annually, there is a shortfall in achieving the items in the management plan, how does FFS shore that up. She further inquired how FFS plans to shore up the budget and to-do list and make it happen. She then inquired if that can be put into the plan somehow. She suggested language "shortfalls will be met by..." either volunteer groups, searching for grant funding, begging somebody to grow pine trees on FFS's behalf. She stated that, on the state level, the state office thinks the plan will have the answer, but the plan is what we have planned but it also should be the goals and how FFS is going to meet those goals, but that doesn't always fall on the manager. It can't because there are too many other things that come out of Tallahassee. Mr. Davis agreed and stated that it depends on

staff and funding permitted. Some of those things, we do not have control over. Ms. Poag agreed and then inquired if Forestry Managers are penalized for not meeting certain goals, but they cannot meet those goals because they don't have the funding, or the equipment is broken, and it is not their job to get the equipment fixed. Mr. Davis stated he doesn't know the best way to address this issue. Ms. Poag agreed. Mr. Mousel stated that has to be directed through when one of the LMRs come through and needs to be a point of emphasis. Ms. Conner stated that she has been to the last three LMRs. Mr. Mousel stated he understood that, and the concerns can be run up the chain to Mr. Mousel. Ms. Conner stated that's why she is looking for a solution. She then stated that she is not dissing anyone at this table at all. Mr. Mousel stated that he sat on every land management review since 2000 for Seminole and we worked through the OPS and try to get that converted. We finally got the Carter House finished to meet one of the LMR suggestions, so it's a slow process that we just got to work through. Mr. Davis inquired if there were any changes to page 19 and apologized for not having a good answer. Mr. Bishop stated that there is a liaison comment in the plan. Mr. Camposano stated that before they move on, he wanted Ms. Conner to know that he hears what she is saying. He understood, and that he would love to have a lot more positions and a lot more places doing a lot of things. We're actually probably as an agency dealing with less of a workforce than we ever have, but at the same time the plan is recording what there is currently. Everything that was said by FFS staff, that's written in here, that the forest needs another forester, another biologist, we can put that in there but that's not going to be the mechanism to get the legislature to authorize two additional positions for SSF. Whenever we have a chance to make a request for a legislative budget request item, staffing is something we think about for all the forests individually, regional positions, state office positions, and when our director and Commissioner say yes, go forward, we'll go forward and request some of those positions. He continued to state that they don't necessarily have to be explicitly listed in this plan as yes, we need these two positions. They will come to Mr. Mousel or Mr. Bishop and ask why certain things aren't getting done. If we're able to add a forester or biologist, if that would help. If Mr. Mousel or Mr. Bishop say yes then they go through that process and get the funding from the legislature, they're going to handle it. Mr. Camposano concluded that he doesn't know if there is a great change to make to page 19 where it's going to affect anything. Again, that is just reporting out what we have and what we're doing, and what those positions are doing. He stated that he knows it says, "the forester will...", it's not just the forester. It is a team effort. Everyone is contributing and everyone is helping around here. That is the way at all our of forests. Mr. Mousel agreed and added that the biologist is helping the forester and the forester is helping the biologist. Mr. Camposano stated that he used to be a biologist in the field before he went to the state office. He also was the State Ecologist. He promised that everyone is working together. He stated that he worked with foresters all the time. They came and worked with him. He also worked with rangers. He had forest rangers that loved learning what invasive species were so that they could identify them for Mr. Camposano so that he could come back later and pull them out of the ground and kill them later with herbicide. So, it is very much a group, team effort and works fairly well that way. Mr. Davis inquired if everyone agrees that it states what they were talking about earlier regarding the liaison meetings. Mr. Camposano pointed out that there is also a goal that talks about the meetings. Mr. Mousel agreed and added that Mr. Bishop went through that and said biannually. Ms. Poag stated that hopefully by leaving it in the plan, it will happen. Mr. Bishop agreed.

- Page 20: Mr. Griffin inquired the appetite in picking up new acquisitions. Mr. Davis stated that FFS is always trying to pursue, not only adding lands to state forests, but the primary goal of adding lands that help facilitate management of the state forest. We just closed on a 10-acre parcel. Sue Lee owned it. It's in the middle of the state forest and eliminates inholding essentially. Mr. Griffin likened it to a hole in the doughnut scenario. Mr. Bishop joked it being a knife in the side with Mr. Griffin jokingly stating that he likes that interpretation better. Mr. Davis continued to state that there's another parcel in appraisal on Lake Norris, but we're always looking for anything like that that would make sense. Mr. Griffin inquired if there was any desire for surplussing land. Mr. Davis stated no. Ms. Baker stated no surplus because this has a lot of jagged edges. She then inquired if the goal was to fill in those jagged edges as opposed to knock off a few oddballs. Mr. Davis agreed and stated that there hasn't been a supportive response from the Acquisition Restoration Council when they've been asked to convert conservation lands to non-conservation. Ms. Baker inquired the definition of conservation and non-conservation lands. Mr. Davis stated that SSF is lease #3936, is a conservation lease so all lands within this lease

are conservation lands. It's spelled out in statute. Mr. Mousel stated that they just picked up a piece that had a house on it. They cut the house out as it's not conservation lands. Mr. Davis stated that they incorporated the remainder into the state forest, which is managed as conservation lands. Mr. Mousel stated that it's like a 63-acre parcel, which they cut the 2 acres out that had the house on it. Mr. Davis stated that when conservation dollars are spent on acquiring conservation lands, it has to jump through a ton of hoops to get there and to get out of it. To get out of it is very unlikely. Ms. Baker inquired about the status of the Strong Property. Mr. Bishop stated that it is called Seminole Woods. Ms. Baker inquired again about the status of Seminole Woods. She stated she talked to Mr. Bishop about it and at the time he stated that no one was going after it. Mr. Bishop stated that this is a property that they've been trying to acquire for 30 plus years. Mr. Davis inquired who was trying to acquire it. Ms. Baker and Ms. Poag both stated the state. Ms. Baker added that it was the number one parcel on the CARL list forever and then inquired its acreage. Mr. Griffin stated that it's about 6,000 acres. Ms. Baker continued to state that it has springs and everything. When she talked to someone about it earlier, it's perfect for state ownership because it's constrained by the Wekiva River Basin Protection Zone that will not allow it to be developed. She would like to know who is keeping tabs on it. Mr. Davis stated that the bottom line is you have to have a willing seller. So, if you don't have a willing seller, then you can't have an acquisition. Ms. Poag stated that the last she heard, it got knocked off because they weren't interested in selling it. Ms. Baker stated that the landowners are getting older, and that it's the kids that is putting a stop to it. Mr. Davis suggested that if they hear of anything to contact FFS. FFS is always looking for willing sellers. Ms. Baker stated she's tried. Ms. Poag inquired the acreage of the Sue Lee property. Mr. Davis stated 10-acres, but it's a very important 10-acres. Ms. Poag stated she knows, and she can drive all the way through now. Mr. Davis further stated that it was acquired this week and is in the process of being incorporated to our lease. Mr. Mousel stated for Mr. Bishop to place a period after the word "surplus". Mr. Bishop inquired which one. Ms. Poag stated where the lines are. Mr. Bishop stated that he got it.

- Page 22: Mr. Keith stated where it talks about law enforcement, "the FWC Lieutenant is responsible for supervising officers in Lake and Sumter County", that she is now an investigator. Mr. Bishop stated that that has since changed. Mr. Keith inquired if it is even necessary to have it spelled out that an FWC Officer lives there. Mr. Bishop stated that she can still provide law enforcement. He stated that he does need to change her title. Ms. Poag stated to change Lieutenant to Investigator. Mr. Bishop agreed. He stated that he would like to keep the statement in there, but he needs to change to her current title. Ms. Poag stated that she is not the supervisor for officers in Lake and Sumter counties. Mr. Camposano stated that that was going to be his question: if her job duties have changed as investigator. Ms. Poag stated that she can still respond to everything in the forest. Mr. Mousel inquired if the statement should still be left in there because you still have a new lieutenant in place. Mr. Bishop stated that the lieutenant doesn't live on the property. Mr. Bishop explained that the reference here is that she resides in SSF's housing. Mr. Mousel understood and apologized for his misunderstanding. Mr. Davis inquired to Mr. Bishop if he was going to make that sentence correct. Mr. Bishop stated that he is going to get her right title and just correct it. Mr. Mousel stated that it says, "she resides in staff housing", but that's not truly FFS housing. Mr. Bishop stated that it is a mobile home site. Mr. Mousel responded that it is a mobile home site. Ms. Poag stated that she owns the mobile home, but it is on FFS property. Mr. Bishop stated that he will correct that as well. Mr. Mousel suggested the language to read "resides on SSF". Mr. Camposano stated that while Mr. Bishop is making his comment, that the state office would introduce themselves. Mr. Camposano, Ms. Marsh, Mr. Davis, and Mr. Whipple all gave their introductions to the MPAG committee. Mr. Bishop inquired if everyone was ok with the strike out. All MPAG members agreed.
- Page 23: Ms. Prine stated that the first paragraph be reviewed and corrected. Mr. Bishop stated that he previously talked to Ms. Prine about this. This paragraph was a carry-over from the last plan that wasn't caught with corrections needed. Mr. Camposano inquired the corrections needed. Mr. Bishop stated quite a bit. Mr. Camposano stated that if Mr. Bishop knows what corrections are needed, he doesn't need to necessarily tell us. Mr. Bishop stated that Ms. Prine is the Chair of the Wekiva National and Wild Scenic River System Working Committee and invited Ms. Prine to summarize the corrections needed. Ms. Prine stated there are details that need to be corrected. The working group is no longer in effect. Mr. Davis stated to Mr. Bishop to make a comment saying to make the paragraph accurate. He then inquired if this is a change that can be fixed quickly.

Ms. Prine stated that it can be very quickly handled if she and Mr. Bishop can talk about it. She then stated that Mr. Bishop has all of the details. Mr. Davis stated that as long as the rest of the MPAG members are good with revising. Mr. Camposano reminded everyone that the changes must be made quickly due to time constraints of less than three weeks. Ms. Baker inquired when the next meeting is if the June meeting is missed. Mr. Davis stated that there is an ARC meeting every two months. Ms. Marsh stated the next one would be in August. Mr. Camposano stated that they have finished an MPAG and gotten everything in far less time, so he has a lot of confidence that we would be able to do this and make it to the June ARC.

- Page 24: Mr. Keith inquired if it is required to show this much information on archeological sites, obviously because people want to go there and rummage through what might be there and what might not be there. It doesn't necessarily give a ton of information about it. He stated Mr. RH Davis's comment "is it a requirement to show this much detail for archeological resources here? The district typically remains as vague as possible on locations and types in our plans to keep from calling undue attention to culture resources. Mr. Davis stated that this response came directly from DHR. They do provide a map that has all the locations of these sites, but we do not put that in the plan. He then stated that as long as we don't show them exactly where they are, just listing them being there won't cause any harm. He then inquired if everyone was ok with that. Mr. Camposano stated that if we were to take the whole list out, DHR has a chance to review our plan one more time before ARC and they're going to say that the list needs to be in there. So, that is as vague or as detailed, whichever way you want to look at it, as we are with all of our plans. They don't seem to have a problem with pilfering of sites by listing this in the plan. If there is a site that someone has local knowledge about, and they choose to go back in there when no one's watching and dig it up. It's not generally because of the plan. It's because they knew it existed before. Ms. Baker stated that local knowledge is a bigger problem. She would love to know how many of the general public go to this plan, get and read at night before they go to bed. They're asleep by page 2. Ms. Prine inquired where the ghost town is. Ms. Baker inquired that, conversely, if this information is public knowledge. She further inquired that if someone were to call and ask where the rower grade is if someone is required to provide that information to them. Mr. Camposano stated that he does not know the answer to that question. Mr. Davis stated that she would have to talk to DHR. Mr. Camposano stated that he would have to consult with the attorney to provide an answer to that question. Ms. Baker stated that he is better off in going to the local pub is what it amounts to. Mr. Camposano stated that his knee jerk reaction is no we would not give out any location because that is something we could redact, but we don't know that for sure. Ms. Baker stated to go to the pub. Mr. Camposano stated that is why we have attorneys. Mr. Davis stated DHR provides us a response and is essentially what she sees and then it includes a map with all the locations, but we're obviously not going to show that in this plan because then there's people that will go out there and dig it up. Ms. Baker inquired why DHR wants it in the plan to begin with. Mr. Davis stated that they want to recognize the historical features. Ms. Poag added that they also want some degree of monitoring done and the staff to know where they're going to have to use best management practices and caution to not disturb or destroy any historical resources that were given a name. She then stated that the "LA" is basically a name and is essentially recognized as significant. That's the reason it has that. So, they do need extra monitoring, protection if you will, and care. Mr. Camposano stated that in the instance where you got a site that isn't a lithic scatter, where people can take things from the ground. Let's say it's a historic building. That might show up on a map because people can't take that. That might be a feature of recreation that we want people to see that structure. So, where it is appropriate that going to be out there, but he's not going to tell anyone where they can find arrowheads in the forest. Mr. Mousel stated that there's enough information on the internet for that. Ms. Baker agreed and then stated that DEP has the Indian mound site on Rock Spring that says Indian Mound. Ms. Conner stated so does Pontoon Island State Park. Ms. Baker inquired if that one was monitored because the one on Rock Springs is not. Ms. Conner stated negative. It is not being monitored. Ms. Baker stated oh well. Ms. Conner stated that is where the trail takes you. Ms. Baker stated the Indian mound.
- Page 56: Mr. Camposano inquired Mr. Bishop to italicize Pinus elliottii. Ms. Poag inquired if Mr. Camposano is a speed reader. Mr. Camposano stated that he has read this plan plenty of times but missed it the last three or four times he's read it.

- Page 58: Mr. Keith stated, regarding item D, that it reads "management needs could consider harvest of pine species if conditions are favorable during timber sales in adjacent uplands". He then stated it could be operational. Ms. Marsh inquired which page Mr. Keith was referring to. Mr. Keith stated page 58, item D, which is the whole page. Mr. Camposano inquired if this was for Depression marsh. Ms. Baker stated yet. Mr. Keith also agreed then stated that marshes should generally be allowed to burn within surrounding communities. Mr. RH Davis wrote could consider harvest of pine species if conditions allowed during sales in adjacent uplands. Mr. Camposano stated that as a group, you want to put that in there, it will be ok. He then stated that's something we are doing anyways. If we are in a drought or a situation where there's a fire that went through there and we want to salvage it, we still have to follow BMPs; so, we have to wait until those conditions are right in order to harvest there. He continued to explain that if there are places where there is too much growth into a wetland type community, such as a depression marsh...a depression marsh will have periods of time where there is no water where you can get in there with some tract equipment and harvest that. He also stated that this is something FFS constantly thinks about based on the situation so it's really up to the group if you want that statement explicitly put in there or not. He concluded by saying that it wouldn't change anything as FFS is still thinking that way, but if the group wants it explicitly written in there then the group needs to decide to add or not. Ms. Poag stated that it is covered if the depression marshes are not in their desired condition and there is encroachment by woody species, FFS could say woody or pine, but she believed the woody species basically covers it. It has undergone some succession. FFS has the ability to get in there using best management practices to harvest, if need be, by the previous sentence. Mr. Camposano agreed and stated that the plan explicitly states that FFS will follow all BMPs. They are not going to harvest it when it's wet and violate BMPs or if there is no need, obviously. If there's a need and we can do that without violating and BMPs, at that point we would consider doing that adding it into a timber sale or something or restoration. Mr. Davis inquired if everyone was ok to leave it as is.
- Page 63: Mr. Keith stated that fire regimes says prairie hammock. He stated that he is not familiar with that particular community type and probably needs to say hydric hammock. Mr. Mousel agreed and stated that it was mislabeled there. Mr. Camposano also agreed and stated that we can fix that. Mr. Bishop inquired what he needed to change it to. The MPAG Committee stated for it to be hydric.
- Page 64: Mr. Keith stated that item J but is not sure where item J is on page 64. Mr. Bishop stated that it started on page 63. Mr. Keith stated that the comment reads "management needs, second paragraph, 'planted pines' is the entirety of mesic flatwoods on SSF in pine plantation? If yes, it likely should be defined in the current conditions". Mr. Mousel stated for Mr. Bishop to scroll to the next page and asked Mr. Keith which page. Ms. Mr. Keith stated that it is at the bottom of page 64. He restated Mr. RH Davis's inquiry about the management needs, which would be the top of page 63. Ms. Poag inquired Mr. Keith if he is sure that is what Mr. RH Davis means by his comments. She then stated that when they have land management reviews and has had this conversation with Mr. Bishop and other state foresters, is that when you have a ruderal site, for an example, that you're working on restoration; or you're taking a pine plantation. It's not the natural community. She continued to explain that there is no definition for a pine plantation under a natural community. It's your desired future condition. She stated that she thinks Mr. RH Davis means if all mesic flatwoods in SSF are currently not natural communities, but rather all are planted pines, then we are not having the same conversation here, because obviously they're not intact. She clarified and stated they don't have the right ground cover; they don't have the right shrub layer. So, that is a question for Mr. Bishop, probably. Mr. Bishop stated that there is really no natural community there, and he would have to look up what the title is if there is one. He continued to state that this section should be talking about mesic flatwoods and the management of. He did agree that that is a weird statement within this section. Mr. Camposano stated that generally, from the FFS perspective, and we have had this conversation. We ask FNAI to do our natural communities map and we're actually almost done doing it through all of the forests. For a while there, it was a struggle to get FNAI to do it, and that wasn't because of them. That was because of folks from our agency that have gone on to retire, but we've been able to get that back to a place where they're doing our natural community mapping, and we've had discussions with them and our leadership and some of our managers. The way we are defining it is FFS does plant pine plantations. That is how we start restoration on a forest stand. So, when we are calling it a pine

plantation, it's from the inception of the planting until the first management action has been taken on that property. You start thinning it, you start burning it; you start some sort of treatment to it that is getting it to be more natural aside from just planting pine trees is when we start calling it flatwoods or whatever the community is, or pine plantation. We don't mixed words. We have it in there, managed community types. We call plantation, semi-improved pasture and improved pasture are our three managed communities, because we are managing them for a purpose whether that's for restoration or for cattle grazing, or some sort of restoration through that; because believe it or not, cattle grazing can be used towards restoration. He further stated that that is where they are at in terms of how FFS is calling it a plantation versus a natural community type. He continued to state that there was a time where FFS stopped asking FNAI, before the current community maps because we don't care that it's plantation now. We care about what it will be in the future. We landed in the middle there because we do start with plantations. He stated that it took him as an Ecologist to wrap his head around the fact that it takes time to restore. That is just the time component switching between plantation and flatwoods. He stated that he is not going to plant some 726 trees to the acre in straight lines and call it mesic flatwoods. He stated that he would be lying to himself and everyone else, but as they grow and start managing it towards that, we're restoring it to that community and that's when we're going to start calling it mesic flatwoods. Mr. Mousel stated that he understands where the group is coming from. It looks like it's kind of misplaced. Mr. Camposano agreed and stated that it does look funny where it is. Ms. Poag agreed. Mr. Mousel stated that he believes the statement should be stricken, and it should be given with the use of applied fire break. We're talking about mesic hammock, not pine plantation. Mr. Camposano inquired the group if they want to strike that sentence. Ms. Poag stated that they are talking about mesic flatwoods and can understand how even if you plant pines, or even through natural regeneration that you would have an overabundance of pine in there. If it isn't thermally thinned by the natural use of prescribed fire, then you would need to go in and thin it. She continued to state that she thinks that is what that sentence means, but it spoke to Mr. RH Davis as a pine plantation is what he interpreted it as. However, she doesn't think that is what the meaning is. Mr. Bishop stated that Ms. Poag's explanation is accurate for this. He was ready to strike the sentence. Mr. Mousel stated that we can strike it but that doesn't mean FFS can't still thin it in the future. Mr. Bishop stated that the intent was based on what Ms. Poag was saying and could be stated better. However, that is up to the committee. Ms. Baker stated that the statement is an oxymoron, "with little natural vegetation, the planted pine should be thinned". Ms. Poag clarified stating that it means there is an overabundance of the planted vegetation. She then stated that she is ok with striking it as long as everyone else is ok with it. Mr. Mousel inquired if the group was in agreement to striking the statement. The group agreed.

- Page 66: Mr. Keith stated that item L, management needs, in the first paragraph: it shows a 1-2 fire return interval for sand pines. You might not be able to generate enough heat to allow for control of sand pine regeneration, because if you're burning it on that 1-2, probably not going to be able to get it. Mr. Mousel inquired Mr. Bishop to scroll up above it to see what it says above it. Mr. Bishop stated that we are talking about sand hill. Mr. Mousel stated that it isn't sand pines, it's sand hills. Mr. Bishop explained that the reference is sand pine. Mr. Camposano stated that it states, "mechanical and ruderal of sand pines, followed by a more frequent fire return interval every 1-2 years may aid in the encroachment of the species". He explained that the statement is saying that once you've removed it, you're going to have to burn it more to keep it from coming up from the ground because they need it to germinate. Mr. Keith stated that what he believes Mr. RH Davis's comment to mean is if you burn it every year, you're not going to have enough fine fuel to generate enough heat to kill the ones being regenerated from the serotinus. Mr. Mousel stated that he can see that you may not have a big enough fuel for grass response to be able to carry the fire. Mr. Camposano inquired if Mr. Keith would be more comfortable in keeping the statement but removing the timeframe. Mr. Mousel agreed and also stated to increase the fire return interval but not keeping Mr. Camposano's point in the plan. Ms. Baker inquired language to state "as needed". Mr. Keith stated it should read 2-5. Ms. Poag stated correct, but if you're not actively putting in anything that will then carry the fire properly, after it's been encroached in with sand pine, and you're taking those out; if you don't have continuous groundcovers, I don't care how long you wait between intervals, if you don't have enough longleaf there and you don't have a lot of wiregrass there, you're going to need another action item. Mr. Camposano stated that he doesn't disagree with Ms. Poag. He then stated that

if it's a stand of pine for a long time, we might have to see what comes up once they are mechanically removed and adjust the fire return interval, but at the end of the day, this is still under sand hill. So, any sand hill that can be burned in the 1–3-year interval, we want to burn in 1–3-year intervals so we can keep that burn unit or stand in as good shape as possible. He then suggested that instead of saying 1-2 years, it just stays within the normal interval of 1-3 years and for the first few years it's every 3 years to generate enough fuel to knock those sand pine seedlings back. He continued to state that if FFS has a sale and one of the objectives of the sale was to get rid of the sand pine because it's too dense or is not a site that should have sand pine to have longleaf. It's going to be important for us to make sure no sand pine comes back up. So, whether that is done through burning, or whether we have to start yanking them out of the ground or hit them with herbicide. Mr. Mousel stated that he would say more frequent fire return interval may aid into it. Mr. Camposano echoed in agreement. Mr. Mousel then stated that it may only burn the first time 30%, but that's 30% that will burn better the next time and then you will encroach further in every time. Ms. Poag stated that she is good with striking it, but for FFS to meet their goals of sand hill restoration, they're going to have to actively plant some herbaceous groundcover; either seeding or planting. Mr. Mousel stated that it depends on what is left in the seed bank. Ms. Poag stated absolutely, but wiregrass doesn't stay in the seed bank very long; maybe two years. Mr. Mousel stated that you can get a pretty significant spot. He also stated that he has seen seed banks go longer than two years have come back very strong once they're cleared. Ms. Poag agreed but only if there is an adjacent blow in. She then stated that wiregrass does not regenerate very well on its own if the resources aren't there. She continued to state that all she is saying is to consider, maybe, some planting. She continued to state that she doesn't see that very often. FFS plants pine but doesn't see anything about improving their groundcover by a planting or seeding in the management plan, and that is certainly a tool in their toolbox to be considered. Mr. Camposano agreed. Mr. Mousel stated that he's going to be the devil's advocate for the next LMR, because seeding is an expensive proposition, that if we get funded and we don't follow through with it as a management action in the next LMR, we can be criticized by the folks sitting at the table looking at it and going through it. He continued to state that if you put it in the plan, you should be able to try to implement it in the future and that's all going to be based on funding, which we may or may not get. Ms. Baker stated that Mr. McDonald will be here telling FFS didn't do that. Ms. Poag stated that it is increasing biodiversity and the ability to burn, the ability to carry a fire, the ability to get to your return interval that's desired. Ms. Baker inquired what Ms. Poag suggests. Ms. Poag answered what she just said. Ms. Conner stated planting. Mr. Mousel stated that from a land manager standpoint, he would not put planting in there, because then they'll be held accountable for it in at the next 10-year period. Ms. Conner stated that she doesn't think they're arguing if it's a good decision or choice to do. I think they're arguing that they're going to get criticized at the next LMR. Mr. Davis stated that we are agreeing with the group, it's just don't want to be bound to it, and that this is the management needs. It is basically saying this is what we're going to do in this situation, but if we don't have the money to do it, we can't do it. While Mr. Davis and Ms. Conner were discussing, Mr. Keith inquired if it's a feasibility issue for FFS to make it happen physically and financially. Ms. Poag stated it may or may not happen.

- Ms. Prine inquired that since FFS has BMPs and follows BMPs, if they were to take out "frequent" instead of "appropriate" if that would help. Mr. Bishop stated that "frequent" is good because it gives you the idea to go ahead and say if sand pine is your issue and you can use more frequent fire to eliminate that sand pine, then this is a suggestion of treatment. He continued to explain that because there are so many different variables that we can't spell out that this site is going to need more wiregrass and this site needs more longleaf planted, etc. We might have a small patch of sand pine that is encroached and doing things, but we have enough things around it to where all you need to do is remove the sand pine and get frequent fire, and it's taken care of. He concluded by saying FFS can't build every site into this one statement and leave things more general. Mr. Keith added that with the amount of sand hill that this forest has to try to restore that with the amount of wiregrass and things like that, groundcover vegetation that you would have to try to plant, it would just be exponentially expensive to try to do that on every sand hill site SSF has. Mr. Bishop stated that SSF doesn't have a lot of sand hill sites on the forest. The one that is being focused right now, is the one down the road, and it did include the planting of wiregrass and supplemental thinning of longleaf. Ms. Poag stated awesome. Mr. Bishop continued to state that that is all in the plan, the operational plan. Ms. Poag stated it's happening. Mr. Keith stated that

what also goes into the comment that he had was the paragraph above that it says "fire should be applied to this community every 1-3 years" but then below that it says 1-2. Mr. Mousel suggested that he would strike that out and keep the comment above. Ms. Poag inquired the fire regime and Mr. Mousel stated yes. He then inquired the group if everyone was ok with said change. The group agreed and the track change was made. Mr. Davis inquired if everyone was good with that. The group stated yes.

- Page 69: Mr. Keith joked here he goes again. He stated that on the top of the page in the first paragraph he read "optimize Florida scrub jay habitat. A continued monitoring and management program will be continued". He stated that is just seems the verbiage is wrong. It seems like the word continued is used one too many times. Mr. Camposano agreed. Mr. Bishop inquired suggestions for change from the committee. Ms. Baker stated to remove the first one or to say that monitoring and management program will be continued. Ms. Marsh inquired if the language "An ongoing monitoring and management program will be continued" would suffice by changing the first continued to "ongoing" or "current". Mr. Camposano also suggested the SSF monitoring, and management program will be continued. Any of those options will work. Mr. Keith agreed. Mr. Whipple suggested "the current monitoring and management program will be continued". The group agreed. Ms. Baker stated that it makes it sound like it's being done now. Mr. Bishop inquired if the sentence is to start with "The current" and the group stated yes. Ms. Poag inquired if FFS has the funding for it. Mr. Bishop inquired if she was referring to continue monitoring and managing. Ms. Poag stated yes and the way it's been done in the past. She then inquired if FFS is going to continue something, then they're going to make sure they have the resources to keep going, and wanted to make sure that FFS has it. Mr. Bishop stated that they have the same amount of biologists that we had before and volunteers. Mr. Camposano stated that regarding biological species, like resources, but monitoring of scrub jays are pretty important for SSF and it's more than just population that we have in the state forest system so, it's a very important thing to do here. He stated that SSF recently had a meeting recently to discuss scrub jays and their management and how we secure resources. Ms. Poag stated that's great. Mr. Bishop added that the meeting also discussed what more is needed.
- Mr. Keith stated that on the same page, second paragraph which reads, "Caution should be taken to avoid excessive soil disturbance as it can reduce native groundcover..." to which he suggested the word "increases" be changed to "increase weedy species". Mr. Mousel stated he just saw that. Mr. Camposano stated that this is why this is helpful to have lots of sets of eyes on the plan, because these things are missed time to time.
- Page 72: Mr. Keith stated that item Q, under management needs the comment reads "Management Needs: Chopping, maybe consider mulching or mowing as a surrogate for roller chopping to reduce volume of ground disturbance". He continued to state that the last sentence of the paragraph reads "eliminated, it will treat...". He then inquired if it should read instead as "eliminated, it will be treated...". He concluded that there are two changes to make on this page. Mr. Bishop inquired what the first change was. Mr. Keith stated chopping, or maybe consider mulching or mulch mowing as a surrogate for roller chopping to reduce volume of ground disturbance. He clarified that this sentence is mid-way through the management needs section. Mr. Camposano inquired if his comment was related to chopping or mulching. Mr. Mousel suggested taking out the whole sentence out and say, "mechanical treatments of the area could be utilized to encourage". Mr. Camposano stated that mowing will be the best thing as chopping would be more detrimental or harder on the ground than mulching. Ms. Baker inquired if you can get to it, and can you mow it or mulch it and if chopping has to be done because of the status of where the growth is, if it's easier to chop. She then stated that they can't possibly mow that. Mr. Mousel stated yes you can. Mr. Keith stated that you can do either. Ms. Baker inquired if chopping is more cost effective. Mr. Keith stated that he would think so. Mr. Mousel stated that chopping is probably the cheapest method to use. Mr. Camposano stated that long-term, it's probably more effective than mowing, because mowing takes the top off and it's coming back. Ms. Baker agreed and stated that it's coming back twice as bushy, and that she says this because she realizes we have budgetary constraints. Mr. Camposano stated that we are also look at the fact that it is wet prairie so we have to look at BMPs and see if we can bring a chopper safely into that. That's the way we would go from a cost-effective standpoint, but the groundcover would have to stand up to that and not violate BMPs. He agreed with Ms. Baker but reiterated that he is not voting on this. Mr. Mousel stated that he would take out the sentence because this section is management needs. Chopping is a management need but then we're bringing in the potential detriment. They are not one

of the same. Ms. Poag stated that she would think that hydrology and a wet prairie would be critical but doesn't know how much chopping would alter the land. Mr. Bishop in quired if he is reducing the whole section. Mr. Mousel stated no and that the sentence should have that one sentence through exotic species, because that is not a management need. That is a result of what we did. The chopping is the management need. Ms. Poag stated no. Elimination is the management need. Mr. Camposano stated that chopping is a tool. Mr. Mousel and Ms. Poag both agreed with Mr. Camposano. Mr. Camposano stated that he understood what Mr. Mousel meant. Mr. Mousel stated that we should say "FFS will utilize the best mechanical means necessary to meet the things by trying to reduce ground disturbance", because chopping is going to be too much ground disturbance and could bring in exotic species. Ms. Prine suggested to take that out and use best management practices instead. Mr. Camposano stated that it should be a more general statement, or just listing a couple of different option and to be able to choose the best option based on the site. Mr. Griffin suggested best mechanical practice pertaining to the...Ms. Baker stated to the sensitivity of the site. Mr. Keith stated that roller chopping is great until you have to turn. Then it tears it up. We can't mow the lawn in straight lines. Ms. Baker added by stating in a wet area. Mr. Keith said that this is just a piece of paper. There's a million different scenarios. Ms. Conner stated to Mr. Bishop that he's going to strike that out completely. Mr. Bishop stated ok but inquired what he is going to write in its place or to leave it alone. Ms. Prine inquired if he has to type anything. Ms. Marsh stated this is where Mr. Camposano stated that a general statement would be best. Mr. Griffin stated this is where the suggestion for "best mechanical practices for the staff" would be. Mr. Camposano stated to put in something like "appropriate mechanical treatments may be applied based on-site conditions" or something like that. Ms. Baker stated that because, in that situation, fire would be ideal. Mr. Camposano stated that fire works well for FFS. If we could do it with fire, we will do it with fire. Ms. Baker suggested language stating, "if necessary, mechanical treatments will be utilized". Mr. Mousel added "when needed". Ms. Marsh suggested language "where necessary" since "where" speaks to generality. Mr. Davis suggested to change the word "will" to "may".

- Mr. Keith stated that the second part to that is at the bottom. The second part of the comment, it says "eliminated, it will treat...". He then inquired if it should read instead as "eliminated, it will be treated...". Mr. Camposano stated yes, basically. It is just a verb tense issue. Mr. Bishop inquired the change once more. Mr. Keith stated that "eliminated, it will treat..." should be changed to "eliminated, it will be treated...". Ms. Poag stated to Mr. Bishop to put "ed" at the end so that treat is read as treated.
- Page 73: Mr. Keith stated that the whole document says SSF, referencing Seminole, and it spells it out in current conditions. Mr. Bishop inquired where the group was at. Mr. Keith stated "In Xeric Hammocks at Seminole" should say "In Xeric Hammocks at SSF" instead. Mr. Camposano stated that it should never read as just Seminole. If it's going to state Seminole, then it needs to say Seminole State Forest. Both Mr. Camposano and Mr. Mousel instructed Mr. Bishop to change Seminole to SSF.
- Mr. Mousel stated to insert a page break to get "Pine Plantation" moved. Mr. Camposano stated that will be addressed later towards the end. Ms. Marsh stated that she will take care of the page break and things like that. Mr. Mousel agreed and stated that he wanted to point that out as they are addressing other formatting changes.
- Page 75: Mr. Keith stated that, item T, first paragraph, sentence three, the comment reads "suggest changing ruderal to altered for consistency within the document". Mr. Bishop inquired what to change "ruderal" to. Mr. Keith answered "altered". Mr. Keith then stated that he has a few more, but back tracked in stating that this next change is for the exhibits; specifically Exhibit B. Mr. Camposano stated that we will pull up the exhibits next if anyone has anything they want to look at in the exhibits. Ms. Conner stated to Mr. Bishop to hit the backspace within the document. Mr. Bishop inquired where. Mr. Davis stated in between "forest" and "canopy". Mr. Camposano stated that he thinks that is an artifact of the type of spacing we use, the justified spacing.
- Page 76: Ms. Conner pointed out that ruderal needs to be changed to altered under management needs. Mr. Keith agreed. He then stated that they have used "altered landcover types" before instead of "ruderal". Instead, change "ruderal" to "altered". Mr. Camposano stated that if we're going to do that, we might as well change the next mention of ruderal too. Ms. Poag stated that ruderal is a good word to use when you don't want to use the same word over and over again.

- Mr. Davis asked if there were any questions or comments on the exhibits. He then inquired Mr. Keith if he had a suggestion for Exhibit B. Mr. Keith stated yes and that it's titled Boundary and Road map. So, when you go to that page, yes, there's the boundary, but the only roads mentioned are state roads. He then stated that he didn't know if that meant Brantley Branch and all the other roads implied around the forest. Mr. Davis stated that it's just the title and instructed Mr. Bishop to go up the page and delete "Roads" from the title. Mr. Bishop stated he can't. Mr. Camposano stated that it's a pdf. Mr. Mousel stated that he can. Mr. Bishop stated he has the word document. Mr. Mousel stated that Mr. Bishop can make a note of that and instructed Mr. Bishop to go to search and then Mr. Bishop reiterated that he has a word document to which he can change the title there.
- Regarding Exhibit E, Tract and Acreage Map, Mr. Keith inquired if this can be combined with Exhibit B, the Boundary and Road Map, because the two maps are almost exactly the same. He continued to explain that if you look at the two maps, B and E, they're exactly the same.
- Ms. Poag inquired if there is a map that references any of the name changes that were mentioned earlier by everyone. Mr. Camposano stated that FFS still needs to create that map. Ms. Poag inquired to Mr. Camposano if he meant the adjacent properties. Mr. Camposano stated that he was referring to the Tract map. Ms. Poag stated that she meant a map of the adjacent conservation properties to SSF. Mr. Camposano stated that that is already in the exhibits. Ms. Poag clarified that she meant any name changes made need to be reflected on the map. Mr. Camposano agreed, and they will make the changes on those. Mr. Bishop inquired where the group is and what Ms. Poag inquired about. Ms. Marsh explained that Ms. Poag mentioned the name changes on the proximity map need to be made. Mr. Camposano stated that the name changes in the text of the plan need to be made to the map as well if it's listed on that physical map. He then inquired that they need to take a look at Exhibit E. Mr. Bishop stated that because it's a tract map, it's only going to be the Seminole Tract and Warea Tract and is referenced here. Mr. Griffin stated that it is pretty well the same as Exhibit B. It's hard to see the difference. Mr. Bishop stated that this one has a tag that says Seminole Tract. Mr. Camposano stated that what we can do if the group wants to, because there are forests where this matters more, and this instance we can probably take Exhibit B and call it the Boundary, Tract and Acreage Map and just throw the acres on there since the true tracts are identified. He concluded by stating if that's what the group what like to do to, we can do that. Mr. Mousel stated yes. Ms. Baker stated yes, and that will make it more comprehensive. Mr. Camposano stated to Mr. Bishop that his comment can be to combine Exhibit B and E together. Ms. Poag stated that she thinks they did that so they can be able to zoom in to put the recreational facilities on the map. and Mr. Camposano stated that they split a couple of maps because we needed to zoom in, and there's no good way to do it, except by making two maps.
- Mr. Keith stated that he has one for Exhibit G, which is the Department of State Report on Archeological and Historic sites. The comment is "should there be a map here calling to the attention to the general location of cultural sites"? Mr. Camposano, Mr. Davis, and Ms. Marsh all stated no. Mr. Keith agreed and stated that there is a map but inquired what the map is for. Ms. Prine and Ms. Baker both asked what the purpose of the map is. Mr. Bishop stated that the map shows some things. It shows what Ms. Poag was looking for. Ms. Poag inquired if it was the ghost town. Mr. Camposano apologized for not seeing this map before but stated that the map itself doesn't tell him anything and needs to come out. Mr. Bishop inquired to make a comment to remove the map. Ms. Prine state yes. Mr. Camposano stated that whoever agrees, we can go ahead and delete it because it doesn't tell us anything. Mr. Griffin inquired if anyone knows the history of the ghost town. Mr. Rogers inquired if that is over by his property. Mr. Griffin stated that there is that cemetery that is up there. Mr. Rogers stated that it's all around it. Ms. Marsh stated to Mr. Camposano that the map came with the roster and information provided by DHR. Mr. Camposano inquired if they sent the map without any other context to it. Ms. Marsh stated yes. Mr. Bishop added that it all came with DHR's letter. Ms. Marsh agreed and stated they provided her with the letter, map, and roster. Mr. Davis instructed Mr. Bishop to delete the map. Ms. Conner stated that it didn't delete. Mr. Bishop explained that it's because it is in track changes. Mr. Camposano stated that Mr. Bishop can accept the track change.

- Mr. Mousel inquired if there would be one more or will we make E the tract map. Mr. Camposano stated that they will go ahead and give it space to put that parcel map in there. He then stated to Mr. Bishop that they will get rid of the extra page, and for Mr. Bishop not to worry about that.
- Mr. Mousel inquired about the DHR roster and what that is for. Ms. Marsh stated that is the list of historical resources. Mr. Mousel stated that it's already listed in the plan. Mr. Davis stated that is DHR's response. Ms. Marsh agreed and added that this is what DHR provides to FFS. Mr. Camposano stated that this is in all of our plans. It doesn't give any sensitive information. Mr. Mousel clarified inquiring if it's needed in the exhibits if we have it listed in the table already in the plan. Mr. Davis stated that this is a part of DHR's response and their entire response, including the letter, is included in the exhibits.
- Ms. Baker inquired where the grading is regarding previous committees on meeting objectives. Mr. Bishop and Mr. Davis both asked if she meant the LMRs. Ms. Baker was unsure. Ms. Marsh inquired if she meant the Land Management Reviews. Ms. Baker stated yes. Mr. Davis stated that it is an exhibit in here. Ms. Baker then inquired that, on these land management reviews, where this forest might get negative remarks regarding how much acreage they got burned. She inquired the fairness of the grade or if anyone really looks at that. She exemplified stating that equipment isn't running. She stated that that isn't this forest's fault or any other forest's fault and that her question is a general one. She inquired if she made sense and continued to state that they got a negative grade for some items. Ms. Poag stated which they do. Ms. Baker inquired Ms. Poag what she meant. Mr. Davis stated that there is a response for each of the ones that are below average.
- He then asked each MPAG member to comment on the draft plan. Mr. Brenner concurred with the plan in recommending improvement of public access and prescribed fire; acknowledging limited resources and funding for smaller properties, but that FFS is doing what they can. Ms. Crosby added that she believes public access should be a priority. Mr. Donovan supports the multiple-use concept. All remaining present MPAG members commented favorably. Ms. Prine inquired response from who. Mr. Davis and Ms. Conner answered that the management team responds. Mr. Davis explained that the response comes from the management team that judged the property in the LMR. Mr. Bishop corrected by stating Forestry responds to each negative comment. Ms. Conner stated that's correct. Ms. Poag inquired Forestry who. Mr. Mousel stated that Mr. Bishop is the one to initially respond. Mr. Camposano added that it then comes to his desk, and he checks it, and as long as he's good with Mr. Bishop's response they're moving on. If we have to change it at all, we'll change it, but then it goes back to DEP, and they file it away. They will send it back to us and say here is your LMR response and it goes into our plan, and we try to make changes based on those recommendations. He continued to state that one he was on previously, that was a DEP property not FFS property, that he felt bad for the managers there because it was a situation where it wasn't their fault. There were two of them managing three parks and because of that there was a large swath of land that was not getting burned. We had no choice as reviewers on an LMR but to say, "you're not getting it done here". However, we are also careful to say in the comments that the managers here are doing the best job they possibly can with the resources that they have available to them. Anyone on an LMR panel is trying to balance. Ms. Conner stated to mitigate those negativities if it's not the managers' fault, but they're given no additional tools or funding because we're scoring them low because there are needs that are not being met; goals that are not being met, and yet they have to provide the answer that then goes up slope to how they're going to fix that in the next management plan only for it to be kicked back down the hill. Ms. Baker stated that it never makes it up hill. Ms. Conner continued to state that it's because FFS doesn't have any control over meeting the goals and the funding needs that are there. We understand that. That's why it speaks to how can we effectively change with all the meetings we have, with empathy, the job that everyone has to do, because she gets it. She inquired how to do it better and stated that you can't squeeze blood out of a rock and knows how you get beat up on land management reviews and we try to be nice. Mr. Camposano agreed. Mr. Rogers stated that a lot of it comes back to a bunch of terrorists; your hands are tied in the government agency. I've had to deal with it on a daily basis for the last 30 years, so you have to do the best with what you got to do it with. Sometimes it looks good and sometimes it don't. Mr. Camposano added that a lot of times, when you have your recommendations from an LMR, you're going to do what you can with what's in your reach right now and the with the resources and capacity to do. He continued to state that there are those other things like additional staffing, but we've gone down that rabbit hole once today. He could tell

the group that staff is almost always a negative in an LMR because everyone thinks that nobody has enough staffing, and it's probably true in most places. But how that's affected by the legislature, who are the only one that can add more positions to our workforce, there could be a disconnect there, but that's DEP thing and not FFS. He concluded by stating that we follow suit and follow statute like we have to. Ms. Poag stated that the frustration that folks were offering their opinion before is the same frustration kind of model that we have. We do all this work and present and then stated this is why she was asking who, who, who, who specifically, because she was under the impression that it was Mr. Bishop crafting the response. Then it was going up to folks who feel the same way we all feel and then the actual action item is a big fat nothing. Mr. Camposano and Mr. Davis both stated not always. Ms. Poag stated ok, then stated a percentage of and that she gets it. She stated that when she said who it's just problem solving. Mr. Camposano stated that in theory, the Division of State Lands should be preparing a report that goes to the legislature every year that shows the common themes from all of the managed lands around the state of Florida. To the degree that that is happening, Mr. Camposano doesn't know and further stated that that is outside of the scope that any of the Forestry personnel that's present today know about. Mr. Mousel added that it's probably one that we don't want to tackle. Mr. Camposano stated that for some reasons we want to, but actually doing it is another story. Ms. Poag inquired Ms. Baker of her question if it was that they score low. Ms. Baker stated that yes, they score low and inquired where it goes from there in terms of when it's out of control. Mr. Davis stated that the managing agency does the best they can and then it goes to DEP, and it goes through all their approvals, so the does have its checks and balances. It is looked at. Hopefully the uppers are seeing it. They can respond to a lot of the similar requests or comments, but we don't have control over what they do. Essentially document it at the end of the day, and where it goes from there, we do the best we can. Outside of that, it's out of our control. Mr. Keith stated that there are so many variables to that. Like he mentioned, DEP managed three parks and one wasn't getting enough fire. Maybe it's at an urban interface and as the burn boss, you are tasked as an individual, not as an agency, to pull the permit. So that put extra weight on the employee, like "do I really want to go for this when it's a little bit iffy on a weather day or something"? Mr. Camposano stated that to be clear, if he was one of those two employees, he wouldn't want to be pulling a permit either because it's just the two of them with very limited equipment so you have to be very careful of what you can do with the means that you have to do that. Mr. Keith stated that the byproduct of that is getting a bad grade.

- Ms. Prine inquired if Mr. Bishop can't say what he would expect for $3 an acre. She then stated that FFS' report shows that they have $3 an acre and that's not right. Mr. Davis stated that those are the expenditures of the state forest. Ms. Prine stated yeah, $3 an acre, and that's not right. Mr. Davis stated that as a whole we manage everything, it is approximately $20 an acre. So, at the end of the day, it's pretty good for what we're doing. Ms. Prine stated that FFS' report says it's $3 an acre. Mr. Davis stated that that's just the expenditures for that state forest. Ms. Prine stated she understood. Mr. Bishop stated that there are other monies, such as salaries and extra fixed capital monies and such. Ms. Prine stated she understand that, but when you put this in a report to somebody who doesn't understand that they don't understand that. Mr. Davis stated that that is what it is. We need more dollars and more personnel.
- Ms. Prine stated that something she missed early on, and maybe all of you understand this and she didn't, but when you talk about the ten-year plan, but the ten-year plan references the five-year plan. She stated that it would be good in an introduction, in some way, to say that this is the ten year-plan, and all work is done under a five-year plan or a one-year plan to help us. Mr. Davis agreed. Mr. Camposano stated that we can be more clear about it. He believed it was stated but maybe not that clearly, because it starts with the ten-year plan conceptually; this is what we're going to do. We're planning out five years at a time from this year forward to the next four years after it, and then they're updating that every year as you move forward. He continued to state that basically, year one of your five-year plan, that is basically your operational plan that you are putting in place this year for all the different things that are done. So that's kind of how it's broken out. Mr. Davis stated that it was mentioned quite a bit into the PowerPoint presentation about the recreation, silviculture plans that we have. Ms. Prine stated that she understands, but inquired if it was in the text, and if she just missed it. Mr. Mousel clarified that she meant the plan text. Mr. Camposano stated it references the five-year plan, but if it's not then it is implied. Mr. Davis echoed Mr. Camposano stating that there are a few references in there. Ms.

Prine stated that there's a lot of folks who are not as knowledgeable and pick up this plan and start reading it, and when she got up to that five-year plan and become confused. Ms. Poag stated that one of the things Ms. Prine is mentioning is about the review of the process, the other refences to other plans. Part of that, besides having someone who just wants to know and understand it, is also going to get volunteers and to educate, because you guys need volunteers. During a side conversation, and in reference to the ten-year plan within the text, Ms. Prine stated there it is. Mr. Bishop stated to Ms. Prine that it kind of tells her what it is. Ms. Poag continued to state that we can't get volunteers if they don't have any clue as to how the process works and there's no one to talk to or educate them. Mr. Davis stated that the five-year plans are referencing the plan quite a bit. Now, sure, when you read it, you could inquire what it means. Ms. Baker inquired if there's an explanation of the five-year plan. Ms. Conner stated that there are multiple five-year plans. Ms. Marsh agreed and stated that the majority of them, as Mr. Bishop has pulled up, are referenced in the goals that are listed. Mr. Bishop stated that it's a matter of an explanation of what is really entailed in the five-year plan is what we're missing. Mr. Camposano agreed and stated that he is hearing the group. He does think that if we put something like that in our plan, then it will be canned language and will stay in every single plan because it explains the concept a little bit better. Ms. Baker inquired that if that's not already the process in place. Mr. Camposano stated that that is the way for FFS, he's not going to say that's how it is for another agency. They may not do a five-year plan. That is something that FFS decides to do. He then stated that this is statutorily required, whereas the five-year plan and our operational plans are something we are doing, as an agency, on our own. Ms. Baker understood. Ms. Prine stated just say, "the five-year operational plan". Mr. Camposano continued to state that he does think that is something we can reference in there and inquired Mr. Bishop to scroll up to the goals section. He then stated that he thinks that is where it needs to be if it's not explicitly stated. He concluded that, if the group is good with this, in the interest of time, he hears Ms. Baker and acknowledged that this is missing and thinks that FFS could do a better job at that. He suggested that he will write a sentence or two explaining how this feeds into five-year and one-year operational plans. He then inquired if that would satisfy what they're looking for. Ms. Baker stated absolutely. Ms. Prine thanked Mr. Camposano. Mr. Camposano stated to Mr. Bishop to add a comment requesting Mr. Camposano clarify five-year and annual operational plans. Ms. Baker stated to put it somewhere where there's other definitions. Mr. Camposano stated that he will put it where the plan explains the ten-year planning process because then they can drop down to five and annual operational plan and we can just be clear about that. Ms. Baker stated to clarify that this is what FFS does. That's great. Mr. Camposano stated that yes, he doesn't know what FWC, what DEP, what the Water Management Districts...if they have five-year plans or maybe an operational plan, but this is what's statutorily required. Mr. Camposano continued to explain that FFS likes to have different intervals of planning depth.

- Mr. Davis asked each MPAG member to comment on the draft plan. Mr. Mousel stated that he thinks it's a good plan. They always get better over the years. We keep trying to improve them for the folks we serve. Ms. Conner stated that she seconds what Mr. Mousel said and feels the same way. Mr. RH Davis stated that he thought the plan was pretty good and a really long read. He then stated that this is the first time he has been involved with something like this and appreciated the opportunity. He then thanked Mr. Davis for letting him come and take his place and take some of his comments. He stated that he learned a lot today and that there's a lot of information to take to his own agency and learn some of the stuff we do and why we do it. Thanks a lot. Mr. Griffin stated that it's a good plan and thought for it being a document that is going to have to speak to a million different scenarios, it is pretty all encompassing. He then appreciated the group for letting him be a part of this MPAG. Ms. Prine stated that she thinks it's a good plan. She appreciated everyone's tolerance and accepting her comments. She stated that this is her first forest plan that she's reviewed and was pleased to see that it covers so much. She concluded by stating that she thinks SSF is doing a great job. Mr. Rogers also stated that this is his first time in sitting on an MPAG. Being a neighboring property owner, it's pretty interesting and pretty educational for him. He was glad to hear that FFS has a lot of the same budgetary constraints as he does. He continued to state that he thinks it's a very good plan and he appreciated the invite to be here. Ms. Baker stated that it's a good plan as well. She stated that it's vague, but it has to be for ten years. She stated that she liked that the plan left a lot of things up to the actual land manager to manage as he sees fit. He's the boots on the

ground and she believes it's great. She stated her concern for the budgetary constraints and then added that she has a lot of budgetary constraints at her house as well. Ms. Poag stated her name and proxy for Commissioner Campione. She stated that she didn't speak for her, but she tried to balance that. She stated that the plan was concise and was shocked to find this plan as a reduction in pages from other plans she's previously read. She gave FFS kudos for that. She stated that being concise and even being more descriptive of, perhaps, desired future conditions, if you will, and how to get there; so, giving enough direction to the managers, even if the management is handed off to someone else; which is a feat into itself. She continued to state that they did incorporate the LMR comments, which is the Land Management Review Team's comments, because she's participated in those for the three sets of those every five years and did the best they could. She stated that she saw them in the plan; the suggestions that they had made, whether that is adding this rare species or monitoring more for this or being more precise in your fire return interval, desired future conditions, and things like that; so, wonderful. She stated that FFS does a great job of balancing the sometimes-conflicting goals and user groups' needs and requests for this forest and this land and its uses. She continued to state that the staff does a great job filling in, almost intuitively, what isn't written. She stated that she loves that about when staff are passionate and they have a plan, which is just the skeleton if you will, but they fill in so that you end up with the whole body of a functioning, working resource at this level; with all the constraints and restrictions that they have and all the boundary lines they have to maintain and adjacent people and stuff like that. She concluded by thanking the group and stating that the plan was very nicely done. Mr. Davis noted that the draft will be submitted to the Acquisition and Restoration Council for review. Consideration by the Council will likely occur at the June 2024 public meeting.

- Mr. Davis thanked everyone for their time and participation and adjourned the meeting.

Workshop Meeting End Time: 3:14 p.m.

Exhibit V

State Forest Summary Budget

	SEMINOLE STATE FOREST MGT. ONLY 22-23 EXPENDITURES	Percentages Based on Total Dollar Amount of Expenditures	Assessed Needed Funding Based Upon LMUAC Resource Management
Resource Management	**$ 40,433**	**23.10%**	**$ 142,036.34**
Exotic Species Control	$ 2,968	2.97%	$ 18,267.17
Prescribed Burning	$ 20,720	3.37%	$ 20,720.42
Cultural Resources Management	$ 69	0.07%	$ 424.25
Timber Management	$ 7,967	7.98%	$ 49,034.23
Hydrological Management	$ 449	0.45%	$ 2,760.67
	$ -		$ -
THER RESOURCE MANAGEMEN	$ 8,259	8.27%	$ 50,829.59
Listed Species Management	$ -		$ -
Forest Pest and Disease	$ -		$ -
Plant Conservation Program	$ -		$ -
State Forest Research Projects	$ -		$ -
Boundary Surveys for State Forests	$ -		$ -
Other Activities Also Include:	$ -		$ -
Liaison Community Meetings / Boundary Line Maintenance / Forest Inventories and Various Other Activities / Wildfire Suppression on State Forests			
			$ -
Administration	**$ -**	**7.02%**	**$ -**
Central Office Headquarters	$ -		$ -
District/Regions	$ -	7.02%	$ -
Units/Projects	$ -		$ -
	$ -		$ -
Support	**$ 36,008**	**36.04%**	**$ 221,603.99**
Land Management Planning	$ 1,834	1.84%	$ 11,288.63
Land Management Reviews	$ 309	0.31%	$ 1,899.88
Training/Staff Development	$ 9,691	9.70%	$ 59,640.38
Vehicle Purchase	$ 380	0.38%	$ 2,336.43
ehicle Operations and Maintenanc	$ 17,543	17.56%	$ 107,967.54
	$ -		$ -
OTHER SUPPORT	$ 6,251	6.26%	$ 38,471.12
ate Forest Land Acquisition Support			$ -
ther Support Activities Also Includ	$ -		$ -
Computer Maintenance / Radio Maintenance / Technical Support / Management of Apiary and Cattle Leases / State Forest Leases, Lease Amendments, Easements and Other Various Activities	$ -		$ -
			$ -
Capital Improvements	**$ 21,044**	**21.06%**	**$ 129,511.86**
New Facility Construction	$ 3,134	3.14%	$ 19,287.82
Facility Maintenance	$ 17,910	17.93%	$ 110,224.04
			$ -
Visitor Services/Recreation	**$ 12,761**	**12.77%**	**$ 78,534.70**
Information/Education	$ 3,104	3.11%	$ 19,103.37
Operations	$ 9,657	9.67%	$ 59,431.33
			$ -
Law Enforcement	$ -	0.00%	$ -
Total	**$ 99,904.76**	**100.00%**	**$614,849.32**

Exhibit W

Arthropod Control Plan
Lake County, Florida

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

NICOLE "NIKKI" FRIED
COMMISSIONER

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 Pan 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: Seminole State Forest

Is Control Work Necessary: ☐ Yes ☑ No

Location: Lake County

Land Management Agency: Florida Forest Service

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

If "Other", please explain:

Arthropod Species for Which Control is Proposed:

Proposed Larval Control:

Proposed larval monitoring procedure:

Are post treatment counts being obtained: ☐ Yes ☑ No

Biological Control of Larvae:

Might predacious fish be stocked: ☑ Yes ☐ No

Other biological controls that might be used:

Mosquito fish (Gambusia holbrooki) can be stocked when requested.

Material to be Used for Larvaciding Applications:

(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:

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:

Records:

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

☑ Yes ☐ No

Records Location: 401 S. Bloxham Ave. Tavares, FL 32778

How long are records maintained: 3 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:

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

Proposed Modification of Aquatic Vegetation:

Land Manager Comments:

Arthropod Control Agency Comments:
Larvicide and or adulticide if requested by Florida forest service.

Signature of Lands Manager or Representative — Date: 10-9-23

Brad T. Russ — Date: 9/29/23
Signature of Mosquito Control Director / Manager

Exhibit X

Borrow Pit Map

Florida Forest Service

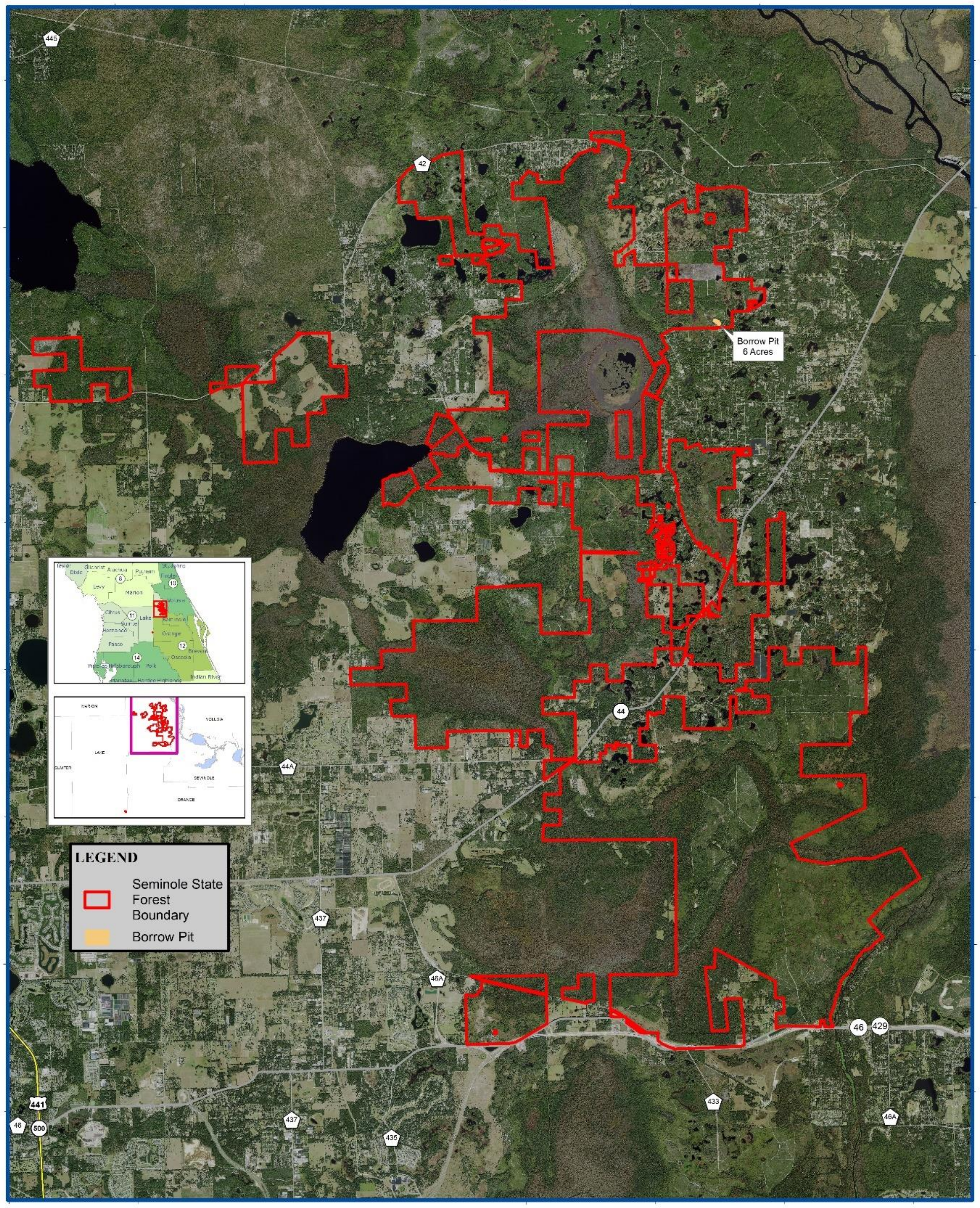
Seminole State Forest

Borrow Pit Map

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

DISCLAIMER:
This map was created by the Florida Forest Service (FFS) Geographic Information System (GIS) staff using data from multiple sources. Maps created by FFS are designed for division use and for use by related public agencies; these products are not legal descriptions or documents.
The Florida Forest Service reserves the right to correct, update, modify, or replace, GIS products without notification.
The Florida Forest Service makes no warranty, either written or implied as to the accuracy or completeness of the information in this map.

Managed Area boundaries courtesy of the Florida Natural Areas Inventory
Formally Used Defense Sites (FUDS) from the US Army Corps of Engineers



0.5 0.25 0 0.5 1 1.5 2 Miles

N W E S

Map Month/Year: September 2023

1,000 500 0 1,000 2,000 3,000 4,000 5,000 6,000 Yards