

CARY STATE FOREST
2024 LAND MANAGEMENT PLAN

EXHIBITS

Exhibit A

Ten-Year Management Accomplishment Summary

Cary State Forest
10-Year Accomplishments

Site Preparation	Chop Single Pass	No.	187
	Disk/Raking	Acres	28
	Burning	Acres	152
	Herbicide	Acres	118
Planting	Slash Bareroot	No.	20,328
		Acres	28
	Longleaf Containerized	No.	231,846
		Acres	327
	Other	No.	1,250
		Acres	4
Seedling survival checks	Survival Checks	Acres	308
	Plots	No.	90
Timber Stand Improvement	Mechanical Treatments	Acres	33
	Herbicide	Acres	118
	Mowing	Acres	105
	Chopping	Acres	35
Timber Sales	Marking	Acres	20
	Cruising	Acres	1,164
	Harvest	Acres	1,360
		Tons	57,402
Timber Inventory	Inventory Update	Acres	10,515
	Plots	Acres	927
Invasive Control	Torpedo Grass	Acres	65.60
	Japanese Climbing Fern	Acres	15.66
	Chinese Tallow	Acres	10.43
	Cuban treefrog	No.	2.00
	Mimosa	Acres	1.77
	Rattle Box	Acres	0.30
	Sesban	Acres	0.25
	Brazilian Vervain	Acres	0.10
	Sword Fern	Acres	0.06

Fire	Wildfire	No.	8
		Acres	381
	Prescribed Burning	No.	58
		Acres	12,088

Recreation	Day Use Estimated Forest Visitors	No.	3,658,095
	Overnight Primitive Camping	No.	20,507
	Annual Entrance Pass	No.	9
	State Forest Use Permit	No.	0
	Commercial Vendor Permits	No.	2

Roadwork	Roads Constructed	Miles	2
	Roads Graded	Miles	143
	Roads Rebuilt	Miles	66
	Culverts Installed	No.	37
	Low Water Crossing	No.	4

Boundary Maintenance	Maintenance/Marking	Miles	73
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I&E Activities	Programs/Tours	No.	66
	Radio/TV Articles	No.	7
	Education/Research	No.	5

Other Activities	Field Mowed	Acres	650
	Tract Mowed	Acres	5
	Planter Rentals	Days	57
	Firelines Maintained	Miles	85
	Road Corridor Trimmed (Trees/Brush)	Miles	4
	Road Mowed	Miles	549
	Trail Corridor Mowed, Trimmed, Painted	Miles	0
	Trails Maintained	Miles	23.50
	Apiary Sites Maintained	No.	126
	Gates installed	No.	13
	Hazard Tree Removed	No.	175
	Hogs Trapped	No.	52

Exhibit B

Boundary Map



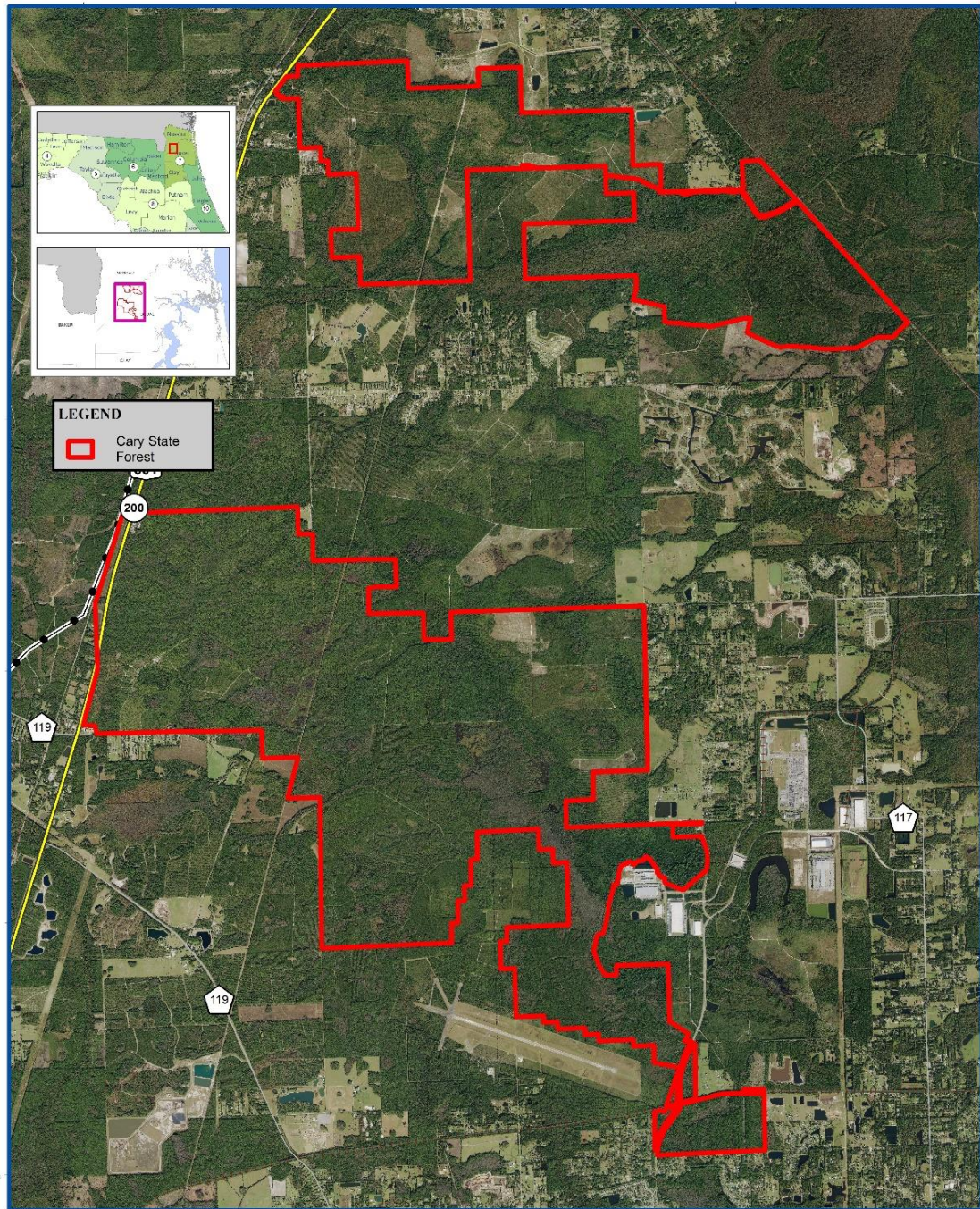
Florida Forest Service

Cary State Forest Boundary Map

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

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TRAVERSE AREA COORDINATES ARE CONTAINED AT THE END OF THIS MAP. SEE THE TRAILER FOR THE JRS STATE COASTAL RESOURCES.



0.5 0.25 0 0.5 1 Miles



Map Month/Year: March 2022

1,000 500 0 1,000 2,000 3,000 Yards

Exhibit C

Optimal Management Boundary Map



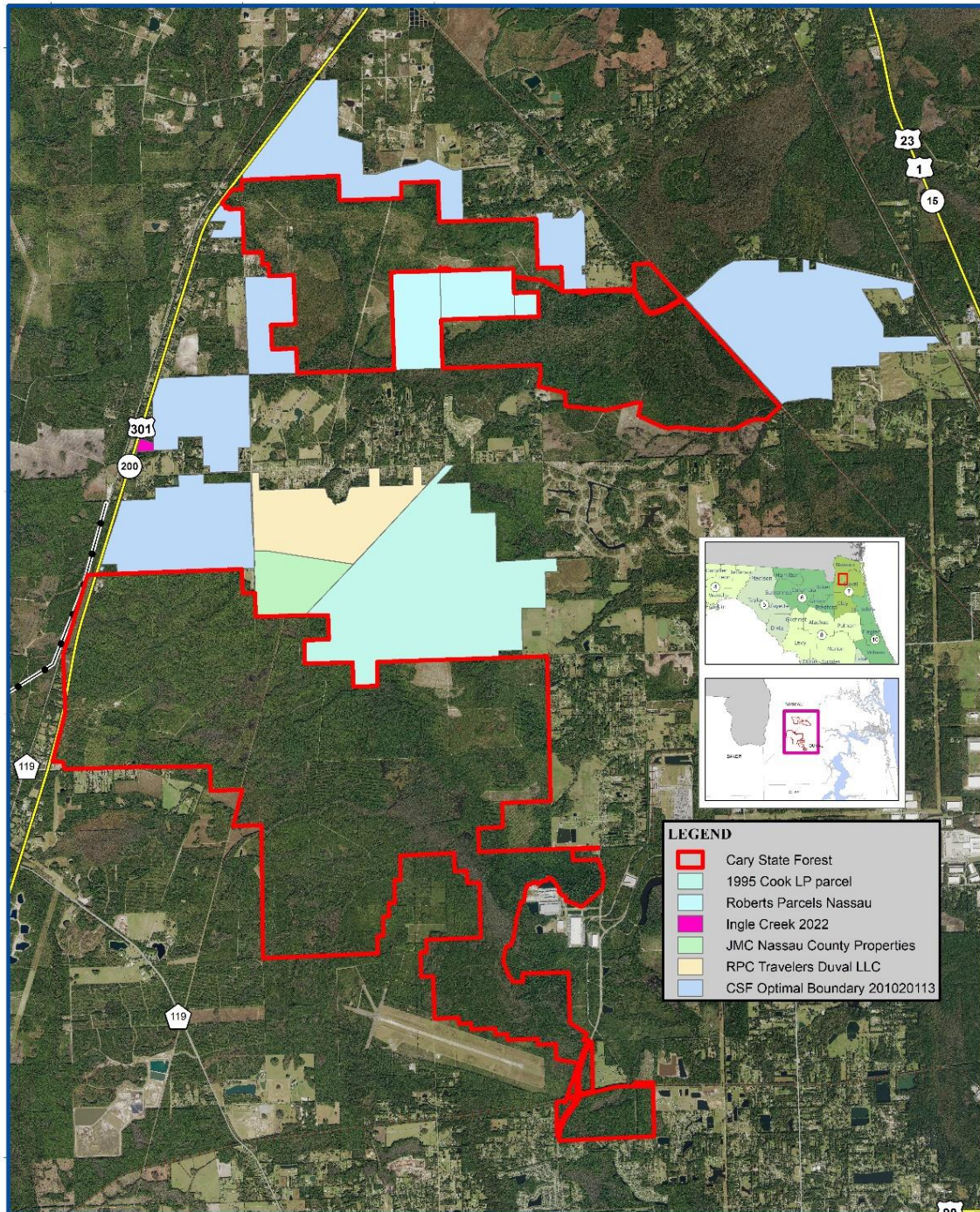
Florida Forest Service

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

Cary State Forest Optimal Management Boundary Map

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Varied Area Boundary as of 2010/2011:
J. P. Cook, Jr. & Son, Inc. (JPCS)
J. P. Cook, Jr. & Son, Inc. (JPCS)
J. P. Cook, Jr. & Son, Inc. (JPCS)



- LEGEND**
- Cary State Forest
 - 1995 Cook LP parcel
 - Roberts Parcels Nassau
 - Ingle Creek 2022
 - JMC Nassau County Properties
 - RPC Travelers Duval LLC
 - CSF Optimal Boundary 2010/20113

0.5 0.25 0 0.5 1
Miles



Map Month/Year: December 2022

1,000 2,000 3,000 4,000
Feet

Exhibit D

Facilities, Recreation, and Improvements Map



Florida Forest Service

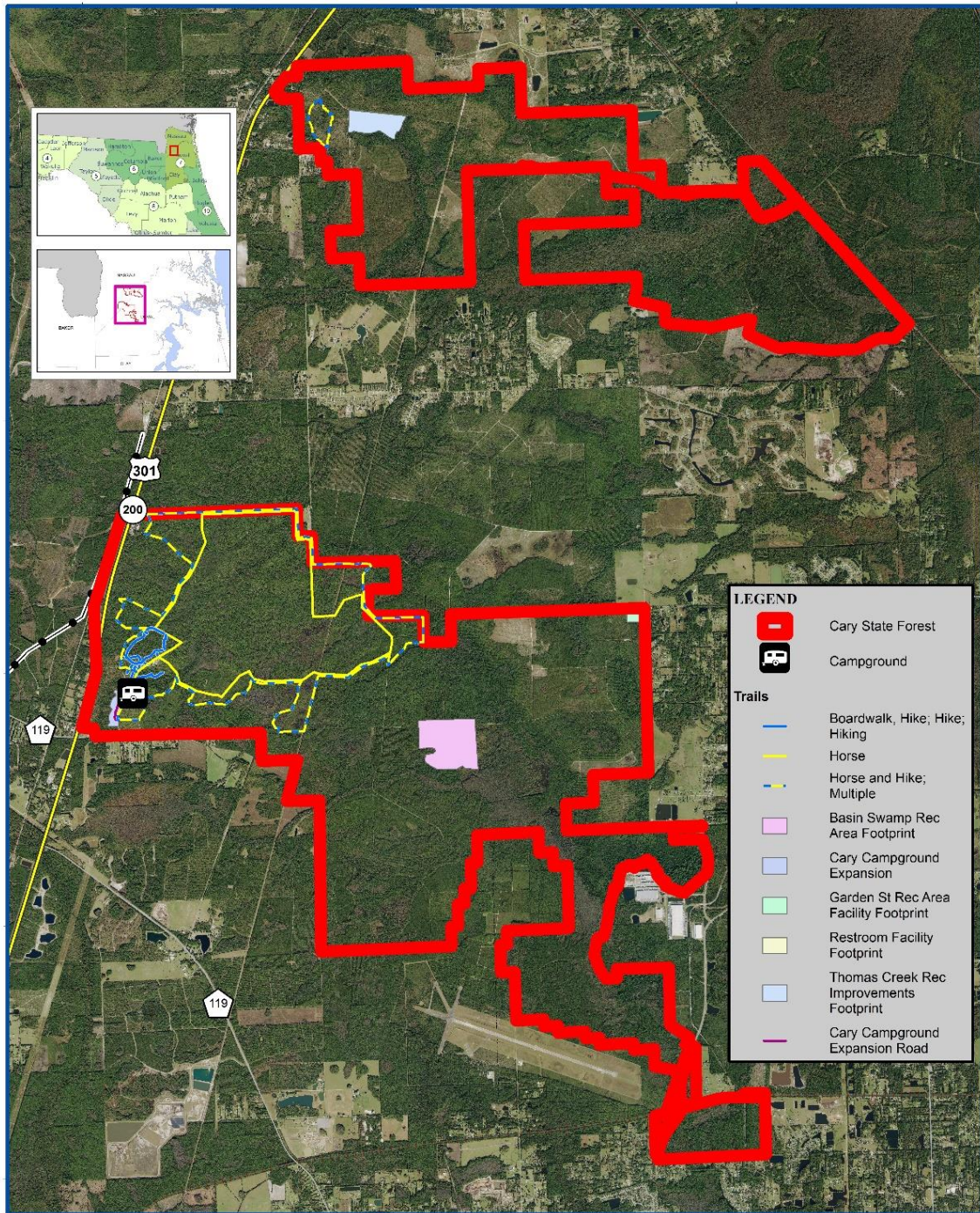
Cary State Forest

Facilities, Recreation, and Improvements Map

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

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Truncated Area boundary as contained in the Florida Forest Service's Inventory and Management Plan (IMP) for the Cary State Forest, dated 2010.



LEGEND



Cary State Forest



Campground

Trails



Boardwalk, Hike, Hike; Hiking



Horse



Horse and Hike; Multiple



Basin Swamp Rec Area Footprint



Cary Campground Expansion



Garden St Rec Area Facility Footprint



Restroom Facility Footprint



Thomas Creek Rec Improvements Footprint



Cary Campground Expansion Road

0.0 0.25 0.5 1.0 Miles



Map Month/Year: December 2022

0 500 1,000 2,000 Feet

Exhibit E

Road Maps



Florida Forest Service

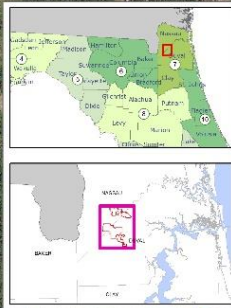
Cary State Forest

Road Map

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

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assumes no liability for any damages, including consequential
damages, arising from the use of this map.

Variation Area boundaries courtesy of
the Florida Department of Transportation
Florida Department of Transportation
from the US Army Corps of Engineers



LEGEND

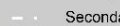


Cary State Forest

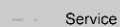
Road Type



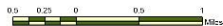
Primary



Secondary



Service



Map Month/Year: March 2022





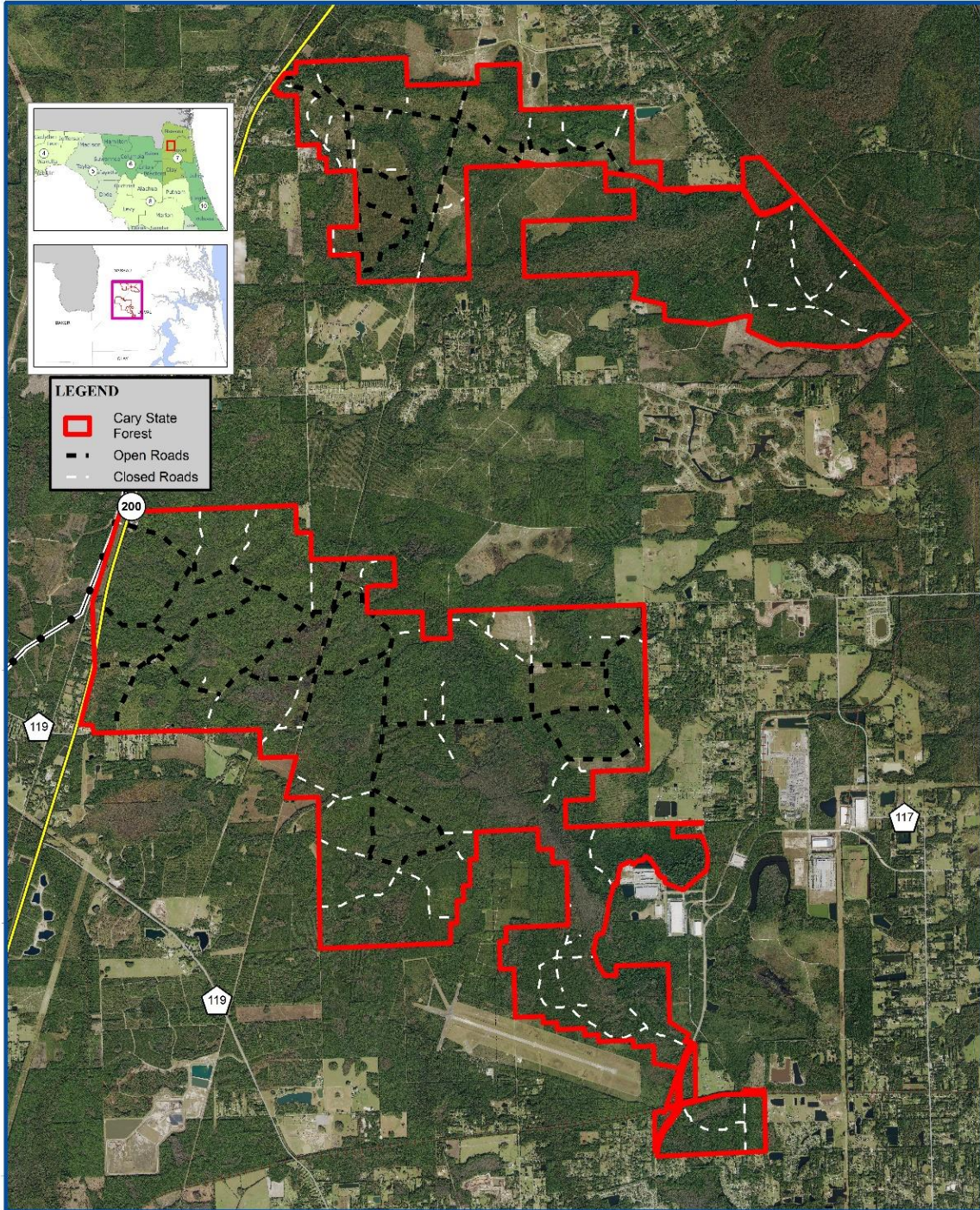
Florida Forest Service

Cary State Forest Road Map

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

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Map Date: 12/2022



LEGEND

- Cary State Forest
- Open Roads
- Closed Roads

0.5 0.25 0 0.5 1 Miles



Map Month/Year: December 2022

0 500 1,000 2,000 3,000 Yards

Exhibit F

Proximity
to
Significant Managed Lands



Florida Forest Service

Cary State Forest

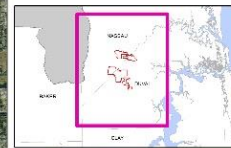
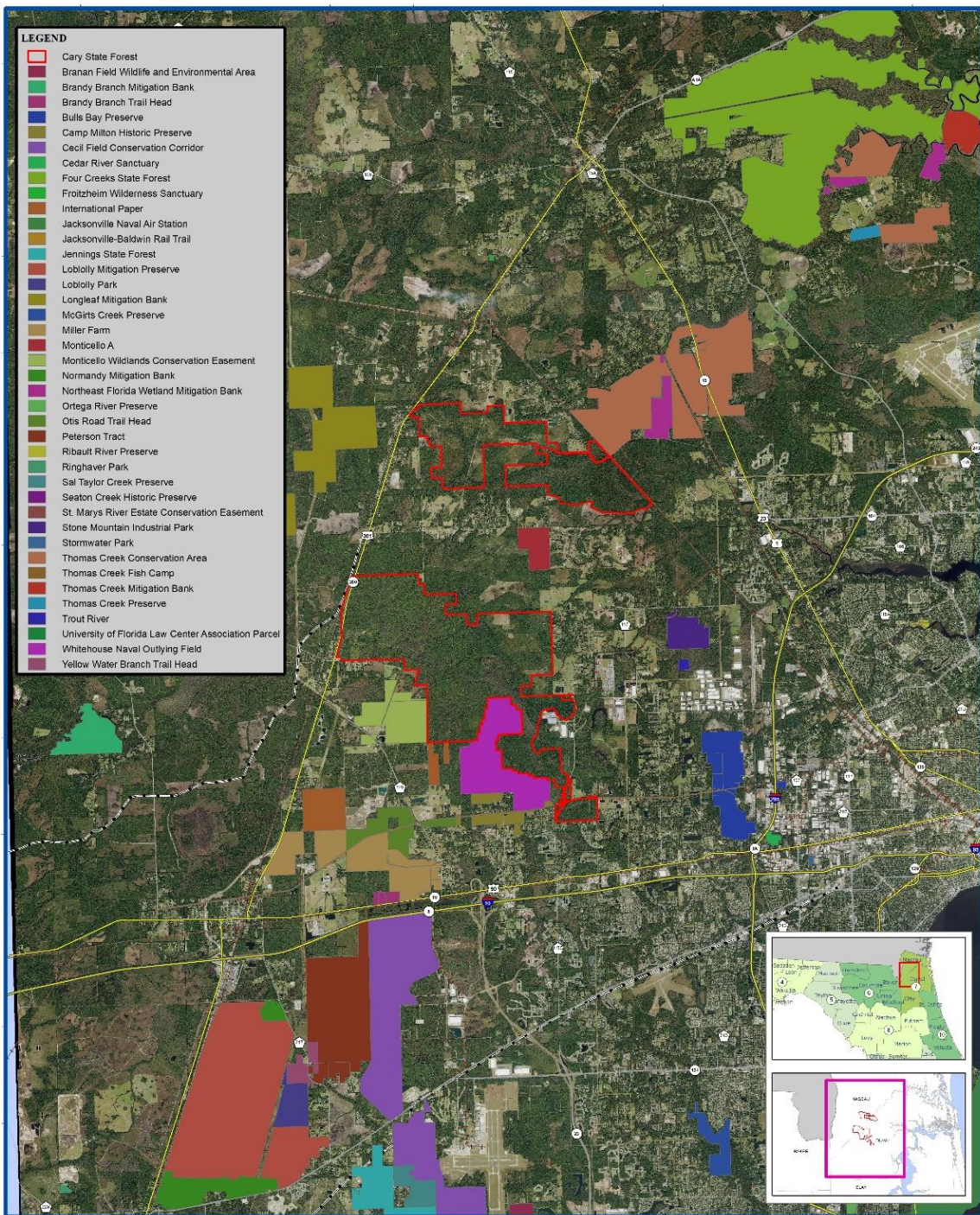
Proximity to Significant Managed Lands Map

Coordinate System: Florida Albers
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Legend:
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- LEGEND**
- Cary State Forest
 - Branan Field Wildlife and Environmental Area
 - Brandy Branch Mitigation Bank
 - Brandy Branch Trail Head
 - Bulls Bay Preserve
 - Camp Milton Historic Preserve
 - Cecil Field Conservation Corridor
 - Cedar River Sanctuary
 - Four Creeks State Forest
 - Fritzheim Wilderness Sanctuary
 - International Paper
 - Jacksonville Naval Air Station
 - Jacksonville-Baldwin Rail Trail
 - Jennings State Forest
 - Loblolly Mitigation Preserve
 - Loblolly Park
 - Longleaf Mitigation Bank
 - McGirts Creek Preserve
 - Miller Farm
 - Monticello A
 - Monticello Wetlands Conservation Easement
 - Normandy Mitigation Bank
 - Northeast Florida Wetland Mitigation Bank
 - Ortega River Preserve
 - Otis Road Trail Head
 - Peterson Tract
 - Ribault River Preserve
 - Ringhaver Park
 - Sal Taylor Creek Preserve
 - Seaton Creek Historic Preserve
 - St. Marys River Estate Conservation Easement
 - Stone Mountain Industrial Park
 - Stormwater Park
 - Thomas Creek Conservation Area
 - Thomas Creek Fish Camp
 - Thomas Creek Mitigation Bank
 - Thomas Creek Preserve
 - Trout River
 - University of Florida Law Center Association Parcel
 - Whitehouse Naval Outlying Field
 - Yellow Water Branch Trail Head



0 0.5 1 1.5 2 2.5 3 Miles



Map Month/Year: January 2024

0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000 10,000 Feet

Exhibit G

Department of State Report on Archaeological 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.

June 14, 2023

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

In response to your request on June 14, 2023, the Florida Master Site File lists three archeological sites and a historic cemetery recorded for the Cary State Forest's managed area.

This search area may contain *unrecorded* archaeological sites, historical structures or other resources even if previously surveyed for cultural resources.

- Because vandalism and looting are common at Florida sites, we ask that you limit the distribution of location information on archaeological sites.
 - While many of our records document historically significant resources, the documentation of a resource at the Florida Master Site File does not necessarily mean the resource is historically significant.
- #
- 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, Ph.D.
Florida Master Site File
Eman.Vovsi@DOS.MyFlorida.com



AR=3
SS=0
CH=1
RG=0
BR=0
Total=4

Cultural Resource Roster

Created: 6/14/2023

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
NA00746	AR	MEDIUM CHICKEN	Bryceville		Not Eligible	
NA01278	AR	Thomas Creek Cattle Dip	Bryceville			
NA01279	AR	Bryce Cattle Dip	Bryceville			
NA01865	CM	Thomas Creek Cemetery	Bryceville	Established 1915, Graves = 3		

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 Map and Descriptions



Florida Forest Service

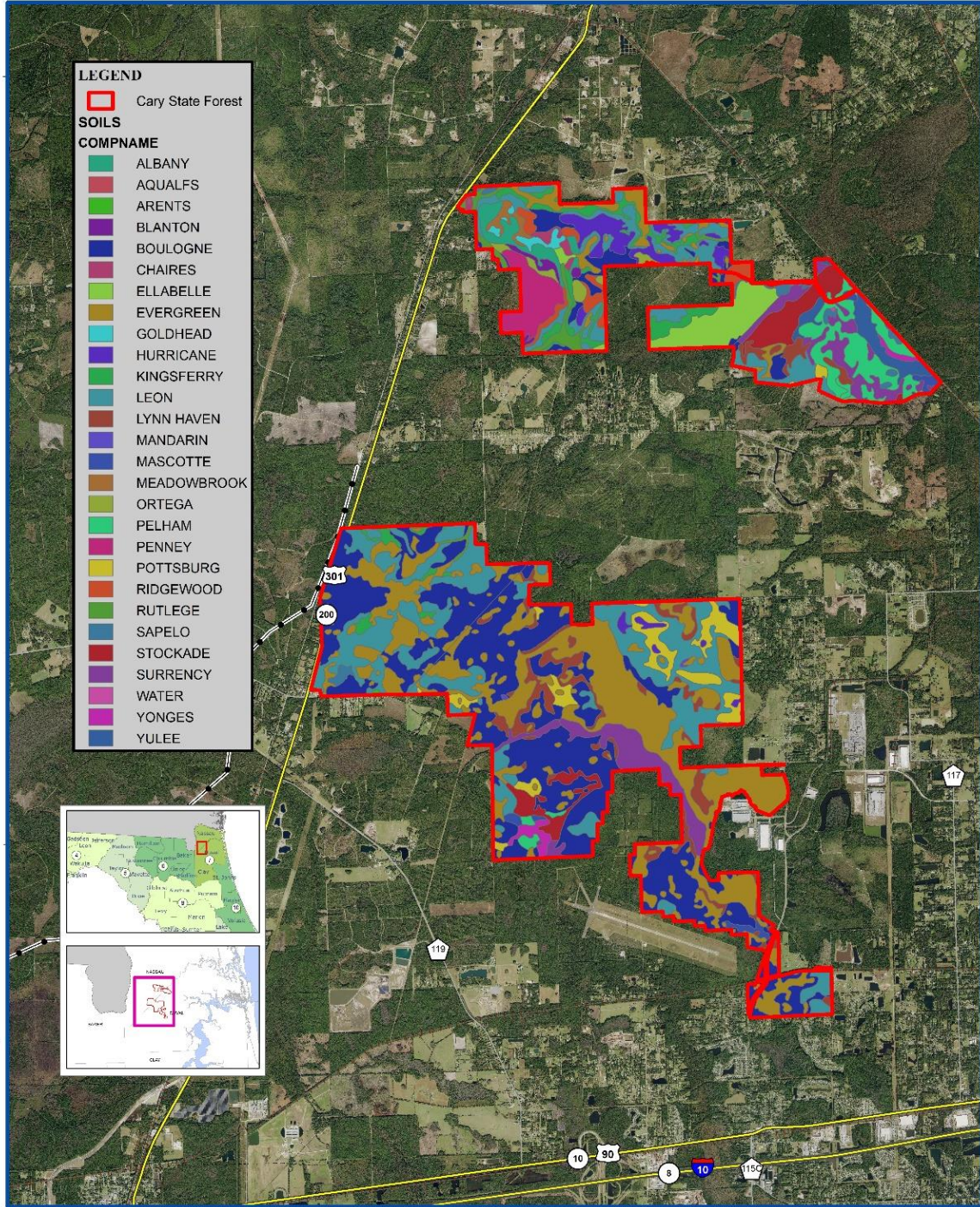
Cary State Forest

Soils Map

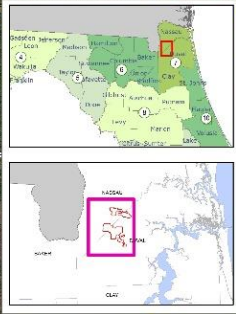
Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

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TERRAIN DATA SOURCES
The terrain data used in this map was obtained from the U.S. Army Corps of Engineers, Hydrologic Engineering Center, and the U.S. Geological Survey, National Elevation Dataset.



- LEGEND**
- Cary State Forest
- SOILS**
- COMPNAME**
- ALBANY
 - AQUALFS
 - ARENTS
 - BLANTON
 - BOULOGNE
 - CHAIRES
 - ELLABELLE
 - EVERGREEN
 - GOLDHEAD
 - HURRICANE
 - KINGSFERRY
 - LEON
 - LYNN HAVEN
 - MANDARIN
 - MASCOTTE
 - MEADOWBROOK
 - ORTEGA
 - PELHAM
 - PENNEY
 - POTTSBURG
 - RIDGEWOOD
 - RUTLEGE
 - SAPELO
 - STOCKADE
 - SURRENCY
 - WATER
 - YONGES
 - YULEE



Map Month/Year: July 2022



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)

Duval County, Florida

Map Unit: 2—Albany fine sand, 0 to 5 percent slopes

Component: Albany (86%)

The Albany component makes up 86 percent of the map unit. Slopes are 0 to 5 percent. This component is on knolls 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 very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 21 inches during January, February, March, April, May, June, July, August, September, October. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. 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: Mascotte (4%)

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

Component: Blanton (4%)

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

Component: Sapelo (3%)

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

Component: Pelham, hydric (3%)

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

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

Component: Boulogne (95%)

The Boulogne component makes up 95 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 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 12 inches during January, February, March, April, 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 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: Lynn Haven (2%)

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

Component: Pottsburg, high (2%)

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

Component: Wesconnett (1%)

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

Map Unit: 22—Evergreen-Wesconnett complex, depressional, 0 to 2 percent slopes

Component: Evergreen (63%)

The Evergreen component makes up 63 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 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 moderately high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Wesconnett (33%)

The Wesconnett component makes up 33 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 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 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 15 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: Leon (1%)

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

Component: Pottsburg (1%)

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

Component: Lynn Haven (1%)

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

Component: Pamlico (1%)

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

Map Unit: 24—Hurricane and Ridgewood soils, 0 to 5 percent slopes**Component:** Hurricane (53%)

The Hurricane component makes up 53 percent of the map unit. Slopes are 0 to 5 percent. This component is on flats on marine terraces on coastal plains, 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 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 January, February, March, April, May, June, July, August, September, October. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Ridgewood (35%)

The Ridgewood component makes up 35 percent of the map unit. Slopes are 0 to 5 percent. This component is on knolls 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 30 inches during January, February, March, April, May, June, July, August, September, October. 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: Pottsburg (2%)

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

Component: Mandarin (2%)

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

Component: Boulogne (2%)

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

Component: Lynn Haven (2%)

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

Component: Ortega (2%)

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

Component: Leon (2%)

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

Map Unit: 32—Leon fine sand, 0 to 2 percent slopes

Component: Leon, non-hydric (89%)

The Leon, non-hydric component makes up 89 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on lower 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 low. 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, November, December. 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 0 within 30 inches of the soil surface.

Component: Leon, hydric (5%)

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

Component: Mascotte (3%)

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

Component: Mandarin (3%)

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

Map Unit: 35—Lynn Haven fine sand, 0 to 2 percent slopes

Component: Lynn Haven (92%)

The Lynn Haven component makes up 92 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 high. 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 January, February, March, April, 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 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: Leon (2%)

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

Component: Boulogne (2%)

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

Component: Evergreen (2%)

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

Component: Wesconnett (2%)

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

Map Unit: 36—Mandarin fine sand, 0 to 2 percent slopes

Component: Mandarin (92%)

The Mandarin component makes up 92 percent of the map unit. Slopes are 0 to 2 percent. This component is on rises, Lower 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 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 24 inches during January, February, March, April, December. 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.

Component: Leon (5%)

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

Component: Rutlege (1%)

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

Component: Centenary (1%)

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

Component: Ortega (1%)

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

Map Unit: 38—Mascotte fine sand, 0 to 2 percent slopes

Component: Mascotte, non-hydric (94%)

The Mascotte, non-hydric component makes up 94 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on lower 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 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 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: Unnamed (5%)

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

Component: Surrency (1%)

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

Map Unit: 44—Mascotte-Pelham complex, 0 to 2 percent slopes**Component:** Mascotte (65%)

The Mascotte component makes up 65 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 12 inches during January, February, March, April, May, June, July, August, September, October. Organic matter content in the surface horizon is about 5 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: Pelham, non-hydric (31%)

The Pelham, non-hydric component makes up 31 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 9 inches during January, February, March, April, 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 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: Pelham, hydric (2%)

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

Component: Surrency (2%)

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

Map Unit: 51—Pelham fine sand, 0 to 2 percent slopes

Component: Pelham (75%)

The Pelham component makes up 75 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods, lower 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 9 inches during January, February, March, April, May, June, July, August, September, October. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Unnamed (13%)

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

Component: Albany (6%)

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

Component: Meggett (3%)

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

Component: Surrency (3%)

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

Map Unit: 56—Pottsburg fine sand, 0 to 2 percent slopes**Component:** Pottsburg (91%)

The Pottsburg component makes up 91 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 low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 9 inches during January, February, March, April, May, June, July, August, September, October. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Evergreen (2%)

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

Component: Lynn Haven (2%)

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

Component: Hurricane (2%)

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

Component: Wesconnett (1%)

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

Component: Pottsburg, high (1%)

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

Component: Mandarin (1%)

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

Map Unit: 58—Pottsburg fine sand, high, 0 to 3 percent slopes

Component: Pottsburg, high (93%)

The Pottsburg, high component makes up 93 percent of the map unit. Slopes are 0 to 3 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 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 18 inches during January, February, March, April, May, June, July, August, September, October. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Boulogne (2%)

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

Component: Hurricane (2%)

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

Component: Pottsburg (1%)

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

Component: Leon (1%)

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

Component: Ridgewood (1%)

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

Map Unit: 63—Sapelo fine sand, 0 to 2 percent slopes**Component:** Sapelo (90%)

The Sapelo 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 and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during January, February, March, April, May, June, 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: Yonges (2%)

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

Component: Albany (2%)

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

Component: Pelham, non-hydric (2%)

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

Component: Pelham, hydric (2%)

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

Component: Surrency (2%)

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

Map Unit: 66—Surrency loamy fine sand, depressional, 0 to 2 percent slopes**Component:** Surrency (92%)

The Surrency component makes up 92 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 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 12 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: Lynn Haven (2%)

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

Component: Pamlico (2%)

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

Component: Pelham, hydric (2%)

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

Component: Yonges (1%)

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

Component: Stockade (1%)

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

Map Unit: 67—Surrency loamy fine sand, 0 to 2 percent slopes, frequently flooded

Component: Surrency, flooded (93%)

The Surrency, flooded component makes up 93 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 low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, December. Organic matter content in the surface horizon is about 12 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: Pamlico (2%)

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

Component: Pelham, hydric (2%)

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

Component: Lynn Haven (2%)

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

Component: Yonges (1%)

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

Map Unit: 78—Yonges fine sandy loam, 0 to 2 percent slopes

Component: Yonges (88%)

The Yonges component makes up 88 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 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 6 inches during January, February, March, April, 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: Lynchburg (4%)

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

Component: Yulee, depressional (4%)

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

Component: Pelham, hydric (4%)

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

Map Unit: 79—Yulee clay, 0 to 2 percent slopes, frequently flooded**Component:** Yulee, frequently flooded (94%)

The Yulee, frequently flooded component makes up 94 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 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 low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Yonges (3%)

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

Component: Surrency, flooded (3%)

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

Map Unit: 81—Stockade fine sandy loam, depressional, 0 to 2 percent slopes**Component:** Stockade (91%)

The Stockade component makes up 91 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 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 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 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 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: Lynn Haven (3%)

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

Component: Yonges (2%)

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

Component: Pelham, hydric (2%)

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

Component: Yulee, depressional (2%)

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

Map Unit: 82—Pelham fine sand, ponded, 0 to 2 percent slopes

Component: Pelham, ponded (96%)

The Pelham, ponded component makes up 96 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions on lower coastal plains. The parent material consists of sandy and/or 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 occasionally ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June. Organic matter content in the surface horizon is about 5 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria.

Component: Unnamed (2%)

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

Component: Bayboro, ponded (1%)

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

Component: Yonges (1%)

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

Map Unit: 86—Yulee clay, depressional, 0 to 2 percent slopes

Component: Yulee, depressional (90%)

The Yulee, 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 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 low. 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 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: Pelham, hydric (4%)

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

Component: Yonges (3%)

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

Component: Stockade (3%)

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

Nassau County, Florida

Map Unit: 2—Arents, nearly level

Component: Arents (100%)

The Arents component makes up 100 percent of the map unit. Slopes are 0 to 2 percent. This component is on fills, rises 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 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 24 inches during March, April, May, June, July, August. Organic matter content in the surface horizon is about 1 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: 6—Hurricane-Pottsburg fine sands, 0 to 5 percent slopes

Component: Hurricane (50%)

The Hurricane component makes up 50 percent of the map unit. Slopes are 0 to 5 percent. This component is on rises on marine terraces on coastal plains, knolls 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 33 inches during March, April, May, June, July, August. 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: Pottsburg (39%)

The Pottsburg component makes up 39 percent of the map unit. Slopes are 0 to 2 percent. This component is on rises on marine terraces on coastal plains, knolls 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 16 inches during May, June, July, August. 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: Boulogne (3%)

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

Component: Ridgewood (2%)

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

Component: Resota (2%)

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

Component: Mandarin (2%)

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

Component: Leon, non-hydric (2%)

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

Map Unit: 9—Leon fine sand, 0 to 2 percent slopes

Component: Leon, non-hydric (89%)

The Leon, non-hydric component makes up 89 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on lower 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 low. 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, November, December. 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 0 within 30 inches of the soil surface.

Component: Leon, hydric (5%)

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

Component: Mascotte (3%)

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

Component: Mandarin (3%)

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

Map Unit: 11—Chaires fine sand

Component: Chaires (91%)

The Chaires component makes up 91 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 low. 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 May, June, July, August. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Goldhead, depressional (3%)

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

Component: Meggett (2%)

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

Component: Ocilla (2%)

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

Component: Meadowbrook, depressional (2%)

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

Map Unit: 14—Rutlege mucky fine sand, frequently flooded

Component: Rutlege (90%)

The Rutlege component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on drainageways on marine terraces on coastal plains. The parent material consists of sandy marine deposits and/or fluviomarine 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 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. Organic matter content in the surface horizon is about 15 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: Croatan (4%)

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

Component: Kingsferry (3%)

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

Component: Ellabelle (3%)

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

Map Unit: 16—Ellabelle mucky fine sand, frequently flooded

Component: Ellabelle (91%)

The Ellabelle component makes up 91 percent of the map unit. Slopes are 0 to 2 percent. This component is on drainageways on marine terraces on coastal plains. The parent material consists of sandy and loamy marine or fluvial 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 low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 3 inches during January, February, March, April, May, June, July, August, September. Organic matter content in the surface horizon is about 15 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: Kingsferry (3%)

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

Component: Goldhead, hydric (3%)

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

Component: Meggett (3%)

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

Map Unit: 20—Ortega fine sand, 0 to 5 percent slopes

Component: Ortega (93%)

The Ortega component makes up 93 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 51 inches during February, March, April, May, June, July, August, September. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Hurricane (2%)

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

Component: Albany (2%)

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

Component: Kershaw (2%)

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

Component: Ridgewood (1%)

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

Map Unit: 21—Blanton fine sand, 0 to 5 percent slopes**Component:** Blanton (90%)

The Blanton 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 sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is 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 39 inches during May, June, July, August. 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: Ocilla (3%)

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

Component: Albany (3%)

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

Component: Ridgewood (2%)

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

Component: Penney (2%)

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

Map Unit: 22—Sapelo-Leon fine sand**Component: Sapelo, non-hydric (49%)**

The Sapelo, non-hydric component makes up 49 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during May, June, July, August. Organic matter content in the surface horizon is about 1 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: Leon, non-hydric (24%)

The Leon, non-hydric component makes up 24 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 May, June, July, August. 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: Leon, hydric (10%)

The Leon, hydric component makes up 10 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy 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 May, June, July, August. 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: Sapelo, hydric (10%)

The Sapelo, hydric component makes up 10 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during May, June, July, August. 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.

Component: Albany (3%)

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

Component: Meadowbrook, depressional (2%)

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

Component: Goldhead, depressional (2%)

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

Map Unit: 24—Kingsferry fine sand

Component: Kingsferry (89%)

The Kingsferry component makes up 89 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 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 low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during June, July, August. Organic matter content in the surface horizon is about 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: Lynn Haven (4%)

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

Component: Leon, non-hydric (4%)

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

Component: Rutlege (3%)

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

Map Unit: 27—Ridgewood fine sand, 0 to 5 percent slopes

Component: Ridgewood (91%)

The Ridgewood component makes up 91 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 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 27 inches during July, August. 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: Centenary (3%)

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

Component: Ortega (2%)

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

Component: Pottsburg (2%)

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

Component: Mandarin (2%)

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

Map Unit: 32—Aqualfs, loamy

Component: Aqualfs, loamy (98%)

The Aqualfs, loamy component makes up 98 percent of the map unit. Slopes are 2 to 5 percent. This component is on rises on coastal plains on marine terraces. The parent material consists of loamy mine spoil or earthy fill. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. 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 June, July, August, September. This soil does not meet hydric criteria.

Component: Aqualfs (2%)

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

Map Unit: 33—Goldhead-Meadowbrook fine sands, depressional

Component: Goldhead, depressional (64%)

The Goldhead, depressional component makes up 64 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 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. Organic matter content in the surface horizon is about 2 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: Meadowbrook, depressional (27%)

The Meadowbrook, depressional component makes up 27 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 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. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Croatan (9%)

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

Map Unit: 36—Boulogne fine sand

Component: Boulogne (98%)

The Boulogne component makes up 98 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 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 12 inches during March, April, May, June, 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: Hurricane (1%)

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

Component: Ridgewood (1%)

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

Map Unit: 39—Evergreen-Leon mucks, depressional

Component: Evergreen (64%)

The Evergreen component makes up 64 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 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 moderately high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Leon (36%)

The Leon component makes up 36 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 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 50 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map Unit: 51—Albany fine sand, 0 to 5 percent slopes

Component: Albany (86%)

The Albany component makes up 86 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 very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 21 inches during May, June, July, August. 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: Sapelo, non-hydric (2%)

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

Component: Meadowbrook, hydric (2%)

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

Component: Leefield (2%)

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

Component: Blanton (2%)

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

Component: Boulogne (3%)

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

Component: Sapelo, hydric (2%)

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

Component: Osier (2%)

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

Map Unit: 54—Sapelo fine sand**Component:** Sapelo, non-hydric (80%)

The Sapelo, non-hydric component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during May, June, July, August. Organic matter content in the surface horizon is about 1 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: Sapelo, hydric (10%)

The Sapelo, hydric component makes up 10 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during May, June, July, August. 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.

Component: Albany (3%)

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

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

Map Unit: 57—Penney fine sand, 0 to 5 percent slopes

Component: Penney (94%)

The Penney component makes up 94 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 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: Blanton (6%)

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

Data Source Information

Soil Survey Area: Duval County, Florida
Survey Area Data: Version 16, Sep 1, 2021

Soil Survey Area: Nassau County, Florida
Survey Area Data: Version 21, Sep 1, 2021

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

Shawn Hamilton
Secretary

Via Email

March 17th, 2022

Ms. Patti Anderson
Land Management Planner
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: Cary State Forest

Dear Ms. Anderson:

Thank you for your inquiry regarding the surface water quality classifications and Outstanding Florida Waters (OFWs) within or near Cary State Forest in Nassau and Duval Counties. All of the surface waters within, adjacent to, or within 5 miles of Cary State Forest are classified as Class III waters according to Rule 62-302.400, Florida Administrative Code (F.A.C.).

According to subsection 62-302.700(9), F.A.C., there are no OFWs within or adjacent to the Cary State Forest (see enclosed map). The OFW closest to the Cary State Forest is the Timucuan Ecological and Historic Preserve, which is located over 10 miles away to the northeast.

You may also be interested to know that, according to the Florida Natural Areas Inventory Managed Areas data layer, there are several other parcels within, adjacent, or nearby that are considered conservation lands at a Federal, State, or Local level. However, these areas have not been designated as OFWs.

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

Sincerely,

Talia Elisa Smith
Standards Development Section

Cary State Forest Map:

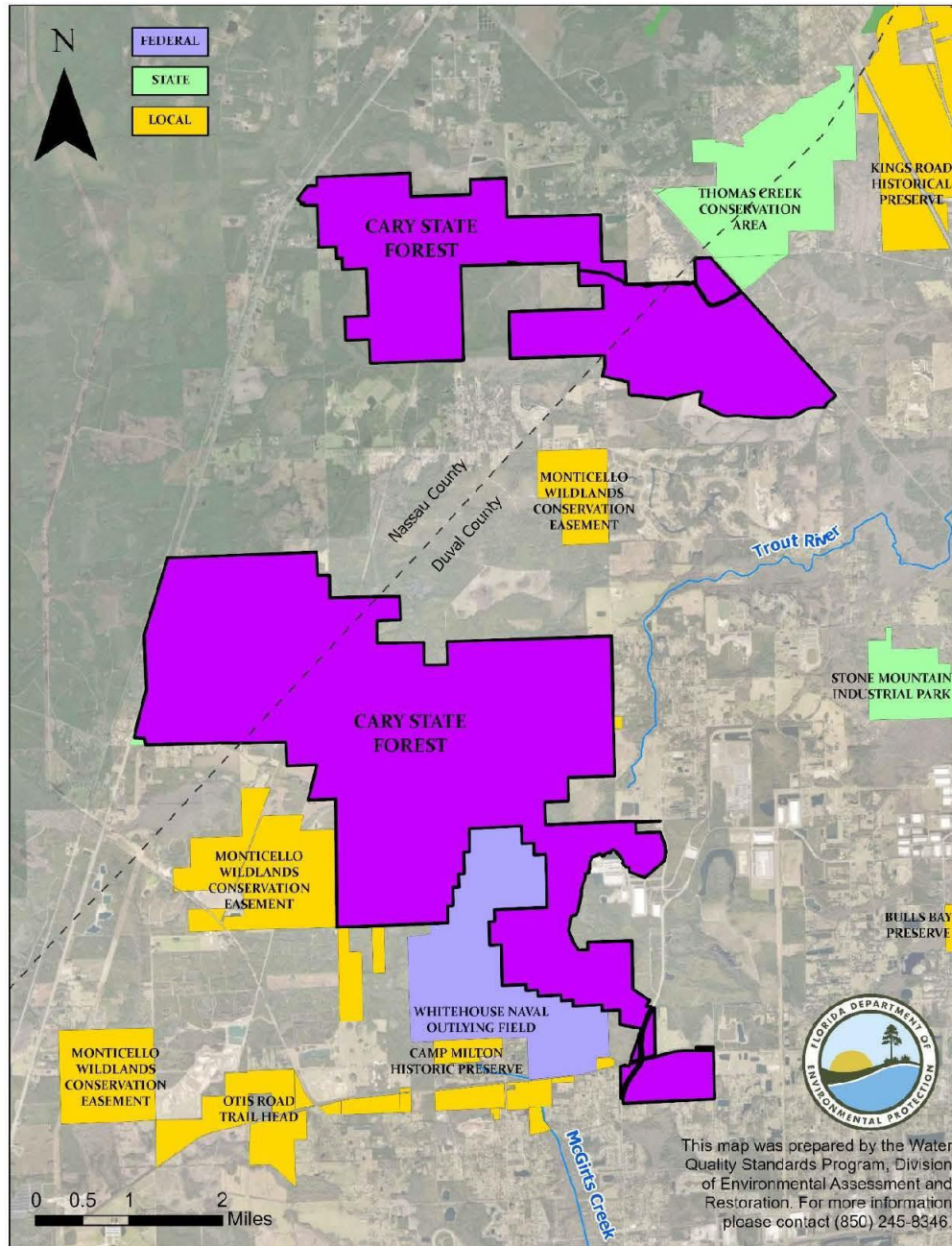


Exhibit K

Water Resources and BMAP Map



Florida Forest Service

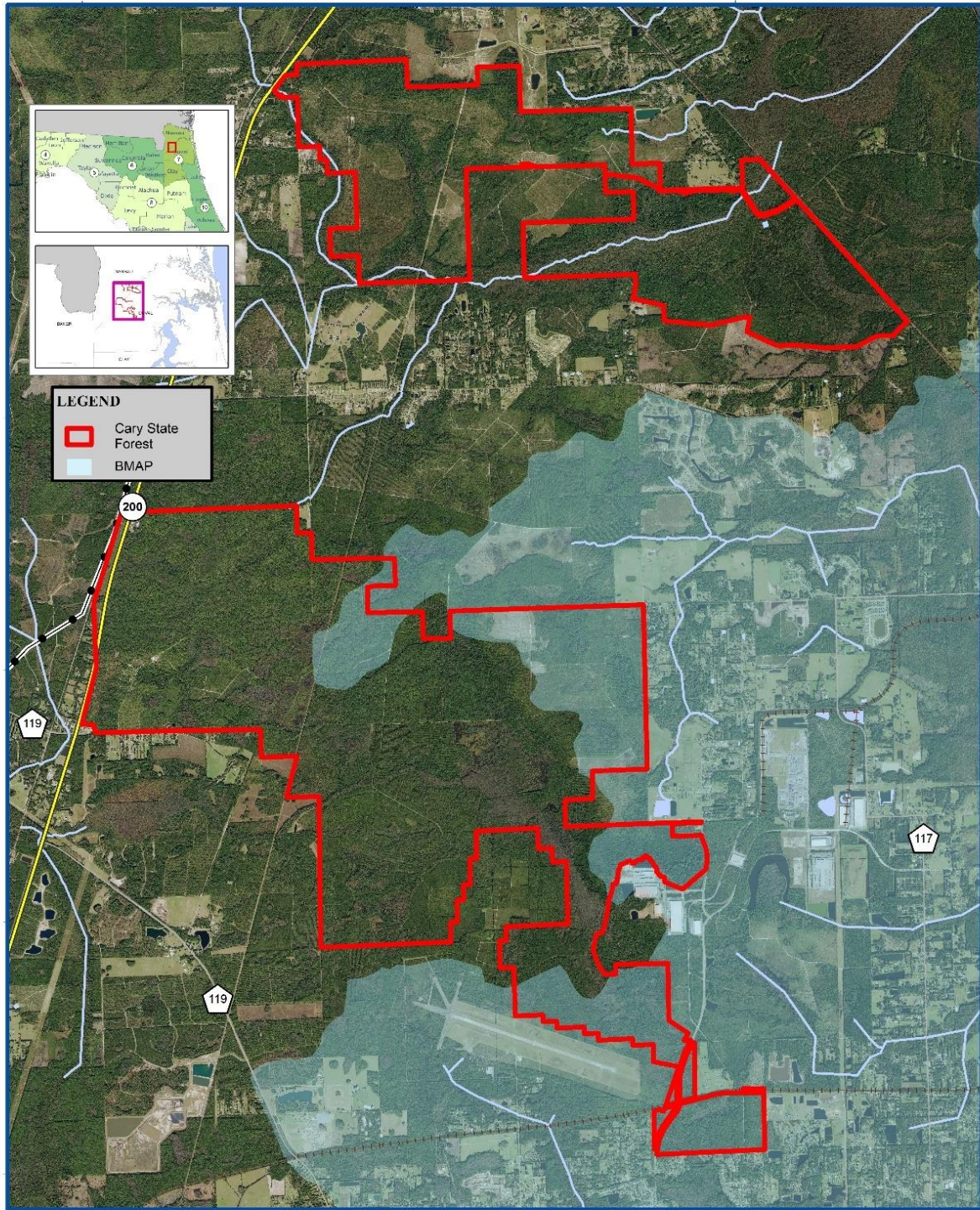
Cary State Forest

Water Resources / BMAP Map

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

DISCLAIMER:
This map was created by the Florida Forest Service
and is intended to provide general information only.
It is not intended to be used for legal purposes.
The Florida Forest Service does not warrant the
accuracy or completeness of the information
presented on this map. The Florida Forest Service
assumes no liability for any errors or omissions
on this map.

WATERBODIES:
Waterbodies shown on this map were derived from
the Florida Department of Natural Resources
BMAP (Biology Management and Planning) data.
The Florida Department of Natural Resources
assumes no liability for any errors or omissions
on this map.



0.5 0.25 0 0.5 1
Miles



Map Month/Year: July 2022

1,500 500 0 1,000 2,000 3,000
Yards

Exhibit L

Florida Natural Areas Inventory Managed Area Tracking Record



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

March 21, 2022

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

Dear Ms. Anderson,

Thank you for requesting information from the Florida Natural Areas Inventory (FNAI). 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: Cary State Forest
Date Received: 3/11/2022
Location: Nassau 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 historically present on or very near this site, specifically Eastern Indigo Snake (*Drymarchon couperi*) (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

Tracking Florida's Biodiversity

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 <https://www.fnai.org/services/clip>.

Managed Areas

Portions of the site appear to be located within the Cary 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 Northeast Florida Timberlands and Watershed Reserve 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/species-communities/tracking-main 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



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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

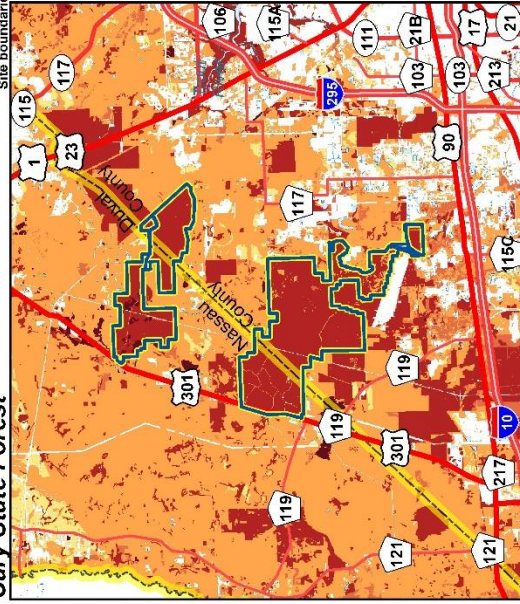
Priority 5

Site Boundary

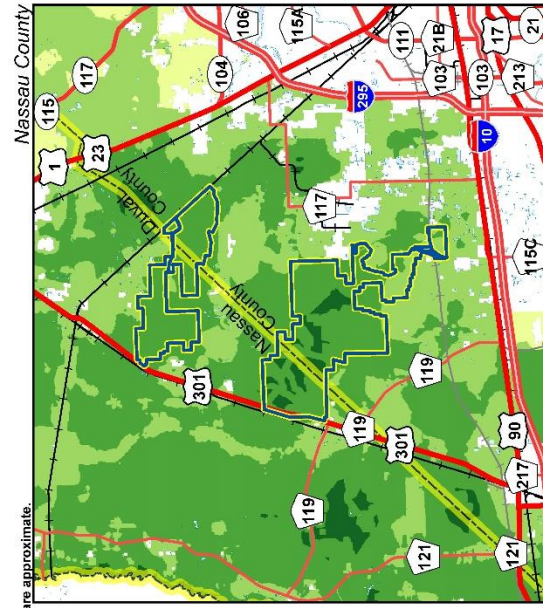
Map should not be interpreted without accompanying documents.

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 support from the U.S. Environmental Protection Agency and U.S. Fish & Wildlife Service.

Cary State Forest

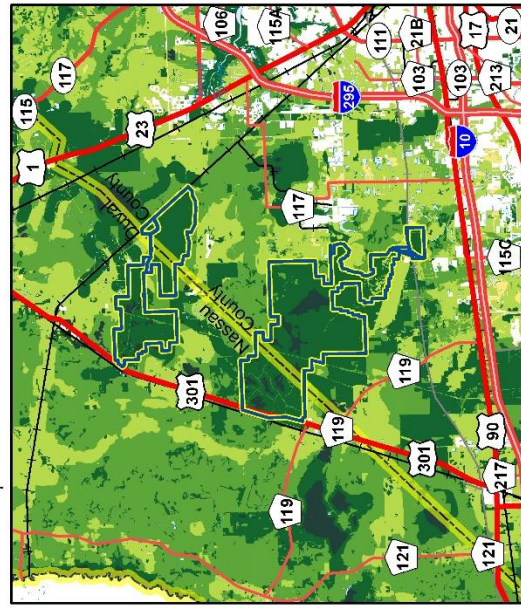
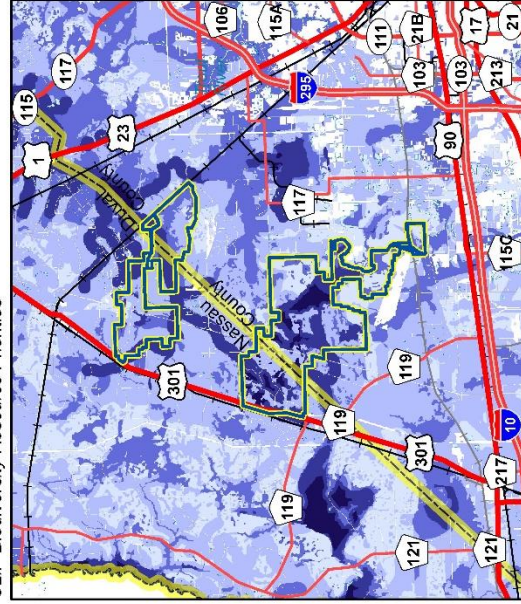


Site boundaries are approximate.



CLIP Biodiversity Resource Priorities

CLIP Landscape Resource Priorities



CLIP Surface Water Resource Priorities

CLIP Aggregated Resource Priorities



Map produced by KAB
3/21/2022



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FNAI ELEMENT OCCURRENCE REPORT on or near Cary State Forest



Map Label	Scientific Name	Common Name	Global State Rank	Federal State Rank	Status	Listing	Observation Date	Description	EO Comments
AMBYCING* (X)13	<i>Ambystoma cingulatum</i>	Frosted Flatwoods Salamander	G2	S1	T	FT	1912-03-02	No description recorded. Area now developed.	2 specimens collected (US 49431, US 49432) in 1912 with the ambiguous location of Jacksonville (A50GOI01FLUS). Palls visited 6 likely ponds around Duval County to survey for <i>Ambystoma cingulatum</i> . Flatwoods Salamanders were not detected in that 1993 survey (U93PAL02FLUS). It is currently accepted that this species extirpated from Duval County.
ASCLVRDU*6	<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T	1964-05-23	LONGLEAF PINE FLATWOODS.	1964-05-23: FLOWERING.
BALDATRO*1	<i>Baldina atropurpurea</i>	purple honeycomb-head	G2	S1	N	E	1987-10-22	In 2018, Recently widened road, ditches may have been recontoured but planted in turf grasses. Area highly disturbed and no evidence of prescribed fire or mowing. Wet areas have dense canopy of hardwoods and very shady. Bog or marsh in pine flatwoods	In 2018, failed to find and suspect that no plants exist in area. Considered common in 1964 (S64WAR01FLUS). Around 100 observed in 1979 and 1987 (S79PER01FLUS, S87BAK01FLUS)
BALDATRO*8	<i>Baldina atropurpurea</i>	purple honeycomb-head	G2	S1	N	E	2021-08-29	Powerline corridor mimicking a wet savanna	2021: 5 plants observed. 2018: ca 180 plants in 6 discrete areas, mostly blooming. 2000-2012: three surveys with total ca. 12 plants. 2000-2009: >gt;5 plants reported at northernmost point.



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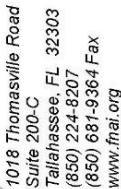


Map Label	Scientific Name	Common Name	Rank	Status	Listing	Date	Description	EO Comments
BASISWAM*62	Basin swamp		G4	S3	N	N	1996-02-26	This area is about 1.5 mi. north of the airstrip. The uplands at the north end of Whitehouse Field are covered mesic flatwoods with a mature slash pine plantation canopy. The mature planted pines extend to the borders of the base in most areas. Three other end pieces of smaller swamps occur on the edge of the navy property about 0.5 and 1 mi. to the southwest. Additionally, a series of three small dome swamps is located in the southwest corner of the north end. These are isolated from each other by the planted pines. All of these are dominated by small cypress trees. The basin swamp is several hundred acres and long and narrow where it borders the northeast side of the base. Only about 40 acres in three discontinuous pieces are within the extreme northeast corner of the Navy property. The largest southeast piece (about 25 acres) has a diverse and dense canopy of mature trees including <i>Taxodium ascendens</i>, <i>Nyssa biflora</i>, <i>Acer rubrum</i>, <i>Magnolia virginiana</i>, <i>Ilex myrifolia</i>, <i>Ilex cassine</i>, <i>Persea palustris</i>, and <i>Pinus elliottii</i> up to 12" DBH and 70' tall. The shrub strata has abundant <i>Lyonia lucida</i> (4-6'), and numerous <i>Cyrilla racemiflora</i> (to 6' and 30'), <i>Myrica inodora</i>, and <i>Vaccinium corymbosum</i>. The herbaceous strata is dominated by <i>Osmunda cinnamomea</i>, <i>Woodwardia areolata</i>, <i>Woodwardia virginica</i>, and <i>Sphagnum</i>. The vines <i>Smilax laurifolia</i> and <i>Vitis rotundifolia</i> are also abundant. The edge of the swamp is dry on this date. Standing water occurs in the center of the swamp where small trees of <i>Taxodium</i> and <i>Nyssa</i> and tall <i>Lyonia</i> (6-8') dominate (only about 10 of the 40 acres on Navy property). A shallow ditch separates the pine plantation to the west from the swamp. The planted pines intrude into the periphery of some parts of the basin swamp.
CALOMULT*55	<i>Calopogon multiflorus</i>	many-flowered grass-pink	G2G3	S2S3	N	T	2014-04-07	none given
CLEIDIVA*5	<i>Cleistes divaricata</i>	large rosebud orchid	G4	S1	N	E	2010-05-14	none given
COOREINTE*8	<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E	2000-09-30	2000-09-30: In moist, semi-shaded sandy loam along edge of mesic woods (<i>Acer</i>, <i>Magnolia</i>, <i>Pinus</i>, and <i>Quercus</i>) (S00ANDFSFLUS). 2010: total of 8 flowering plants seen at two points; 2014: a total of 288 flowering plants seen after a burn on 2/20/2014. 5 plants seen 2000-09-30: Frequent (S00ANDFSFLUS).

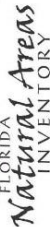
FNAI ELEMENT OCCURRENCE REPORT on or near
Cary State Forest



Map Label	Scientific Name	Common Name	Global State Rank	State Rank	Status	Listing	Observation Date	Description	EO Comments
CTENFLOR*31	<i>Ctenium floridanum</i>	Florida toothache grass	G2	S2	N	E	2013-10-10	2005-11: mesic flatwoods with firebreaks; appears that area may have received a growing season burn in 2005 based on flowering wiregrass (PNDSUR01FLUS).	Observed in similar area in 2005 and 2013, with hundreds of vegetative plants documented in the more recent visit.
CTENFLOR*33	<i>Ctenium floridanum</i>	Florida toothache grass	G2	S2	N	E	2012-10-09	No general description given	2 plants observed
DRYMCOLP*459	<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT	1996-01-18	The right-of-way is moved several times a year. Vegetation consists of blackberry (<i>Rubus</i> sp.), <i>Aristida</i> sp., prickly pear (<i>Opuntia</i> sp.), and various grasses. A few saw palmetto (<i>Serenoa repens</i>) and oak seedlings and saplings remain. Soils include Mandarin and Arenitis fine sands.	1996-01-18: L. Smith found 1 shed skin in the vicinity of gopher tortoise burrows along the Whitehouse Naval Outlying Field air strip right-of-way (F96SMI02FLUS).
DRYMCOLP*82	<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT	1970 pre	No general description given	1970-PRE: MANSELL OBSERVED INDIGO, PROBABLY PRE-1970. (P. MOLER INTERVIEW OF 24 JAN 1981, U82MOL01FLUS).
DRYBORE* (X)32	<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE	1978 circa	Mesic flatwoods	Active colony recorded circa 1978 (UNDBAK02FLUS). Not sure when woodpeckers disappeared; mature pines remain in the immediate vicinity but pine plantation is all around (aerial photography, PNDNES03FLUS, PNDMCF01FLUS).
ELANFOR*58	<i>Elanoides forficatus</i>	Swallow-tailed Kite	G5	S2	N	N	2007-04-03	Floodplain forest	Observed 1 bird calling (F13FNA03FLUS).
GOPHPOLY*1024	<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST	1996-06-13	Airstrip right-of-way has wiregrass (<i>Aristida</i> sp.), blackberry (<i>Rubus</i> sp.), prickly-pine (<i>Opuntia</i>) and occasional saw palmetto (<i>Serenoa repens</i>). The pine plantation has 30 year old slash pine (<i>Pinus elliotii</i>), <i>Kalmia</i> sp. and dense saw palmetto. The planted pine south of the runway is more xeric.	36 adults were observed (adults and subadults) in a total of 107 burrows surveyed. Egg shell fragments were seen on several burrow aprons. Transect sampling: planted pine (north of runway) 0.23 tortoises/ha; planted pine, scrubby flatwoods (south of runway) 0.57 tortoises/ha.



Cary State Forest

03/21/2022



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FNAI ELEMENT OCCURRENCE REPORT on or near

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		Global State Federal State			Observation		EO Comments
Map Label	Scientific Name	Common Name	Rank	Rank Status	Date	Description	
MESIFLAT*143	Mesic flatwoods		G4	S4 N N	1996-12-20	This area is about 0.8 mi. north of the west end of the airstrip. Mature pine plantations extend to the borders of the Navy property. Basin swamps are to the east.	The north end of Whitehouse Field is mesic flatwoods with a mature slash pine plantation canopy. About 70 acres near the center is on slightly elevated ground and retains the natural shrub and ground cover strata. The canopy is exclusively planted pines (75% cover, 4-8" dbh, and 40-50' tall) except for a few mature Pinus palustris by a small dome swamp about 100' east of the north-south dirt road. The canopy east of this dome swamp is thinner than normal due to the spindly growth of the trees. No subcanopy exists. The shrub strata is dominated by abundant Serenoa repens (50% cover, 3' tall), Kalmia hirsuta (30%, 1'), Quercus minima (10%, 1-2'), and Lyonia fruticosa (5%, 2-4'). The thick ground cover is primarily grasses including Aristida stricta, Aristida rhizomophora, and Sporobolus sp. Gopherus polyphemus burrows are present here. The periphery of this center area slopes very gently downward towards basin swamps and loses the well developed ground cover. The entire north end is covered by a grid of shallow ditches. Logging of pines started to the north and east of this center area in April 1996.
PROGALAC*12	<i>Progomphus alachuensis</i>	Tawny Sanddragon	G3	S3 N N	1982-03-22	1982-03-22: No description given (U09DEP01FLUS).	1982-03-22: This species was documented by Florida Department of Environmental Protection agency staff at two localities on three dates going back to 1979-12-06 (U09DEP01FLUS).
PTERECRI*113	<i>Pteroglossaspis ecristata</i>	giant orchid	G2G3	S2 N T	2009-12-07	2009-12-07: Mowed clearing with scattered oaks (F09ELA01FLUS).	2009-12-07: One fruiting plant in clearing (F09ELA01FLUS).
PTERECRI*140	<i>Pteroglossaspis ecristata</i>	giant orchid	G2G3	S2 N T	2012-08-17	not given	1 plant seen
PTERECRI*141	<i>Pteroglossaspis ecristata</i>	giant orchid	G2G3	S2 N T	2012-10-06	2012-none given	A total of 15 plants seen at 3 different points in 2012.
PTERECRI*142	<i>Pteroglossaspis ecristata</i>	giant orchid	G2G3	S2 N T	2012-10-11	roadside	1 plant seen
PTERECRI*162	<i>Pteroglossaspis ecristata</i>	giant orchid	G2G3	S2 N T	2004-02-12	FNAI NC recorded as ruderal. Formerly sandhill and mesic flatwoods.	Observed 1 plant in leaf.



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Map Label	Scientific Name	Common Name	Rank	Status	Listing	Date	Description	EO Comments
RUELNOC*29	<i>Ruellia noctiflora</i>	nightflowering wild petunia	G3?	S2	N	E	2010-11-05: Roadside ditch (PNDCAM03FLUS).	12+ plants seen with at least 2 in flower) in July 2010 and 2 seen in same vicinity in November 2010.
SCIUNIGE*110	<i>Sciurus niger niger</i>	Southeastern Fox Squirrel	G5T5	S3	N	N	1996-11-11 The airstrip right-of-way is mowed biannually and contains a mixture of grasses (e.g. <i>Aristida</i> sp., <i>Muhlenbergia</i> , <i>Sorghastrum</i>) and low growing oaks (<i>Quercus</i> sp.) and an occasional saw palmetto (<i>Serenoa repens</i>). The surrounding pine plantation consists of +/- 30 year old slash pine (<i>Pinus elliotii</i>) and dense galberry (<i>Ilex glabra</i>) and saw palmetto.	Several adults and two juveniles observed on various dates.
SCIUNIGE*207	<i>Sciurus niger niger</i>	Southeastern Fox Squirrel	G5T5	S3	N	N	2005-11-17 2005-11: predominantly mesic flatwoods with areas of disturbance such as roads and food plots (PNDSUR01FLUS).	2005-11-17: J. Surdick observed individual foraging in food plot during a natural community survey of the forest (PNDSUR01FLUS).
URSUFLOP*95	<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T4	S4	N	N	2020-11-19 Large area of pine plantation, mesic and wet flatwoods, and dome and basin swamps. Largely private commercial timberland, nurseries, and small neighborhoods; public lands are dominated by pine plantation but also have flatwoods interspersed with dome swamps and patches of scrub. Large area of sand pine and oak scrub, mesic flatwoods, sandhill, depression marshes and hardwood swamps, pine plantation; regular harvesting of sand pine (U05SIM01FLUS).	2005-11-17: J. Surdick observed individual foraging in food plot during a natural community survey of the forest (PNDSUR01FLUS). 2005-11-17: 1,539 bears estimated in the primary ranges in the Ocala-St. John's region. Part of a larger population that includes Okefenokee Swamp National Wildlife Refuge in Georgia (U05SIM01FLUS). 2014: 1,198 bears estimated in the Ocala-St. John's region and 495 estimated in the Osceola region (A16HUM01FLUS). 2016: polygons created to show where bears are considered 'Abundant' and 'Common' (U16FWC01FLUS) -> Primary is the FWC-designated core area that represents breeding range and contains documented evidence of reproduction or female bears within available habitat, and Secondary is the FWC-designated area where bears occur within available habitat but outside primary bear range (evidence of bears without documented evidence of reproduction) (U12FWC02FLUS, U05SIM01FLUS). These boundaries are based on decades of bear observations, roadkill distribution, nuisance bear locations, and bear research projects. For detailed location data contact the FWC.



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FNAI ELEMENT OCCURRENCE REPORT on or near Cary State Forest

Map Label	Scientific Name	Common Name	Global State Rank	Federal Rank	Status	Listing	Observation Date	Description	EO Comments
VERBHETE-36	Verbesina heterophylla	variable-leaf crownbeard	G2	S2	N	E	2010-07-12	none given	3 plants seen
VERBHETE-37	Verbesina heterophylla	variable-leaf crownbeard	G2	S2	N	E	2012-06-17	none given	1 plant seen



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Florida Natural Areas Inventory

Aggregated Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Documented					
Basin swamp		G4	S3	N	N
<i>Calopogon multiflorus</i>	many-flowered grass-pink	G2G3	S2S3	N	T
<i>Cleistes divaricata</i>	large rosebud orchid	G4	S1	N	E
<i>Ctenium floridanum</i>	Florida toothache grass	G2	S2	N	E
<i>Elanoides forficatus</i>	Swallow-tailed Kite	G5	S2	N	N
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Hartwrightia floridana</i>	hartwrightia	G2	S2	N	T
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
Mesic flatwoods		G4	S4	N	N
<i>Pteroglossaspis ecristata</i>	giant orchid	G2G3	S2	N	T
<i>Ruellia noctiflora</i>	nightflowering wild petunia	G3?	S2	N	E
<i>Sciurus niger niger</i>	Southeastern Fox Squirrel	G5T5	S3	N	N
<i>Verbesina heterophylla</i>	variable-leaf crownbeard	G2	S2	N	E
Likely					
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
<i>Mycteria americana</i>	Wood Stork	G4	S2	T	FT
Sandhill		G3	S2	N	N
Scrub		G2	S2	N	N
Upland hardwood forest		G5	S3	N	N
Potential					
<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Ambystoma cingulatum</i>	Frosted Flatwoods Salamander	G2	S1	T	FT
<i>Amoglossum diversifolium</i>	variable-leaved Indian-plantain		S2	N	T
<i>Asclepias viridula</i>	southern milkweed		S2	N	T
<i>Balduina atropurpurea</i>	purple honeycomb-head		S1	N	E
<i>Calydorea coelestina</i>	Bartram's ixia	G2G3	S2S3	N	E
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S1	N	N
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Linum westii</i>	West's flax	G1	S1	N	E
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Matelea floridana</i>	Florida spiny-pod	G2	S2	N	E
<i>Neovison vison lutensis</i>	Atlantic Salt Marsh Mink	G5T3	S3	N	N
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2	N	C
<i>Orbexilum virgatum</i>	pineland scurfpea	G1	S1	N	E
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Podomys floridanus</i>	Florida Mouse		S3	N	N
<i>Pycnanthemum floridanum</i>	Florida mountain-mint		S3	N	T
<i>Rhynchospora thornei</i>	Thorne's beaksedge		S1S2	N	N
<i>Rudbeckia nitida</i>	St. John's blackeyed susan		S2	N	E
<i>Sideroxylon alachuense</i>	silver buckthorn	G1	S1	N	E
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T4	S4	N	N
<i>Uvularia floridana</i>	Florida merrybells	G3	S1	N	E

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



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Florida Natural Areas Inventory

Managed Area Element Summary

Cary State Forest



SCIENTIFIC NAME	COMMON NAME	Global rank	State rank	Federal status	State status
PLANTS					
<i>Balduina atropurpurea</i>	purple honeycomb-head	G2	S1	N	E
<i>Calopogon multiflorus</i>	many-flowered grass-pink	G2G3	S2S3	N	T
<i>Cleistes divaricata</i>	large rosebud orchid	G4	S1	N	E
<i>Ctenium floridanum</i>	Florida toothache grass	G2	S2	N	E
<i>Hartwrightia floridana</i>	hartwrightia	G2	S2	N	T
<i>Pteroglossaspis ecristata</i>	giant orchid	G2G3	S2	N	T
<i>Ruellia noctiflora</i>	nightflowering wild petunia	G3?	S2	N	E
<i>Verbesina heterophylla</i>	variable-leaf crownbeard	G2	S2	N	E
AMPHIBIANS					
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
REPTILES					
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
BIRDS					
<i>Elanoides forficatus</i>	Swallow-tailed Kite	G5	S2	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
MAMMALS					
<i>Sciurus niger niger</i>	Southeastern Fox Squirrel	G5T5	S3	N	N
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T4	S4	N	N

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

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

Rodney Barreto
Chairman
Coral Gables

Michael W. Sole
Vice Chairman
Tequesta

Steven Hudson
Fort Lauderdale

Gary Lester
Oxford

Gary Nicklaus
Jupiter

Sonya Rood
St. Augustine

Robert A. Spottswood
Key West

Executive Staff

Eric Sutton
Executive Director

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

Jennifer Fitzwater
Chief of Staff

**Fish and Wildlife
Research Institute**
Gil McRae
Director

727-896-8626
727-823-0166 FAX

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

**Fish and Wildlife
Research Institute**
100 Eighth Avenue SE
St. Petersburg, Florida
33701-5020
Voice: (727) 896-8626
Fax: (727) 823-0166
Hearing/speech-impaired:
(800) 955-8771 (T)
(800) 955-8770 (V)
MyFWC.com/Research

March 17, 2022

Patti Anderson
Land Management Planner
Florida Forest Service

Dear Patti:

This letter is in response to your request for listed species occurrence records and critical habitats for your project (Cary State Forest) located in Nassau and Duval 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 Southeastern squirrel fox, Red Cockaded woodpecker, purple honeycomb-head, many-flowered grass-pink, giant orchid, variable-leaf crownbeard, Florida toothache grass, gopher tortoise and Night-flowering wild petunia were found on, or within a 1-mile distance of, the property. The Florida Fish and Wildlife Conservation Commission's database indicates that no SHCA's occur within a reasonable distance of the property. Enclosed are 8.5 x 11 maps showing, species richness, priority wetlands for listed species, 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.

Patti Anderson
Page 2
March 17th, 2021

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>).

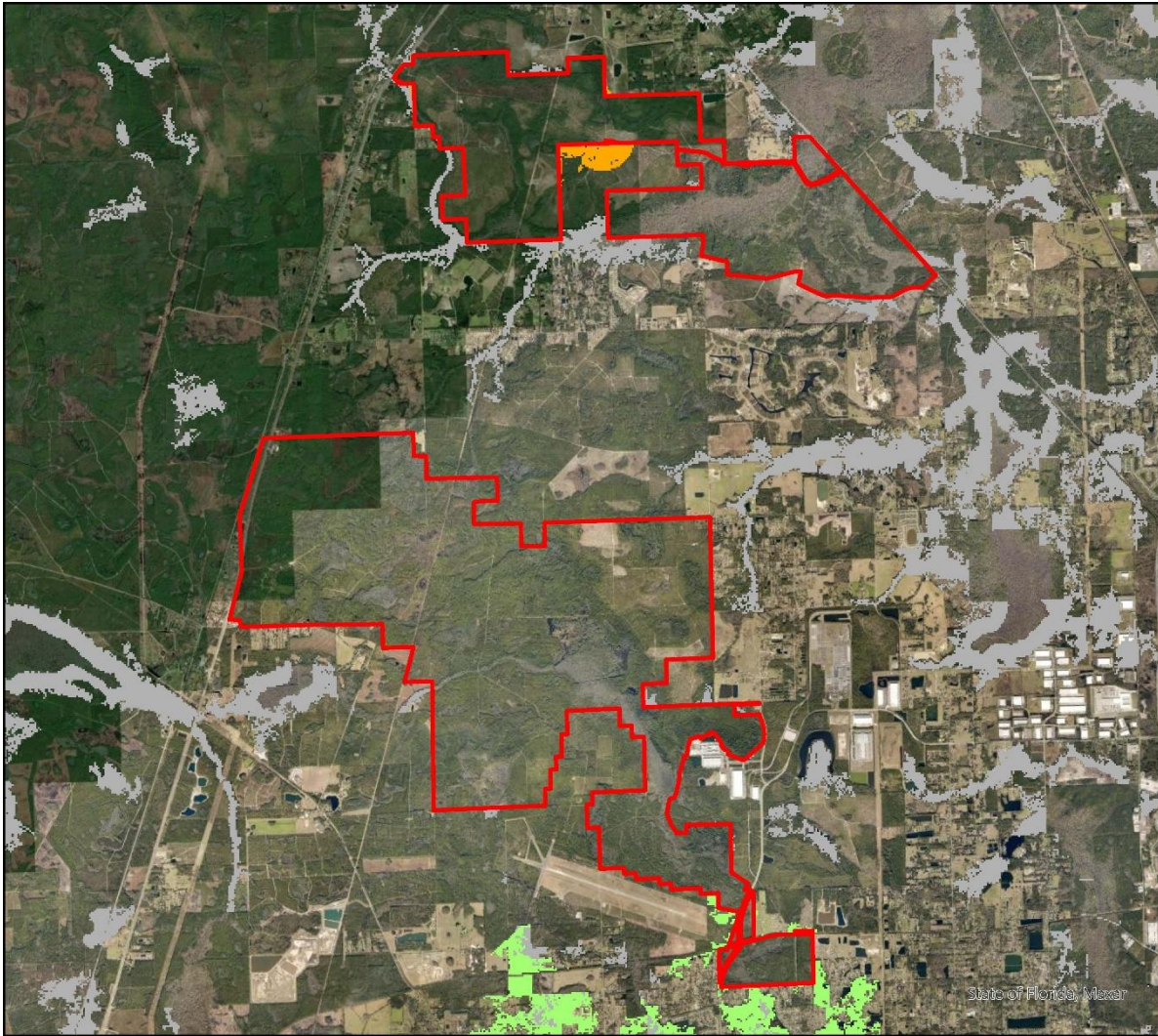
Please credit the Florida Fish and Wildlife Conservation Commission in any publication or presentation of these data. If you have any questions or further requests, please contact me at (850) 488-0588 or gisrequests@myfwc.com.

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
727-502-4970



Prioritized SHCA's

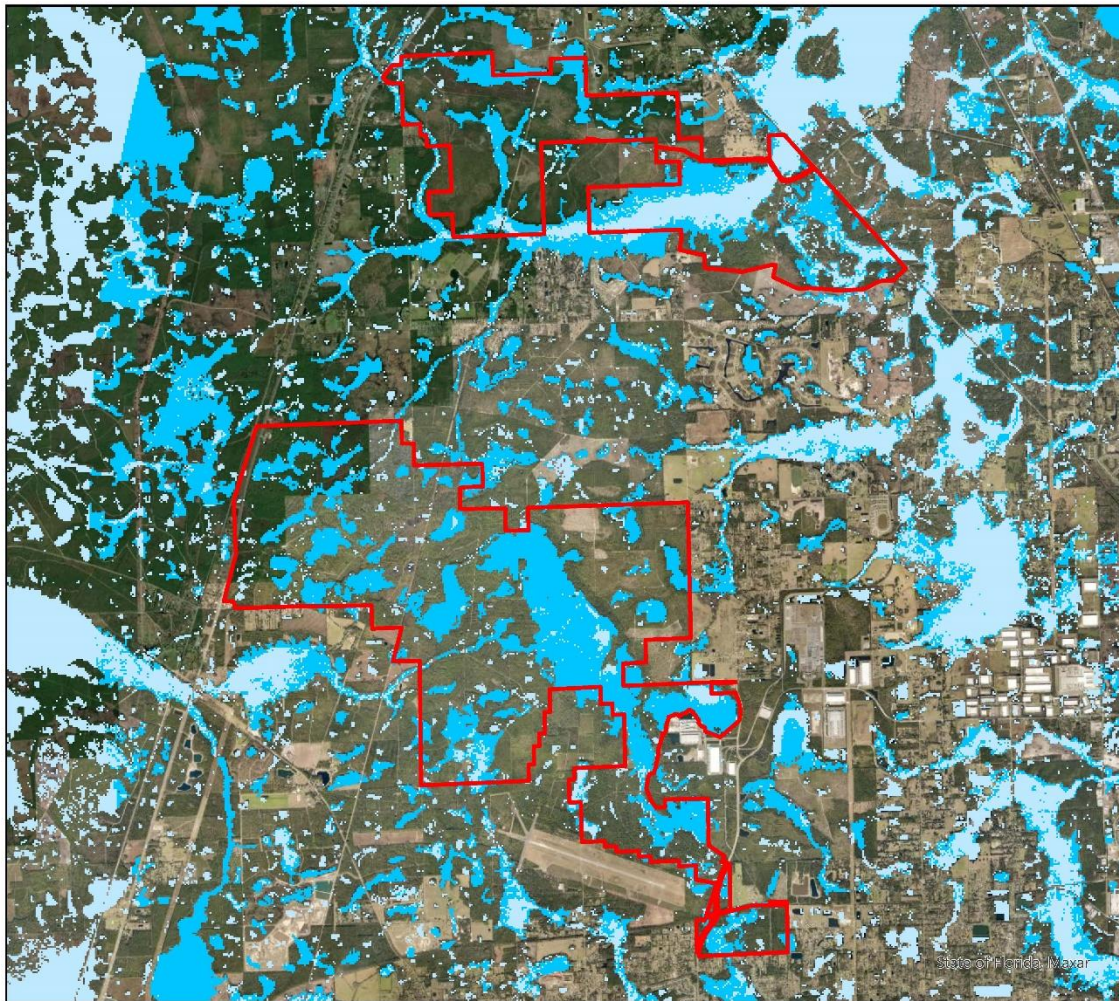


 Approximate site boundary and 1-mile buffer



Cary State Forest

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.



Priority Wetlands

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

Approximate site boundary and 1-mile buffer



Cary State Forest

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.

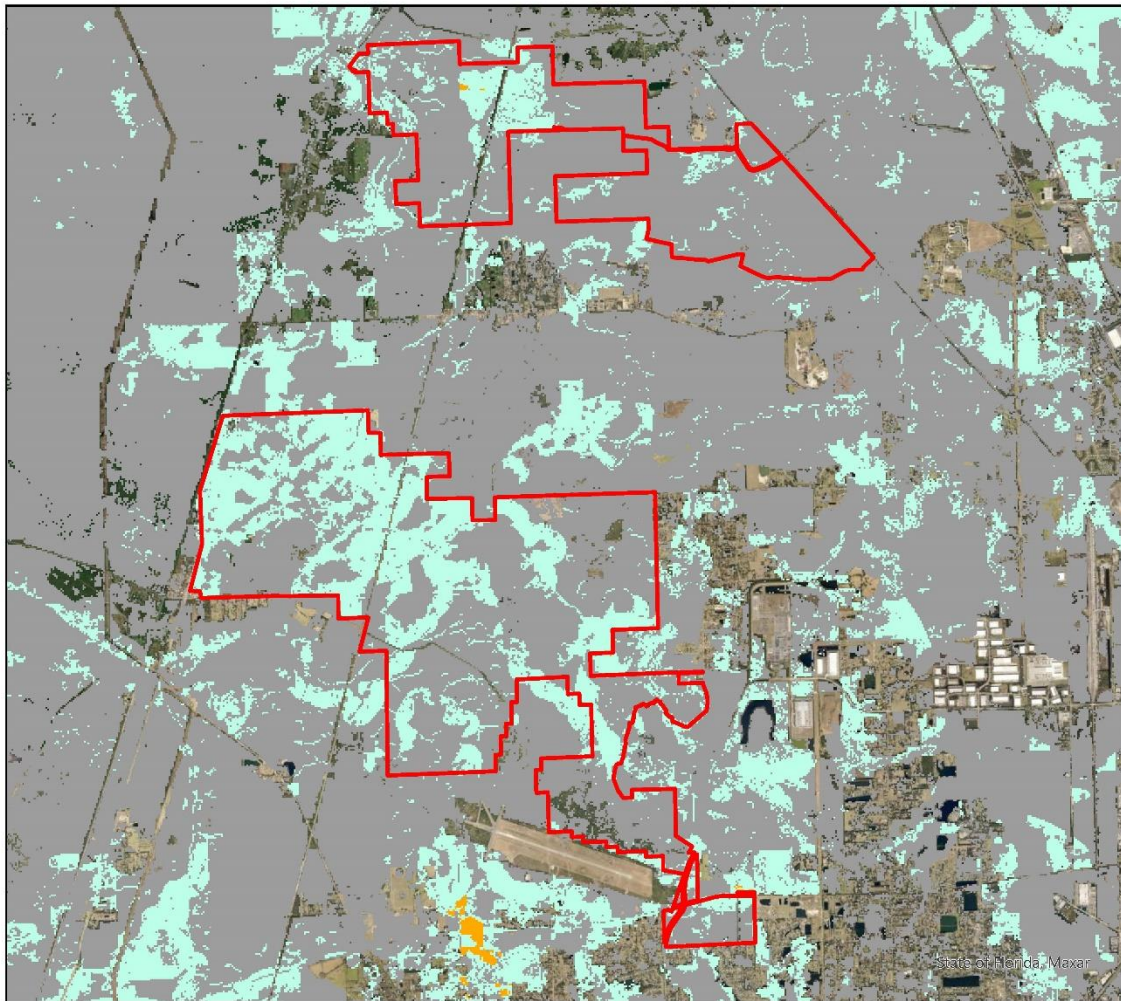


Florida Fish and Wildlife
Conservation Commission
MyFWC.com

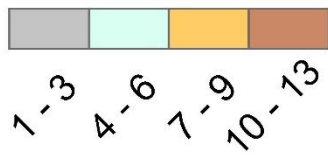


FWC ID: 2022_6547

March 11, 2022



Species Richness



 Approximate site boundary and 1-mile buffer



Cary State Forest

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 occurrence 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



FWC ID: 2022_6547

March 11, 2022

Exhibit N

Eleven-Year Fire History

Cary State Forest Burn Acres by Fiscal Year

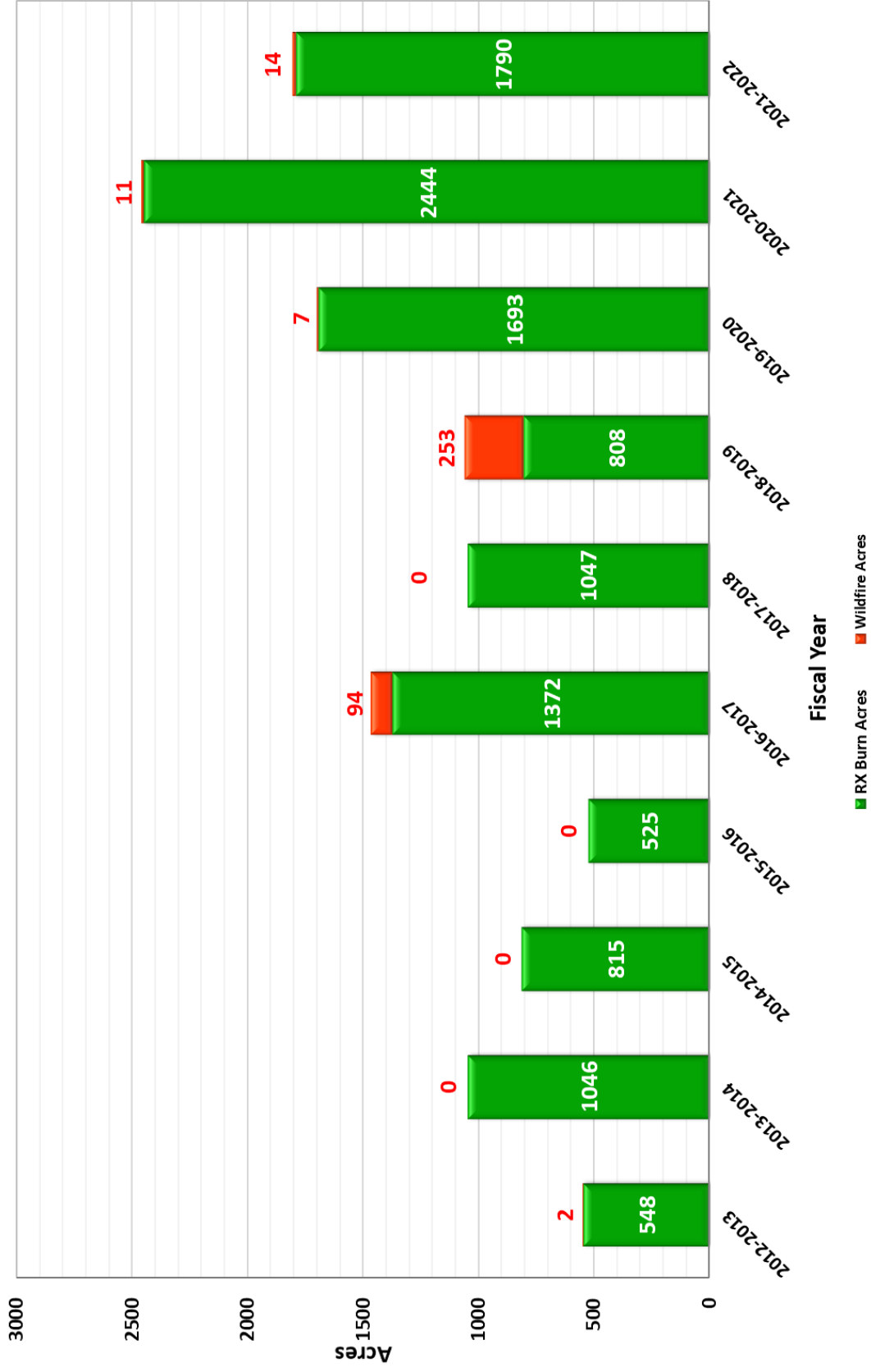


Exhibit O

Invasive Species Map



Florida Forest Service

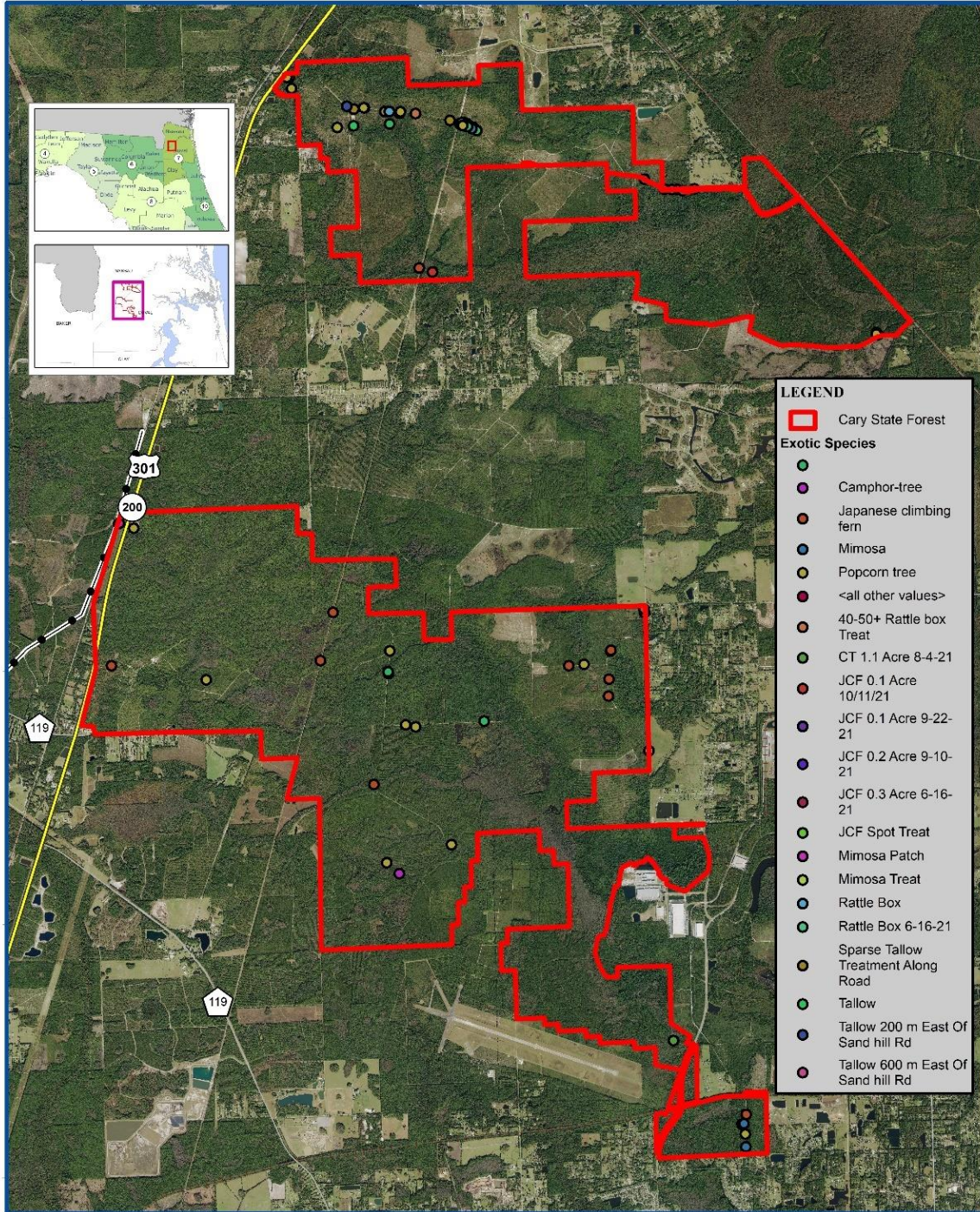
Cary State Forest

Non-Native Invasive Species Map

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

DISCLAIMER:
This map was prepared by the Florida Forest Service
and is intended for informational purposes only. It is not
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LEGEND

 Cary State Forest

Exotic Species

- Camphor-tree
- Japanese climbing fern
- Mimosa
- Popcorn tree
- <all other values>
- 40-50+ Rattle box Treat
- CT 1.1 Acre 8-4-21
- JCF 0.1 Acre 10/11/21
- JCF 0.1 Acre 9-22-21
- JCF 0.2 Acre 9-10-21
- JCF 0.3 Acre 6-16-21
- JCF Spot Treat
- Mimosa Patch
- Mimosa Treat
- Rattle Box
- Rattle Box 6-16-21
- Sparse Tallow Treatment Along Road
- Tallow
- Tallow 200 m East Of Sand hill Rd
- Tallow 600 m East Of Sand hill Rd

0.5 0.25 0 0.5 1 Miles



Map Month/Year: July 2022

1,000 500 0 1,000 2,000 3,000 Yards

Exhibit P

Current FNAI Natural Communities Map



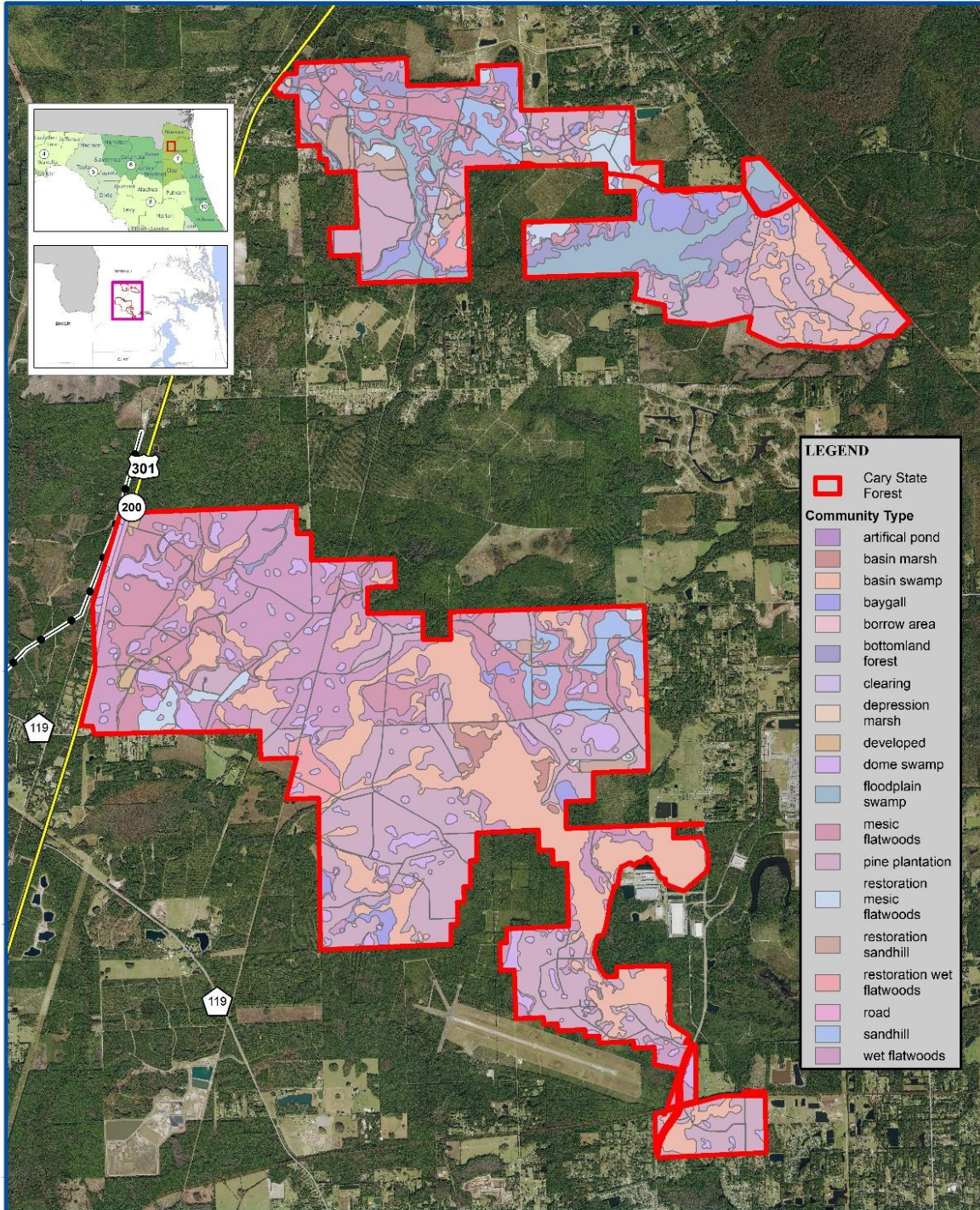
Florida Forest Service

Cary State Forest Current FNAI Natural Communities and Cover Type Map

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

DISCLAIMER:
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TAMPAH ALPS COUNTRY AS CONTAINED BY THE FLORIDA FOREST SERVICE, FLORIDA DEPARTMENT OF NATURAL RESOURCES, MAY 2011. 1:50,000 SCALE. COLOR BY TAMPALAKE.



LEGEND

- Cary State Forest
- Community Type**
- artificial pond
- basin marsh
- basin swamp
- baygall
- borrow area
- bottomland forest
- clearing
- depression marsh
- developed
- dome swamp
- floodplain swamp
- mesic flatwoods
- pine plantation
- restoration mesic flatwoods
- restoration sandhill
- restoration wet flatwoods
- road
- sandhill
- wet flatwoods

0.5 0.25 0 0.5 1 Miles



Map Month/Year: March 2022

1,000 500 0 1,000 2,000 3,000 Feet

Exhibit Q

Historic FNAI Natural Communities Map



30-20-10 NPK

Exhibit R

Land Management Reviews (2012, 2017 & 2022)

Name of Site: Cary SF

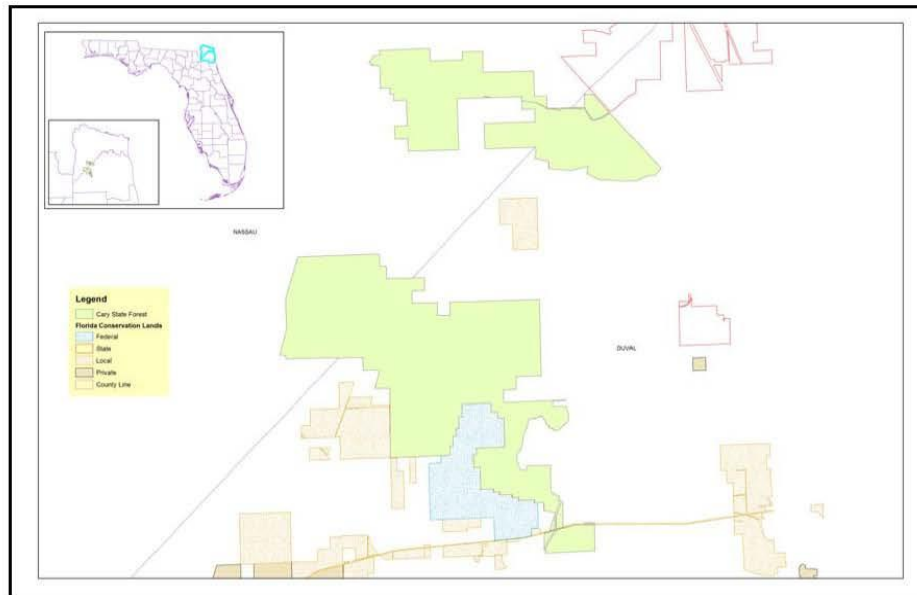
County: Duval/Nassau

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

Acres: 11,911.27
Area Reviewed: Entire tract

Review Date: 10/25/12

Management Plan Approval Date: 11/16/07



Review Team Determination

Managed in accordance with
Acquisition purpose? Yes =6, No = 0



Management practices, including public access,
in compliance with the management plan? Yes =6, No = 0



Categories	Management Plan Review	Field Review
Natural Communities	1.00	3.99
Listed Species	1.00	4.08
Natural Resource Survey	0.97	3.97
Cultural Resources	1.00	4.00
Prescribed Fire	1.00	4.22
Restoration	1.00	4.60
Exotic Species	1.00	4.61
Hydrology	1.00	4.25
Groundwater Monitoring	1.00	3.73
Resource Protection	1.00	3.58
Adjacent Property Concerns	0.83	4.28
Public Access & Education	1.00	4.13
Management Resources	N/A	3.92
Managed Area Uses	1.00	N/A
Buildings, Equipment, Staff & Funding	N/A	3.25

Consensus Commendations to the Managing Agency

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

1. The team commends the FFS staff on the restoration of previously clearcut areas using adaptive methods that are tailored to site-specific soils, elevation and vegetation conditions as well as listed species occurrences. (VOTE: 6+, 0-)

★★★★★★

2. The team commends the FFS staff on their close collaboration with volunteers from the Florida Native Plant Society and other organizations to develop a database for compiling species inventories and specifically for documenting occurrences of listed plant and animal species such that management decisions and public education opportunities can take these into consideration. (VOTE: 6+, 0-)

★★★★★★

3. The team commends the FFS staff for their efforts to implement thinning and burning in pine plantation sites that which have done much to bring these stands into their desired condition. (VOTE: 6+, 0-)

★★★★★★

4. The team commends the FFS staff for their aggressive efforts to restore degraded sandhill (i.e. reintroduce fire, reduce hardwoods and planting longleaf pine. (VOTE: 6+, 0-)

★★★★★★

5. The team commends the FFS staff for their in-depth assessment of ephemeral wetland (i.e. depression marsh) in flatwoods during timber management planning and planting. (VOTE: 6+, 0-)

★★★★★★

6. The team commends the FFS staff on efforts control and monitor invasive plants on the property. (VOTE: 6+, 0-)

★★★★★★

7. The team commends the FFS for their proactive cooperation with FWC regarding hunter access issues. (VOTE: 6+, 0-)

★★★★★★

8. The team commends the FFS staff for extensive preparation and presentation of forest resources materials for the land management review. (VOTE: 6+, 0-)

★★★★★★

Consensus Recommendations to the Managing Agency

The following recommendations resulted from a discussion and vote of review team members. The management plan must include responses to the recommendations identified below.

1. The team recommends that staff reach out to available agencies or groups, such as FNAI and FWC, to ask for assistance with imperiled invertebrate and amphibian assessments. (VOTE: 6+, 0-)

★★★★★★

Managing Agency Response:

2. The team recommends that staff continue to closely follow external development pressures that might cause degradation to natural resources of the property. (VOTE: 6+, 0-)

★★★★★★

Managing Agency Response:

Field Review Checklist Findings

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

- Natural Communities, regarding mesic flatwoods, wet flatwoods, dome swamp, baygall, basin swamp, bottomland forest, flood plain swamp and basin marsh.
- Listed Species, regarding animal and plant inventory.
- Natural Resources, regarding listed species or habitat monitoring, fire effects monitoring, other habitat management effects monitoring, and invasive species survey/monitoring.
- Cultural Resources, regarding the cultural resource survey and protection and preservation.
- Resource Management, Prescribed Fire, regarding area being burned (no. acres), frequency and quality.
- Restoration of Ruderal Areas, regarding degraded sandhill and basin swamp restoration.
- Forest Management, regarding timber inventory, timber harvesting, reforestation/afforestation and site preparation
- Non-native, Invasive and Problem Species, regarding the prevention and control of plants, animals and pests/pathogens.
- Hydrologic/Geologic Function, regarding roads/culverts and ditches.
- Ground/Surface Water Monitoring, regarding the water quality and quantity.
- Resource Protection, regarding boundary surveys.
- Adjacent Property Concerns, regarding expanding development, US 301 road widening and inholdings /additions.
- Public Access & Education, regarding roads and parking.
- Environmental Education & Outreach, regarding wildlife, invasive species, habitat management activities, interpretive facilities and signs, recreational opportunities and management of visitor impacts.
- Management Resources Maintenance, regarding waste disposal and sanitary facilities.
- Infrastructure, regarding equipment and funding..

Items Requiring Improvement Actions 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 .5 score on average.). Please note that overall good scores do not preclude specific recommendations by the review team requiring remediation. The management plan must include responses to the checklist items identified below:

- 1. The review team average score indicates a need for acknowledgement of adjacent property concerns, specifically US 301 road widening. Please provide documentation in the management plan.**

Managing Agency Response:

PLAN REVIEW		1	2	3	4	5	6	AVERAGE
Natural Communities (I.A)								
Mesic Flatwoods	I.A.1	1	1	1	1	1	1	1.00
Wet Flatwoods	I.A.2	1	1	1	1	1	1	1.00
Dome Swamp	I.A.3	1	1	1	1	1	1	1.00

Baygall	I.A.4	1	1	1	1	1	1	1.00
Basin Swamp	I.A.5	1	1	1	1	1	1	1.00
Sandhill	I.A.6	1	1	1	1	1	1	1.00
Bottomland forest	I.A.7	1	1	1	1	1	1	1.00
Flood Plain Swamp	I.A.8	1	1	1	1	1	1	1.00
Basin Marsh	I.A.9	1	1	1	1	1	1	1.00
Depression Marsh	I.A.10	1	1	1	1	1	1	1.00
Listed species:Protection & Preservation (I.B)								
Animal Inventory	I.B.1	1	1	1	1	1	1	1.00
Plant Inventory	I.B.2	1	1	1	1	1	1	1.00
Natural Resources Survey/Management Resources (I.C)								
Listed species or habitat monitoring	I.C.2	1	1	1	1	1	1	1.00
Other non-game species or habitat monitoring	I.C.3	1	1	1	1	1	1	1.00
Fire effects monitoring	I.C.4	1	1	1	1	1	0	0.83
Other habitat management effects monitoring	I.C.5	1	1	1	1	1	1	1.00
Invasive species survey / monitoring	I.C.6	1	1	1	1	1	1	1.00
Cultural Resources (Archeological & Historic sites) (II.A,II.B)								
Cultural Res. Survey	II.A	1	1	1	1	1	1	1.00
Protection and preservation	II.B	1	1	1	1	1	1	1.00
Resource Management, Prescribed Fire (III.A)								
Area Being Burned (no. acres)	III.A.1	1	1	1	1	1	1	1.00
Frequency	III.A.2	1	1	1	1	1	1	1.00
Quality	III.A.3	1	1	1	1	1	1	1.00
Restoration of Ruderal Areas (III.B)								
Degraded Sandhill	III.B.1	1	1	1	1		1	1.00
Basin Swamp Restoration	III.B.2	1	1	1	1		1	1.00
Forest Management (III.C)								
Timber Inventory	III.C.1	1	1	1	1	1	1	1.00
Timber Harvesting	III.C.2	1	1	1	1	1	1	1.00
Reforestation/Afforestation	III.C.3	1	1	1	1	1	1	1.00
Site Preparation	III.C.4	1	1	1	1	1	1	1.00
Non-Native, Invasive & Problem Species (III.E)								
Prevention								
prevention - plants	III.E.1.a	1	1	1	1	1	1	1.00
prevention - animals	III.E.1.b	1	1	1	1	1	1	1.00
prevention - pests/pathogens	III.E.1.c	1	1	1	1	1	1	1.00
Control								
control - plants	III.E.2.a	1	1	1	1	1	1	1.00
control - animals	III.E.2.b	1	1	1	1	1	1	1.00
control - pest/pathogens	III.E.2.c	1	1	1	1	1	1	1.00

Hydrologic/Geologic function Hydro-Alteration (III.F.1)								
Roads/culverts	III.F.1.a	1	1	1	1	1	1	1.00
Ditches	III.F.1.b	1	1	1	1	1		1.00
Ground Water Monitoring (III.F.2)								
Ground water quality	III.F.2.a	1		1	1	1	1	1.00
Ground water quantity	III.F.2.b	1	1	1	1	1	1	1.00
Surface Water Monitoring (III.F.3)								
Resource Protection (III.G)								
Boundary survey	III.G.1	1	1	1	1	1	1	1.00
Gates & fencing	III.G.2	1	1	1	1	1	1	1.00
Signage	III.G.3	1	1	1	1	1	1	1.00
Law enforcement presence	III.G.4	1	1	1	1	1	1	1.00
Adjacent Property Concerns (III.H)								
Land Use								
Expanding development	III.H.1.a	1	1	1	1	0	1	0.83
US 301 Road Widening	III.H.1.b	0	0	1	1	0	0	0.33
Inholdings/additions	III.H.2	1	1	1	1	1	1	1.00
Discussion of Potential Surplus Land Determination	III.H.3	1	1	1	1	1	1	1.00
Surplus Lands Identified?	III.H.4	1	1	1	1	1	1	1.00
Public Access & Education								
Public Access								
Roads	IV.1.a	1	1	1	1	1	1	1.00
Parking	IV.1.b	1	1	1	1	1	1	1.00
Environmental Education & Outreach								
Wildlife	IV.2.a	1	1	1	1	1	1	1.00
Invasive Species	IV.2.b	1	1	1	1	1	1	1.00
Habitat Management Activities	IV.2.c	1	1	1	1	1	1	1.00
Interpretive facilities and signs	IV.3	1	1	1	1		1	1.00
Recreational Opportunities	IV.4	1	1	1	1		1	1.00
Management of Visitor Impacts	IV.5	1	1	1	1		1	1.00
Managed Area Uses								
Existing Uses								
Hiking	VI.A.1	1	1	1	1	1	1	1.00
Nature Study	VI.A.2	1	1	1	1	1	1	1.00
Forest Education	VI.A.3	1	1	1	1	1	1	1.00
Horseback Riding	VI.A.4	1	1	1	1	1	1	1.00
Bicycling	VI.A.5	1	1	1	1	1	1	1.00
Camping	VI.A.6	1	1	1	1	1	1	1.00
Hunting	VI.A.7	1	1	1	1	1	1	1.00
Silviculture	VI.A.8	1	1	1	1	1	1	1.00

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 2.5 score on average). Please note that overall good scores do not preclude specific recommendations by the review team requiring remediation. The management plan must include responses to the checklist items identified below:

1. The review team average score indicates a need for acknowledgement of natural communities, specifically sandhill. Please provide documentation in the management plan.

Managing Agency Response:

FIELD REVIEW		1	2	3	4	5	6	AVERAGE
Natural Communities (I.A)								
Mesic Flatwoods	I.A.1	5	4	4	3	4	4	4.00
Wet Flatwoods	I.A.2	4	4	4	3	4	4	3.83
Dome Swamp	I.A.3	5	5	5	3	4	4	4.33
Baygall	I.A.4	4	5	5	5	4	5	4.67
Basin Swamp	I.A.5	3	4	5	3	4	3	3.67
Sandhill	I.A.6	3	2	4	2	2	2	2.50
Bottomland forest	I.A.7	5	4	5	5	5	5	4.83
Flood Plain Swamp	I.A.8	4	5	5	5	5	5	4.83
Basin Marsh	I.A.9	4	4	5	2	4	4	3.83
Depression Marsh	I.A.10	3	X	5	2	4	3	3.40
Listed species:Protection & Preservation (I.B)								
Animal Inventory	I.B.1	3	4	5	4	4	4	4.00
Plant Inventory	I.B.2	3	4	5	4	4	5	4.17
Natural Resources Survey/Management Resources (I.C)								
Listed species or habitat monitoring	I.C.2	3	5	4	3		5	4.00
Other non-game species or habitat monitoring	I.C.3	3	2	4	3	3	4	3.17
Fire effects monitoring	I.C.4	5	3	5	4	3	3	3.83
Other habitat management effects monitoring	I.C.5	5	4	5	4	3	4	4.17
Invasive species survey / monitoring	I.C.6	4	5	5	5	4	5	4.67
Cultural Resources (Archeological & Historic sites) (II.A,II.B)								
Cultural Res. Survey	II.A	3	4	4	5	4	4	4.00
Protection and preservation	II.B	3	5	4	5	3	4	4.00
Resource Management, Prescribed Fire (III.A)								
Area Being Burned (no. acres)	III.A1	3	3	5	4	3	4	3.67

Frequency	III.A.2	4	4	5	5	3	4	4.17
Quality	III.A.3	5	5	5	5	4	5	4.83
Restoration of Ruderal Areas (III.B)								
Degraded Sandhill	III.B.1	4	4	5	5		4	4.40
Basin Swamp Restoration	III.B.2	3	3	4	3		3	3.20
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	5	5	5	5.00
Reforestation/Afforestation	III.C.3	5	5	5	5	5	5	5.00
Site Preparation	III.C.4	5	5	5	5	5	5	5.00
Non-Native, Invasive & Problem Species (III.E)								
Prevention								
prevention - plants	III.E.1.a	4	5	5	5	5	4	4.67
prevention - animals	III.E.1.b	4	5	5	5	5	4	4.67
prevention - pests/pathogens	III.E.1.c	4	X	5	5	5	3	4.40
Control								
control - plants	III.E.2.a	4	5	5	5	5	5	4.83
control - animals	III.E.2.b	4	5	5	5	5	4	4.67
control - pest/pathogens	III.E.2.c	4	X	5	5	5	3	4.40
Hydrologic/Geologic function Hydro-Alteration (III.E.1)								
Roads/culverts	III.F.1.a	4	4	5	5	4	5	4.50
Ditches	III.F.1.b	3	5	5	5	2		4.00
Ground Water Monitoring (III.F.2)								
Ground water quality	III.F.2.a	3		4	5	3	4	3.80
Ground water quantity	III.F.2.b	3	3	4	5	3	4	3.67
Surface Water Monitoring (III.E.3)								
Resource Protection (III.F)								
Boundary survey	III.G.1	3	4	4	5	4	5	4.17
Gates & fencing	III.G.2	3	4	4	5	4	4	4.00
Signage	III.G.3	3	3	4	5	3	3	3.50
Law enforcement presence	III.G.4	1	3	4	2	3	3	2.67
Adjacent Property Concerns (III.G)								
Land Use								
Expanding development	III.H.1.a	3	4	5	5	4	4	4.17
US 301 Road Widening	III.H.1.b	3	4	5	5	4	5	4.33
Inholdings/additions	III.H.2	4	4	5	5	4	4	4.33
Public Access & Education								
Public Access								
Roads	IV.1.a	5	4	5	5	4	4	4.50
Parking	IV.1.b	3	4	4	4	4	4	3.83
Environmental Education & Outreach								
Wildlife	IV.2.a	3	4	5	5	4	4	4.17

Invasive Species	IV.2.b	3	4	4	5	3	4	3.83
Habitat Management Activities	IV.2.c	3	4	5	5	4	4	4.17
Interpretive facilities and signs	IV.3	3	3	5	5	4	4	4.00
Recreational Opportunities	IV.4	4	3	5	5	4	4	4.17
Management of Visitor Impacts	IV.5	4	4	5	5	4	4	4.33
Management Resources								
Maintenance								
Waste disposal	V.1.a	3	4	4	5	3	4	3.83
Sanitary facilities	V.1.b	3	4	4	5	4	4	4.00
Infrastructure								
Buildings	V.2.a	3	3	4	2	4	3	3.17
Equipment	V.2.b	3	3	4	5	3	4	3.67
Staff	V.3	3	3	4	2	2	2	2.67
Funding	V.4	3	4	4	4	3	3	3.50

Florida Forest Service Manager and Key Staff Present:

- Devon McFall, Forester
- Bruce Hill, Center Manager
- Todd Knapp
- Pat Deren

APPENDIX:

The following comments represent individual comments, and may not represent the consensus of the land management review team.

I.A. Natural Communities

- Commend efforts on restoring natural communities to maintenance conditions.
- Cary State Forest burning activity for exceeds the burning frequencies on private lands in NE Florida-fire can be safely used on any upland area in this forest.
- Lots of good plantings in disturbed sandhills including hardwood removal. Just need more burning and time. Identify any new natural communities that might not yet be known. Such as upland mixed woodland (Red Oak) & depression marshes in flatwoods.
- Four month old mgt. plan does thorough job of describing conditions, mgt. needs for each community. The mesic throughout the Cary tract flatwoods (the majority of the unaltered mesic flatwood occur on this tract) looked excellent with many areas of mature longleaf and slash pine timber. All sites appeared to be routinely burned and appropriately thinned to maintain desired densities. Ground cover was diverse with good balance of woody structure (palmetto, gallberry, etc.) and herbaceous grass cover. Overall, the Cary tract, as it related to its stand and ecotone conditions is in as best condition as I've seen it, thanks to recent efforts to increase fire frequencies and to burn into wetland transition zones (ecotones). The mesic and wet flatwoods are in tracts purchased much more recently were largely managed as industrial pine plantations by the previous landowners. Until further thinning and burning can be done to reduce densities, it is unclear how much will have sufficient native groundcover to be returned to a natural maintenance condition without significant restoration efforts. This is especially true in the areas previously heavily bedded and planted to sand pine or loblolly pine at very heavy stocking. Several stands were observed on the Thomas Creek tract that looked very promising - where following clear cut timber harvest, rollerchopping and burning - the site was planted to either slash or longleaf pine using a modified v-blade scalping blade. Seedling survival looked good and the native groundcover appeared to be recovering well, and very manageable with fire alone. Continued effort is needed however in the sandhills, especially in the Monticello tract, to remove off site planted pines and improve any remaining groundcover species using frequent prescribed fires that include the reintroduction of growing season fire. The impact of past industrial forestry practices as it relates to native groundcover composition in these stands is still an unknown. Considerable effort on nearly 200 acres of sandhill in the Thomas Creek Tract however appears to have successfully re-established longleaf pine seedlings (2011) on an area of heavily degraded (oak densities) sandhill, following an aerial velpar application in 2009 and a hot burn in 2010.

I.B. Listed Species

- Recommend survey for amphibians (salamanders & gopher frog).
- The excellent use of prescribed fire benefits all the listed species.
- Excellent work by forest volunteers (Yay George!) to identify and monitor a much expanded imperiled plant list. Good past survey work on gopher tortoises in sandhills.

I.C. Natural Resource Survey/Monitoring Resources

- Recommend survey for invertebrates.
- Need to bring in any new imperiled species by cooperating with groups already conducting surveys in region such as invertebrate and amphibian assessments.
- Again excellent work to expand listed species survey, monitoring and documentation. Invasive plants are well monitored and mapped by staff.

II.A.B. Cultural Resources

- Add any new sites as they appear to master site file. Ask FDEP for assessment of possible soil contamination at old Dip vat areas.
- Good work by staff to submit two potential sites (dipping vats) to DHR. The forester is scheduled to attend the next DHR archeological site monitor school. Current sites are all located and monitored at least annually.

III.A. Resource Management

- Management needs to consider the amount of acreage that is actually available to be burned.
- My assessment of meeting objectives takes out the drought years so Cary State Forest exceeds objectives in my opinion.
- The FFS staff have burned over 4000 acres over the past four years, which is well over 50% of the acres currently burnable on the forest, after removing the nearly 1000 acres recently planted on the state forest over the last five years and those dense loblolly and sand pine stands awaiting harvest. Great work increasing growing season component to nearly 600 acres over the last four years. More effort has been taken to avoid fire line construction near wetland ecotones and fire has been successfully pushed into many of these transition “edges”.

III.B. Restoration

- Exceeded acreage objective of sandhill restoration. Basin swamp restoration project has been prepared & is ready to be implemented by an outside entity for mitigation credits when development occurs.
- Good restoration progress in the degraded sandhill in the Thomas Creek Tract (?) to re-establish longleaf pine (discussed in natural community notes). Good planning efforts to establish a wetland restoration project in the area of a large basin swamp fire, however, no actual field work has begun on this project.

III.C. Forest Management

- Commend adaptable approach to reforestation w/minimal negative impacts to surrounding environment (v-blade).
- Excellent efforts to inventory and map all forest stands. Data is very current. Good work to identify and develop timber thinning projects to improve forest health, reduce timber densities and provide for revenues. Timber sales appeared to be well marked and very effectively administered. Excellent recent work reestablishing pine seedlings following clearcuts using modified v-blade with very little soil or vegetative disturbance.

III.D. Non-native Invasive & Problem Species

- The extensive use of prescribed fire in Cary State Forest has the beneficial effect of minimizing presence of problem species specifically southern pine beetle.
- Cary/District 7 staff is an active participant in NE Florida invasive plant working group. Very effective efforts at treating all invasive plants on the forest. The only exception is the widespread population of torpedo grass along the road shoulders. Past research has suggested however that torpedo grass is not a serious threat to spread from road shoulders into natural upland habitats.

III.E. Hydrologic/Geologic Function

- Recommend pursuing assessment of hydrology of Norfolk Southern Tract & Thomas Creek Tract; commend detailed attention to road maintenance.
- Roads were in particularly good condition throughout considering public use, timber harvest activities and the need for access for management activities. Suggest coordinating w/SJRWMD to discuss the potential need for and planning of water quality testing if necessary in the future.
- Water quantity is monitored by an outside agency SJRWMD & quality monitoring by FDEP, no need for staff to duplicate monitoring.
- Excellent work to replace old culverts and improved road surfaces throughout the state forest, including the more recently acquired tracts.

III.F. Resource Protection

- More law enforcement personnel would be beneficial but the existing law enforcement cooperation with FWC has been very good.
- Boundaries are all well surveyed and fenced, where appropriate.

III.G. Adjacent Property Concerns

- Red shirt parcel swapped for SJRWMD parcel adjacent to Thomas Creek.
- Excellent cooperation with FDOT during the current widening of US 301, including the protection of several historic oaks at the office site.

IV. Public Access and Education

- As time and opportunity allow staff could seek assistance with other volunteers to build on the public education efforts with regard to forest use by visitors interested in listed plants & animals. Also to locally advertise the opportunity for firewood harvest in the sandhill restoration areas.

- Plans exist for new access and parking on newly acquired tract. Roads are in excellent condition for public access.
- Nice balance of recreation opportunities that focus on hunters, equestrian users and a small number of campers. Additional trail heads (one completed on Thomas Creek) and camping areas are planned, but not yet funded.

V. Infrastructure/ Management Resources

- Appears to be need for 1 additional ranger.
- Equipment storage sheds need expansion & a permanent office building have been requested. There are needs for additional staff and funding.
- Need forest ranger. Need funding to repair hydrological damaged roads.
- Nice improvements to the camping area restroom.
- Need to expand existing equipment storage area.
- Just one forester assigned here. Need to establish a park ranger position.

Management Review Determination

- Overall management of Cary State Forest is excellent..

2017 Land Management Review Team Report for Cary State Forest

Table of Contents

1. Introduction.....	2
1.1. Property Reviewed in this Report.....	3
1.2 Property Map	3
1.3. Overview of Land Management Review Results.....	4
1.3.1 Consensus Commendations for the Managing Agency	4
1.3.2. Consensus Recommendations to the Managing Agency	5
2. Field Review Details.....	6
2.1 Field Review Checklist Findings	6
2.2. Items Requiring Improvement Actions in the Field.....	7
2.3. Field Review Checklist and Scores.....	7
3. Land Management Plan Review Details	10
3.1 Items Requiring Improvements in the Management Plan.....	10
3.2 Management Plan Review Checklist and Scores	10
Appendix A: Scoring System Detail.....	14

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 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: Cary State Forest

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

Acres: 13,385

County: Duval, Nassau

Purpose(s) for Acquisition: Development and management of a state forest.

Acquisition Program(s): CCC/Florida Forever/SOR

Original Acquisition Date: 7/14/39

Area Reviewed: Entire Property

Last Management Plan Approval Date: 6/28/2012

Review

Agency Manager and Key Staff Present:

- Sam Negaran, Manager
- Jennifer Hart, FFS
- Jon Johnson, FFS
- Noah Wyatt, FFS

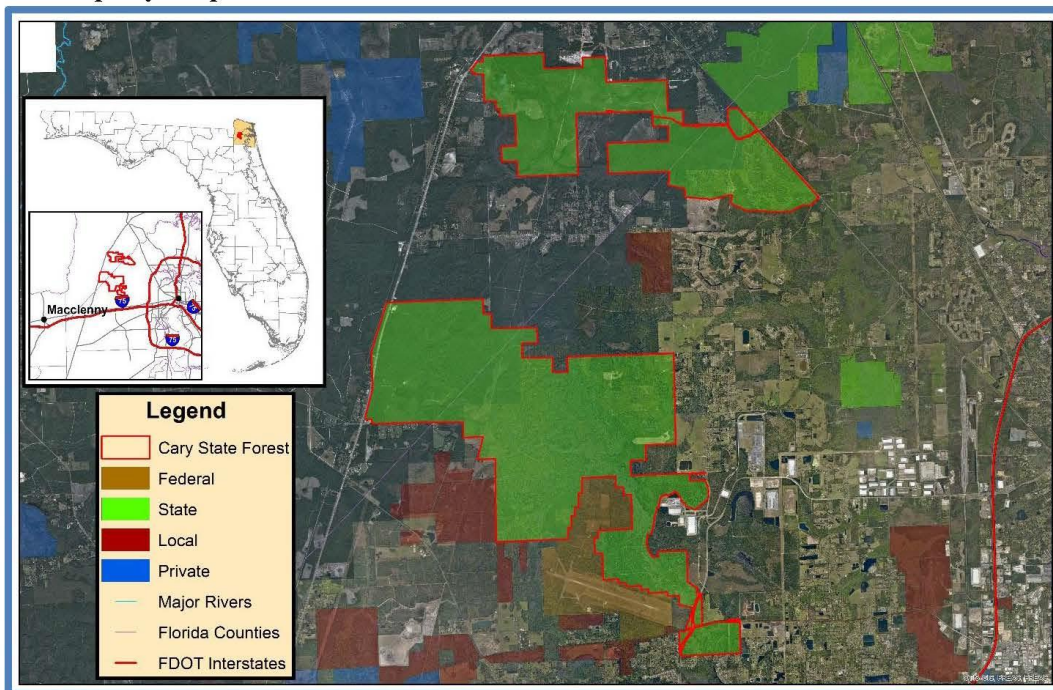
Review Team Members Present (voting)

- Rick Owen, DRP District
- Local, None
- Scotland Talley, FWC
- Brittany Dion, FDEP-NE District
- Bill Korn, FFS
- George Barbour, Conservation Org.
- Private Land Manager, None
- Heather Venter, SJRWMD

Other Non-Team Members Present (attending)

- James Parker, DEP/DSL
- Aric Larson, DEP/DSL
- Ray Spaulding, DEP/DSL
- Faith Barbour, FNPS

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 = 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	4.55	4.75
Prescribed Fire / Habitat Restoration	4.07	4.51
Hydrology	3.96	3.89
Imperiled Species	4.80	4.58
Exotic / Invasive Species	4.56	4.33
Cultural Resources	4.42	3.75
Public Access / Education / Law Enforcement	4.55	4.39
Infrastructure / Equipment / Staffing	4.08	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 for continuing to make progress in the prescribed fire program by keeping stands in fire rotation and bringing in new areas by reintroducing fire to unburned stands. (6+, 0-)
2. The team commends the FFS for making good progress with sandhill restoration on the Thomas Creek tract. (6+, 0-)
3. The team commends the FFS for reintroducing fire into overgrown areas before they become too uncontrollable. (6+, 0-)
4. The team commends the staff for efforts to punch fire into the ecotonal areas. (6+, 0-)
5. The team commends the FFS staff for the good coordination with appropriate agencies and especially volunteer efforts to monitor imperiled species, including invertebrates. (6+, 0-)
6. The team commends the FFS for completing the Basin Catch Swamp Road hydrological restoration project. (6+, 0-)
7. The team commends the FFS for upgrading the campground and facilities on the Cary tract and improving security by providing for a campground host. (6+, 0-)
8. The team commends the FFS for the good coordination with DHR concerning cultural resource identification and submission of new sites on the forest. (6+, 0-)

9. The team commends the FFS for their excellent job at recruiting and hiring professional foresters and biological staff that can add to the experience of managing forest natural and cultural resources. (6+, 0-)
10. The team commends the FFS for the good efforts at public education and outreach with local communities and increasing educational opportunities within the forest. (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, during the next management plan update, add blackwater stream FNAI community. (6+, 0-)

Managing Agency Response: Requesting and obtaining funding to receive an updated FNAI survey to capture a complete Current and Historical Natural Communities assessment is one of the FFS' explicit goals as defined in Goal 4, Objective 1 of the current CSF 10 Yr Resource Management Plan. A specific request to identify and add Thomas Creek as a blackwater stream will be made as part of the survey scope of work.

2. The team recommends that the FFS increase burn frequency into all sandhill communities on the forest, especially on Thomas Creek tract where restoration efforts have been used. (6+, 0-)

Managing Agency Response: The lack of consistent and experienced personnel to conduct prescribed burn operations across all community types on CSF has been a challenge. Currently, CSF is fully staffed with 3 Certified Burn Managers, including the FAS, and the Forester is enrolled in an upcoming Certified Burn Manager Class. Bringing all community types, including sandhills, into accepted burn rotation frequencies is one of CSF's highest priorities.

3. The team recommends that the FFS seek funding to improve roads in the Norfolk tract to increase access for resource management activities, especially prescribed fire. (6+, 0-)

Managing Agency Response: Securing funding for significant road projects is most often associated with the ability to provide access to significant tracts of merchantable, or near merchantable timber. There are currently @ 643 ac of 15 – 20 yr old plantation timber in the Norfolk Southern tract that is regularly assessed for its harvest potential with the first thinning of the oldest plantation expected within the next 3-4 years. With fuel loads of at least a 9-yr rough, the re-introduction of fire into these stands will be post-thinning. In the absence of special project funding, road improvement projects in the Norfolk Southern tract will be performed in small sections over time.

4. The team recommends that the FFS reach out to DHR to conduct a preliminary site visit to the forest to get advice on existing cultural resources and the need for additional survey work. (6+, 0-)

Managing Agency Response: The Cary SF forester will contact DHR as recommended.

5. The team recommends that the FFS continue to assess access/vandalism issues on the Garden Street entrance. (6+, 0-)

Managing Agency Response: The FFS continues to work closely with FWC and local law enforcement to minimize vandalism and other illegal activity across the entirety of Cary SF. A planned parking/recreation area near the Garden St. entrance with walk-in access only is under consideration. The effectiveness of reducing vandalism by changing the current Garden St. entrance to a walk-in only access point will have to be carefully weighed against the severe curtailment of general access to those members of the public who enter Cary SF via Garden St. to use the forest legally, without incident, and as intended.

6. The team recommends that the FFS continue to work towards prioritizing burn units in order to better define burn objectives. (6+, 0-)

Managing Agency Response: A recent, significant effort to identify and change burn units to more definable and manageable parcels has taken place, has thus far shown to be productive, and is still subject to modification as needed. This change is expected to continue increasing the ability of forest staff to accurately record burn histories, prioritize burn units, and better define burn objectives.

7. The team recommends that the FFS assess the feasibility of introducing some mechanical vegetation management (mowing or chopping) in areas where fire is a challenge. (6+, 0-)

Managing Agency Response: The Jacksonville District does not have a drum chopper and budget allocation is the primary obstacle in hiring third party contractors. Special project funding for vegetation management has focused on site preparation/reforestation activities. Past and ongoing collaboration with the FWC has resulted in several successful sandhill and specific species habitat improvement projects with the ultimate goal of reintroducing fire. We will continue to assess the feasibility and opportunities to fund mechanical vegetation management in areas where fire is a challenge.

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, basin swamp, wet flatwoods, sandhill, bottomland forest, dome swamp, baygill, floodplain swamp, depression marsh, basin marsh, blackwater stream.
2. Listed species protection and preservation; animals, gopher frog, gopher tortoise, Sherman's fox squirrel, plants, night flowering petunia, many flowered orchids.
3. Natural resources survey/monitoring specifically; listed species or their habitat monitoring, fire effects monitoring other habitat management effects, invasive species survey/monitoring.
4. Cultural resources, specifically cultural resource survey, and protection and preservation
5. Resource management (prescribed fire), specifically area being burned, frequency, and quality.
6. Restoration, specifically degraded sandhill, basin swamp.
7. Forest Management, specifically timber inventory/assessment, timber harvesting, reforestation/afforestation, site preparation.

8. Non-native, invasive, and problem species, specifically prevention and control of plants, animals and pest/pathogens.
9. Hydrologic/geologic function, specifically roads/culverts, ditches and hydro-period 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, specifically; inholdings/additions.
14. Public access, specifically parking and roads.
15. Environmental education and outreach; specifically, wildlife, invasive species, habitat management activities, interruptive facilities and signs, recreational opportunities and management of visitor impacts.
16. Management resources, specifically waste disposal, sanitary facilities, buildings, equipment, staff and funding.

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:

**** The review team scores did not identify items requiring improvement actions in the field. ****

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	4	4	4	4	4			4.00
Basin swamp	I.A.2	4	4	5	5	5	5			4.67
Wet flatwoods	I.A.3	3	4	4	3	3	3			3.33
Sandhill	I.A.4	4	3	3	3	5	3			3.50
Bottomland forest	I.A.5	4	5	5	5	5	5			4.83
Dome swamp	I.A.6	4	5	5	5	5	5			4.83
Baygall	I.A.7	5	4	5	5	5	5			4.83
Floodplain swamp	I.A.8	5	5	5	5	5	5			5.00
Depression marsh	I.A.9	5	4	4	5	5	5			4.67
Basin marsh	I.A.10	5	4	5	5	5	5			4.83
Blackwater Stream	I.A.11	4		5	5	5	5			4.80

Natural Communities Average Score										4.48
Listed species:Protection & Preservation (I.B)										
Animals	I.B.1	4	5	5	4	5	4			4.50
Gopher Frog	I.B.1.a					5				5.00
Gopher Tortoise	I.B.1.b					5				5.00
Plants	I.B.2		4		5	5	5			4.75
Shermans Fox Squirrel	I.B.1.c					5				5.00
Night Flowering Petunia	I.B.2.a	5	5	5	3	5	5			4.67
Many Flowered Orchid	I.B.2.b	5	5	5	3	5	5			4.67
Listed Species Average Score										4.80
Natural Resources Survey/Management Resources (I.C)										
Listed species or their habitat monitoring	I.C.2	5	5	5	5	5	4			4.83
Other non-game species or their habitat monitoring	I.C.3	5	5	5	4	5	4			4.67
Fire effects monitoring	I.C.4	4	4	4	4	4	4			4.00
Other habitat management effects monitoring	I.C.5	4	5	3	4	5	4			4.17
Invasive species survey / monitoring	I.C.6	5	5	5	5	5	5			5.00
Cultural Resources (Archeological & Historic sites) (II.A, II.B)										
Cultural Res. Survey	II.A	4	4	4	4	5	5			4.33
Protection and preservation	II.B	4	5	4	4	5	5			4.50
Cultural Resources Average Score										4.42
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A1	2	3	3	3	4	4			3.17
Frequency	III.A.2	5	3	3	2	4	3			3.33
Quality	III.A.3	5	4	4	5	5	5			4.67
Resource Management, Prescribed Fire Average Score										3.72
Restoration (III.B)										
Degraded Sandhill	III.B.1	4	5	3	4	5	4			4.17
Basin Swamp	III.B.2	4	5	5	4	5	5			4.67
Restoration Average Score										4.42
Forest Management (III.C)										
Timber Inventory / Assessment	III.C.1	4	5	5	5	5	5			4.83
Timber Harvesting	III.C.2	4	4	5	5	5	4			4.50
Reforestation/Afforestation	III.C.3	4	5	5	5	5	4			4.67
Site Preparation	III.C.4	4	4	5	5	5	4			4.50
Forest Management Average Score										4.63
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.D.1.a	4	5	5	4	5	5			4.67
prevention - animals	III.D.1.b	4	5	5	3	5	4			4.33
prevention - pests/pathogens	III.D.1.c	4	5	5	3	5	5			4.50

Control										
control - plants	III.D.2.a	4	5	5	4	5	5			4.67
control - animals	III.D.2.b	4	5	5	4	5	4			4.50
control - pest/pathogens	III.D.2.c	4	5	5	4	5	5			4.67
Non-Native, Invasive & Problem Species Average Score										4.56
Hydrologic/Geologic function Hydro-Alteration (III.E.1)										
Roads/culverts	III.E.1.a	4	4	5	5	5	4			4.50
Ditches	III.E.1.b	4	4	4	5	5	4			4.33
Hydro-period Alteration	III.E.1.c	5	4							4.50
Water Level Alteration	III.E.1.d									
Dams, Reservoirs, other impoundments	III.E.1.e									
Hydrologic/Geologic function, Hydro-Alteration Average Score										4.44
Ground Water Monitoring (III.E.2)										
Ground water quality	III.E.2.a	4	4	4	3		3			3.60
Ground water quantity	III.E.2.b	4	4	4	3		3			3.60
Ground Water Monitoring Average Score										3.60
Surface Water Monitoring (III.E.3)										
Surface water quality	III.E.3.a	4	4	4	3	5	3			3.83
Surface water quantity	III.F.3.b	4	4	4	3	5	3			3.83
Surface Water Monitoring Average Score										3.83
Resource Protection (III.F)										
Boundary survey	III.F.1	4	5	5	4	4	4			4.33
Gates & fencing	III.F.2	5	4	5	4	5	4			4.50
Signage	III.F.3	4	5	5	4	5	4			4.50
Law enforcement presence	III.F.4	5	5	5	4	5	4			4.67
Resource Protection Average Score										4.50
Adjacent Property Concerns (III.G)										
Land Use										
Expanding Development	III.G.1.a	5	4	3	3	5	4			4.00
Inholdings/additions	III.G.2	4	4	4	3		4			3.80
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	4	4	4	4	5	4			4.17
Parking	IV.1.b	4	4	3	4	5	5			4.17
Environmental Education & Outreach										
Wildlife	IV.2.a	5	5	5	4	5	5			4.83
Invasive Species	IV.2.b	4	5	5	4	5	5			4.67
Habitat Management Activities	IV.2.c	4	5	5	4	5	5			4.67
Interpretive facilities and signs	IV.3	4	5	5	4	5	5			4.67
Recreational Opportunities	IV.4	4	5	5	4	5	5			4.67
Management of Visitor Impacts	IV.5	5	5	5	5	5	5			5.00
Public Access & Education Average Score										4.60

Management Resources (V.1, V.2, V.3. V.4)										
Maintenance										
Waste disposal	V.1.a	4	5	5	4	5	5			4.67
Sanitary facilities	V.1.b	4	5	5	4	5	5			4.67
Infrastructure										
Buildings	V.2.a	4	4	4	3	5	4			4.00
Equipment	V.2.b	4	4	4	3	5	3			3.83
Staff	V.3	3	4	5	2	4	3			3.50
Funding	V.4	3	4	5	3	4				3.80
Management Resources Average Score										4.08
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:

****The review team scores did not identify items requiring improvement actions in the field. ****

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	5	5	5	5	5			5.00
Basin swamp	I.A.2	5	5	5	5	5	5			5.00
Wet flatwoods	I.A.3	5	5	5	5	5	5			5.00
Sandhill	I.A.4	5	5	5	4	5	5			4.83
Bottomland forest	I.A.5	5	5	5	5	5	5			5.00
Dome swamp	I.A.6	5	5	5	5	5	5			5.00
Baygall	I.A.7	5	5	5	5	5	5			5.00
Floodplain swamp	I.A.8	5	5	5	5	5	5			5.00
Depression marsh	I.A.9	5	5	5	5	5	5			5.00
Basin marsh	I.A.10	5	5	5	4	5	5			4.83
Blackwater Stream	I.A.11	4	5	1	1	5	5			3.50

Natural Communities Average Score										4.83
Listed species: Protection & Preservation (I.B)										
Animals	I.B.1	4	5		4	5	3			4.20
Gopher Frog	I.B.1.a					5				5.00
Gopher Tortoise	I.B.1.b					5				5.00
Shermans Fox Squirrel	I.B.1.c					5				5.00
Plants	I.B.2	5	5		3	5	3			4.20
Night Flowering Petunia	I.B.2.a	5	5	5	3	5	3			4.33
Many Flowered Orchid	I.B.2.b	5	5	5	3	5	3			4.33
Listed Species Average Score										4.58
Natural Resources Survey/Management Resources (I.C)										
Listed species or their habitat monitoring	I.C.2	5	5	5	4	5	3			4.50
Other non-game species or their habitat monitoring	I.C.3	5	5	5	4	5	3			4.50
Fire effects monitoring	I.C.4	4	5	4	3	5	3			4.00
Other habitat management effects monitoring	I.C.5	4	5	3	3	5	3			3.83
Invasive species survey / monitoring	I.C.6	5	5	5	4	5	3			4.50
Cultural Resources (Archeological & Historic sites) (II.A,II.B)										
Cultural Res. Survey	II.A	4	4	2	2	5	4			3.50
Protection and preservation	II.B	4	5	4	2	5	4			4.00
Cultural Resources Average Score										3.75
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	5	5	4	4	5	5			4.67
Frequency	III.A.2	5	5	4	3	5	5			4.50
Quality	III.A.3	5	5	4	4	5	5			4.67
Resource Management, Prescribed Fire Average Score										4.61
Restoration (III.B)										
Degraded Sandhill	III.B.1	4	4	5	4	5	4			4.33
Basin Swamp	III.B.2	4	5	5	4	5	4			4.50
Restoration Average Score										4.42
Forest Management (III.C)										
Timber Inventory / Assessment	III.C.1	4	5	5	4	5	5			4.67
Timber Harvesting	III.C.2	4	5	5	4	5	5			4.67
Reforestation/Afforestation	III.C.3	4	5	5	4	5	5			4.67
Site Preparation	III.C.4	4	5	5	4	5	5			4.67
Forest Management Average Score										4.67
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.D.1.a	4	5	5	3	5	4			4.33
prevention - animals	III.D.1.b	4	5	5	3	5	4			4.33

prevention - pests/pathogens	III.D.1.c	4	5	5	3	5	4			4.33
Control										
control - plants	III.D.2.a	4	5	5	3	5	4			4.33
control - animals	III.D.2.b	4	5	5	3	5	4			4.33
control - pest/pathogens	III.D.2.c	4	5	5	3	5	4			4.33
Non-Native, Invasive & Problem Species Average Score										4.33
Hydrologic/Geologic function, Hydro-Alteration (III.E.1)										
Roads/culverts	III.E.1.a	4	5	4	4	5	4			4.33
Ditches	III.E.1.b	4	5	4	4	5				4.40
Hydrologic/Geologic function, Hydro-Alteration Average Score										4.37
Ground Water Monitoring (III.E.2)										
Ground water quality	III.E.2.a	4		4	3		3			3.50
Ground water quantity	III.E.2.b	4		4	3		3			3.50
Ground Water Monitoring Average Score										3.50
Surface Water Monitoring (III.E.3)										
Surface water quality	III.E.3.a	4		4	3	5	3			3.80
Surface water quantity	III.E.3.b	4		4	3	5	3			3.80
Surface Water Monitoring Average Score										3.80
Resource Protection (III.F)										
Boundary survey	III.F.1	4	5	5	3	5	4			4.33
Gates & fencing	III.F.2	5	5	5	3	5	4			4.50
Signage	III.F.3	4	5	5	3	5	4			4.33
Law enforcement presence	III.F.4	5	5	4	4	5	4			4.50
Resource Protection Average Score										4.42
Adjacent Property Concerns (III.G)										
Land Use										
Expanding Development	III.G.1.a	4	4	5	3	5	4			4.17
Inholdings/additions	III.G.2	4	5	4	3	5	4			4.17
Discussion of Potential Surplus Land Determination	III.G.3		4	4	3	5	4			4.00
Surplus Lands Identified?	III.G.4		4	4	3	5	4			4.00
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	4	5	5	4	5	4			4.50
Parking	IV.1.b	4	5	5	4	5	4			4.50
Environmental Education & Outreach										
Wildlife	IV.2.a	5	5	4	3	5	4			4.33
Invasive Species	IV.2.b	4	5	4	3	5	4			4.17
Habitat Management Activities	IV.2.c	4	5	4	3	5	4			4.17
Interpretive facilities and signs	IV.3	4	5	4	4	5	4			4.33
Recreational Opportunities	IV.4	4	5	5	4	5	4			4.50
Management of Visitor Impacts	IV.5	5	5		3	5	4			4.40
Public Access & Education Average Score										4.36

Managed Area Uses (VI.A, VI.B)										
Existing Uses										
Hunting	VI.A.1	4	5	5	5	5	5			4.83
Equestrian	VI.A.2	5	5	5	4	5	5			4.83
Camping	VI.A.3	4	5	5	4	5	5			4.67
Hiking	VI.A.4	4	5	5	5	5	5			4.83
Biking	VI.A.5	4	5	5	4	5	5			4.67
Nature study	VI.A.6	4	5	5	5	5	5			4.83
wildlife observation	VI.A.7	4	5	5	5	5	5			4.83
Picnicking	VI.A.8	4	5	5	5	5	5			4.83
Geocaching	VI.A.9		5	5	5	5	5			5.00
Proposed Uses										
On-site housing	VI.B.1	4	4	5	4	4	5			4.33
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*

2022 Land Management Review Team Report for Cary State Forest

Table of Contents

Introduction.....	2
Property Reviewed in this Report.....	3
Property Map	3
Overview of Land Management Review Results.....	4
Consensus Commendations for the Managing Agency	4
Consensus Recommendations to the Managing Agency	4
Field Review Details.....	4
Field Review Checklist Findings	5
Items Requiring Improvement Actions in the Field.....	5
Field Review Checklist and Scores.....	5
Land Management Plan Review Details.....	8
Items Requiring Improvements in the Management Plan.....	8
Management Plan Review Checklist and Scores	8
Appendix A: Scoring System Detail.....	12

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.

Property Reviewed in this Report

Name of Site: Cary State Forest

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

Acres: 13,385

County: Duval, Nassau

Purpose(s) for Acquisition: Development and management of a state forest.

Acquisition Program(s): CCC/Florida Forever/SOR

Original Acquisition Date: 7/14/39

Area Reviewed: Entire Property

Last Management Plan Approval Date: 6/28/12

Review Date: 8/5/22

Agency Manager and Key Staff:

- Carlton Scott, Manager
- Andy Lamborn
- Sam Negaran

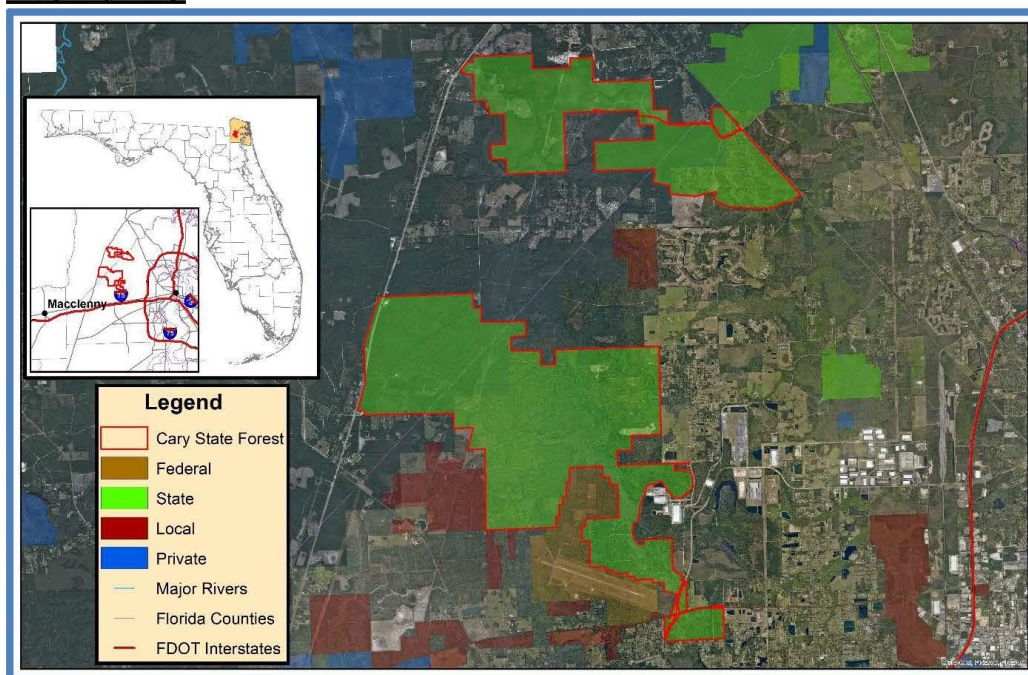
Review Team Members (voting)

- John McKenzie, DRP District
- Local Gov't., None
- Rebecca Doane, FWC
- Caleb Johnson, DEP District
- Shelly Wayte, FFS
- Chris Kinslow, SJRWMD
- George Barbour, Conservation Org.
- Private Land Manager, None

Non-Team Members (attending)

- Keith Singleton, DEP/DSL

Property Map



Overview of Land Management Review Results

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

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	4.81	4.80
Prescribed Fire / Habitat Restoration	4.65	4.56
Hydrology	4.31	4.19
Imperiled Species	4.96	4.48
Exotic / Invasive Species	4.44	4.33
Cultural Resources	4.42	4.42
Public Access / Education / Law Enforcement	4.69	4.58
Infrastructure / Equipment / Staffing	4.28	N/A
Color Code (See Appendix A for detail)		
Excellent	Above Average	Below Average
		Poor

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) staff for expanding recreational opportunities on both the Cary and Thomas Creek tract. (6+, 0-)
2. The team commends staff for ongoing mechanical efforts to mitigate associated concerns with prescription burning along the smoke sensitive corridors. (6+, 0-)

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 parking area on Thomas Road be closed due to low usage and damage to natural resources. (6+, 0-)

Managing Agency Response: *The parking area on Acree Road will be closed to vehicular traffic. The gate and road will be opened during hunting season to allow limited vehicular traffic for quota hunters only. The Florida Forest Service will retain the option of re-opening this parking site in the future as population growth in surrounding areas increase demand for appropriate, non-destructive recreational opportunities.*

Field Review Details

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, basin swamp, wet flatwoods, sandhill, bottomland forest, baygall, floodplain swamp, depression marsh, and basin marsh.
2. Listed species, listed animal and plant species in general, and specifically night flowering petunia, and many flowered orchid.
3. Natural resources survey/monitoring resources; specifically 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. Prescribed fire, specifically area being burned, frequency and quality.
6. Restoration, specifically degraded sandhill, basin swamp.
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 and culverts, and ditches.
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, specifically expanding development, and inholdings and additions.
14. Public access, specifically parking, and roads.
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, sanitary facilities, buildings, and equipment.

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:

The review team scores did not identify items requiring improvement actions in the field.

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	5	5	4	5	4	4			4.50
Basin swamp	I.A.2	4	5	5	5	5	4			4.67
Wet flatwoods	I.A.3	4	5	4	5	4	3			4.17
Sandhill	I.A.4	5	5	4	5	4	5			4.67
Bottomland forest	I.A.5	5	5	5	5	5	4			4.83
Dome swamp	I.A.6	3	4	3	5	4	4			3.83
Baygall	I.A.7	4	5	5	5	5	5			4.83
Floodplain swamp	I.A.8	5	5	5	5	5	5			5.00
Depression marsh	I.A.9	4	5	5	5	5	5			4.83
Basin marsh	I.A.10	4	5	5	5	5	5			4.83
Blackwater stream	I.A.11	5	3	5	5	x	5			4.60
Natural Communities Average Score										4.62
Listed species: Protection & Preservation (I.B)										
Animals	I.B.1	5	5	5	5	4	5			4.83
Plants	I.B.2	5		5	5	5	5			5.00
Night Flowering Petunia	I.B.2.a	5	5	5	5	5	5			5.00
Many Flowered Orchid	I.B.2.b	5	5	5	5	5	5			5.00
Listed Species Average Score										4.96
Natural Resources Survey/Management Resources (I.C)										
Listed species or their habitat monitoring	I.C.2	5	5	5	5	5	4			4.83
Other non-game species or their habitat monitoring	I.C.3	4	5	5	5	4	4			4.50
Fire effects monitoring	I.C.4	5	5	5	5	4	5			4.83
Other habitat management effects monitoring	I.C.5	4	5	5	5	5	4			4.67
Invasive species survey / monitoring	I.C.6	4	5	5	5	5	4			4.67
Cultural Resources (Archeological & Historic sites) (II.A, II.B)										
Cultural Res. Survey	II.A	5	5	4	5	3	4			4.33
Protection and preservation	II.B	5	5	5	5	3	4			4.50
Cultural Resources Average Score										4.42
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	5	5	4	5	4	4			4.50
Frequency	III.A.2	5	5	5	5	4	4			4.67
Quality	III.A.3	5	5	5	5	5	5			5.00
Resource Management, Prescribed Fire Average Score										4.72
Restoration (III.B)										
Degraded Sandhill	III.B.1	5	5	5	5	4	5			4.83
Basin Swamp	III.B.2	3	5	5	5	4	4			4.33
Restoration Average Score										4.58
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	5	5	5			5.00
Reforestation/Afforestation	III.C.3	5	5	5	5	5	5			5.00

Site Preparation	III.C.4	5	5	5	5	5	5			5.00
Forest Management Average Score										5.00
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.D.1.a	4	5	5	5	4	3			4.33
prevention - animals	III.D.1.b	4	5	5	5	4	3			4.33
prevention - pests/pathogens	III.D.1.c	4	5	5	5	5	3			4.50
Control										
control - plants	III.D.2.a	4	5	5	5	4	4			4.50
control - animals	III.D.2.b	4	5	5	5	4	4			4.50
control - pests/pathogens	III.D.2.c	3	5	5	5	5	4			4.50
Non-Native, Invasive & Problem Species Average Score										4.44
Hydrologic/Geologic function Hydro-Alteration (III.E.1)										
Roads/culverts	III.E.1.a	5	5	4	5	5	4			4.67
Ditches	III.E.1.b	4	5	4	5	5	3			4.33
Hydrologic/Geologic function, Hydro-Alteration Average Score										4.50
Ground Water Monitoring (III.E.2)										
Ground water quality	III.E.2.a	4	5	5	5	4	3			4.33
Ground water quantity	III.E.2.b	4	5	5	5	4	3			4.33
Ground Water Monitoring Average Score										4.33
Surface Water Monitoring (III.E.3)										
Surface water quality	III.E.3.a	4	4	5	5	4	3			4.17
Surface water quantity	III.F.3.b	3	4	5	5	4	3			4.00
Surface Water Monitoring Average Score										4.08
Resource Protection (III.F)										
Boundary survey	III.F.1	5	5	5	5	5	4			4.83
Gates & fencing	III.F.2	4	5	5	5	5	4			4.67
Signage	III.F.3	5	5	5	5	5	4			4.83
Law enforcement presence	III.F.4	5	5	5	5	5	3			4.67
Resource Protection Average Score										4.75
Adjacent Property Concerns (III.G)										
Land Use										
Expanding development	III.G.1.a	5	5	5	5	5	3			4.67
Inholdings/additions	III.G.2	5	5	5	5	5	3			4.67
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	4	5	5	5	5	4			4.67
Parking	IV.1.b	5	5	5	5	5	4			4.83
Environmental Education & Outreach										
Wildlife	IV.2.a	4	5	5	5	4	4			4.50
Invasive Species	IV.2.b	4	5	5	5	4	4			4.50
Habitat Management Activities	IV.2.c	5	5	5	5	5	4			4.83
Interpretive facilities and signs	IV.3	4	5	5	5	4	4			4.50
Recreational Opportunities	IV.4	5	5	5	5	4	4			4.67

Management of Visitor Impacts	IV.5	4	5	5	5	4	4			4.50
Public Access & Education Average Score										4.63
Management Resources (V.1, V.2, V.3, V.4)										
Maintenance										
Waste disposal	V.1.a	4	5	5	5	5	3			4.50
Sanitary facilities	V.1.b	5	5	5	5	5	3			4.67
Infrastructure										
Buildings	V.2.a	4	5	5	5	5	4			4.67
Equipment	V.2.b	5	5	5	5	5	4			4.83
Staff	V.3	4	5	4	3	3	3			3.67
Funding	V.4	2	5	4	3	3	3			3.33
Management Resources Average Score										4.28
Color Code:		Excellent	Above Average	Below Average	Poor		See Appendix A for detail			
			Missing Vote	Insufficient Information						

Land Management Plan Review Details

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 blackwater stream, received a below average score. 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: The Florida Natural Areas Inventory (FNAI) completed a natural community mapping and description project on Cary State Forest in 2010 and 2019. Blackwater stream was not included as a recognized and delineated FNAI community type in the final report of natural community descriptions on CSF in either survey so it was not included in the Cary State Forest 10 yr Land Management Plan.

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	5	5	5	5	4			4.83

Basin swamp	I.A.2	5	5	5	5	5	4			4.83
Wet flatwoods	I.A.3	5	5	5	5	5	3			4.67
Sandhill	I.A.4	5	5	5	5	5	4			4.83
Bottomland forest	I.A.5	5	5	5	5	5	4			4.83
Dome swamp	I.A.6	5	5	5	5	5	4			4.83
Baygall	I.A.7	5	5	5	5	5	4			4.83
Floodplain swamp	I.A.8	5	5	5	5	5	4			4.83
Depression marsh	I.A.9	5	5	5	5	5	4			4.83
Basin marsh	I.A.10	5	5	5	5	5	4			4.83
Blackwater stream	I.A.11	1	3	1	5	1	4			2.50
Natural Communities Average Score										4.61
Listed species: Protection & Preservation (I.B)										
Animals	I.B.1	4	5	5	5	4	4			4.50
Plants	I.B.2	4		5	5	4	4			4.40
Night Flowering Petunia	I.B.2.a	4	5	5	5	4	4			4.50
Many Flowered Orchid	I.B.2.b	4	5	5	5	4	4			4.50
Listed Species Average Score										4.48
Natural Resources Survey/Management Resources (I.C)										
Listed species or their habitat monitoring	I.C.2	4	5	5	5	4	4			4.50
Other non-game species or their habitat monitoring	I.C.3	4	5	5	5	4	4			4.50
Fire effects monitoring	I.C.4	4	5	5	5	4	4			4.50
Other habitat management effects monitoring	I.C.5	4	5	5	5	4	4			4.50
Invasive species survey / monitoring	I.C.6	4	5	5	5	4	4			4.50
Cultural Resources (Archeological & Historic sites) (II.A, II.B)										
Cultural Res. Survey	II.A	5	5	5	4	3	4			4.33
Protection and preservation	II.B	5	5	5	5	3	4			4.50
Cultural Resources Average Score										4.42
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	5	5	4	4	5	4			4.50
Frequency	III.A.2	4	5	5	5	5	4			4.67
Quality	III.A.3	4	5	5	5	5	4			4.67
Resource Management, Prescribed Fire Average Score										4.61
Restoration (III.B)										
Degraded Sandhill	III.B.1	4	5	5	5	4	4			4.50
Basin Swamp	III.B.2	4	5	5	5	4	4			4.50
Restoration Average Score										4.50
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	5	5	5			5.00
Reforestation/Afforestation	III.C.3	5	5	5	5	5	5			5.00
Site Preparation	III.C.4	5	5	5	5	5	5			5.00
Forest Management Average Score										5.00
Non-Native, Invasive & Problem Species (III.D)										
Prevention										

prevention - plants	III.D.1.a	4	5	5	5	4	3			4.33
prevention - animals	III.D.1.b	4	5	5	5	4	3			4.33
prevention - pests/pathogens	III.D.1.c	3	5	5	5	5	3			4.33
Control										
control - plants	III.D.2.a	4	5	5	5	4	3			4.33
control - animals	III.D.2.b	4	5	5	5	4	3			4.33
control - pests/pathogens	III.D.2.c	3	5	5	5	5	3			4.33
Non-Native, Invasive & Problem Species Average Score										4.33
Hydrologic/Geologic function, Hydro-Alteration (III.E.1)										
Roads/culverts	III.E.1.a	4	5	4	5	5	4			4.50
Ditches	III.E.1.b	4	5	4	5	5	3			4.33
Hydrologic/Geologic function, Hydro-Alteration Average Score										4.42
Ground Water Monitoring (III.E.2)										
Ground water quality	III.E.2.a	4	5	4	5	4	3			4.17
Ground water quantity	III.E.2.b	4	5	4	5	4	3			4.17
Ground Water Monitoring Average Score										4.17
Surface Water Monitoring (III.E.3)										
Surface water quality	III.E.3.a	3	5	4	5	4	3			4.00
Surface water quantity	III.E.3.b	3	5	4	5	4	3			4.00
Surface Water Monitoring Average Score										4.00
Resource Protection (III.F)										
Boundary survey	III.F.1	4	5	5	5	5	4			4.67
Gates & fencing	III.F.2	4	5	5	5	5	4			4.67
Signage	III.F.3	4	5	5	5	5	4			4.67
Law enforcement presence	III.F.4	4	5	5	5	5	3			4.50
Resource Protection Average Score										4.63
Adjacent Property Concerns (III.G)										
Land Use										
Expanding development	III.G.1.a	4	5	5	5	4	3			4.33
Inholdings/additions	III.G.2	4	5	5	5	4	3			4.33
Discussion of Potential Surplus Land Determination	III.G.3	4	5	5	5	4	3			4.33
Surplus Lands Identified?	III.G.4	4	5	5	5	4	3			4.33
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	4	5	5	5	5	4			4.67
Parking	IV.1.b	4	5	5	5	5	4			4.67
Environmental Education & Outreach										
Wildlife	IV.2.a	4	5	5	5	4	4			4.50
Invasive Species	IV.2.b	4	5	5	5	4	4			4.50
Habitat Management Activities	IV.2.c	4	5	5	5	4	4			4.50
Interpretive facilities and signs	IV.3	4	5	5	5	4	4			4.50
Recreational Opportunities	IV.4	4	5	4	5	5	4			4.50
Management of Visitor Impacts	IV.5	4	5	5	5	4	4			4.50
Public Access & Education Average Score										4.54

Managed Area Uses (VI.A, VI.B)										
Existing Uses										
Hunting	VI.A.1	5	5	5	5	5	3			4.67
Equestrian	VI.A.2	4	5	5	5	5	3			4.50
Camping	VI.A.3	5	5	5	5	5	3			4.67
Hiking	VI.A.4	4	5	5	5	4	3			4.33
Biking	VI.A.5	4	5	5	5	4	3			4.33
Nature study	VI.A.6	4	5	5	5	4	3			4.33
Wildlife observation	VI.A.7	5	5	5	4	4	3			4.33
Picnicking	VI.A.8	5	5	5	5	5	3			4.67
Geocaching	VI.A.9	4	5	5	5	5	3			4.50
Proposed Uses										
On-site housing	VI.B.1	4	5	5	5	5	3			4.50

Color Code:

Excellent

Above
Average

Below
Average

Poor

Missing
Vote

Insufficient
Information

See
Appendix A
for detail

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 S

Compliance with Local Comprehensive Plan(s)

City of Jacksonville
and
Nassau County



ONE CITY. ONE
JACKSONVILLE.

City of Jacksonville, Florida

Donna Deegan, Mayor

City Hall at St. James
117 W. Duval St.
Jacksonville, FL 32202
(904) 630-CITY
www.coj.net

February 16, 2024

Emily Marsh
Florida Department of Agriculture and Consumer Services

RE: Consistency of Cary State Forest with the City of Jacksonville's 2045 Comprehensive Plan

Ms. Marsh,

This letter is in response to your request for confirmation of the consistency of Cary State Forest with the City of Jacksonville's 2045 Comprehensive Plan.

Cary State Forest, located in western Duval County and southwestern Nassau County, contains 13,385 acres of scenic mature flatwoods, sandhills, and basin marsh communities. It was also established as Florida's second state forest in 1937. The main goals of this ten year management plan are:

1. Sustainable Forest Management
2. Public Access and Recreation Opportunities
3. Habitat Restoration, Improvement, and Fire Management
4. Listed and Rare Species Habitat Maintenance, Enhancement, Restoration, or Population Restoration
5. Invasive Species Management and Control
6. Cultural and Historical Resource Management
7. Hydrological Preservation and Restoration
8. Capital Facilities and Infrastructure

The plan proposes the purchase of additional land to facilitate restoration, protection, maintenance, and management of natural resources. No alternate uses of this forest are being considered and the adjacent residential and commercial uses will potentially restrict prescribed burning due to smoke management concerns. With this, the 10 year plan is compliant with the 2045 Comprehensive plan.

After reviewing the proposed improvements, we find that that no further action from the Community Planning Division is necessary.

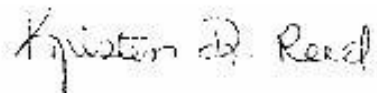
Since the City of Jacksonville's Park Department will continue to utilize the property as a state forest, the proposed use of state lands is consistent with the following goals, objectives and policies of the 2045 Comprehensive Plan, Recreation and Open Space Element:

GOAL 1	To provide a variety of recreational facilities, both active and passive, in order to achieve and maintain adopted standards for levels of service.
Objective 1.1	The City shall provide a variety of recreational facilities in the recreation and park system
Objective 1.2	The City shall ensure that recreation facilities are added to keep up with new growth and development.
GOAL 3	To use open space and recreational facilities as a key element in the City's planning strategy to enhance the natural environment and to conserve important natural resources.
Policy 3.1.2	The Recreation and Community Services Department, along with State and Federal agency partnerships will manage those portions of park properties containing important natural resources for long-term conservation. Opportunities for public access to the resource will continue to be developed in a manner that is consistent with the conservation of the resource.
GOAL 7	The City shall protect and utilize its cultural and historical resources.
Objective 7.1	The City shall protect historic and cultural resources from various types of incompatible development by preservation, conservation, restoration and inclusion in the City's recreational/open space inventory.
Objective 8.4	The City shall protect the naturally beautiful environment and prevent unwarranted abuse of its resources.
Policy 8.4.1	The City's Land Development Regulations shall require the conservation of natural areas having special characteristics, such as major waterways, wildlife habitats, woodlands, and beaches. The regulations shall be consistent with the Conservation/Coastal Management Element of the Comprehensive Plan.

Based on the information noted above, the Planning and Development Department finds that the continued use of state lands known as Cary State Forest is consistent with the 2045 Comprehensive Plan.

Please let me know if I may be of further assistance.

Sincerely,

A handwritten signature in black ink that reads "Kristen D. Reed". The signature is written in a cursive, flowing style.

Kristen D. Reed, AICP
Chief, Community Planning Division
Planning and Development Department



PLANNING DEPARTMENT
NASSAU COUNTY, FLORIDA

Elizabeth Backe, AICP
Planning Director
96161 Nassau Place
Yulee, FL 32097
(904) 530-6320

May 13, 2024

Emily Marsh
State Lands Management Planner
Florida Forest Service
3125 Conner Boulevard
Tallahassee, FL 32399
(850) 681-5800

via email: Emily.Marsh@fdacs.gov

RE: Cary State Forest Ten-Year Land Management Plan and Exhibits Review for Consistency with Nassau County's Comprehensive Plan

Dear Ms. Marsh,

The Florida Forest Service requested that the Nassau County Planning Department review the 2024 Ten-Year Land Management Plan and Exhibits for Cary State Forest for compliance with the policies of our local Comprehensive Plan. This request was made to both the Duval and Nassau County Planning Departments.

After review, the land management plan was found to be in compliance with the Nassau County 2030 Comprehensive Plan. More specifically, the existing uses and potential future developments in the land management plan and exhibits are not in conflict with the Comprehensive Plan policies and goals. The multiple use management strategy of Cary State Forest provides sustainable forest management, outdoor recreation opportunities, and protection of natural and cultural resources. Actions which improve quality of life of County residents and protect native ecosystems for future generations are directly in line with the goals of the Nassau County 2030 Comprehensive Plan.

Nassau County Planning Department staff have no further comments or questions regarding this review.

Sincerely,

Adam Olsen, Planner II

Exhibit T

State Forest Management Plan Advisory Group Summary

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

January 11, 2024

10:30 A.M.

Meeting Minutes

MPAG Members Present:

- | | |
|-----------------------------------|---|
| • Andy Lamborn | Jacksonville District Manager, Florida Forest Service (FFS) |
| • Eric Dennis | Florida Fish and Wildlife Commission |
| • Chris Kinslow | St. Johns River Water Management District |
| • George Barbour | Florida Native Plant Society |
| • Jordan Huntley | Local Property Owner |
| • Candice Leek | Local Property Owner |
| • Commissioner Allyson McCullough | Nassau County Commissioner |

MPAG Members Not Present:

- | | |
|------------------------------|--|
| • Ray Deacon, Jr. | Duval Soil and Water Conservation District |
| • Representative Randy White | Jacksonville City Council |

FFS Staff:

- | | |
|-------------------|---|
| • Alan Davis | Land Planning Coordinator |
| • Brian Camposano | Forest Management Assistant Bureau Chief |
| • Sam Negaran | Jacksonville District Forestry Resource Administrator |
| • Emily Marsh | Land Management Planner |

Guests:

- Faith Barbour

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

- Land Planning Coordinator, Alan Davis (FFS) opened the meeting by introducing himself and explained the purpose and statutory framework for the Cary 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 Cary State Forest (CSF) 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 local newspapers Fernandina Beach News on December 20, 2023 and the Florida Times Union on December 15, 2023, as well as posted to the Florida Administrative Register, FFS webpage, and at the kiosks in the Jacksonville District. The meetings were announced at the Nassau County Board of County Commissioners meeting on December 11, 2023 and at the Jacksonville City Council meeting on November 28, 2023. 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. Andy Lamborn 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. One (1) member of the public was present.
- Mr. Davis then introduced Forestry Resource Administrator Sam Negaran who presented a PowerPoint presentation of the 10-Year Plan. Mr. Dennis pointed out the Branan Field Wildlife and Environmental Area during the presentation. Mr. Davis asked if there were any clarifying questions regarding the presentation. Mr. Kinslow stated that he liked the pitcher plant picture.
- Commissioner McCullough asked, in reference to the Thomas Creek Tributary, if clearing out portions of Thomas Creek on Ratliff and on the back side, if would affect water flow or change the trajectory of the path of the waterway. Mr. Negaran stated that Thomas Creek is one of the main tributaries that comes up from the north of South Branch and that it is yet to be determined if work would alter the tributary in any way, such as unplanned back up of water. Any work done upstream or downstream can have an impact but is not causing any current impacts at this time.
- Mr. Davis asked if there are any further questions.
- Mr. Davis then thanked everyone for participating and adjourned the public hearing portion of the meetings.

Public Meeting End Time: 11:00 A.M.

Management Plan Advisory Group Workshop Meeting
Cary State Forest
10-Year Land Management Plan
January 11, 2024
1:00 P.M.
Meeting Minutes

MPAG Members Present:

- | | |
|-----------------------------------|---|
| • Andy Lamborn | Jacksonville District Manager, Florida Forest Service (FFS) |
| • Eric Dennis | Florida Fish and Wildlife Commission |
| • Chris Kinslow | St. Johns River Water Management District |
| • George Barbour | Florida Native Plant Society |
| • Jordan Huntley | Local Property Owner |
| • Candice Leek | Local Property Owner |
| • Commissioner Allyson McCullough | Nassau County Commissioner |

MPAG Members Not Present:

- | | |
|------------------------------|--|
| • Ray Deacon, Jr. | Duval Soil and Water Conservation District |
| • Representative Randy White | Jacksonville City Council |

FFS Staff:

- | | |
|-------------------|---|
| • Alan Davis | Land Planning Coordinator |
| • Brian Camposano | Forest Management Assistant Bureau Chief |
| • Sam Negaran | Jacksonville District Forestry Resource Administrator |
| • Emily Marsh | Land Management Planner |

Guests:

- None

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

- Land Planning Coordinator, Alan Davis introduced himself and opened the CSF MPAG Workshop by conducting MPAG member attendance. 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. Forest Resource Administrator Sam Negaran 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. None followed.
- Mr. Davis began a page-by-page review of the draft plan and exhibits to address MPAG members' questions, comments and suggested changes.
- Page 1: Mr. Kinslow requested the lease numbers to be checked as they do not match the rest of the document. The rest of the document has the correct lease numbers. Mr. Camposano stated his appreciation for noticing the discrepancy. Mr. Kinslow stated that the 90-acre parcel that is split is actually 130 acres because it is 130 acres that the district manages. 90 acres is what FFS manages on the west side of the railroad. Mr. Camposano stated that there have been previous discussions between FFS and the Water Management District to get the

acreage correct. Mr. Camposano asked for the acreage in ownership. Mr. Kinslow stated that WMD manages 130 acres from Lease #4609; which was worked out several months prior with a management agreement. Mr. Davis asked if these were two separate parcels on the northeast side of the forest, which Mr. Kinslow confirmed. Mr. Kinslow stated that it was finalized on April 5, 2023. Mr. Lamborn stated it was while they were finalizing the draft plan they decided to formalize the acreage. Mr. Davis stated that these parcels and acreage are still within the lease. FFS did not release the parcel, rather, WMD manages it for FFS due more of the land being adjacent to WMD as opposed to Cary State Forest. Mr. Camposano asked if there is another piece on the other side of the railroad tracks. Mr. Kinslow stated that is the 130-acre parcel. Mr. Huntley inquired about the term of the lease. Mr. Kinslow stated that the lease agreement terminates in 2059. Mr. Camposano stated that the lease is a 50-year agreement. Mr. Davis stated that all of FFS's leases are 50-year leases.

- Page 4: Mr. Kinslow inquired if an apiary site is classified by an individual hive or by a group of hives. Mr. Negaran stated that they are classified by groups of hives, and that each apiary site can have up to 50 hives, which would equate to 126 sites over 10 years. There are really 12 sites across CSF over 10 years. Mr. Kinslow stated that he wanted to ensure that terminology used within his district was similar to what FFS uses. Mr. Kinslow then asked if the sites are moving around. Mr. Negaran stated that they do not move. They are set sites across the forest that FFS staff have identified. FFS charges a fee and as long as the apiarist wants to keep those sites each year, then each year FFS reevaluates if they need to be moved due to it being too close to a recreation site or for some other reasons. For the most part, where FFS have established the sites, they have stayed there. Mr. Dennis asked if the same individual is awarded the site or if it could be multiple individuals awarded that site based on seasonality. Mr. Negaran stated that the individual has the site for 12 months and they can renew every year for an additional 12 months. However, if somebody else wants to have an apiary site on Cary, FFS evaluates that. For the sites that have been identified, if an apiarist wants to give them up, then procedure is for FFS to notify other apiary site holders or any member of the public we might know that would like an apiary site and then there's a drawing to determine who gets that site. The winner would have to abide by FFS rules and policies for maintaining the site. Mr. Dennis asked if we are keeping it at 12 sites unless more interest is apparent. Mr. Lamborn stated that you would be limited due to distance. Mr. Negaran supplemented by stating distance between other sites, distance from boundary and distance from recreational areas and trails. Mr. Camposano added that this information is listed in the BMPs for bee apiary leasing. Mr. Negaran stated that they have made some minor accommodations in the past, which was to prevent one person's colony from taking over the others. However, if it is the same beekeeper, then they don't care. FFS has spaced these sites out in a way in which there is sizeable distance between colonies. However, distance within a colony could be closer than the rules.
- Page 5: Commissioner McCullough stated that a community meeting was held 2 months ago to discuss the ballpark. One of the things that the committee from the ballpark brought up was if there is more opportunity for more recreational ballpark access to extend the ballpark based on Goal 2 in the draft plan or if that would be considered more permanent facilities. Mr. Davis stated that this is a ground disturbance activity. Every time you do a ground disturbance activity, it is a different situation. Since these are conservation lands, they are being managed by a conservation lease under statutes, so you are limited. However, FFS has done exchanges throughout the state with different entities. There are ways around it but at the same time, the state has to get a net conservation benefit; and they have a lot of different thresholds, whether it be value or acreage. It is dependent on who gets what. Mr. Camposano stated that the ballpark would not be part of the state forest because that is not a compatible recreation type for a forest. It would have to be an exchange of land. Mr. Davis added that with the state, it is typically more than a 2:1 ratio, so if you are getting 5 acres, the state must get a minimum of 10 acres, and then the values have to match at least in a 1:1 ration within the exchange. Basically, you can't say that you have 5 acres of uplands and the county has 10 acres of wetlands and you say here is your 2:1 ratio and here is your land, so the values do not match. Commissioner McCullough stated that she wanted to represent her public and to have this conversation on their behalf. Mr. Davis stated that if it makes sense great, but we have to abide by all the state statutes and policies. Commissioner McCullough stated that timelines play a significant role as well and thanked Mr. Davis for the clarification.

- Page 6: Mr. Dennis inquired about Goal 3, objective 1 and if FFS has goals for growing season and dormant season burns since FFS did total acreage for the year. Mr. Dennis expressed concern about the possibility of not maximizing benefit to the forest. Mr. Lamborn stated that they set goals every year, though the goals are moving targets based on what was burned in the past and fuel loads could have got out of rotation. When something gets out of rotation, it can cause a previously planned burn to be rescheduled for the dormant season to “catch up”. We are always going to strive to achieve more and more growing season burns than what is reported in the plan. The plan is written in a way to prevent painting ourselves into a corner. Mr. Dennis stated that he would like to have as equal of a ratio as possible between growing season and dormant season burns depending on conditions. Mr. Negaran stated that each year they develop their 5-Year plans, which one of them is the Prescribed Fire Plan and we definitely break them out between growing season and dormant season burns. As Mr. Lamborn stated, the goals are a moving target. Mr. Davis stated that the moving target is different every year. This can also affect the Land Management Review if we put in a specific number and do not meet said number, thus receiving a low score for something out of our control. Mr. Camposano stated that the language can be written better because the intent is how many acres we strive to burn annually. The reason the seasons are separated out is because we recognize there are different seasons, but we are trying to burn year-round. We do not want to pass up a good burn day just because something is scheduled to be in a growing season burn or vice-versa. Mr. Negaran said that there are a lot of factors. As Mr. Lamborn stated earlier, we are the lead wildfire fighting agency in the state. On days when it may be somewhat marginal, we may authorize a burn for Camp Blanding, but we won’t authorize a burn for ourselves because we need to be available for fire response so that number of restrictions and other factors go into whether we can burn or not; even on a “good” growing season day, it would potentially prevent us from meeting a goal if we put a number in. Mr. Lamborn stated that there are days he will allow others within the public to burn but not FFS due to weather parameters. That way, if a prescribed burn does escape, FFS resources would be available to tackle it. Mr. Dennis stated that he wouldn’t want burn permits issued on days that are marginal at best, however if there is a large footprint, he understands. Mr. Negaran stated that based on the numbers reflected in the plan, we’re hoping to turn over all pyrogenic communities about every 5 to 6 years, which is captured within the fire return interval on each of our burn units. A GIS Database helps us track these intervals. We are working on turning over the sandhill communities every 1 to 3 years, depending on when it was last burned and fuel conditions. The goal is to get it in a growing season rotation. We are trying to get mesic flatwoods into growing season burn rotation, but those other factors can get in the way. Mr. Kinslow stated that meeting that fire-return interval is more important than which season the burn is taking place. Mr. Lamborn stated that frequency is more important than which season the burn is scheduled for. Mr. Davis asked if there were any changes to be made. Mr. Dennis stated no changes needed.
- In reference to Objective 6 within Goal 2, Ms. Leek asked if a separate section about volunteers is needed given its reference throughout the plan. Mr. Davis stated that this plan is conceptual, and if someone would like some more information to contact us directly. Mr. Camposano added that language in the plan also directs the reader to the FFS website to learn more information about volunteers and how to become a volunteer. Folks are more likely to see this information on the website rather than in the plan.
- Page 13: Ms. Leek asked how “expense” is defined. Mr. Lamborn stated that the budgets are broken into different types of funding and how it is structured. Mr. Dennis asked if “expense encumbrance” would be redundant. Mr. Camposano agreed that it would be. Mr. Dennis asked if these budgets are set up annually. Mr. Camposano stated that the budget is annual. Stating contractual encumbrance would be appropriate. Mr. Lamborn stated that he thinks no change is needed.
- Page 14: Mr. Kinslow stated that the Surplus Land Assessment does a good job describing what DSL is looking for. The land management plan doesn’t say monitor surplus lands, or how do you make that determination? Mr. Camposano stated that that is a line on the LMR checklist “how did you make a determination?” and what is written in the plan is how we make our determinations. Mr. Davis asked if there were any changes to be made. Mr. Kinslow asked if there was a map in the exhibits. Mr. Davis stated no.
- Page 15: Mr. Davis asked for the lease numbers to be highlighted and if these were the leases in question that needed to be checked. Mr. Kinslow stated that they are correct on this page.

- Page 17: Ms. Leek stated her surprise to learn about a prospective oil well. She asked about the diameter of the hole, how it is capped and if it is periodically inspected. Mr. Negaran stated that he does not even know where they are. Mr. Lamborn guessed the diameter might be 6 inches. Ms. Leek re-stated her curiosity in how they were capped. Mr. Davis requested Mr. Negaran to make a comment confirming whether to leave or take out language. Mr. Camposano stated that this language may have been added in by a person who worked on the plan previously and got lost in translation. We will look into it and make that determination if it needs to be left in or taken out.
- Page 18: Mr. Kinslow stated to add in the management agreement between the management district and the state forest regarding the Red Shirt parcel. Mr. Lamborn stated to put in a comment to clarify recent lease update they did. Mr. Kinslow asked if the master file had been updated. Mr. Negaran stated that Carlton sent it up to DHR and will check to see if DHR updated to the Florida Master File. There is a cemetery near Thomas Creek that had been sent to DHR to update the Master Site File, so they will follow up with DHR.
- Page 23: Mr. Dennis noted that southeastern fox squirrel should be southern fox squirrel. Mr. Kinslow stated that a couple of species' scientific names need to be italicized. Mr. Barbour stated there is a name change to a species but is not a concern at the moment. Mr. Negaran stated that an internal employee spotted some additional species to be added to the table and if it was appropriate to add them in at this time or to provide a comment. Mr. Camposano asked who this information came from. Mr. Negaran stated Mr. Johnson found the species in question. Mr. Camposano stated that the list comes from anyone who has documentation of these sightings (FNAI, FWC, internal FFS personnel, etc.). Mr. Camposano asked if all of the listed species that Mr. Negaran referred to should be added to the table. Mr. Negaran stated that a further review should be done because there appears to be some status discrepancies to ensure they are added correctly. Commissioner McCullough suggested to add a comment requesting for additional review. Mr. Camposano stated that we can analyze further and add to the table, where appropriate. Mr. Lamborn asked Sam if Mr. Johnson recently brought this to his attention. Mr. Negaran stated yes. Ms. Marsh requested Mr. Negaran to send her the list of species so that she can add the appropriate species to the table.
- Page 25: Mr. Dennis stated that eastern fox squirrel was reclassified and needs to be changed to southern fox squirrel instead. He also stated that leaving the subspecies the way it is would be ok.
- Page 26: Mr. Dennis stated for FFS to ensure the list of species provided by FNAI matches the table of species within the draft plan. Mr. Davis asked if there were any additional questions or comments. Mr. Dennis then asked why the gopher tortoise language was added into the draft. Mr. Camposano stated that this language is a new statutory requirement as of two (2) years ago. He then stated that land managers have to assess every property over 40 acres for its feasibility for gopher tortoise recipient sites, and that all plans moving forward will have that language inserted. Mr. Kinslow confirmed this new statute went into effect in July 2022.
- Page 30: Mr. Dennis stated that there is a small game season that does not require quota permits. He asked if "and/or" language should be inserted for accuracy. Mr. Camposano stated that the language in place is stock and is used in all FFS land management plans. Mr. Dennis stressed that he doesn't want people to assume you can only hunt on Cary with a quota permit during the appropriate season because there is a non-quota small game hunt season. Mr. Camposano stated that most people looking for this information would be looking on FWC's website versus in the land management plan. Mr. Davis asked if there were any additional questions or comments.
- Mr. Kinslow stated that the recreation section was written very well. FFS did a great job balancing natural resource-based recreation with natural resource management. He then inquired if FFS was thinking of expanding or adding more campsites. Commissioner McCullough inquired the number of campsites established. Mr. Lamborn and Mr. Negaran both stated six (6) campsites. Mr. Kinslow suggested a zoomed in view of the campground on the Facilities and Improvements map in the exhibits. Mr. Davis mentioned that one can see a zoomed in view via the state forest's brochure. Mr. Negaran noted that the public can see the campground on an interactive map online as well as through Reserve America. Commissioner McCullough stated she thought there were more campsites due to how the road loops around the campground. Mr. Lamborn stated that they received a lot of positive feedback from the public on how the campground is laid out. The layout is intentional. Commissioner McCullough stated that FFS could add more sites. Mr. Lamborn

stated that he does not plan on adding more sites due to expense and staffing concerns. Mr. Negaran echoed Mr. Lamborn's sentiment in stating that they need more resources if they were to have more campsites. Mr. Lamborn then stated he wants to maintain his recreation to the highest standard possible. Therefore, he would rather have fewer sites with them being very well maintained versus having more sites and not as well maintained.

- Page 33: Commissioner McCullough asked if FFS closes hiking trails during the hunting seasons. Mr. Lamborn stated no. Mr. Dennis asked if language regarding kiosks should be inserted. Mr. Lamborn expressed language is not necessary because if the public looks at the kiosks, they will be able to see the hunting dates and information. Mr. Dennis then stated he is trying to avoid potential hunter-recreation user conflicts.
- Page 37: Mr. Huntley stated that water resources will be affected. He suggested language that would change the wording to read in a way that water resources will not be affected, such as through herbicide application. Mr. Camposano stated that FFS uses herbicides that are appropriate for plants on or near water resources and that chemicals are applied as directed by the label. Mr. Dennis agrees with Mr. Camposano's explanation. Mr. Huntley is satisfied with the discussion and does not suggest any changes.
- Page 39: Mr. Camposano stated that treatment strategy for Chinese tallows should read as "single and broadcast". The same change is also needed for Mimosa. Mr. Negaran stated it could be single and broadcast depending on the nature of infestation. Mr. Camposano then asked how staff are treating it because he has treated those species with both strategies. Mr. Negaran suggested to change language to read "single and broadcast depending on nature of infestation". Mr. Camposano agreed to language change. Mr. Negaran pointed out that some treatment strategies are mechanical, such as with Tallow treatments. Sometimes it can be plucked by hand. Mr. Camposano agreed. He then stated that FFS staff can fix the table on their own time in the interest on time.
- Page 59: Mr. Kinslow asked about the classifications and the language regarding pine plantation. He stated that language does not paint the real picture of CSF. Mr. Negaran stated that for the purposes of the plan, staff has defaulted to FNAI's classification. Mr. Kinslow acknowledged FNAI's classification. Mr. Camposano stated that FFS is not trying to have managed community types be a slighted category. Managed community types are to be seen as part of a "working-forest" strategy. Improved and Semi-Improved Pasture types are addressed in management plans in a similar format. As soon as FFS does some type of management to the pine plantation, whether it be through burning, thinning, etc., it is then classified as a natural community type rather than a pine plantation under "managed communities".
- Mr. Davis asked if there were any questions or comments on the exhibits. Ms. Leek stated that some of the maps were hard to interpret due to their size. Mr. Davis stated that the document had to be compressed for it to be sent to the MPAG members. Therefore, the maps are smaller than the original pdf. Mr. Davis suggested Ms. Leek to reach out to FFS staff for a copy of the map(s) she is interested in.
- Mr. Davis then asked each MPAG member to comment on the draft plan. Mr. Lamborn thanked everyone for their suggestions and changes. Mr. Dennis stated that the plan looked good except for a couple of minor changes that were found. Mr. Kinslow stated that the plan was well written, and that Cary does a good job in balancing their resources with completing responsibilities. He praised the CSF staff for all their hard work. Mr. Barbour stated that, except for a few minor changes, the plan is great. He noted FNAI's extensive input. Mr. Huntley stated that it was a great meeting and well-thought-out plan. He suggested FFS to start factoring in biodiversity and water quantity into their plans. Ms. Leek thanked FFS for her involvement and conversation. She stated the presentation was very informative and is pleasantly impressed with the plan. The plan reads easily and is understandable. She thanked FFS for answering her questions. She was pleased to see the extent that FFS took to address recreation within the plan. Commissioner McCullough observed the common interest of sustainability. She is grateful for FFS's investment and dedication to conserving and preserving Florida's land.
- 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 7, 2024, public meeting.
- Mr. Davis thanked everyone for their time and participation and adjourned the meeting.

Workshop Meeting End Time: 2:08 P.M.

Exhibit U

State Forest Summary Budget

	CARY 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	\$ 17,029	23.10%	\$ 63,017.26
Exotic Species Control	\$ 1,180	2.97%	\$ 8,104.60
Prescribed Burning	\$ 9,193	3.37%	\$ 9,193.03
Cultural Resources Management	\$ 27	0.07%	\$ 188.23
Timber Management	\$ 3,167	7.98%	\$ 21,755.02
Hydrological Management	\$ 178	0.45%	\$ 1,224.83
	\$ -		\$ -
OTHER RESOURCE MANAGEMENT	\$ 3,283	8.27%	\$ 22,551.56
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	\$ 14,313	36.04%	\$ 98,319.03
Land Management Planning	\$ 729	1.84%	\$ 5,008.43
Land Management Reviews	\$ 123	0.31%	\$ 842.92
Training/Staff Development	\$ 3,852	9.70%	\$ 26,460.65
Vehicle Purchase	\$ 151	0.38%	\$ 1,036.60
Vehicle Operations and Maintenance	\$ 6,973	17.56%	\$ 47,901.95
	\$ -		\$ -
OTHER SUPPORT	\$ 2,485	6.26%	\$ 17,068.48
State Forest Land Acquisition Support			\$ -
Other Support Activities Also Include:	\$ -		\$ -
Computer Maintenance / Radio Maintenance / Technical Support / Management of Apiary and Cattle Leases / State Forest Leases, Lease Amendments, Easements and Other Various Activities	\$ -		\$ -
			\$ -
Capital Improvements	\$ 8,365	21.06%	\$ 57,460.52
New Facility Construction	\$ 1,246	3.14%	\$ 8,557.43
Facility Maintenance	\$ 7,119	17.93%	\$ 48,903.09
			\$ -
Visitor Services/Recreation	\$ 5,072	12.77%	\$ 34,843.49
Information/Education	\$ 1,234	3.11%	\$ 8,475.59
Operations	\$ 3,839	9.67%	\$ 26,367.90
			\$ -
Law Enforcement	\$ -	0.00%	\$ -
Total	\$ 39,711.60	100.00%	\$272,790.17

Exhibit V

Arthropod Control Plans Responses from Nassau and City of Jacksonville



NASSAU COUNTY
BOARD OF COUNTY COMMISSIONERS
96135 Nassau Place, Suite 1
Yulee, Florida 32097

John F. Martin
Aaron C. Bell
Jeff Gray
Thomas R. Ford
Klynt A. Farmer

Dist. No. 1 Fernandina Beach
Dist. No. 2 Amelia Island
Dist. No. 3 Yulee
Dist. No. 4 Bryceville/Hilliard
Dist. No. 5 Callahan/West Yulee

TACO E. POPE, AICP
County Manager

JOHN A. CRAWFORD
Ex-Officio Clerk

DENISE C. MAY
County Attorney

April 25, 2022

Carlton Scott
Florida Department of Agriculture and Consumer Services
carlton.scott@fdacs.gov
Cary State Forest
7465 Pavilion Rd
Bryceville, FL 32009

Re: Cary State Forest Arthropod Control Plan

Dear Mr. Scott

Per your request, please use this letter as verification that Nassau County does not provide mosquito control services. It is our understanding that this would exclude us from needing an Arthropod Control Plan.

Sincerely,

A handwritten signature in red ink, appearing to read "Taco E. Pope", with a long, sweeping horizontal stroke extending to the right.

Taco E. Pope, AICP
Nassau County Manager

TP/kb

(904) 530-6010 or (866)-474-1446

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NIKKI FRIED
COMMISSIONER

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

ARTHROPOD MANAGEMENT PLAN - PUBLIC LANDS

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

Return to:

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

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

Name of Designated Land: Cary State Forest

Is Control Work Necessary: ☒ Yes ☐ No

In the event of a mosquito-borne illness in a populated area adjacent to or near the designated area, JMCD will reach out to land managers to coordinate activities. The same is true for a declared natural disaster such as hurricane that might necessitate emergency control measures.

Location: Cary State Forest, 7465 Pavilion Rd, Bryceville, FL 32009

Land Management Agency: Florida Forest Service, Florida Department of Agriculture and Consumer Services

Are Arthropod Surveillance Activities Necessary? ☒ Yes ☐ No

If "Yes", please explain:

Currently surveillance activities are based in areas that surround Cary State Forest. Floodwater species and potential disease vector mosquitoes are common in the area. If further surveillance within the Cary State Forest, JMCD Entomologist will coordinate with the land manager.

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:

JMCD maintains an extensive monitoring network for surveillance Jew Jersey Light Traps, CDC Light Traps, and a sentinel chicken program. Currently, Cary State Forest is not the location of any of these activities, however it may become necessary to do so in the event that mosquito-borne disease transmission is detected near or traced back to Cary State Forest. Other surveillance techniques that may be used included gravid traps, resting traps, rotator CDC traps, or BG Sentinel traps.

Arthropod Species for Which Control is Proposed: *Anopheles crucians* complex, *An. quadrimaculatus*, *Aedes infirmatus*, *Ae. tormentor*, *Ae. vexans*, *Culex nigripalpus*, *Cx. quinquefasciatus*, *Cx. salinarius*, *Culiseta melanura*, *Psorophora ciliata*, *Ps. columbiae*, *Ps. ferox*

Proposed Larval Control: Any applications within Cary State Forest would be completed by rotary wing aircraft.

Proposed larval monitoring procedure: larval dip counts

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: None

Material to be Used for Larviciding 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: Vectobac, Fourstar Bti-CRG, Altosid SBG, Duplex (Bti and methoprene prepared according to label)

☐ Ground ☒ Aerial

Rate of application: Per label instructions specific to method of application and larvacide

Method of application: machine application applied by air only when required due to a mosquito borne public health threat or declared natural disaster with increased standing water in the immediate area that impedes clean up due to increased mosquito activity.

Proposed Adult Mosquito Control:

Aerial adulticiding (see below) ☒ Yes ☐ No
Ground adulticiding ☐ Yes ☒ No

Aerial adulticiding will only occur under the following conditions and after discussion with the land manager: 1) mosquito borne disease health threat, 2) natural disaster declaration with increased mosquito populations that affect mosquito populations in the area, and/or 3) at the request of the WEA land manager.

Please specify the following for each adulticide:

Chemical or common name: Dibrom (Naled)

Rate of application: 0.5 ounces/acre

Method of application: ULV aerial application using a helicopter.

Proposed Modifications for Public Health Emergency Control:

In the event of a declared public health emergency, control may be performed by the arthropod control agency, as part of a larger treatment plan to safeguard public health. Area land managers will be notified prior to treatment.

Proposed Notification Procedure for Control Activities:

Manager of the area will be notified and consulted by e-mail and/or phone call when treatment of the area will occur. The notice should include a map of the area being treated, the material to be used and the general time of day the treatment will occur. Public notification is posted on the City of Jacksonville website: coj.net/mosquito.

Records:

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

☒ Yes ☐ No Records Location: 1321 Eastport Road, Jacksonville, FL 32218

How long are records maintained:

Minimum of three years per Ch. 5E-13, FAC

Vegetation Modification:

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

Proposed Land Modifications:

Is any land modification, i.e., rotary ditching, proposed: None

Include proposed operational schedules for water fluctuations: None

List any periodic restrictions, as applicable, for example peak fish spawning times: None

Proposed Modification of Aquatic Vegetation: None

Land Manager Comments:

Arthropod Control Agency Comments:

As stated earlier, JMCD will notify designated land manager prior to any applications made with in the designated lands. Any treatment would be in response to a natural disaster or mosquito borne disease that could impact the health of nearby residents or at the request of the land manager. In that case, JMCD would work with the land manager to determine appropriate treatments.

William A
Lamborn

Digitally signed by William A
Lamborn
Date: 2022.05.04 08:33:50 -04'00'

Signature of Lands Manager or Representative

Date



4/25/2022

Signature of Mosquito Control Director / Manager

Date

Exhibit W

Ground Water Monitoring Wells Map



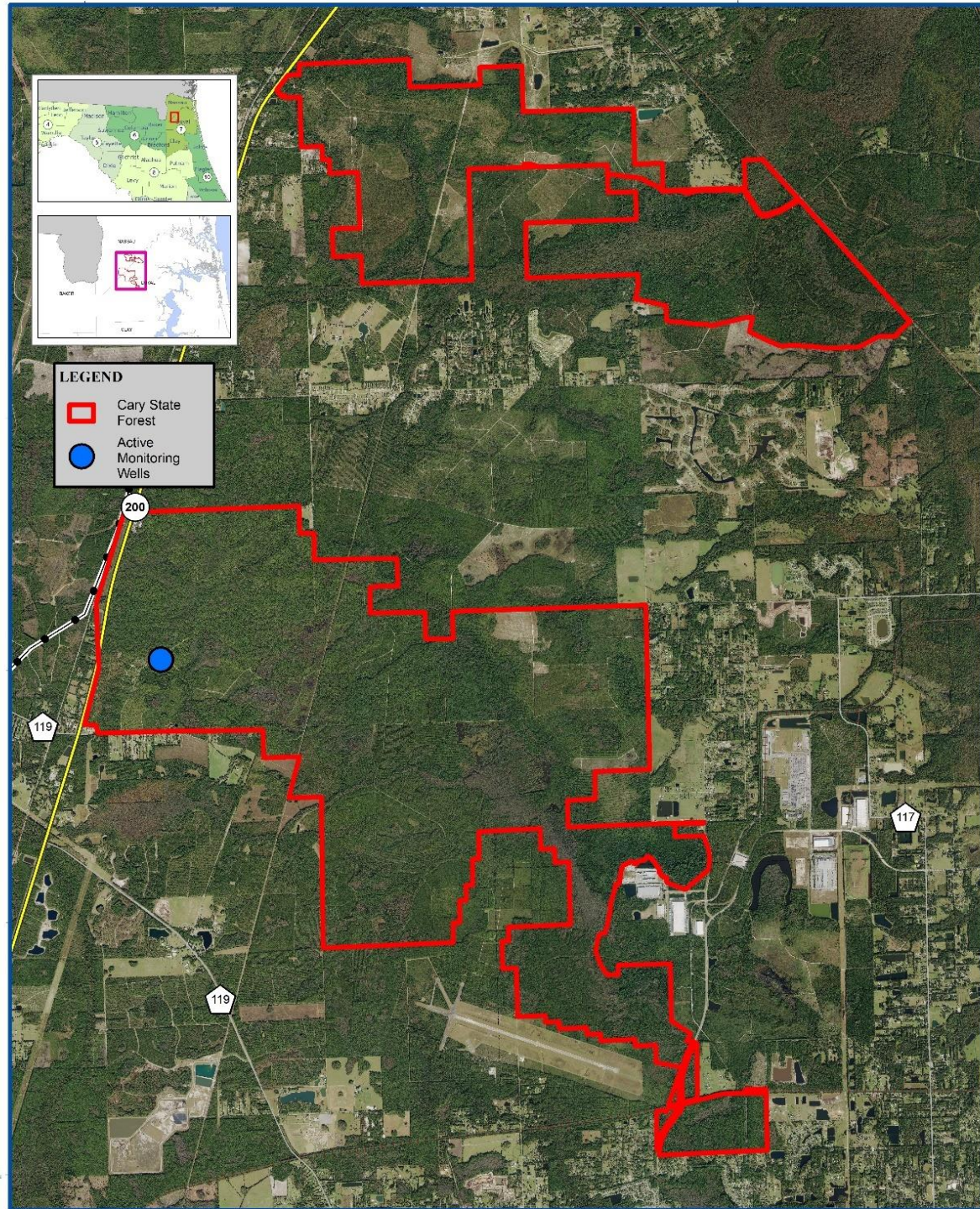
Florida Forest Service

Cary State Forest

Ground Water Monitoring Wells Map

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

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



0.5 0.25 0 0.5 1
Miles



Map Month/Year: March 2022

0 500 1,000 2,000 3,000
Yards

Exhibit X

Borrow Pit Map



Florida Forest Service

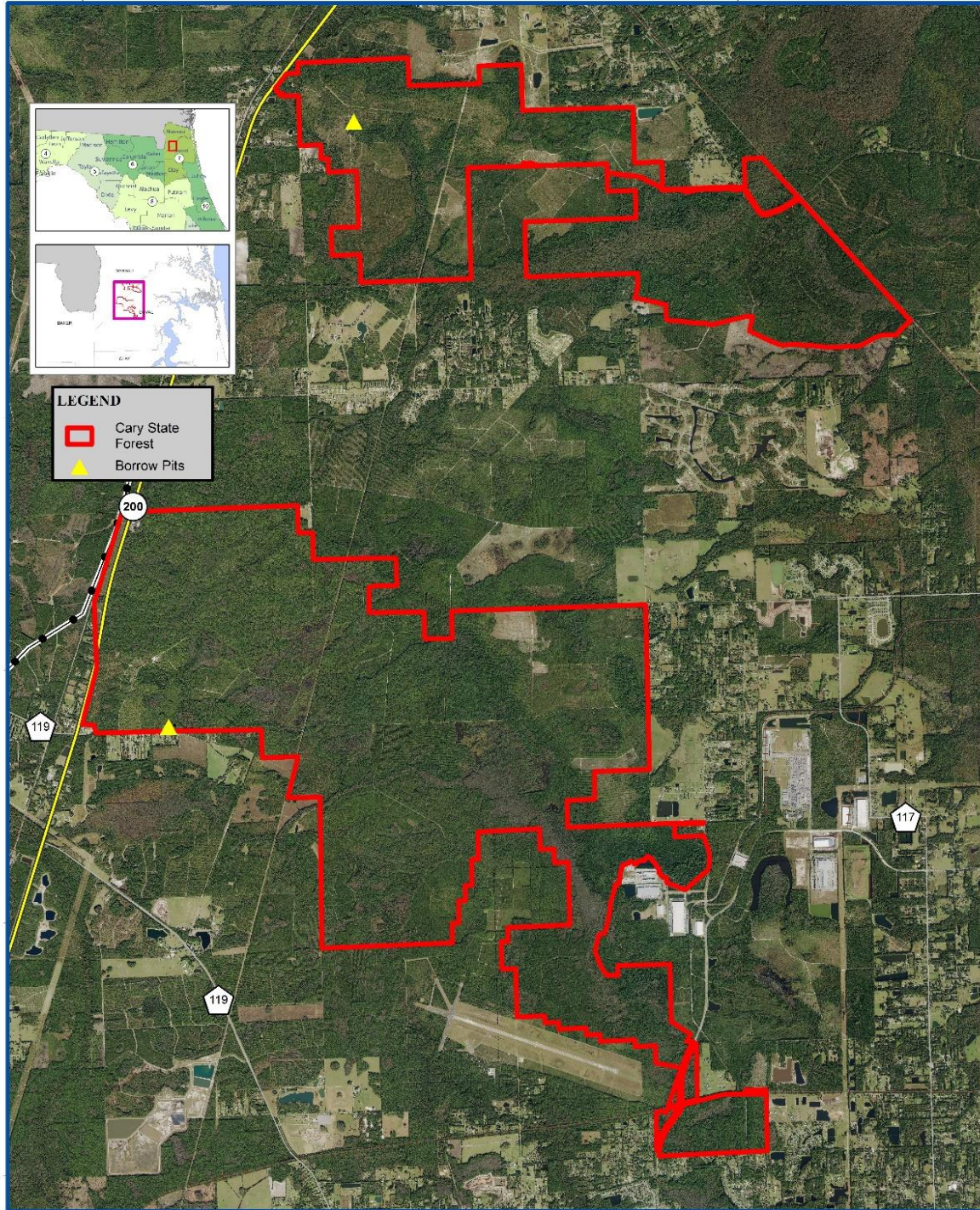
Cary State Forest

Borrow Pit Map

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

DISCLAIMER:
The Florida Forest Service does not warrant the accuracy or completeness of the information contained herein. The Florida Forest Service is not responsible for any errors or omissions, or for any consequences arising from the use of the information contained herein. The Florida Forest Service is not responsible for any damages, including but not limited to, direct, indirect, or consequential damages, arising from the use of the information contained herein.

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LEGEND

- Cary State Forest
- Borrow Pits

0.5 0.25 0 0.5 1
Miles



Map Month/Year: July 2022

1,000 500 0 1,000 2,000 3,000
Yards

Exhibit Y

Florida Forever Project

2021 Florida Forever Five-Year Plan

***Northeast Florida Timberlands and
Watershed Reserve***

Summary of Recommendations and Status
as of
December 2020



Division of State Lands
Florida Department of Environmental Protection



Northeast Florida Timberlands and Watershed Reserve

Partnerships & Regional Incentives Project
Clay, Duval, Nassau

Project-at-a-Glance

Year Added to Priority List	2002
Project Acres	147,431
Acquired Acres	71,004
Cost of Acquired Acres	\$141,546,558
Remaining Project Acres	76,427
2019 Assessed Value of Remaining Acres	\$1,106,101,849

Purpose for State Acquisition

Public acquisition of this project will contribute to the following Florida Forever goals: (1) Increase the protection of Florida's biodiversity at the species, natural community, and landscape levels – known to harbor four FNAI-listed species of vascular flora and four rare animals; (2) Increase the amount of open space available in urban areas – conserve spaces suitable for greenways or outdoor recreation that are compatible with conservation purposes; (3) Increase natural resource-based public recreation and educational opportunities – camping, picnicking, nature appreciation, hiking, and horseback riding are possible; and (4) Protect, restore, and maintain the quality and natural functions of land, water, and wetland systems of the state – 75-80 percent of land is disturbed with restoration a primary objective.

Manager(s)

Florida Forest Service/FFS of the Florida Department of Agriculture and Consumer Services. The City of Jacksonville is manager for the 172-acre Jacksonville-Baldwin Rail Trail.

General Description

This project describes a northeast-southwest diagonal along the west side of Duval County, stretching from the Nassau River north of Jacksonville to Trail Ridge in Clay County, near the



town of Lawtey. Another section of the project makes a north-south connection about 12 miles long, between the Camp Blanding Military Reservation and the Etoniah Creek State Forest. About 75 percent of this land is used, or has been used, for silviculture. It also includes mesic flatwoods, cypress and hardwood swamp, sandhills and associated plant communities.

FNAI Element Occurrence Summary

<u>FNAI Elements</u>	<u>Score</u>
Red-cockaded woodpecker	G3/S2
Eastern indigo snake	G3/S2?
Gopher tortoise	G3/S3
Swallow-tailed kite	G5/S2
Florida black bear	G5T4/S4
<i>Florida toothache grass</i>	G2/S2
<i>variable-leaf crownbeard</i>	G2/S2
<i>hartwrightia</i>	G2/S2
<i>giant orchid</i>	G2G3/S2
<i>Thorne's beaksedge</i>	G3/S1S2
Painted Bunting, eastern population	G5T3/S1S2
<i>Bartram's ixia</i>	G2G3/S2S3

23 rare species are associated with the project

Public Use

The FFS will promote recreation and environmental education in the natural environment. There is a possibility of an intermediate and long-term need for some type of developed recreation facilities. If such facilities are developed, the use of low-impact, rustic facilities will be stressed. If an organized recreation area is desired, it will be assessed and evaluated to minimize any possible adverse effects on the natural environment. Unnecessary roads, firelines and hydrological disturbances will be abandoned and/or restored to the greatest extent practical.

Acquisition Planning

2001

On December 6, 2001, the Acquisition and Restoration Council (ARC) recommended the Northeast Florida Timberlands and Watershed Reserve project for Group A of the Florida Forever (FF) 2002 Priority list. This fee-simple and less-than-fee acquisition, located in Clay, Duval and Nassau Counties, and sponsored by The Nature Conservancy (TNC), the City of Jacksonville, and the St. Johns River Water Management District (SJRWMD), consisted of approximately 132,450 acres, more than 150 landowners, and a 2001 taxable value of \$50,158,195.



The following 37 ownerships were identified as essential: Gilman, Jackson, Carter, Owen, Nemours, Miller, Bostiwick, Klieg, Bullock, 1st Bank and Trust, Rayonier, International Paper, Motes, Boyd, South Regional Industrial Realty, East Fiftone Partners, Monticello Drugs, St. Joe, Barnett Bank Trustee, Anheuser-Busch, Inc., Travelers Ins., Foster, Tison, Castleton, Wright, Buck, Logan, Higgenbotham, Betz, Ogilvie, Milne, Kaleel and Roberts, Grey, Sythe, Pharr, Wilkinson, and Helmer.

2003

On June 6, 2003, the ARC approved a 506-acre addition, known as the Norfolk Southern property, to the project boundary in Duval County. The fee-simple acquisition, sponsored by TNC, consisted of a single owner, Southern Region Industrial Realty Inc., and had a 2002 taxable value of \$408,700.

On December 5, 2003, the ARC approved a 7,043-acre addition, known as the Four Creeks Forest tract, to the project boundary in Nassau County. The fee-simple acquisition, sponsored by the SJRWMD, consisted of one landowner, Rayonier Timberlands Operating Co. LP, and a 2002 taxable value of \$1,478,838.

2004

On December 3, 2004, the ARC approved a 3,500-acre addition, known as the Bull Creek tract, to the project boundary in Clay County. The fee-simple acquisition, sponsored by the SJRWMD, consisted of one landowner, Ventura LLC, and a taxable value of \$760,646.

2006

On June 30, 2006, the Board of Trustees purchased 1,651 acres within the Florida Forever project boundary.

2007

On February 16, 2007, the ARC approved a fee-simple, 2,665-acre addition to the Bull Creek portion of the project boundary. It was sponsored by the SJRWMD, consisted of one landowner, 1621 Venture II LLC, nine parcels, and a taxable value of \$445,189. The FFS will manage these essential parcels

2010

On November 5, 2010, DSL purchased 15 acres (Rayonier Forest Resources, L.P.--\$18,108 with FF funds) for FFS to manage.



2011

On April 25, 2011, 3.95 acres in Four Creeks State Forest/Pacett) were donated. FFS will manage.

On December 9, 2011, ARC placed this project in the Partnerships and Regional Incentives category of Florida Forever projects.

2018

On February 16, 2018, ARC voted to expand the boundary of the project to include approximately 300 acres in Nassau County (Studdard Tract), a partial inholding within the Four Creeks State Forest.

ARC also voted to add a parcel to the Northeast Florida Timberlands and Watershed Reserve during the August 2018 meeting. This 52-acre parcel in Nassau County is an inholding in the Four Creeks State Forest, near Highway A1A.

Coordination

In 1992, the 172-acre Jacksonville-Baldwin Rail Trail was acquired with Florida Greenways and Trails funds. This trail which meanders through the project is managed by the City of Jacksonville. The SJRWMD is an acquisition partner in areas of the project to help protect the multiple creeks and rivers. The National Guard Bureau through a Memorandum of Agreement (MOA) is an acquisition partner in areas of the project to help buffer and prevent encroachment of Camp Blanding. TNC, City of Jacksonville, Duval County, FCT, and the U.S. Navy are considered partners in this project.

Management Policy Statement

The FFS proposes to manage the project under a multiple-use management regime consistent with the FFS management of the Cary State Forest, the Jennings State Forest and the Cecil Field Conservation Corridor, all of which are adjacent to this project. The acquisition goals and objectives as approved by ARC would include timber management and restoration, low-impact diverse recreation uses, and management of archaeological and historic sites, habitat and other biological resources.



Management Prospectus

Qualifications for state designation

The project's size and diversity make it desirable for use and management as a state forest. Management by the FFS as a state forest is contingent on acquiring fee-simple title to the core parcels adjacent to the existing state forests and to approximately 60 percent of the project.

Manager

FFS is recommended to be the lead managing agency.

Conditions affecting intensity of management

Much of the parcel has been disturbed by past pine plantings and will require restoration work. This area of Florida is experiencing rapid urban growth, so that any prescribed burning to restore the forest will have to be carefully planned. The level of management and the related management costs are expected to initially be high to obtain necessary information to restore and manage portions as a state forest. It is recognized that a portion of the project will be less-than-fee simple. This technique is valuable on the fringes of urban growth because it allows the landowners to manage the property as they have been managing it, and continuing to produce forest products for Florida's economy, while protecting the property from conversion to urban growth.

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

Once the core areas of the project are acquired and assigned to the FFS, initial public access will be provided for diverse, low-intensity outdoor recreation activities. Initial and intermediate management efforts will concentrate on site security, public and resource management access, prescribed burns, reforestation, and restoration activity.

Revenue-generating potential

Timber sales will be conducted as needed to improve or to maintain the desirable ecosystem conditions. These sales will primarily take place in the marketable pine stands and will provide a variable source of revenue, depending on a variety of factors. The existing condition of the timber stands on the property is such that the revenue-generating potential is expected to be moderate. Other compatible state forest sources of income will be considered. It is anticipated that management funding will come from the Conservation and Recreation Lands Trust Fund.

Cooperators in management activities

The FFS will cooperate with, and seek the assistance of, other state agencies, local government agencies, other interested parties as appropriate, and with the Florida Natural Areas Inventory

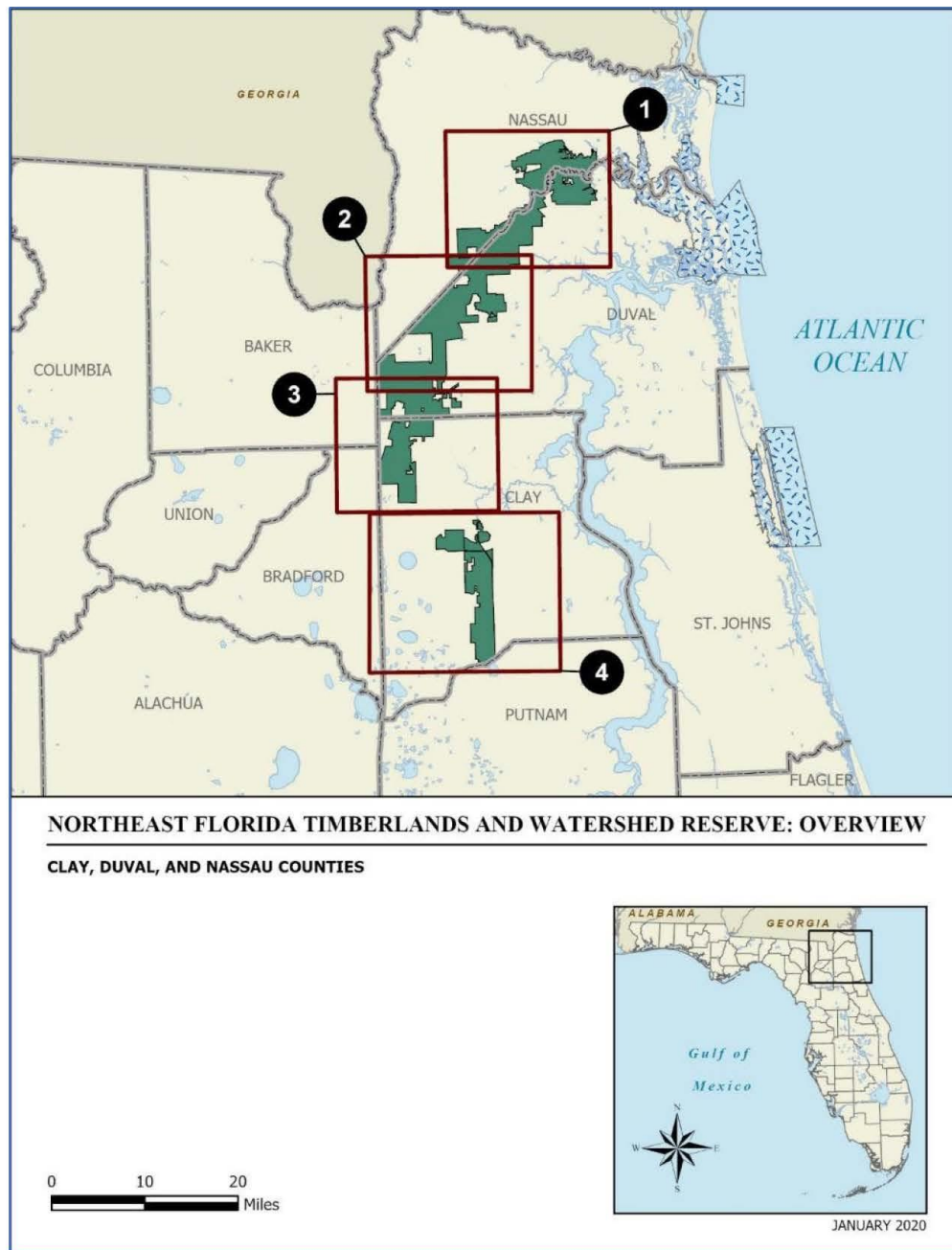


(FNAI). The FFS intends to coordinate with the Florida Fish and Wildlife Conservation Commission (FWC) regarding game and non-game management activity and related public use of the property.

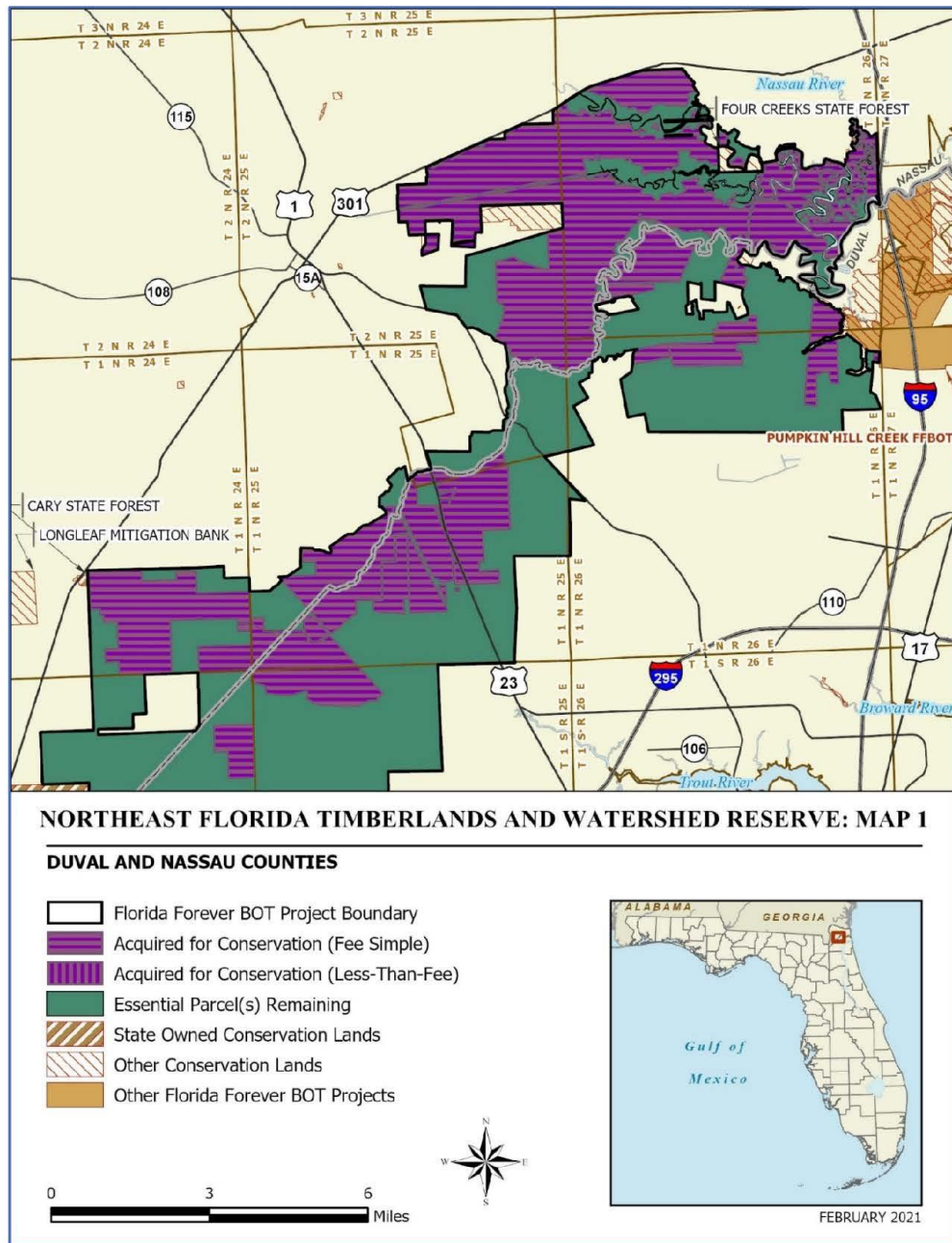
Management Cost Summary

<u>FWC</u>	<u>Cost</u>
Source of Funds	CARL
Salary (4 FTEs)	\$154,357
Expense	\$620,000
OCO	\$148,075
TOTAL	\$887,007

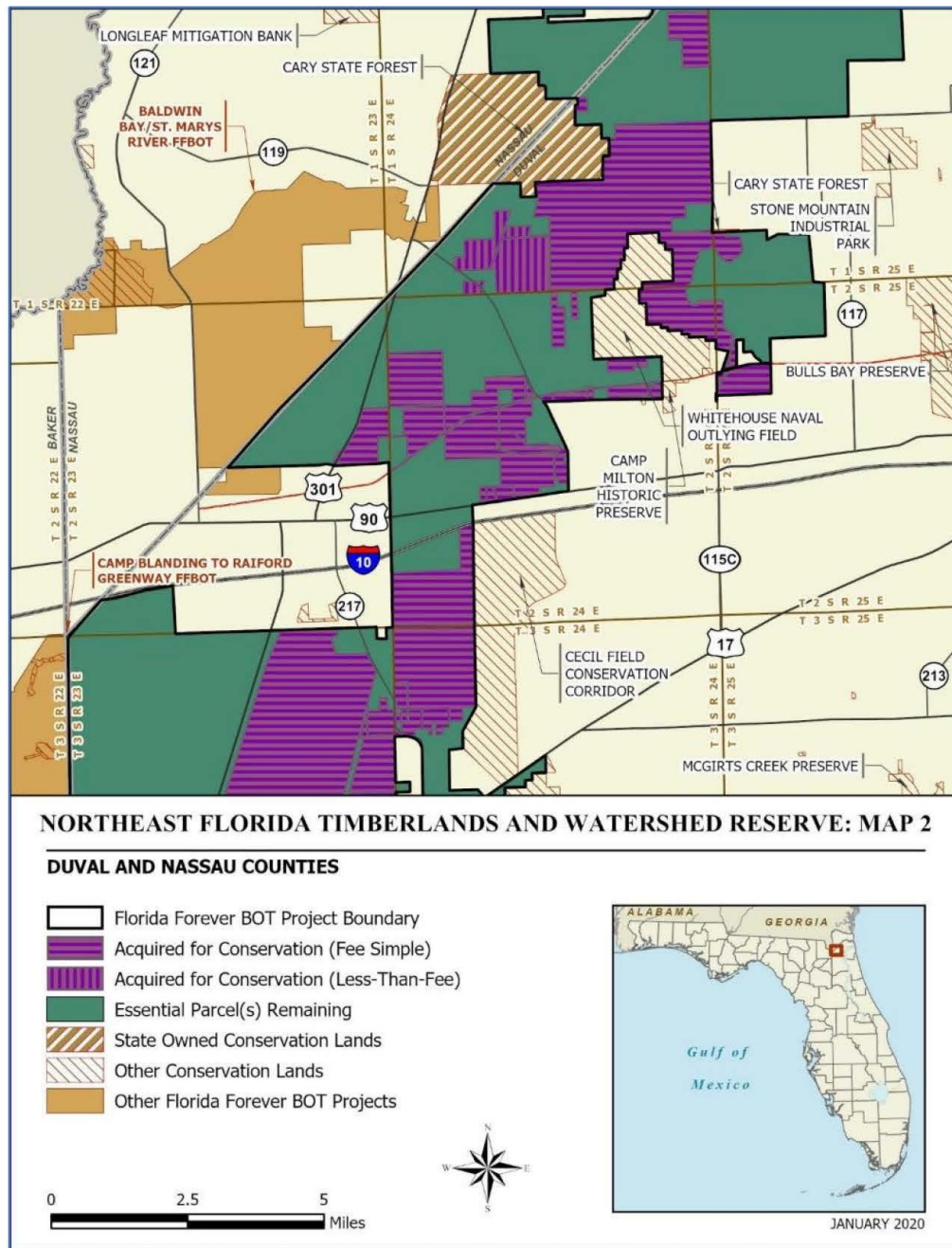
Source: Management Prospectus as originally submitted



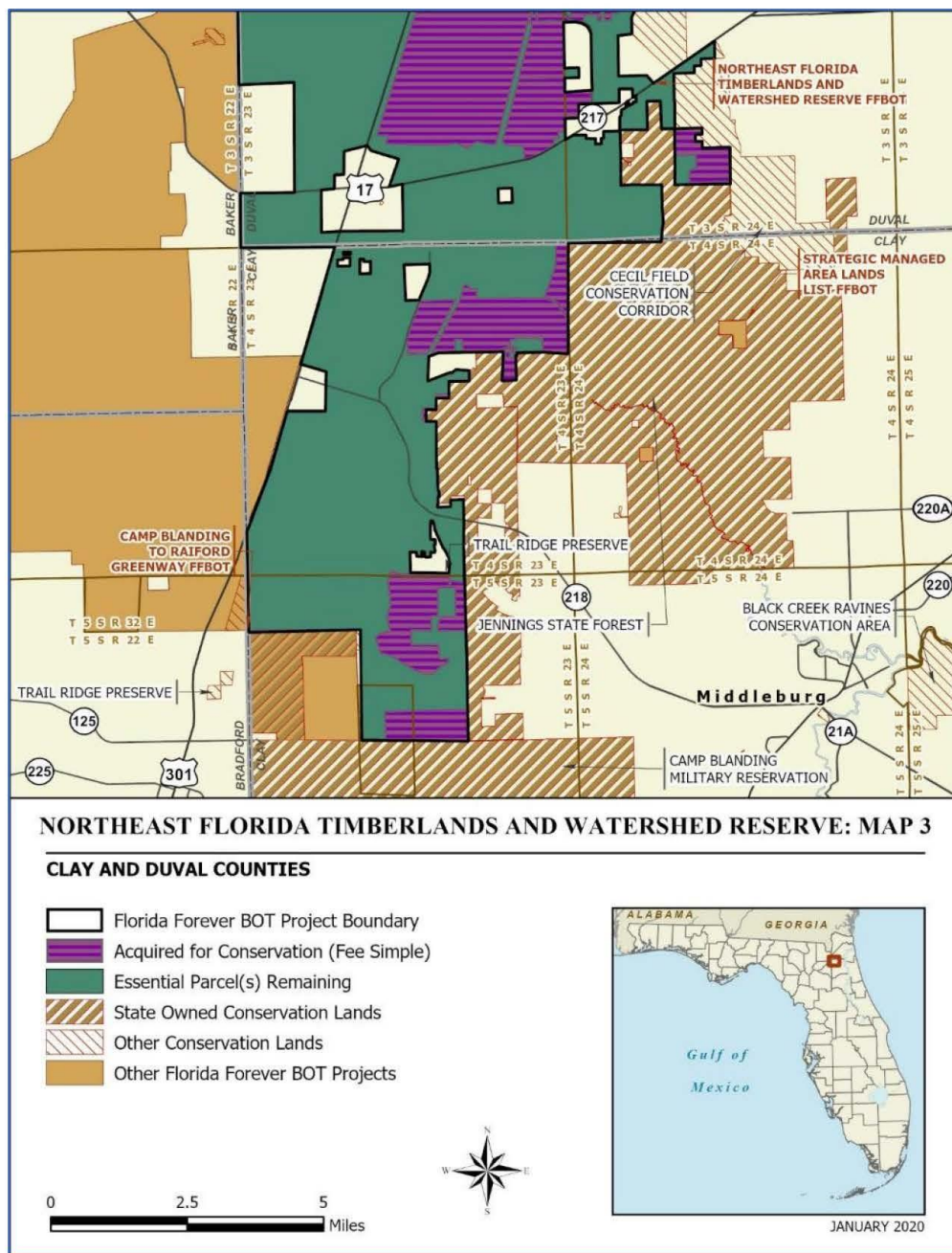
Map 1 : FNAI, January 2021



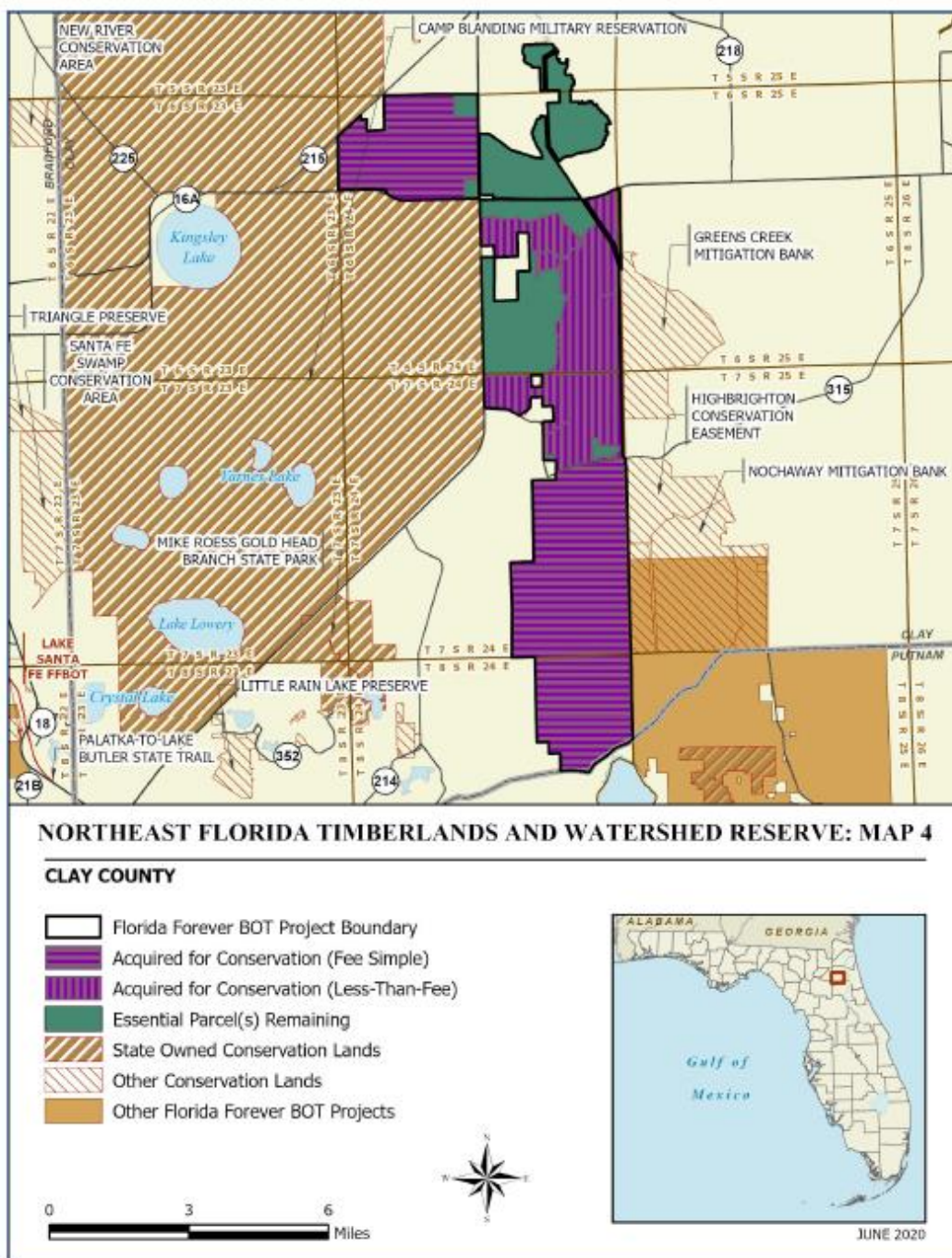
Map 2 : FNAI, January 2021



Map 3 : FNAI, January 2021



Map 4 : FNAI, January 2021



Map 5 : FNAI, January 2021