

**MATANZAS STATE FOREST  
2018 LAND MANAGEMENT PLAN**

**EXHIBITS**

## Exhibit A

### Ten Year Management Accomplishment Summary

**MATANZAS STATE FOREST**  
**10 YEAR ACCOMPLISHMENT REPORT**

ACTIVITIES				TOTAL
Timber Inventory		Inventory update	acres	2,873
		New Inventory	acres	4,543

Site Preparation	1	Chop Single Pass	Acres	8
	5	Burn	Acres	40

Exotic Species Control	1	Air Potato	Acres	3.18
	2	Brazilian pepper	Acres	1.31
	3	Caesar's Weed	Acres	0.12
	4	Camphor	Acres	0.71
	5	Chinaberry	Acres	3.00
	6	Chinese Tallow	Acres	500.20
	7	Cogon grass	Acres	2.30
	8	Coral ardisia	Acres	7.15
	9	Japanese climbing fern	Acres	1.32
	10	Lantana	Acres	0.20
	11	Purple sesban	Acres	5.35
	12	Torpedo grass	Acres	9.90
	13	Tropical soda apple	Acres	0.00

Timber Stand Improvement		Mechanical Treatments		
	1	Mowing		131
	2	Walkdown/Between Rows	Acres	177
	3	Chopping	Acres	781

Timber Sales	1	Marking	acres	9
	2	Cruising	acres	2,237
	3	Harvest	acres	1,855
	4	Revenue	dollars	966,107

Recreation	1	Day Use - sign in	No.	35,483
	2	Overnight - Primitive(#Xnights)	No.	5,502
	3	Horse Permits	No.	4

Fire	1	Wildfire	No.	7
	2	Wildfire	Acres	443
	3	Prescribed Burning	Acres	2,348

Roads	1	Roads Graded	Miles	15.4
	2	Roads mowed	Miles	137
	3	Roads Rebuilt	Miles	8.6
	4	Culverts Installed	No.	15

<b>Boundary Maint.</b>	1	Maintenance/Marking	Miles	18
	2	Perimeter Firebreaks plowed/narrowed	Miles	21

<b>I&amp;E Activities</b>	1	Programs/Tours	No.	14
	2	Radio - TV - Articles	No.	3

<b>Other Activities</b>	1	Dupont Forestry Station residence renovated for MaSF office headquarters		
	2	Enter/Exit Signs Installed	No.	2
	3	Entrance Parking & Kiosk installed	No.	1
	4	Established Group Camp	No.	1
	5	Hiking Trail route & trailhead plan approved	No.	1



## Exhibit B

### Location/Boundary Maps



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Coordinate System: NAD83  
High Accuracy Reference Network (HARN). Datum:

A scale bar labeled "Kilometers" with markings at 0, 25, 50, 100, 150, and 200.

Map Month/Year: December 2017



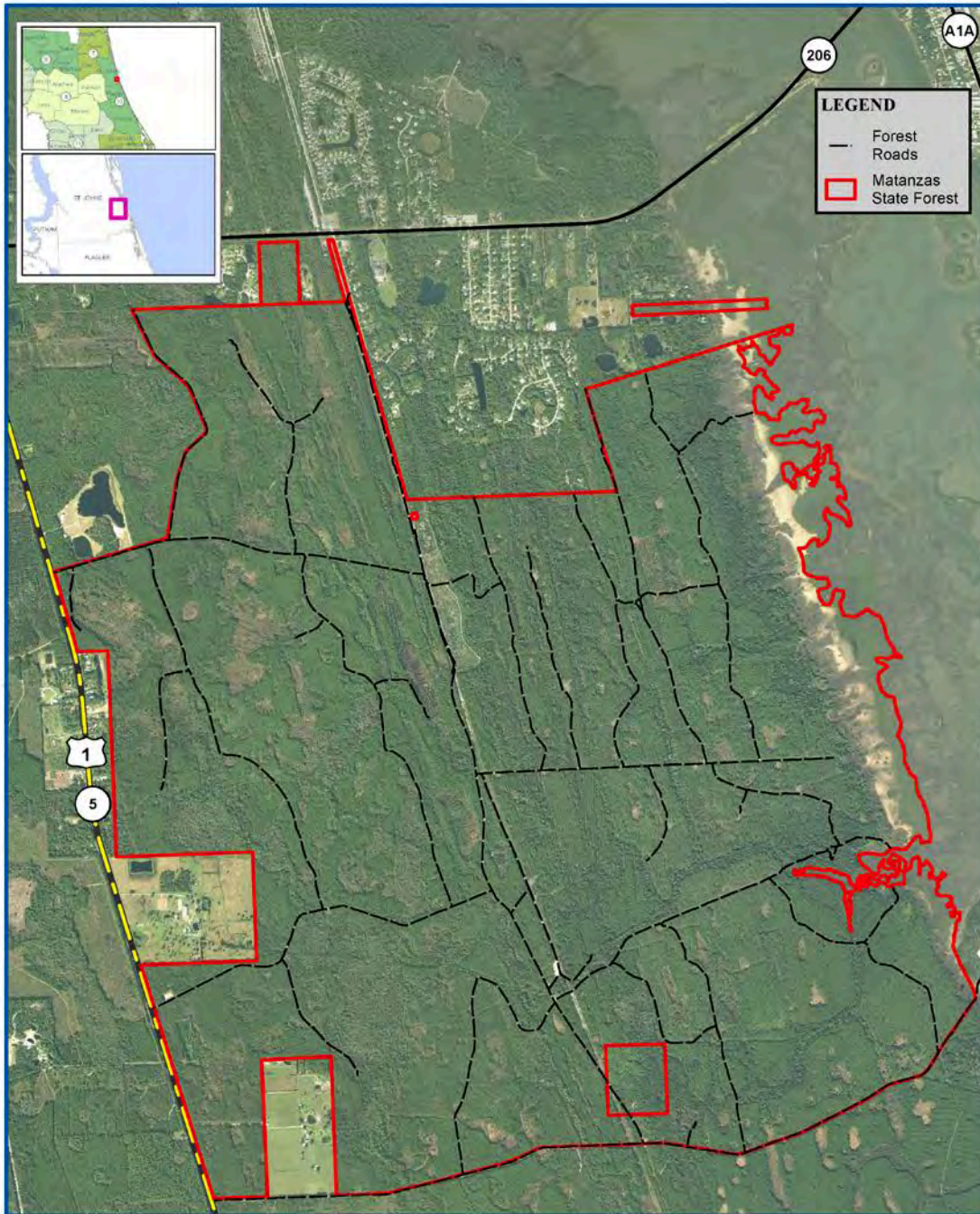
Florida Forest Service

# Matanzas State Forest Boundary Map

Coordinate System: Florida Albers  
NAD 83 - FIPS 4500 - NAD83 (FIPS 4500) Datum

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Map Date: 11/15/2017  
Map Title: Matanzas State Forest Boundary Map  
Map Scale: 1:50,000  
Map Author: Florida Forest Service



0 0.125 0.25 0.5 0.75 1 Miles

Map Month/Year: November 2017



0 0.15 0.3 0.6 0.9 1.2 Kilometers

## Exhibit C

### Optimal Management Boundary Map





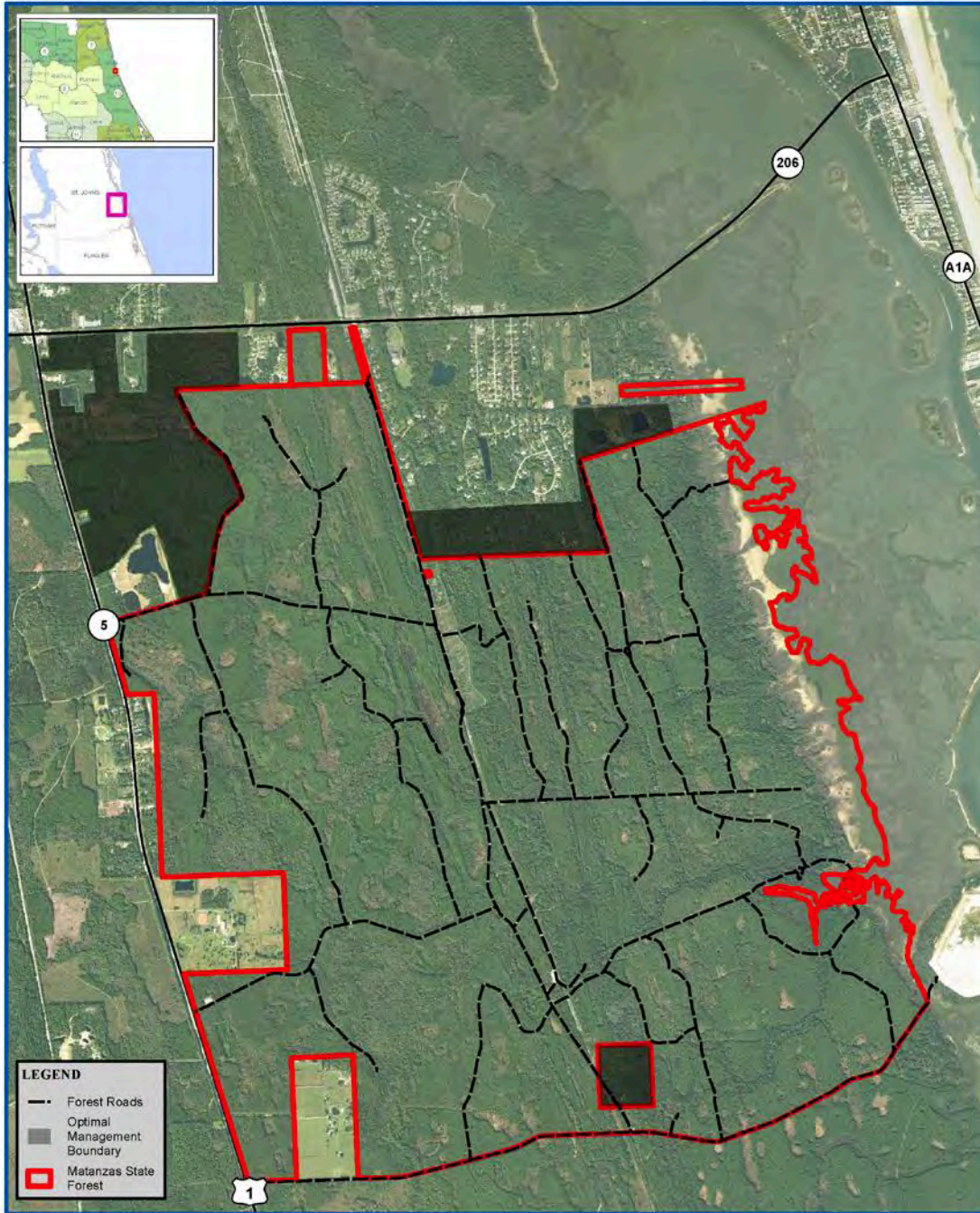
Florida Forest Service

# Matanzas State Forest Optimal Mangement Boundary Map

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

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NEIGHBORING AGENCIES: FLORIDA FOREST SERVICE,  
FLORIDA DEPARTMENT OF AGRICULTURE,  
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION,  
FLORIDA DEPARTMENT OF TRANSPORTATION,  
FLORIDA DEPARTMENT OF REVENUE,  
FLORIDA DEPARTMENT OF HEALTH,  
FLORIDA DEPARTMENT OF EDUCATION,  
FLORIDA DEPARTMENT OF CORRECTIONS,  
FLORIDA DEPARTMENT OF TROOPERS,  
FLORIDA DEPARTMENT OF LAW,  
FLORIDA DEPARTMENT OF SOCIAL SERVICES,  
FLORIDA DEPARTMENT OF REVENUE,  
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FLORIDA DEPARTMENT OF TROOPERS,  
FLORIDA DEPARTMENT OF LAW,  
FLORIDA DEPARTMENT OF SOCIAL SERVICES,



- LEGEND**
- Forest Roads
  - Optimal Management Boundary
  - Matanzas State Forest

0 0.125 0.25 0.5 0.75 1 Miles

Map Month/Year: November 2017



0 0.2 0.4 0.8 1.2 1.6 Kilometers

## Exhibit D

### Road Map





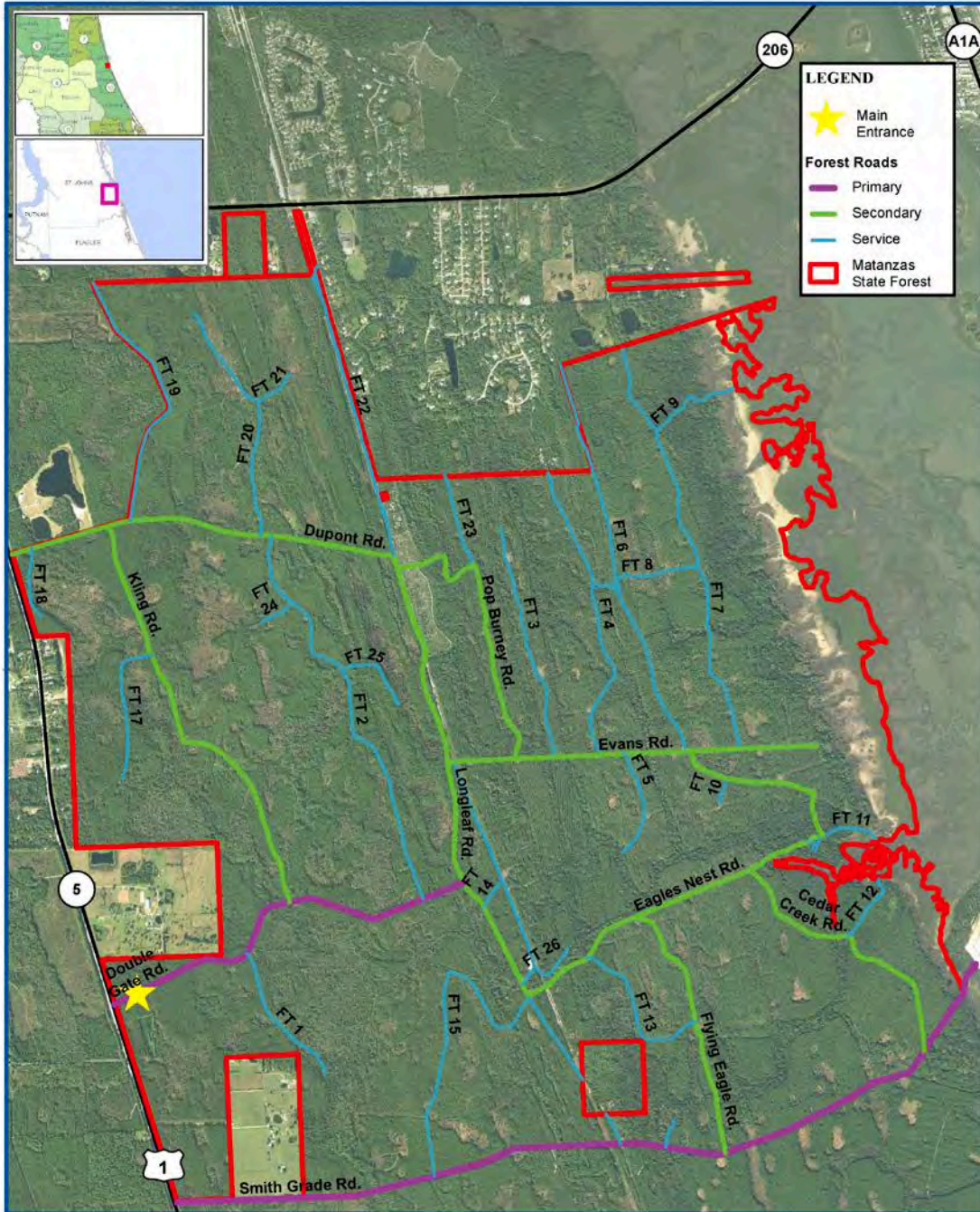
Florida Forest Service

# Matanzas State Forest Roads Map

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

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Map Date: 11/2017  
Map Scale: 1 inch = 1 mile  
Map Author: Florida Forest Service



0 0.125 0.25 0.5 0.75 1 Miles

Map Month/Year: November 2017



0 0.15 0.3 0.6 0.9 1.2 Kilometers

## Exhibit E

### Current/Planned Facilities, Recreation, and Improvements





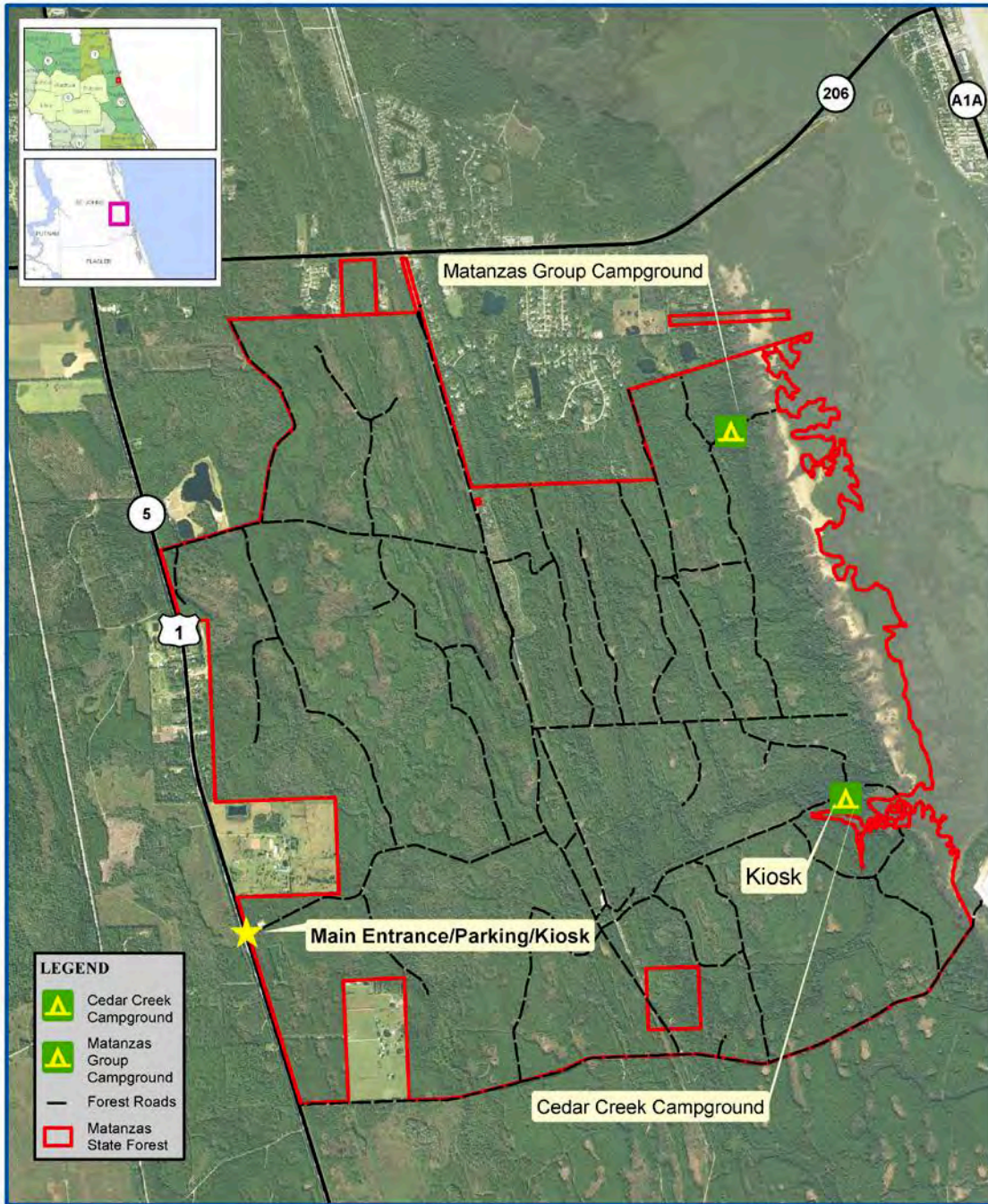
Florida Forest Service

## Matanzas State Forest

### Current - Facilities, Recreation, and Improvements Map

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

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0 0.125 0.25 0.5 0.75 1 Miles

Map Month/Year: November 2017



0 0.15 0.3 0.6 0.9 1.2 Kilometers





Florida Forest Service

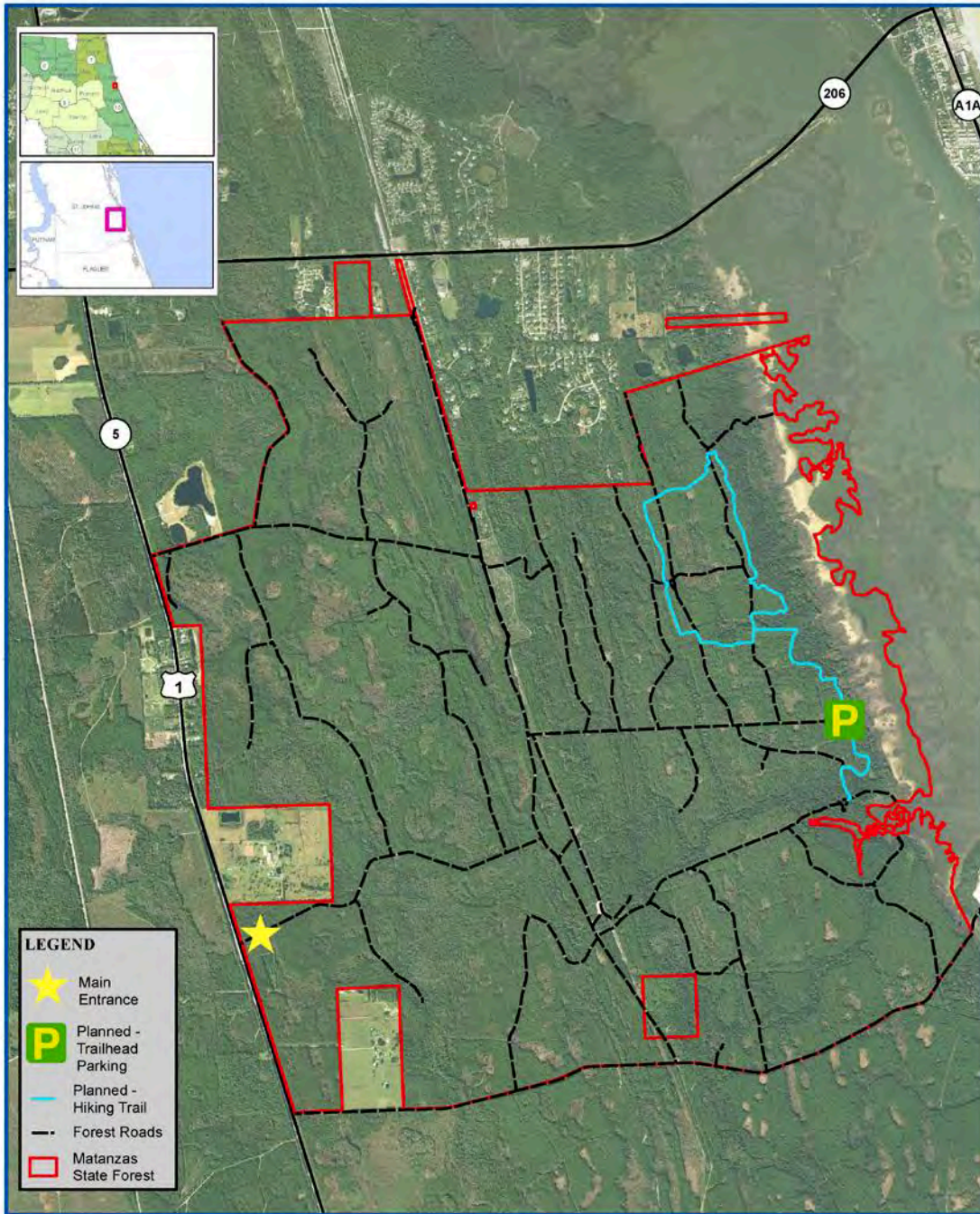
## Matanzas State Forest

### Planned - Facilities, Recreation, and Improvements Map

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

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Map Date: 11/1/2017  
Map Title: Matanzas State Forest  
Map Scale: 1 inch = 1 mile  
Map Author: Florida Forest Service



0 0.125 0.25 0.5 0.75 1 Miles

Map Month/Year: November 2017



0.8 0.4 0 0.8 Kilometers

## Exhibit F

### Proximity to Significant Managed Lands





Florida Forest Service

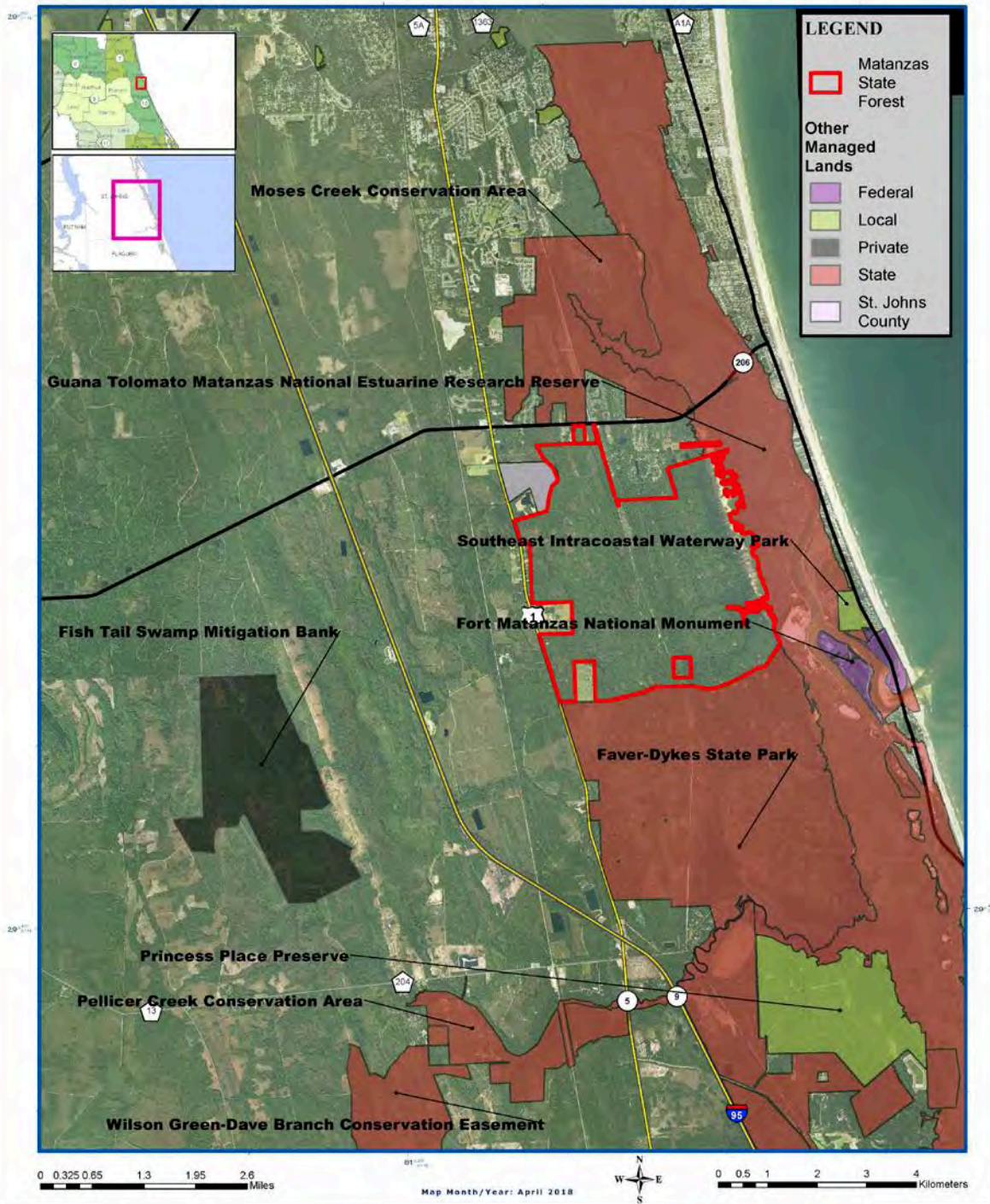
Coordinate System: Florida Albers  
High Accuracy Reference Network (HARN) Datum

# Matanzas State Forest

## Proximity to Significant Managed Lands

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Map Date: 04/18  
Map Month/Year: April 2018



## Exhibit G

### Florida Forever Projects

# Matanzas to Ocala Conservation Corridor

Flagler, Putnam and St. Johns Counties

Less-Than-Fee

## Purpose for State Acquisition

Acquiring a less-than-fee interest over the 110,382 acres of the Matanzas to Ocala Conservation Corridor would enhance the connections of at least 15 conservation lands and conservation easements in this region of Florida, preserve natural areas for wildlife biodiversity, and protect surface waters and wetlands in this area, ensuring an adequate water supply for the current and the future needs of the natural systems and for the citizens of the state. Much of this land is silvicultural land, and this corridor would preserve these lands in an agricultural use. As a wildlife corridor among other conservation lands, the Matanzas to Ocala Conservation Corridor would help the long-term survival of larger and wide-ranging wildlife such as the Florida black bear and other wildlife species, both rare and common.

The Florida Forever Measures Evaluation identifies how much of the area would contribute to the Florida Forever goals, with 100 percent of the area contributing to surface-water protection. Some 99 percent of the area would help aquifer recharge, 45 percent of the area would preserve functional wetlands, 40 percent of the area would preserve natural floodplain functions, and 97 percent of the area would preserve ecological greenways. This project meets the requirements of the 2014 Amendment One constitutional initiative.

There are currently two approved Developments of Regional Impact (DRI), totaling 10,000 acres, and eight other developments, totaling 20,000 acres, that are within the boundary of this conservation corridor. Development of these projects with their related roads and infrastructure would impact the ability of the Matanzas to Ocala Conservation Corridor to function as a viable wildlife corridor.

## Manager

As a less-than-fee property, the land would be managed by the landowners with periodic visits from the staff of the Division of State Lands to ensure that they conditions the owners agreed to are being met. There is a possibility that some of the parts of this area could be acquired in fee-simple.

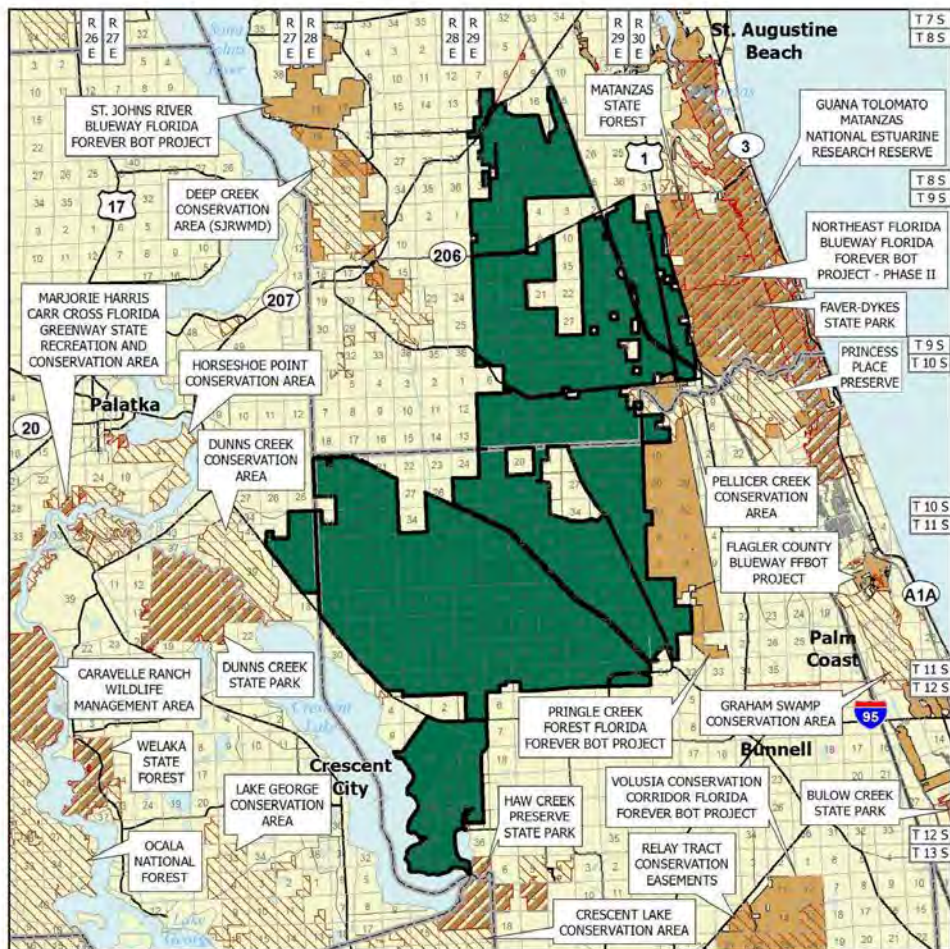
## General Description

The Matanzas to Ocala Conservation Corridor has 19 different landowners in Flagler, Putnam and St. Johns counties. It is in the Eastern Flatwoods physiographic district described as coastal lowlands, with flatwoods and swamps on silty sand soils. The land stretches from State Road 100 in Flagler and Putnam counties on the southwest end, east to US Highway 1 in St. Johns County and to Interstate Highway 95 on the northeast side. It is basically one contiguous piece with several

Matanzas to Ocala Conservation Corridor FNAI Elements	
Florida Black Bear	G5T2/S2
Gopher Tortoise	G3/S3
Swallow-tailed Kite	G5/S2
Lake-side Sunflower	G1G2/S1S2
Celestial Lily	G2/S2
Florida Beargrass	G3/S3
Nodding Pinweed	G3/S3
Bachman's Sparrow	G3/S3
Florida Mountain-mint	G3/S3
Bald Eagle	G5/S3
10 rare species are associated with the project	

Placed on List	2016
Project Area (GIS Acres)	110,328
Acres Acquired (GIS)	0
at a Cost of	\$0
Acres Remaining (GIS)	110,328
with Estimated (Tax Assessed) Value of	\$21,223,436

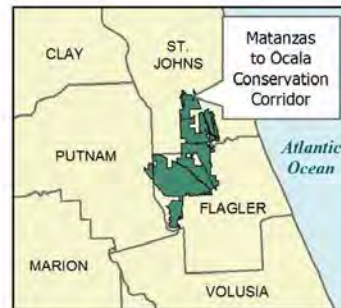
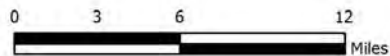




## MATANZAS TO OCALA CONSERVATION CORRIDOR

**FLAGLER, PUTNAM, AND ST. JOHNS COUNTIES**

- Florida Forever BOT Project Boundary
- Other Florida Forever BOT Projects
- State Owned Lands
- Other Conservation Lands



DECEMBER 2015

outparcels. There are several public conservation lands on the boundaries of this project, including the Matanzas State Forest, the Faver-Dykes State Park, the Pellicer Creek Conservation Area, and at the southern end, the Haw Creek Preserve State Park. The Pringle Creek Forest Florida Forever project and the Northeast Florida Blueway Florida Forever project also abut this project, on the eastern side.

Historically this was a mix of mesic and wet pine flatwoods. Currently the trees on this land are mainly stands of slash pine up to 40 years old, with understory that ranges from heavily wooded with shrubs to no understory in areas where the pines are bedded. Commercial pine plantations account for about half of the acreage. Natural uplands are about 5 percent of the project, with small patches of wet and mesic flatwoods. Other areas have scrub, scrubby flatwoods and sandhill terrain.

Wetland communities make up the majority of natural communities on the property, about 40 percent of the area. Vegetation is generally dominated by bald cypress or swamp tupelo, with other wetland trees and shrubs. Isolated wetlands are abundant throughout the property. Dome swamps dominated by pond cypress (*Taxodium ascendens*) and open depression marshes are common within the pine plantation and flatwoods uplands. Several natural lakes occur on the property, with the largest in the southeast quarter – Speckled Perch Lake, Black Lake, and Tank Lake. These are in a higher, more xeric portion of the property. Baygall vegetation dominated by loblolly bay (*Gordonia lasianthus*) and slash pine surrounding these lakes indicates the increased seepage originating from the xeric uplands.

#### **Public Use**

The project is planned to be a less-than-fee acquisition, which would limit the ability of the state to provide public use. However, the project proposal has suggested recreational uses hosted by the landowners once the state acquires and precludes the rights to use the property for more intensive uses. Some parts of the property could be acquired in fee-simple to augment the adjoining and existing public lands, in which case the acquired land would be managed by the agency already managing those adjacent lands.

#### **Acquisition Planning**

This Less-than-Fee project was sponsored in a proposal by the Conservation Trust of Florida, and was presented to the Acquisition and Restoration Council at the October 16, 2015 meeting.

#### **Coordination**

There are no partners in the acquisition at this time.

#### **Management Prospectus**

The Office of Environmental Services of the Division of State Lands is tasked with ensuring the oversight of the conservation easement on this project. If any of the lands in this project are acquired in fee-simple, they would be managed according to the management plans of the associated public conservation land.





# Northeast Florida Blueway

Duval, Flagler and St. Johns Counties

Climate Change Lands

## 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 – helps to maintain shoreline plant communities on the Tolomato & Matanzas rivers, benefiting the manatees that spend the warm season in these water; (2) Increase the amount of open space available in urban areas – serves as a vital connection in the Statewide System of Greenways and Trails; (3) Increase natural resource-based public recreation and educational opportunities – offers many resource-based recreation opportunities both directly and indirectly: fishing, canoeing, bicycling, and camping, to name a few; (4) Protect, restore, and maintain the quality and natural functions of land, water, and wetland systems of the state – connectivity with other areas contribute to ongoing governmental efforts to protect and restore the regional land and water; and (5) Increase the amount of forestland available for sustainable management of natural resources – areas observed within the Rayonier property that are capable of producing pine timber products have been site prepared and planted.

## Manager

The City of Jacksonville, the Florida Forest Service (FFS) of the Department of Agriculture and Consumer Services (DACS), and the Division of Recreation and

Parks (DRP) of the Department of Environmental Protection (DEP).

## General Description

This project is composed of many publicly and privately owned uplands and wetlands along both sides of the Intracoastal Waterway, the Tolomato and Matanzas rivers and selected tributaries, from the Duval County line south to the Flagler County line. Marshlands, open water, and small islands of shrub and hammock vegetation are 92 percent of the public lands. The intention of the project is to connect existing natural areas and greenspace to form a conservation lands corridor along the north-south waterway. It is adjacent to the following managed areas: Guana Tolomato Matanzas National Estuarine Research Reserve (several WMD Conservation Areas included therein), Faver-Dykes State Park, Guana River State Park, Deep Creek State Forest, and Ft. Matanzas National Monument.

## Public Use

This project would support primitive camping opportunities with canoeing and kayaking taking place within the waterway and associated creeks. Some of the larger parcels may have potential for archaeological interpretation and nature study trails, depending on the ability of the public to gain access. The DRP proposes to manage the St. Johns County portion north of Faver-Dykes State Park and south of a haul road between US

Northeast Florida Blueway FNAI Elements	
Manatee	G2/S2
Florida Black Bear	G5T2/S2
Gopher Tortoise	G3/S3
Wood Stork	G4/S2
Yellow Hibiscus	G4G5/S2
Roseate Spoonbill	G5/S2
American Oystercatcher	G5/S2
Eastern Diamondback Rattlesnake	G4/S3
Least Tern	G4/S3
Bald Eagle	G5/S3
Osprey	G5/S3S4
Little Blue Heron	G5/S4
16 rare species are associated with the project	

Placed on List	2001
Project Area (GIS Acres)	27,917
Acres Acquired (GIS)	15,801*
at a Cost of	\$32,438,430**
Acres Remaining (GIS)	12,116
Estimated (Tax Assessed) Value of	\$30,059,986

\*Acquisition Includes lands owned by public entities and NGOs.

\*\*Money spent includes funds spent by the Board of Trustees (current) and acquisition partners (requires updating).

Highway 1 and a spoil site on the Matanzas River. This section of the project contains about 5,000 acres. As a part of Faver-Dykes State Park, hunting would not be allowed. The property would expand the quality and quantity of recreational activity at the park including bicycling, hiking, horseback riding, camping (RV and primitive camping), environmental education, and picnicking.

The FFS proposes to manage the remainder of the project under a multiple-use management regime consistent with the State Forest system. A portion of the project will become part of the Deep Creek State Forest, managed for multiple uses including, but not limited to, timber management and restoration, low impact recreational opportunities, and protecting archeological and historic sites.

#### **Acquisition Planning**

On January 25, 2001, the Acquisition & Restoration Council (ARC) added the Northeast Florida Blueway – Phase I project to Group A of the Florida Forever (FF) 2001 Priority list. This fee-simple acquisition, located in Duval County and known as Pablo Creek, was sponsored by the City of Jacksonville (Preservation Project Jacksonville). It consisted of approximately 6,943 acres, multiple owners (private & public), and a 1998 taxable value of \$15,700,000 on the 4,867 acres in private ownerships. The entire project was designated as essential.

On December 6, 2001, the ARC approved Phase II, also known as Tolomato & Matanzas Rivers, to the project boundary. The fee-simple addition in St. Johns County consisted of approximately 27,929 acres, multiple owners (private & public), and a 2001 taxable value of \$18,610,780 on the 17,834 acres in private ownerships. St. Johns County sponsored this addition. The essential parcels were designated as Rayonier Timberlands, Ponce de Leon Resort, Flagler Development, Roberts, Rayland, Wadsworth, and Swan Development.

On August 15, 2003, the ARC approved two additions to the project boundary. The Office of Coastal & Aquatic Managed Areas (CAMA) sponsored a 20.26-acre addition with a single owner, Jacoby Development Inc., two parcels, and a 2002 taxable value of \$2,955,714. This fee-simple addition, located in St. Johns County, was added to Phase II. St. Johns County sponsored a 70-acre addition with a single owner,



Marina Park Properties, LLC, multiple parcels, and a 2002 taxable value of \$8,400,000. This fee-simple addition is located in Flagler County. On October 13, 2006, the ARC approved a redesign of the project boundary. A total of 2,000 acres no longer suitable for conservation were removed from the project, 180 in Duval County and 1,820 in St. Johns County, reducing the total project size to 32,564 acres. The updated total includes lands in public ownership and acres acquired. Previous project area estimates did not include lands in public ownership.

On December 9, 2011, ARC placed this project in the Climate Change Lands list of projects.

#### **Coordination**

The City of Jacksonville is an acquisition partner in Phase I, in Duval County. The city has contacted FEMA and they may contribute \$250,000 towards acquisition. Florida Communities Trust has already contributed acquisition funds with the City for several parcels, the SJRWMD has purchased some conservation easements and the Jacksonville Transportation Authority has mitigation funds to contribute towards acquisition. The Trust for Public Land will be the intermediary for negotiations.

Portions of Phase II, in St. Johns County, will likely be acquired through other conservation programs. St. Johns County, the Florida Communities Trust Program and the St. Johns River Water Management District (SJRWMD) may be partners on portions of the project.

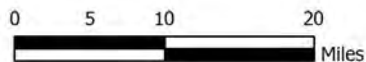
#### **Management Policy Statement**

To conserve and protect environmentally unique and irreplaceable lands that contain native, relatively unaltered flora and fauna representing a natural area unique to, or scarce within, a region of the state or a larger geographic area. To conserve and protect significant habitat for native species or endangered and threatened species. To conserve, protect, manage, or restore important ecosystems, landscapes, and forests, in order to enhance or protect significant surface water, coastal, recreational, timber, fish or wildlife resources. Finally, to preserve significant archaeological or historical sites.



## NORTHEAST FLORIDA BLUEWAY: OVERVIEW

**DUVAL, ST. JOHNS, AND FLAGLER COUNTIES**



MARCH 2016



### Management Prospectus

**Qualifications for State Designation** The lands in Phase I are rapidly disappearing as Duval County grows. The Preservation Project, the city's land acquisition program, seeks to protect and preserve the existing habitat and waterway as it exists today. It is the goal of the City of Jacksonville to manage this project to conserve, protect or restore important ecosystems while providing opportunities for natural-resource-based recreation. The City of Jacksonville proposes to manage the lands in accordance with the standards of the Acquisition and Restoration Council.

Phase II is of a size and diversity that makes it desirable for use and management as a state forest. Management by the FFS as a state forest is contingent upon acquiring fee simple title to the parcels of interest to FFS. The portion of the project of interest for management by the DRP is largely disturbed land that has been managed for silviculture. While much restoration work will be required over time, the quality of the property when restored will make it suitable for state park purposes.

**Manager** The City of Jacksonville will manage that portion of the project within Duval County. The DRP proposes to manage that portion of the Northeast Florida Blueway - Phase II project, approximately 5,000 acres, lying north of Faver-Dykes State Park, south of a haul road from US 1 to a spoil site on the Matanzas River, east of US 1 and west of the Matanzas River. The Florida Forest Service (FFS) proposes to manage the Rayonier parcel north of the spoil haul road (approximately 4,000 acres) plus two additional parcels, one adjoining Deep Creek State Forest and an adjoining Florida Natural Areas Inventory Addition (approximately 2,500 acres).

### Conditions affecting intensity of management

Initial management efforts of Phase I by the City of Jacksonville will concentrate on site security, resource inventory, removing trash, and having limited public access to the property. Steps will be taken to ensure that the public is provided appropriate access while simultaneously protecting sensitive resources. Intensive restoration will be needed on the portion of Phase II managed by DRP to restore natural communities disturbed by timber operations. Intensity of restoration will be dictated by study of the site. Any immediate action, such as prescribed burning, would increase the early intensity of management. The lands bordering the river are in relatively good shape and will not require intensive management.

The portions of Phase II managed by FFS can be restored with the help of carefully prescribed fires and hydrologic restoration. The use of fire must be carefully applied because of the fuel load and type of fuel in this

forest system. An inventory of the forest roads in this area would determine which stay open for public use, which would be used for management, and which would be closed.

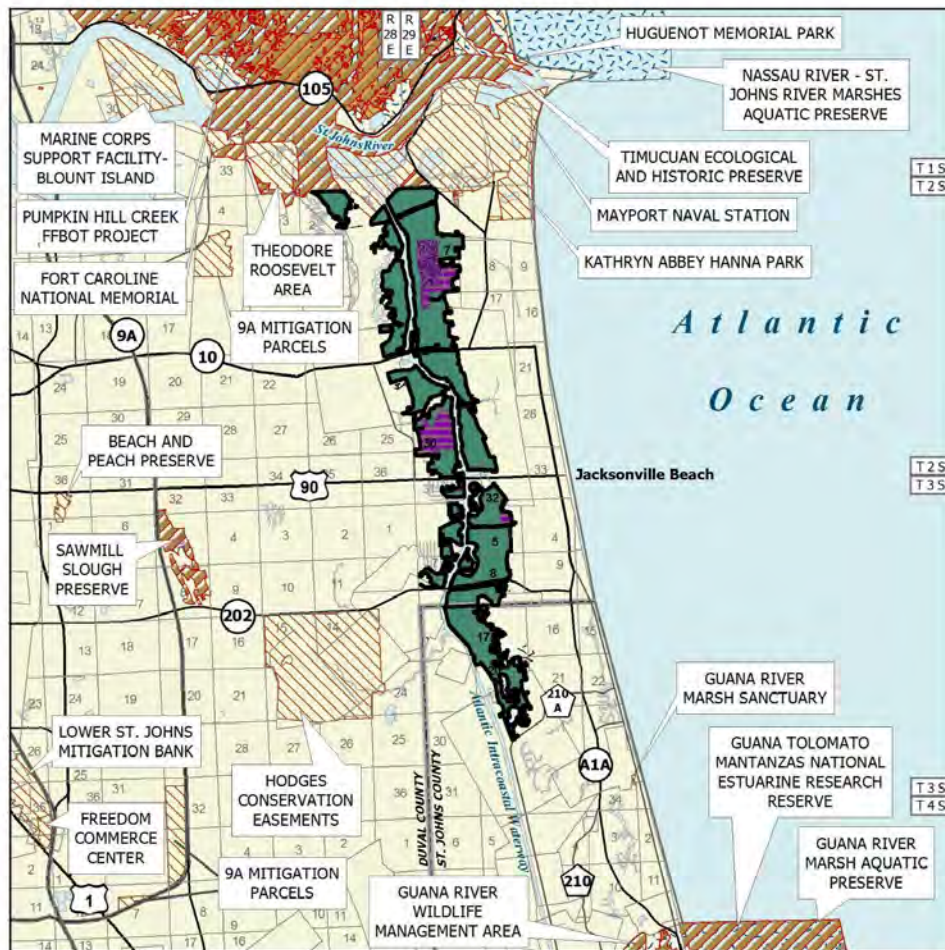
### Timetable for implementing management, and provisions for security and protection of infrastructure

Jacksonville's land-acquisition program, Preservation Project Jacksonville, will be responsible for developing and implementing the management plans for Phase I. The Preservation Project set aside \$950,000 to hire a program manager to develop and implement management plans. As properties are acquired, the City will first inventory natural resources and develop a plan to protect and restore resources, including removing invasive and exotic species, before developing access plans. The DRP plans for its portion of Phase II that, upon fee title acquisition, public access will be provided for low-intensity, non-facility outdoor recreation. Within the first year after acquisition, management will concentrate on site security, natural and cultural resource protection, and developing a plan for long-term public use and resource management.

The FFS timetable for management of the remainder of Phase II also provides initial public access for diverse, low-intensity outdoor recreation. Management would be carried out by the FFS Bunnell District until additional personnel were available for resource management and restoration activity. Initial and intermediate management will concentrate on site security, public and resource management access, prescribed fire, reforestation, and removing trash.

**Revenue-generating potential** Phase II, the portion to be added to Faver Dykes State Park, will not initially make any significant revenue for the DRP. After acquiring and adding the land to Faver-Dykes State Park, it will probably be several years before significant public use facilities are developed. The amount of revenue generated will depend on the nature and extent of public use and facilities developed. The FFS plans to conduct timber sales as needed to improve or maintain desirable ecosystems. These sales will primarily be from merchantable pine stands and provide a variable revenue depending on a variety of factors. The condition of the timber stands on the property is such that the revenue generating potential is expected to be moderate.

**Cooperators in management activities** Although not required, the City of Jacksonville commits to



## NORTHEAST FLORIDA BLUEWAY: MAP 1 OF 3

### DUVAL AND ST. JOHNS COUNTIES

- Florida Forever BOT Project Boundary
- Acquired for Conservation (Fee Simple)
- State Owned Lands
- Other Conservation Lands
- Essential Parcel(s) Remaining
- Other Florida Forever BOT Projects
- State Aquatic Preserves

0 1.25 2.5 5  
Miles



MARCH 2016

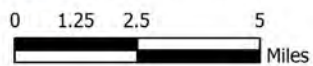




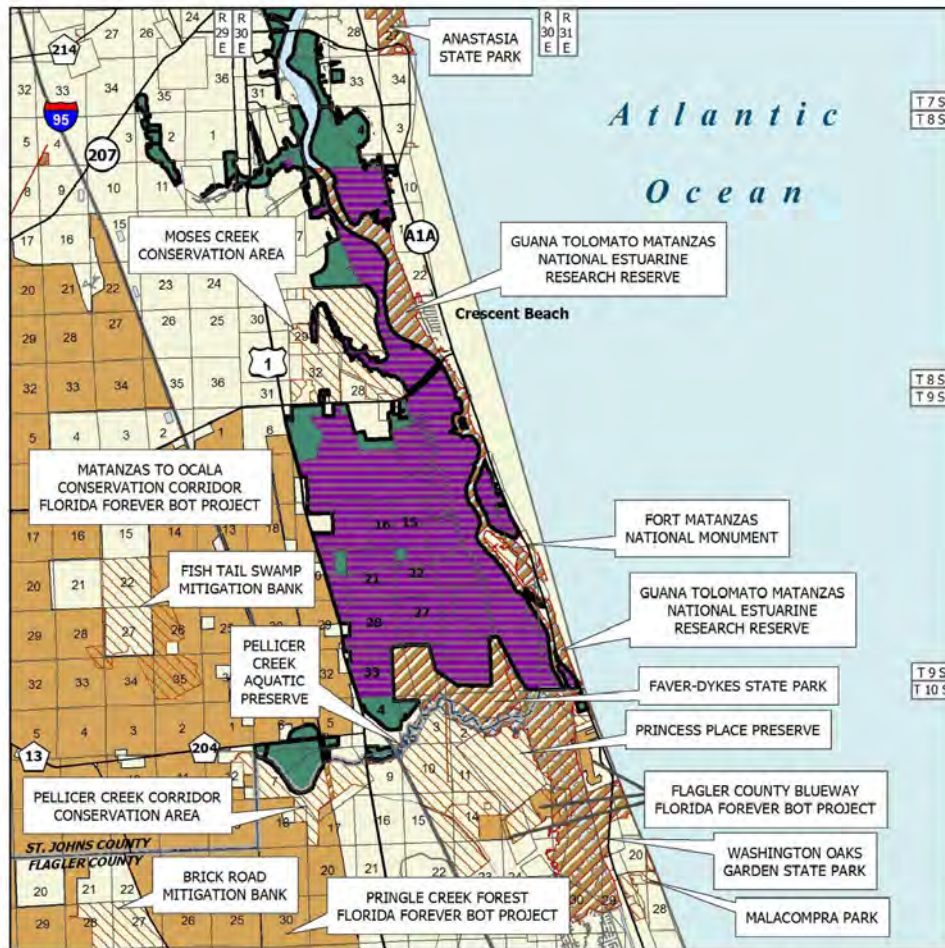
## NORTHEAST FLORIDA BLUEWAY: MAP 2 OF 3

### ST. JOHNS COUNTY

-  Florida Forever BOT Project Boundary
-  Acquired for Conservation (Fee Simple)
-  Essential Parcel(s) Remaining
-  State Owned Lands
-  Other Conservation Lands
-  State Aquatic Preserves



MARCH 2016



## NORTHEAST FLORIDA BLUEWAY: MAP 3 OF 3

### ST. JOHNS AND FLAGLER COUNTIES

- Florida Forever BOT Project Boundary
- Acquired for Conservation (Fee Simple)
- Acquired for Conservation (Less-Than-Fee)
- Essential Parcel(s) Remaining
- Other Florida Forever BOT Projects
- State Owned Lands
- Other Conservation Lands
- State Aquatic Preserve

0 1.25 2.5 5  
Miles



MARCH 2016

submitting management plans for city-controlled properties in the Blueway to the Acquisition and Restoration Council for review and comment, even though properties may have been acquired with other sources. Doing so will ensure that the Preservation Project takes a system-wide approach to managing Blueway properties.

In Phase II, DRP will consult other federal, state, and local government agencies, as appropriate, to further resource management, recreational and educational opportunities and developing the property for state park purposes. FFS plans to cooperate with, and seek the assistance of, local government entities, interested parties as appropriate and the Florida Natural Areas Inventory. The FFS also intends to coordinate the recreational use of the Rayonier parcel with the DRP because of the potential for a recreation trail on the eastern portion of the property. The FFS will work with the Florida Fish and Wildlife Conservation Commission (FWC) in game and non-game management and related public use of the property.

The Blueway also includes a substantial amount of property owned by other government agencies. It is not the intent that the City or State acquire these properties. However, it is hoped that the Blueway boundary will be the catalyst for a voluntary, joint management approach to publicly owned lands within the corridor. Other agencies that own lands within the Blueway include the U.S. Navy, the National Park Service, Florida Inland Navigation District, the cities of Jacksonville Beach and Atlantic Beach, the City of Jacksonville, the Jacksonville Electric Authority and the St. Johns River Water Management District.

**Management Cost Summary  
Phase I Management Costs  
and Sources of Revenue:**

<b>Projected annual cost (FY 2001):</b>	
<b>Management plans</b>	<b>\$ 200,000</b>
<b>Security:</b>	<b>\$ 25,000</b>
<b>Invasion/exotics control:</b>	<b>\$ 25,000</b>
<b>One-time capital outlay</b>	<b>\$2,500,000</b>
<b>TOTAL</b>	<b>\$2,750,000</b>

The DRP has made general management estimates that would be adjusted based on approval of a unit management plan. Costs for fencing are included. Restoration costs are estimated at \$500 per acre, and until further study, the total of acres to be restored is not known.

**Phase II Management Cost Summary/DRP:**

<b>Category</b>	<b>Startup</b>	<b>Recurring</b>
<b>Source of Funds:</b>	<b>CARL</b>	<b>CARL</b>
<b>Salary</b>	<b>\$0</b>	<b>\$29,000</b>
<b>OPS</b>	<b>\$15,000</b>	<b>\$8,000</b>
<b>Expense</b>	<b>\$18,000</b>	<b>\$12,000</b>
<b>OCO</b>	<b>\$28,000</b>	<b>\$0</b>
<b>FCO</b>	<b>\$20,000</b>	<b>\$0</b>
<b>TOTAL</b>	<b>\$81,000</b>	<b>\$49,000</b>

The FFS anticipates that revenue funding will come from the CARL Trust Fund. Budget needs for interim management are estimated as follows:

**Phase II Management Cost Summary/FFS**

<b>Salary (3 FTE's)</b>	<b>\$79,518</b>
<b>Expense</b>	<b>\$215,000</b>
<b>OCO</b>	<b>\$37,800</b>
<b>TOTAL:</b>	<b>\$333,318</b>

*Updated April 13, 2016*



## Exhibit H

### Department of State Report on Archeological Sites and Historical Sites



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

July 20, 2017

Alan L. Davis  
Land Planning Coordinator  
Florida DA&CS  
3125 Conner Boulevard  
Tallahassee, FL 32399-1650  
E-mail: [Alan.Davis@freshfromflorida.com](mailto:Alan.Davis@freshfromflorida.com)



Re: Matanzas State Forest

In response to your inquiry of July 17, 2017, the Florida Master Site File lists five archeological sites and one standing structure found at the designated area for Matanzas Forest, St.-Johns County, Florida:

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

- This search area may contain *unrecorded* archaeological sites, historical structures or other resources even if previously surveyed for cultural resources.
- 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 850-245-6333.

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

Sincerely,

Eman M. Vovsi  
Florida Master Site File  
[Eman.Vovsi@DOS.MyFlorida.com](mailto:Eman.Vovsi@DOS.MyFlorida.com)

AR=5  
SS=1  
CH=0  
RG=0  
BR=0  
Total=6

## Cultural Resource Roster

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
SJ03152	AR	DOG STATION	SUMMER HAVEN		Insufficient Info	
SJ03154	AR	CEDAR LANDING				
SJ03155	AR	CEDAR CREEK		Human Remains May Be Present		
SJ03156	AR	HAMILTON				
SJ03484	AR	LUCKY STRIKE	SUMMER HAVEN		Not Eligible	
SJ04272	SS	8400 US 1 SOUTH		c1925 Frame Vernacular		

# Exhibit I

## 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 March 2013)

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

### **A. General Discussion**

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

### **B. Agency Responsibilities**

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

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

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

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

### **C. Statutory Authority**

Statutory Authority and more in depth information can be found at:  
<http://www.flheritage.com/preservation/compliance/guidelines.cfm>

D. Management Implementation

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

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

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

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

E. Minimum Review Documentation Requirements

In order to have a proposed project reviewed by the Division, certain information must be submitted for comments and recommendations. The minimum review documentation requirements can be found at:

[http://www.flheritage.com/preservation/compliance/docs/minimum\\_review\\_documentation\\_requirements.pdf](http://www.flheritage.com/preservation/compliance/docs/minimum_review_documentation_requirements.pdf).

\* \* \*

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

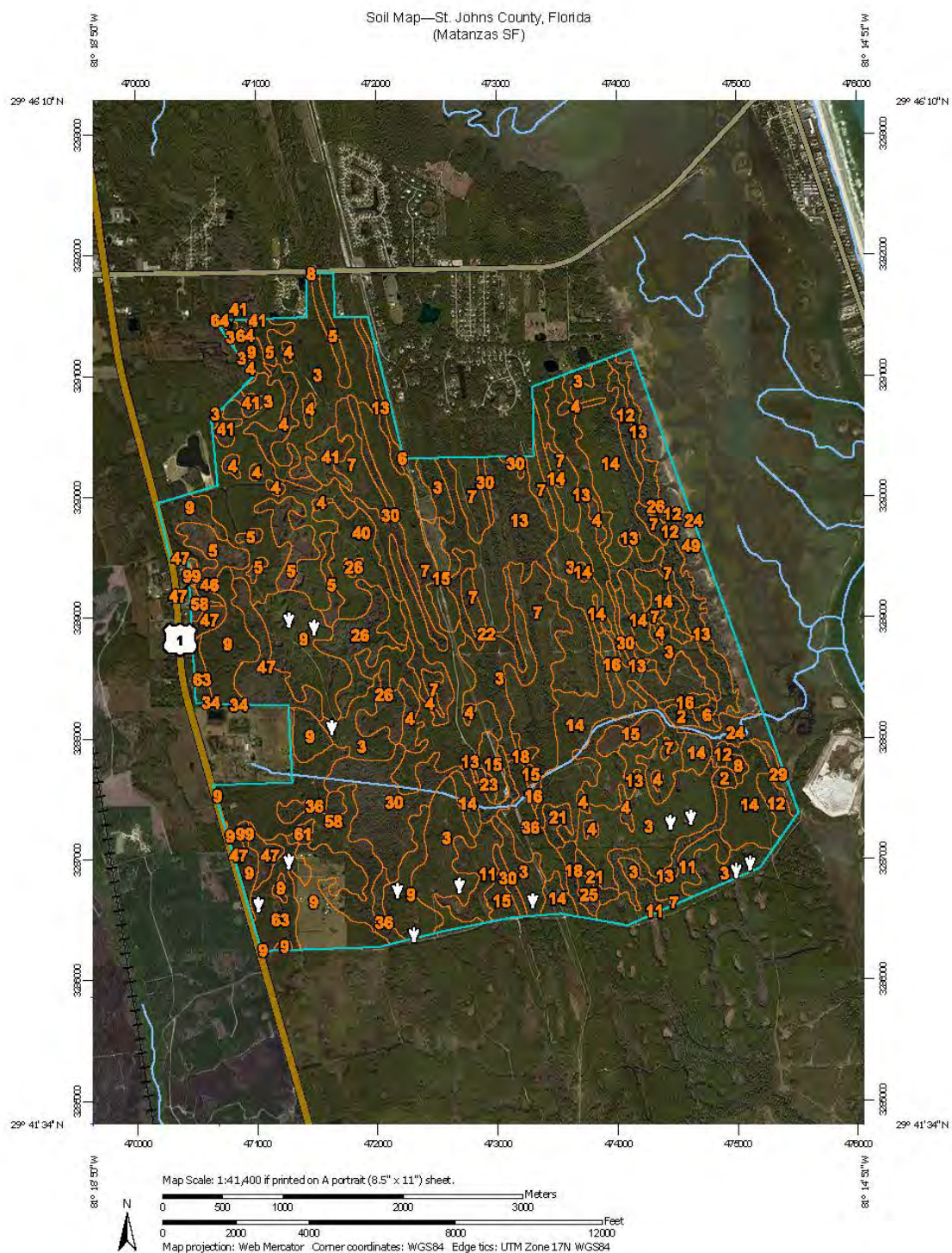
Deena S. Woodward  
Division of Historical Resources  
Bureau of Historic Preservation  
Compliance and Review Section  
R. A. Gray Building  
500 South Bronough Street  
Tallahassee, FL 32399-0250

Phone: (850) 245-6425  
Toll Free: (800) 847-7278  
Fax: (850) 245-6435

## Exhibit J

### Soil Maps and Descriptions





**Natural Resources  
Conservation Service**

Web Soil Survey  
National Cooperative Soil Survey

7/31/2017  
Page 1 of 4



Soil Map—St. Johns County, Florida  
(Matanzas SF)

### MAP LEGEND

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

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: St. Johns County, Florida

Survey Area Data: Version 15, Sep 28, 2016

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

Date(s) aerial images were photographed: Jan 1, 1999—Dec 13, 2011

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

## Map Unit Legend

St. Johns County, Florida (FL109)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Astatula fine sand, 0 to 8 percent slopes	15.7	0.3%
3	Myakka-Myakka, wet, fine sands, 0 to 2 percent slopes	975.5	20.5%
4	Myakka fine sand, frequently ponded, 0 to 1 percent slopes	147.6	3.1%
5	St. Johns fine sand, depressionai	134.7	2.8%
6	Tavares fine sand, 0 to 5 percent slopes	40.3	0.8%
7	Immokalee fine sand	559.3	11.7%
8	Zolfo fine sand	7.8	0.2%
9	Pomona fine sand	441.9	9.3%
11	Smyrna-Smyrna, wet, fine sand, 0 to 2 percent slopes	82.3	1.7%
12	Ona-Ona, wet, fine sand, 0 to 2 percent slopes	49.8	1.0%
13	St. Johns fine sand	523.7	11.0%
14	Cassia fine sand, 0 to 2 percent slopes	446.7	9.4%
15	Pomello fine sand, 0 to 5 percent slopes	97.4	2.0%
16	Orsino fine sand, 0 to 5 percent slopes	25.1	0.5%
18	Floridana fine sand, frequently flooded	21.9	0.5%
21	Wabasso fine sand, 0 to 2 percent slopes	27.3	0.6%
22	Manatee fine sandy loam, frequently flooded	32.9	0.7%
23	Paola fine sand, 0 to 8 percent slopes	7.1	0.1%
24	Pellicer silty clay loam, frequently flooded	33.3	0.7%
25	Parkwood fine sandy loam, frequently flooded	9.9	0.2%
26	Samsula muck, frequently ponded, 0 to 1 percent slopes	106.1	2.2%
29	Satellite fine sand	13.8	0.3%
30	Wesconnett fine sand, frequently flooded	232.4	4.9%

St. Johns County, Florida (FL109)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
34	Tocol fine sand	0.5	0.0%
36	Riviera fine sand, frequently flooded	85.3	1.8%
40	Pottsburg fine sand	87.8	1.8%
41	Tomoka muck	53.4	1.1%
46	Holopaw fine sand	5.0	0.1%
47	Holopaw fine sand, frequently flooded	101.2	2.1%
49	Moultrie fine sand, frequently flooded	135.0	2.8%
58	Eau Gallie fine sand	171.9	3.6%
61	Riviera fine sand, depressionai, 0 to 1 percent slopes	7.3	0.2%
63	Placid fine sand	74.0	1.6%
64	Elizay fine sand	2.6	0.1%
99	Water	4.9	0.1%
<b>Totals for Area of Interest</b>		<b>4,761.6</b>	<b>100.0%</b>

## Component Legend

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

### Report—Component Legend

Component Legend—St. Johns County, Florida							
Map unit symbol and name	Map unit acres	Pct. of map unit	Component name	Component kind	Pct. slope		
					Low	RV	High
2—Astatula fine sand, 0 to 8 percent slopes	5,500						
		85	Astatula	Series	0.0	4.0	8.0
3—Myakka-Myakka, wet, fine sands, 0 to 2 percent slopes	39,870						
		75	Myakka	Series	0.0	1.0	2.0
		15	Myakka, wet	Series	0.0	1.0	2.0
4—Myakka fine sand, frequently ponded, 0 to 1 percent slopes	2,370						
		85	Myakka	Series	0.0	0.5	1.0
5—St. Johns fine sand, depressional	5,610						
		85	St. Johns, depressional	Series	0.0	1.0	2.0
6—Tavares fine sand, 0 to 5 percent slopes	8,230						
		90	Tavares	Series	0.0	3.0	5.0
7—Immokalee fine sand	20,230						
		70	Immokalee, nonhydric	Series	0.0	1.0	2.0
		20	Immokalee, hydric	Series	0.0	1.0	2.0
8—Zolfo fine sand	7,440						
		90	Zolfo	Taxadjunct	0.0	1.0	2.0
9—Pomona fine sand	32,020						
		70	Pomona, nonhydric	Series	0.0	1.0	2.0
		20	Pomona, hydric	Series	0.0	1.0	2.0
11—Smyrna-Smyrna, wet, fine sand, 0 to 2 percent slopes	10,660						
		76	Smyrna, non-hydric	Series	0.0	1.0	2.0
		20	Smyrna, hydric	Series	0.0	1.0	2.0



Component Legend—St. Johns County, Florida							
Map unit symbol and name	Map unit acres	Pct. of map unit	Component name	Component kind	Pct. slope		
					Low	RV	High
12—Ona-Ona, wet, fine sand, 0 to 2 percent slopes	5,570						
		75	Ona	Series	0.0	1.0	2.0
		12	Ona, wet	Series	0.0	1.0	2.0
13—St. Johns fine sand	10,130						
		60	St. Johns, hydric	Series	0.0	1.0	2.0
		30	St. Johns, nonhydric	Series	0.0	1.0	2.0
14—Cassia fine sand, 0 to 2 percent slopes	4,660						
		80	Cassia	Series	0.0	1.0	2.0
15—Pomello fine sand, 0 to 5 percent slopes	4,450						
		95	Pomello	Series	0.0	2.5	5.0
16—Orsino fine sand, 0 to 5 percent slopes	2,380						
		90	Orsino	Series	0.0	3.0	5.0
18—Floridana fine sand, frequently flooded	4,975						
		80	Floridana, frequently flooded	Series	0.0	1.0	2.0
21—Wabasso fine sand, 0 to 2 percent slopes	2,975						
		85	Wabasso	Series	0.0	1.0	2.0
22—Manatee fine sandy loam, frequently flooded	3,430						
		85	Manatee	Series	0.0	1.0	2.0
23—Paola fine sand, 0 to 8 percent slopes	1,480						
		85	Paola	Series	0.0	4.0	8.0
24—Pellicer silty clay loam, frequently flooded	17,135						
		90	Pellicer	Series	0.0	0.5	1.0
25—Parkwood fine sandy loam, frequently flooded	5,480						
		90	Parkwood	Series	0.0	1.0	2.0
26—Samsula muck, frequently ponded, 0 to 1 percent slopes	4,390						
		85	Samsula	Series	0.0	0.5	1.0
29—Satellite fine sand	1,675						
		90	Satellite	Series	0.0	1.0	2.0

Component Legend—St. Johns County, Florida							
Map unit symbol and name	Map unit acres	Pct. of map unit	Component name	Component kind	Pct. slope		
					Low	RV	High
30—Wesconnett fine sand, frequently flooded	5,500						
		90	Wesconnett	Series	0.0	1.0	2.0
34—Tocoi fine sand	20,575						
		65	Tocoi, nonhydric	Series	0.0	1.0	2.0
		20	Tocoi, hydric	Series	0.0	1.0	2.0
36—Riviera fine sand, frequently flooded	26,530						
		85	Riviera, frequently flooded	Series	0.0	1.0	1.0
40—Pottsburg fine sand	3,175						
		70	Pottsburg, nonhydric	Series	0.0	1.0	2.0
		20	Pottsburg, hydric	Series	0.0	1.0	2.0
41—Tomoka muck	4,990						
		80	Tomoka	Series	0.0	0.6	1.0
46—Holopaw fine sand	16,800						
		70	Holopaw, nonhydric	Series	0.0	1.0	2.0
		15	Holopaw, hydric	Series	0.0	1.0	2.0
47—Holopaw fine sand, frequently flooded	9,710						
		90	Holopaw, frequently flooded	Series	0.0	1.0	2.0
49—Moultrie fine sand, frequently flooded	1,775						
		90	Moultrie	Series	0.0	0.6	1.0
58—Eaughallie fine sand	5,985						
		70	Eaughallie, nonhydric	Series	0.0	1.0	2.0
		15	Eaughallie, hydric	Series	0.0	1.0	2.0
61—Riviera fine sand, depression, 0 to 1 percent slopes	4,590						
		85	Riviera, depression	Series	0.0	0.5	1.0
63—Placid fine sand	9,205						
		85	Placid	Series	0.0	1.0	2.0
64—Elzey fine sand	6,170						
		60	Elzey, nonhydric	Series	0.0	1.0	2.0
		30	Elzey, hydric	Series	0.0	1.0	2.0
99—Water	34,220						
		100	Water	Miscellaneous area			

### Data Source Information

Soil Survey Area: St. Johns County, Florida  
Survey Area Data: Version 15, Sep 28, 2016

## 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)

### St. Johns County, Florida

**Map Unit:** 2—Astatula fine sand, 0 to 8 percent slopes

**Component:** Astatula (85%)

The Astatula component makes up 85 percent of the map unit. Slopes are 0 to 8 percent. This component is on ridges on marine terraces on coastal plains, knolls on marine terraces on coastal plains. The parent material consists of eolian or sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive layer is very high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.



**Component: Tavares (5%)**

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

**Component: Paola (5%)**

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

**Component: Orsino (5%)**

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

**Map Unit: 3—Myakka-Myakka, wet, fine sands, 0 to 2 percent slopes****Component: Myakka (75%)**

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

**Component: Myakka, wet (15%)**

The Myakka, wet component makes up 15 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods, coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during June, July, August, September. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component: Basinger (5%)**

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

**Component:** EauGallie, non-hydric (4%)

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

**Component:** Placid, depressional (1%)

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

**Map Unit:** 4—Myakka fine sand, frequently ponded, 0 to 1 percent slopes**Component:** Myakka (85%)

The Myakka component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of sandy 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, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component:** Basinger (5%)

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

**Component:** Placid (4%)

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

**Component:** Anclote (3%)

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

**Component:** Floridana (2%)

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

**Component:** Samsula (1%)

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

**Map Unit:** 5—St. Johns fine sand, depressional

**Component:** St. Johns, depressional (85%)

The St. Johns, depressional component makes up 85 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 4 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component:** Myakka, depressional (8%)

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

**Component:** Wesconnett (7%)

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

**Map Unit:** 6—Tavares fine sand, 0 to 5 percent slopes

**Component:** Tavares (90%)

The Tavares component makes up 90 percent of the map unit. Slopes are 0 to 5 percent. This component is on hills on marine terraces on coastal plains. The parent material consists of eolian or sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 57 inches during June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component:** Candler (4%)

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

**Component:** Adamsville (3%)

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

**Component:** Cassia (2%)

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

**Component:** Zolfo (1%)

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

**Map Unit:** 7—Immokalee fine sand

**Component:** Immokalee, nonhydic (70%)

The Immokalee, nonhydic component makes up 70 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains, 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 poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during June, July, August, September, October, November. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 4w. This soil does not meet hydic criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component:** Immokalee, hydic (20%)

The Immokalee, hydic component makes up 20 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during July, August. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 4w. This soil meets hydic criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.



**Component:** Myakka, nonhydric (3%)

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

**Component:** Pottsburg, nonhydric (3%)

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

**Component:** Smyrna, nonhydric (2%)

Generated brief soil descriptions are created for major soil components. The Smyrna 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:** 8—Zolfo fine sand**Component:** Zolfo (90%)

The Zolfo 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, rises on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 33 inches during June, July, August, September, October, November. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component:** Adamsville (4%)

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

**Component:** Ona, nonhydric (3%)

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

**Component:** Immokalee, nonhydric (3%)

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

**Map Unit: 9—Pomona fine sand**

**Component: Pomona, nonhydryc (70%)**

The Pomona, nonhydryc component makes up 70 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during July, August, September. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component: Pomona, hydric (20%)**

The Pomona, hydric component makes up 20 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during July, August, September. 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: Myakka, nonhydryc (2%)**

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

**Component: EauGallie, nonhydryc (2%)**

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

**Component: St. Johns, hydric (2%)**

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

**Component:** Bakersville (2%)

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

**Map Unit:** 11—Smyrna-Smyrna, wet, fine sand, 0 to 2 percent slopes

**Component:** Smyrna, non-hydric (76%)

The Smyrna, non-hydric component makes up 76 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during June, July, August, September. Organic matter content in the surface horizon is about 7 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:** Smyrna, hydric (20%)

The Smyrna, hydric component makes up 20 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during June, July, August, September. Organic matter content in the surface horizon is about 7 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 0 within 30 inches of the soil surface.

**Component:** Basinger, depressional (2%)

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

**Component:** EauGallie, hydric (1%)

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

**Component:** Pomona, non-hydric (1%)

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

**Map Unit:** 12—Ona-Ona, wet, fine sand, 0 to 2 percent slopes

**Component:** Ona (75%)

The Ona component makes up 75 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component:** Ona, wet (12%)

The Ona, wet component makes up 12 percent of the map unit. Slopes are 0 to 2 percent. This component is on sloughs on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 8 inches during July, August, September. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component:** Myakka (5%)

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

**Component:** Immokalee (4%)

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

**Component:** Basinger, hydric (4%)

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



**Map Unit: 13—St. Johns fine sand****Component: St. Johns, hydric (60%)**

The St. Johns, hydric component makes up 60 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 January, February, March, April, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component: St. Johns, nonhydric (30%)**

The St. Johns, nonhydric component makes up 30 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 12 inches during January, February, March, April, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component: Myakka, nonhydric (4%)**

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

**Component: Smyrna, nonhydric (3%)**

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

**Component: Ona, hydric (3%)**

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

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

**Component: Cassia (80%)**

The Cassia component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on rises on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is 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, July, August, September, October, November, 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. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component: Myakka (7%)**

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

**Component: Pomello (6%)**

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

**Component: Satellite (4%)**

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

**Component: Jonathan (3%)**

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

**Map Unit: 15—Pomello fine sand, 0 to 5 percent slopes**

**Component: Pomello (95%)**

The Pomello component makes up 95 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridges, coastal plains. The parent material consists of sandy marine deposits. 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 33 inches during July, August, September, October, November. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 0 within 30 inches of the soil surface.

**Component:** Smyrna (3%)

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

**Component:** Bulow (1%)

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

**Component:** Tavares (1%)

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

**Map Unit:** 16—Orsino fine sand, 0 to 5 percent slopes

**Component:** Orsino (90%)

The Orsino component makes up 90 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridges on marine terraces on coastal plains, knolls on marine terraces on coastal plains. The parent material consists of eolian or sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is very high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 51 inches during June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component:** Paola (4%)

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

**Component:** Tavares (3%)

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

**Component:** Pomello (3%)

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

**Map Unit:** 18—Floridana fine sand, frequently flooded**Component:** Floridana, frequently flooded (80%)

The Floridana, frequently flooded component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains on marine terraces on coastal plains, drainageways on marine terraces on coastal plains. The parent material consists of sandy 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 low. 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, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 7 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component:** Holopaw, frequently flooded (10%)

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

**Component:** Riviera, frequently flooded (10%)

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

**Map Unit:** 21—Wabasso fine sand, 0 to 2 percent slopes**Component:** Wabasso (85%)



The Wabasso component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on flats on marine terraces on coastal plains. The parent material consists of sandy marine deposits over loamy marine deposits. Depth to a root restrictive layer, strongly contrasting textural stratification, is 12 to 63 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 2 percent. 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: Riviera (4%)**

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

**Component: Felda (4%)**

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

**Component: Basinger (4%)**

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

**Component: Boca (3%)**

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

**Map Unit: 22—Manatee fine sandy loam, frequently flooded**

**Component: Manatee (85%)**

The Manatee component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains on marine terraces on coastal plains, drainageways on marine terraces on coastal plains. The parent material consists of sandy 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, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 9 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component: Parkwood (5%)**

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

**Component: Bluff (5%)**

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

**Component: Riviera, frequently flooded (5%)**

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

**Map Unit: 23—Paola fine sand, 0 to 8 percent slopes**

**Component: Paola (85%)**

The Paola component makes up 85 percent of the map unit. Slopes are 0 to 8 percent. This component is on hills on marine terraces on coastal plains, ridges on marine terraces on coastal plains, knolls on marine terraces on coastal plains, 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 excessively drained. Water movement in the most restrictive layer is very 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. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 0 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component: Cassia (5%)**

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

**Component:** Candler (5%)

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

**Component:** Astatula (5%)

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

**Map Unit:** 24—Pellicer silty clay loam, frequently flooded

**Component:** Pellicer (90%)

The Pellicer component makes up 90 percent of the map unit. Slopes are 0 to 1 percent. This component is on tidal marshes on marine terraces on coastal plains. The parent material consists of clayey marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is 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 high. This soil is frequently 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, November, December. Organic matter content in the surface horizon is about 18 percent. Nonirrigated land capability classification is 8. This soil meets hydric criteria. The soil has a strongly saline horizon within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 65 within 30 inches of the soil surface.

**Component:** Durbin (4%)

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

**Component:** St. Augustine (3%)

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

**Component:** Tisonia (3%)

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

**Map Unit:** 25—Parkwood fine sandy loam, frequently flooded

**Component:** Parkwood (90%)

The Parkwood component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains on marine terraces on coastal plains, drainageways on marine terraces on coastal plains. The parent material consists of sandy 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 high. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 8 percent. Nonirrigated land capability classification is 5w. This soil meets hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 15 percent. 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: Bluff (4%)**

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

**Component: Floridana, frequently flooded (3%)**

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

**Component: Manatee (3%)**

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

**Map Unit: 26—Samsula muck, frequently ponded, 0 to 1 percent slopes**

**Component: Samsula (85%)**

The Samsula component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of herbaceous organic material over sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 3 inches during January, February, 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: Kaliga (3%)**



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

**Component:** Basinger, depressional (3%)

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

**Component:** Myakka, depressional (3%)

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

**Component:** Sanibel (2%)

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

**Component:** Floridana, depressional (2%)

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

**Component:** Anclote (2%)

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

**Map Unit:** 29—Satellite fine sand

**Component:** Satellite (90%)

The Satellite component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on interdunal 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 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 27 inches during June, July, August, September, October, November. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component:** Fripp (4%)

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

**Component:** Pompano, nonhydric (3%)

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

**Component:** Moultrie (3%)

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

**Map Unit:** 30—Wesconnett fine sand, frequently flooded**Component:** Wesconnett (90%)

The Wesconnett 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. 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, 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:** Bakersville (3%)

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

**Component:** Myakka, depressional (3%)

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

**Component:** St. Johns, depressional (2%)

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

**Component:** Tomoka (2%)

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

**Map Unit:** 34—Tocoi fine sand

**Component:** Tocoí, nonhydryc (65%)

The Tocoí, nonhydryc component makes up 65 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is 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, August, September, October, November, December. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component:** Tocoí, hydric (20%)

The Tocoí, hydric component makes up 20 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during January, February, August, September, October, November. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component:** Placid (3%)

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

**Component:** Pompano, hydric (3%)

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

**Component:** St. Johns, hydric (3%)

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

**Component:** Myakka, nonhydryc (3%)

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

**Component:** Ona, nonhydryc (3%)

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

**Map Unit: 36—Riviera fine sand, frequently flooded**

**Component: Riviera, frequently flooded (85%)**

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

**Component: Floridana, frequently flooded (3%)**

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

**Component: Bluff (3%)**

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

**Component: Manatee (3%)**

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

**Component: Holopaw, frequently flooded (3%)**

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

**Component: Winder, frequently flooded (3%)**

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

**Map Unit: 40—Pottsburg fine sand**

**Component: Pottsburg, nonhydric (70%)**



The Pottsburg, nonhydric component makes up 70 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during January, February, March, July, August, September, October, November, December. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component:** Pottsburg, hydric (20%)

The Pottsburg, hydric component makes up 20 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during 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:** Immokalee, nonhydric (4%)

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

**Component:** Myakka, nonhydric (3%)

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

**Component:** Smyrna, nonhydric (3%)

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

**Map Unit:** 41—Tomoka muck

**Component:** Tomoka (80%)

The Tomoka component makes up 80 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of herbaceous organic material over 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 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 90 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:** Samsula (10%)

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

**Component:** Hontoon (10%)

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

**Map Unit:** 46—Holopaw fine sand

**Component:** Holopaw, nonhydric (70%)

The Holopaw, nonhydric component makes up 70 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 June, July, August, September, October, November. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4w. This soil 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:** Holopaw, hydric (15%)

The Holopaw, hydric component makes up 15 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during July, August, September. 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:** Winder (5%)

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

**Component:** Riviera, hydric (5%)

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

**Component:** Pompano, hydric (5%)

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

**Map Unit:** 47—Holopaw fine sand, frequently flooded

**Component:** Holopaw, frequently flooded (90%)

The Holopaw, frequently flooded 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 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, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 1 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:** Floridana, frequently flooded (4%)

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

**Component:** Myakka, depressional (3%)

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

**Component:** Riviera, frequently flooded (3%)

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

**Map Unit:** 49—Moultrie fine sand, frequently flooded**Component:** Moultrie (90%)

The Moultrie component makes up 90 percent of the map unit. Slopes are 0 to 1 percent. This component is on tidal marshes on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. 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, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 8. This soil meets hydric criteria. The soil has a strongly saline horizon within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 70 within 30 inches of the soil surface.

**Component:** Pellicer (5%)

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

**Component:** Tisonia (5%)

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

**Map Unit:** 58—EauGallie fine sand**Component:** EauGallie, nonhydric (70%)

The EauGallie, nonhydic component makes up 70 percent of the map unit. Slopes are 0 to 2 percent. This component is on rises on marine terraces on coastal plains, 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 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 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:** EauGallie, hydric (15%)

The EauGallie, hydric component makes up 15 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during June, July, August, September. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

**Component:** Myakka, nonhydic (5%)

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

**Component:** Wabasso (5%)

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

**Component:** Riviera, hydric (5%)

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

**Map Unit:** 61—Riviera fine sand, depressional, 0 to 1 percent slopes

**Component:** Riviera, depressional (85%)



The Riviera, depressional component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is 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 June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 1 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:** Chobee, depressional (7%)

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

**Component:** Wabasso (4%)

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

**Component:** Tequesta, depressional (4%)

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

**Map Unit:** 63—Placid fine sand

**Component:** Placid (85%)

The Placid component makes up 85 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 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 0 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 2 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:** Floridana, hydric (4%)

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

**Component:** Ellzey, hydric (4%)

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

**Component:** Holopaw, hydric (4%)

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

**Component:** Toco, hydric (3%)

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

**Map Unit:** 64—Ellzey fine sand**Component:** Ellzey, nonhydric (60%)

The Ellzey, nonhydric component makes up 60 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces, coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during June, July, August, September, October. 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:** Ellzey, hydric (30%)

The Ellzey, hydric component makes up 30 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces, coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. 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 June, July, August, September. Organic matter content in the surface horizon is about 2 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:** Pompano, hydric (5%)

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

**Component:** Floridana, hydric (5%)

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

**Map Unit:** 99—Water**Component:** Water (100%)

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

**Data Source Information**

Soil Survey Area: St. Johns County, Florida

Survey Area Data: Version 15, Sep 28, 2016

## Exhibit K

Department of Environmental Protection  
Outstanding Florida Waters



## Florida Department of Environmental Protection

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

Rick Scott  
Governor

Carlos Lopez-Cantera  
Lt. Governor

Noah Valenstein  
Secretary

July 20, 2017

Mr. Alan L. Davis  
Land Planning Coordinator  
Florida Forest Service  
Florida Department of Agriculture and Consumer Services  
The Conner Building  
3125 Conner Boulevard, Suite J-237  
Tallahassee, Florida 32399-1650

RE: Matanzas State Forest

Dear Mr. Davis:

Thank you for your inquiry regarding the surface water quality classifications on and near Matanzas State Forest in St. Johns County. There are no Outstanding Florida Waters (OFW) in or immediately adjacent to the state forest. However, the site does lie immediately north of Faver-Dykes State Park. The southern portion of the state park has been designated as OFW (subparagraph 62-302.700(9)(c)22., Florida Administrative Code (FAC)), but this area does not lie anywhere close to the state forest. Most surface waters on the site are classified as Class III waters (subparagraph 62-302.400(17)(b)55., FAC), which is the statewide default classification. The easternmost portion of the site either lies immediately adjacent to or includes some waters classified as Class II waters under the rule specified above.

If you have any questions or need additional information, please feel free to contact me at the letterhead address (mail station 6511), by phone at 850/245-8429, or via E-mail at [Eric.Shaw@dep.state.fl.us](mailto:Eric.Shaw@dep.state.fl.us).

Sincerely,

A handwritten signature in black ink, appearing to read "Eric Shaw".

Eric Shaw  
Environmental Manager  
Water Quality Standards Program  
Florida Department of Environmental Protection  
2600 Blair Stone Road, MS 6511  
Tallahassee, FL 32399-2400  
Phone: (850) 245-8429  
Email: [Eric.Shaw@dep.state.fl.us](mailto:Eric.Shaw@dep.state.fl.us)



## Exhibit L

### Water Resources



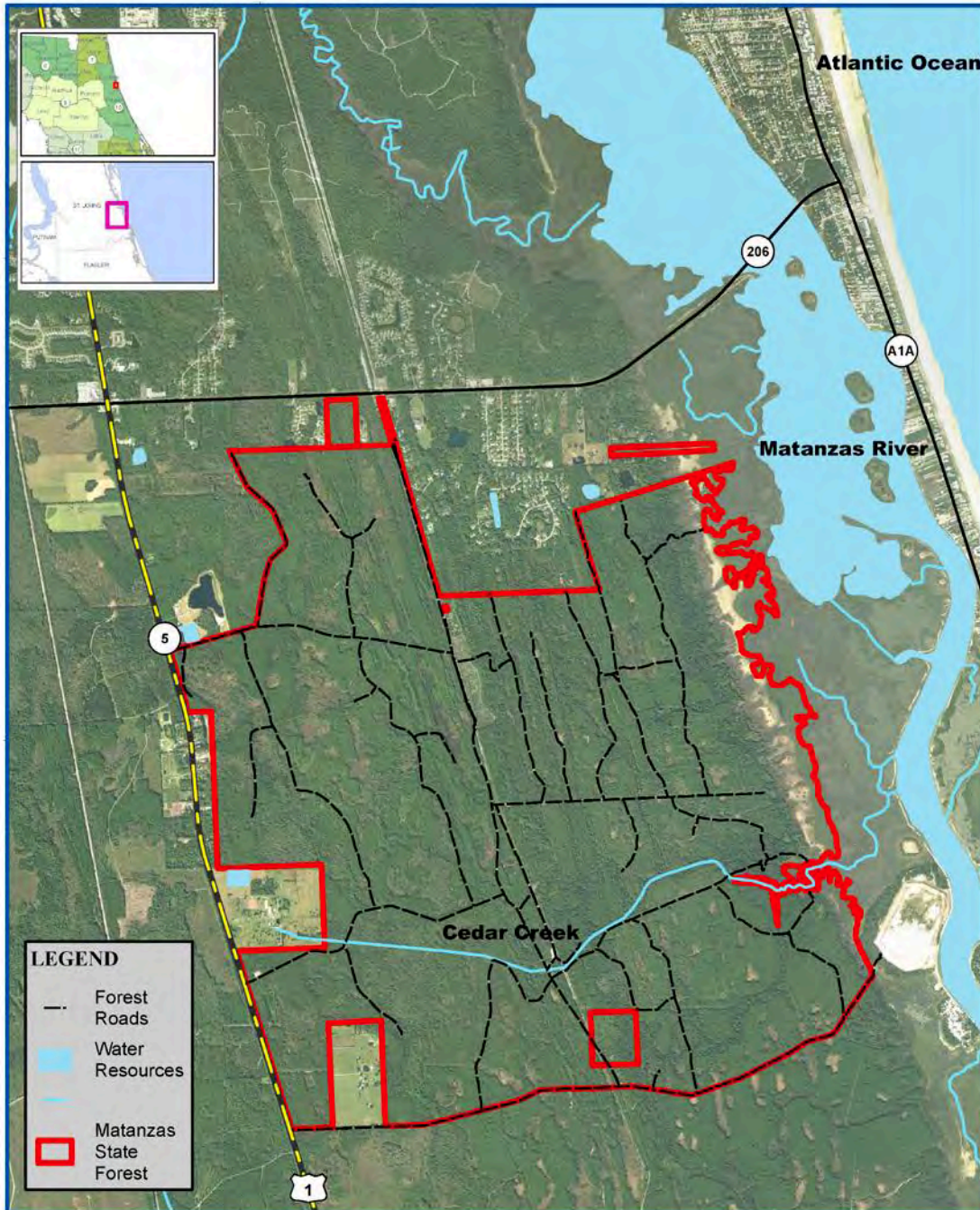
Florida Forest Service

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

## Matanzas State Forest Water Resources Map

**DISCLAIMER:**  
This map was prepared by the Florida Forest Service  
and is not intended to be used for any purpose other than  
general information. It is not a legal document and should not  
be used to make any legal decisions. The Florida Forest Service  
does not warrant the accuracy or completeness of the information  
contained in this map. The Florida Forest Service is not responsible  
for any errors or omissions in this map. The Florida Forest Service  
is not responsible for any damages or losses resulting from the use  
of this map.

Map Data Digitized from the  
Florida Forest Service's  
Inventory of State Forests (IFRS) from the  
2000-2005 Survey of Forests



0 0.125 0.25 0.5 0.75 1 Miles

Map Month/Year: April 2018



0 0.225 0.45 0.9 1.35 1.8 Kilometers

## Exhibit M

### 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

August 9, 2017

Alan Davis  
FDACS, Florida Forest Service  
3125 Conner Boulevard  
Tallahassee, FL 32399

Dear Mr. Davis,

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

**Project:** Matanzas State Forest  
**Date Received:** 8/7/2017  
**Location:** St. Johns County

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

#### **Element Occurrences**

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

#### **Federally Listed Species**

Our data indicate federally listed species are present on or very near this site (see table 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.*



Florida Resources  
and Environmental  
Analysis Center

Institute of Science  
and Public Affairs

The Florida State University

#### **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.

*Tracking Florida's Biodiversity*

*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.*

#### **Land Acquisition Projects**

This site appears to be located within the Northeast Florida Blueway - Phase II, and adjacent to the Matanzas to Ocala Conservation Corridor Florida Forever BOT Projects, which are part of the State of Florida's Conservation and Recreation Lands land acquisition program. A description of these projects can be found at [http://www.dep.state.fl.us/lands/FFplan\\_county.htm](http://www.dep.state.fl.us/lands/FFplan_county.htm). For more information on these Florida Forever Projects, contact the Florida Department of Environmental Protection, Division of State Lands.

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

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

Please visit [www.fnai.org/trackinglist.cfm](http://www.fnai.org/trackinglist.cfm) for county or statewide element occurrence distributions and links to more element information.

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

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

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

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

Sincerely,

*Elyse Sachs*

Elyse Sachs  
GIS / Data Services

Encl

*Tracking Florida's Biodiversity*





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

## Florida Natural Areas Inventory

### Managed Area Element Summary

#### Matanzas State Forest



#### SCIENTIFIC NAME

#### COMMON NAME

Global  
rank

State  
rank

Federal  
status

State  
status

#### REPTILES

*Gopherus polyphemus*

Gopher Tortoise

G3

S3

C

ST

#### BIRDS

*Egretta caerulea*

Little Blue Heron

G5

S4

N

ST

*Mycteria americana*

Wood Stork

G4

S2

LT

FT

*Pandion haliaetus*

Osprey

G5

S3S4

N

SSC\*

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

08/09/2017

Page 1 of 4



## Florida Natural Areas Inventory

### Managed Area Element Summary

### Matanzas State Forest



SCIENTIFIC NAME	COMMON NAME	Global rank	State rank	Federal status	State status
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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).
- GNRTR = 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

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



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

## Florida Natural Areas Inventory Managed Area Element Summary Matanzas State Forest



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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.  
LE = Endangered species in danger of extinction throughout all or a significant portion of its range.  
LE, LT = Species currently listed endangered in a portion of its range but only listed as threatened in other areas  
LE, PDL = Species currently listed endangered but has been proposed for delisting.  
LE, PT = Species currently listed endangered but has been proposed for listing as threatened.  
LE, XN = Species currently listed endangered but tracked population is a non-essential experimental population.  
LT = Threatened species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.  
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.

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  
F(XN) = Federal listed as an experimental population in Florida  
FT(S/A) = Federal Threatened due to similarity of appearance  
ST = State population listed as Threatened by the 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. (ST\* for *Ursus americanus floridanus* (Florida black bear) indicates that this status does not apply in Baker and Columbia counties and in the Apalachicola National Forest. ST\* for *Neovison vison* pop.1 (Southern mink, South Florida population) indicates that this status applies to the Everglades population only.)  
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\* indicates that a species has SSC status only in selected portions of its range in Florida. 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/>.

LE = Endangered species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant

---



*Florida Natural Areas Inventory*  
Managed Area Element Summary  
Matanzas State Forest




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to the U.S. Endangered Species Act.

LT = Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered.

N = Not currently listed, nor currently being considered for listing.



# Florida Natural Areas Inventory Aggregated Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<b>Documented</b>					
<i>Dermochelys coriacea</i>	Leatherback Sea Turtle	G2	S2	LE	FE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Pandion haliaetus</i>	Osprey	G5	S3S4	N	SSC*
<b>Likely</b>					
<i>Caretta caretta</i>	Loggerhead Sea Turtle	G3	S3	LT	FT
<i>Chelonia mydas</i>	Green Sea Turtle		S2S3	LT	FT
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3Q	S3	LT	FT
<i>Haematopus palliatus</i>	American Oystercatcher	G5	S2	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Mycteria americana</i>	Wood Stork		S2	LT	FT
<i>Peromyscus polionotus phasma</i>	Anastasia Island Beach Mouse	G5T1	S1	LE	FE
Scrub		G2	S2	N	N
<i>Sterna antillarum</i>	Least Tern	G4	S3	N	ST
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T2	S2	N	N
<b>Potential</b>					
<i>Acipenser oxyrinchus oxyrinchus</i>	Atlantic Sturgeon	G3T3	S1	LE	FE
<i>Asplenium heteroresiliens</i>	Wagner's Spleenwort	G2	S1	N	N
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	T
<i>Calydorea coelestina</i>	Bartram's Ixia		S2S3	N	E
<i>Carex chapmani</i>	Chapman's Sedge	G3	S3	N	T
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	E
<i>Charadrius melodus</i>	Piping Plover	G3	S2	LT	FT
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S2	N	N
<i>Egretta caerulea</i>	Little Blue Heron	G5	S4	N	ST
<i>Eretmochelys imbricata</i>	Hawksbill Sea Turtle	G3	S1	LE	FE
<i>Glandularia maritima</i>	Coastal Vervain		S3	N	E
<i>Gymnopogon chapmanianus</i>	Chapman's Skeletongrass		S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	T
<i>Lilsea aestivalis</i>	Pondspice	G3?	S2	N	E
<i>Lythrum curtissii</i>	Curtiss' Loosestrife	G1	S1	N	E
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	E
<i>Monolropsis reynoldsiae</i>	Pygmy Pipes	G1	S1	N	E
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Neovison vison lutensis</i>	Atlantic Salt Marsh Mink	G5T3	S3	N	N
<i>Nolina atopocarpa</i>	Florida Beargrass	G3	S3	N	T
<i>Podomys floridanus</i>	Florida Mouse		S3	N	N
<i>Pteroglossaspis ecrinata</i>	Giant Orchid	G2G3	S2	N	T
<i>Pycnanthemum floridanum</i>	Florida Mountain-mint	G3	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>Salix floridana</i>	Florida Willow	G2	S2	N	E
<i>Trichechus manatus</i>	West Indian Manatee		S2	LE, PT	FE

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



## Exhibit N

### Florida Fish and Wildlife Conservation Commission Response



**Florida Fish  
and Wildlife  
Conservation  
Commission**

**Commissioners**

**Brian Yablonski**  
Chairman  
Tallahassee

**Allese P. "Liesa" Priddy**  
Vice Chairman  
Immokalee

**Ronald M. Bergeron**  
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**Robert A. Spottswood**  
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**Nick Wiley**  
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**Eric Sutton**  
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**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

8/01/2017

Alan L. Davis  
Land Planning Coordinator  
Florida Forest Service  
3125 Conner Boulevard  
Tallahassee, FL  
32399

Dear Alan Davis:

This letter is in response to your request for listed species occurrence records and critical habitats, Strategic Habitat Conservation Areas (SHCA's), on the following properties: Peace River, Newnans Lake SF, Ross Prairie SF, Matanzas SF, Jennings SF, Tate's Hell SF, and Picayune Strand SF. The Florida Fish and Wildlife Conservation Commission's database indicates that SHCA's for swallow-tailed kite and Cooper's hawk occur in Newnans Lake. SHCA's for Cooper's hawk, scrubjay, and swallow-tailed kite occur in Peace River. SHCA's for the Florida black bear and the striped newt occur in Jennings SF. Enclosed are 8.5 x 11 maps showing prioritized SHCA's, priority wetlands, and species locations for all projects.

**\*\* Please note:** the SHCAs were developed for the purpose of identifying new areas that may eventually be managed for species conservation. Many public lands were expressly removed from the models and this is why some sites, or portions of sites, have no SHCA. Therefore on maps where there is no visual representation of a SHCA there is a strong possibility that our models would have designated these locations as SHCA had they not already been designated as public or protected lands.

This letter and/or 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. Please note 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.**

If you have any questions or further requests, please contact me at (850) 488-0588 or [gisrequests@myfwc.com](mailto:gisrequests@myfwc.com)

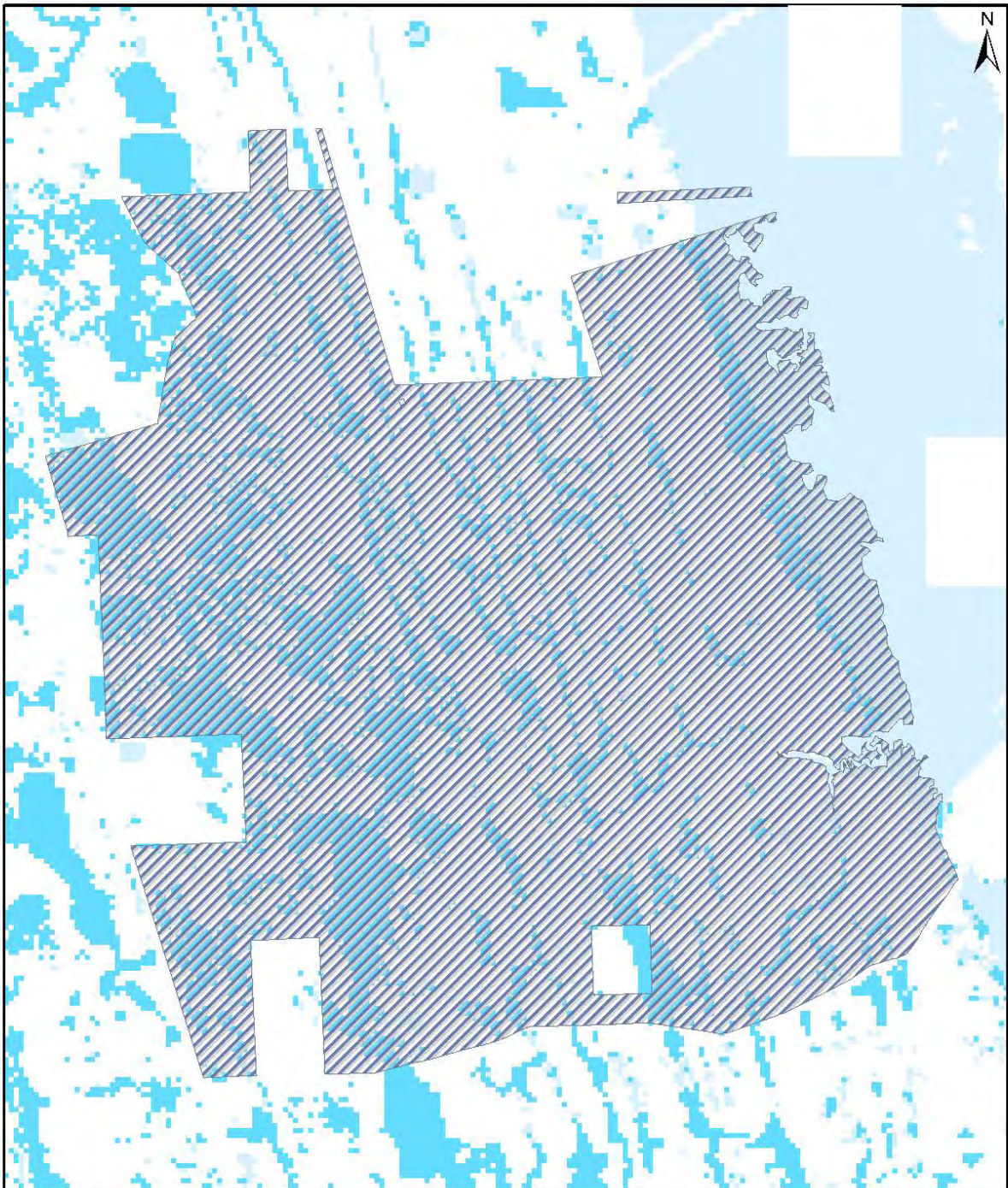
Sincerely,

*Eva Salinas*

Eva Salinas  
Research Assistant

2017\_6219  
Enclosures





## Matanzas State Forest

Miles  
0 0.25 0.5 0.75 1

### Priority Wetlands

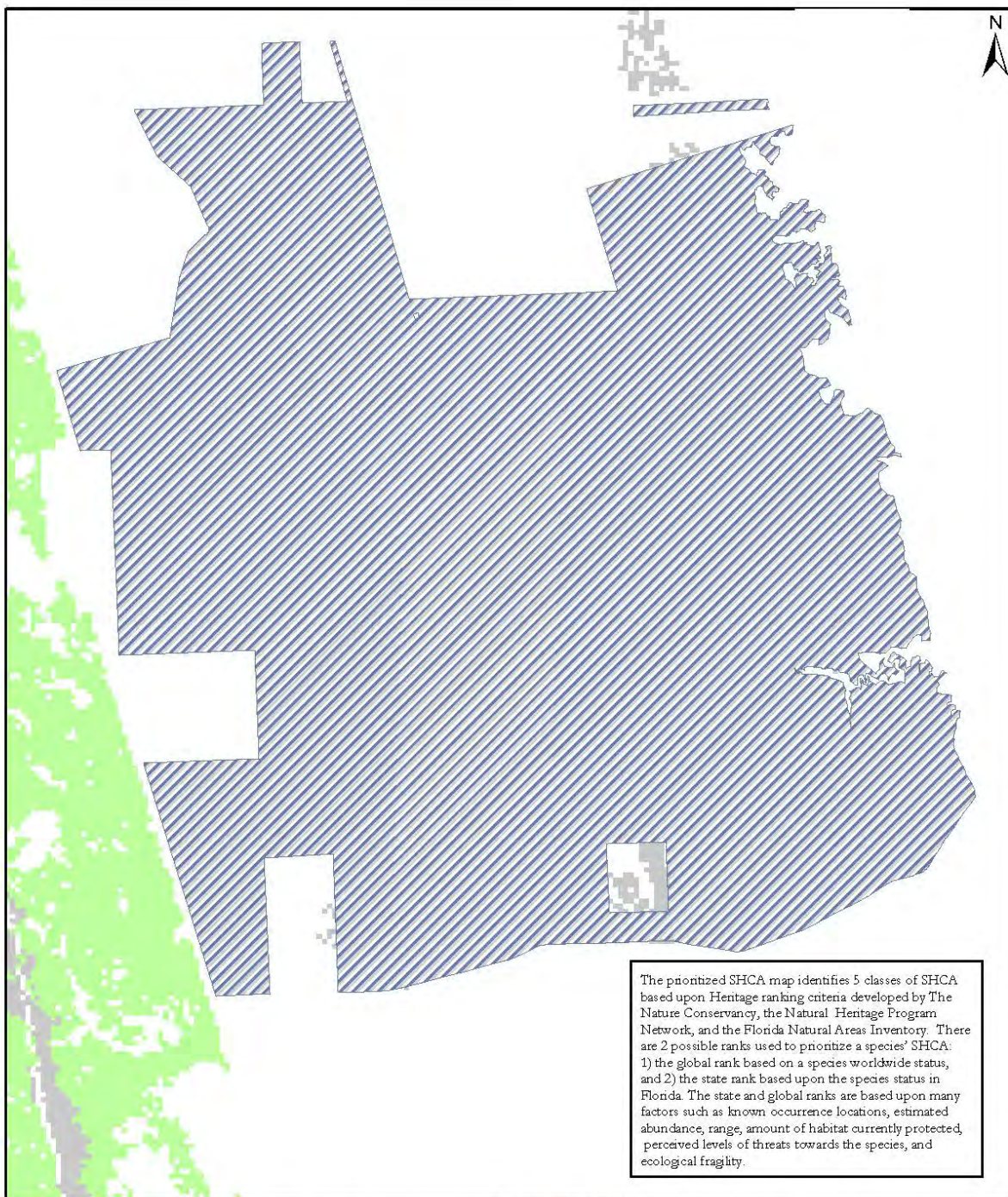
- 1-3 Species, Wetlands habitat
- 4-6 Species, Wetlands habitat
- 7-9 Species, Wetlands habitat
- 10-11 Species, Wetlands habitat



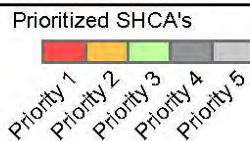
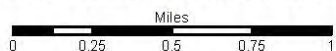
Florida Fish and Wildlife  
Conservation Commission  
MyFWC.com

FWC ID: 2017\_6219 August 1, 2017





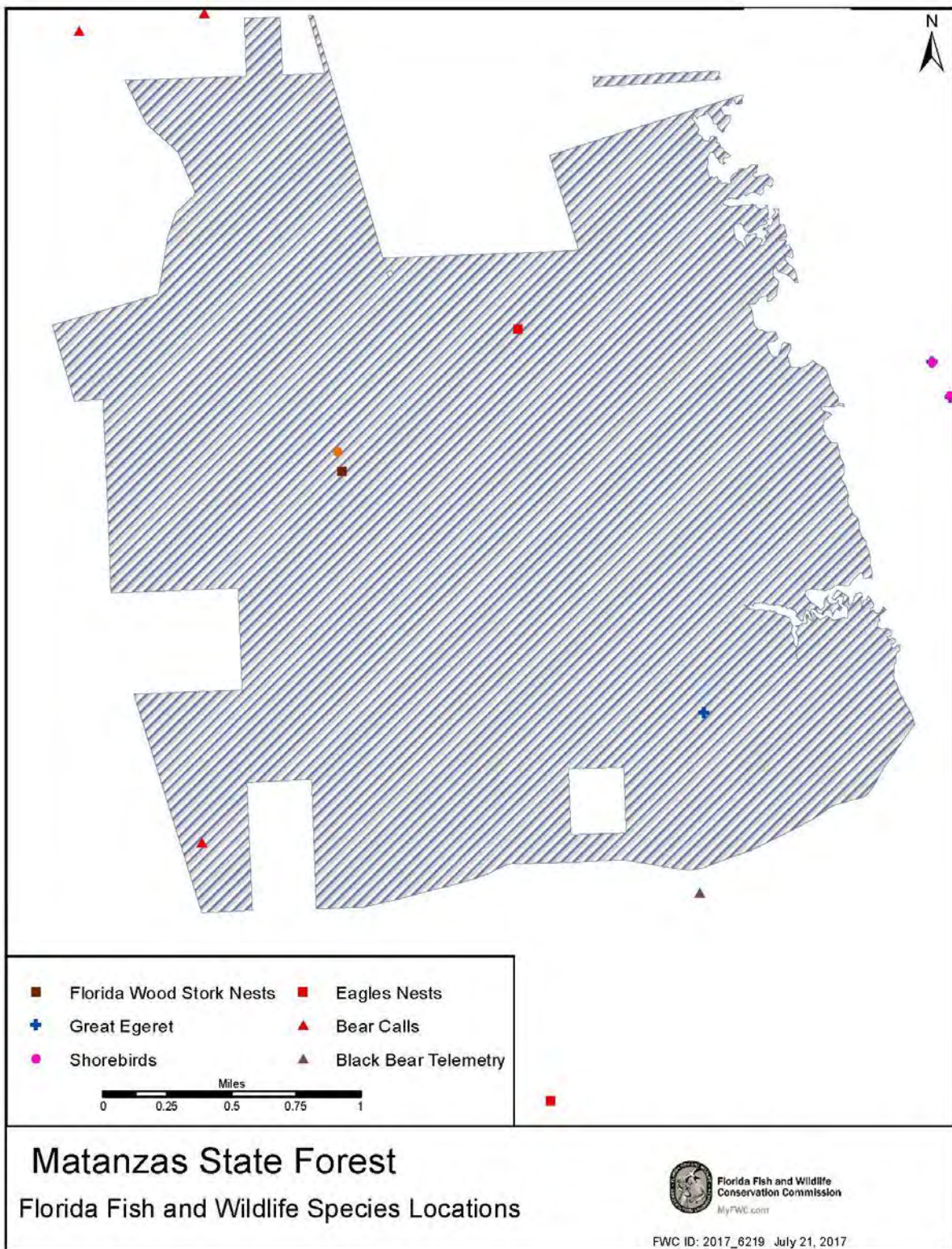
## Matanzas State Forest



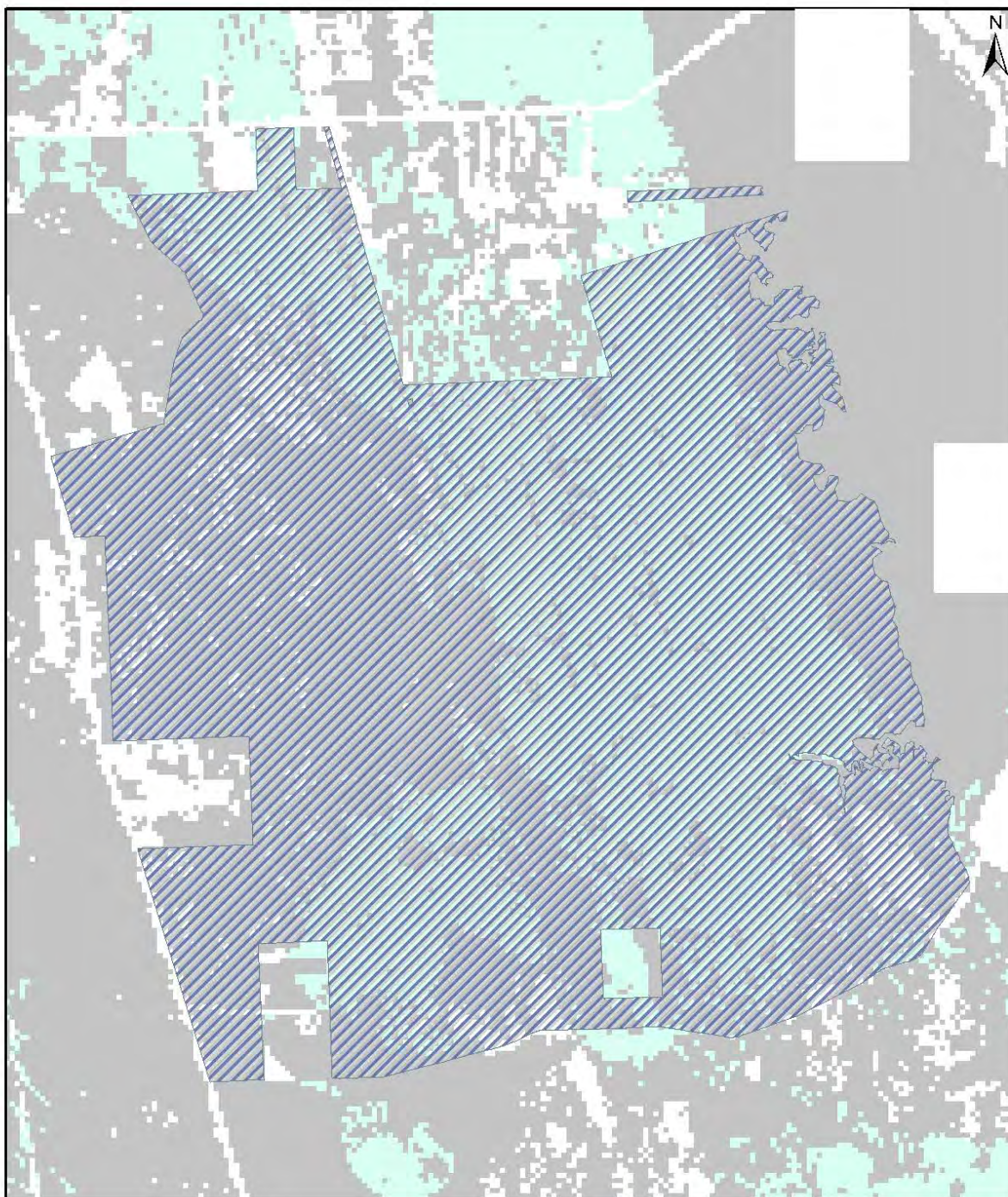
Florida Fish and Wildlife  
Conservation Commission  
MyFWC.com

FWC ID: 2017\_6219 August 1, 2017

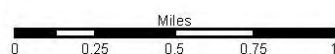




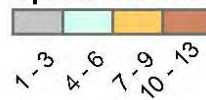




## Matanzas State Forest



### Species Richness

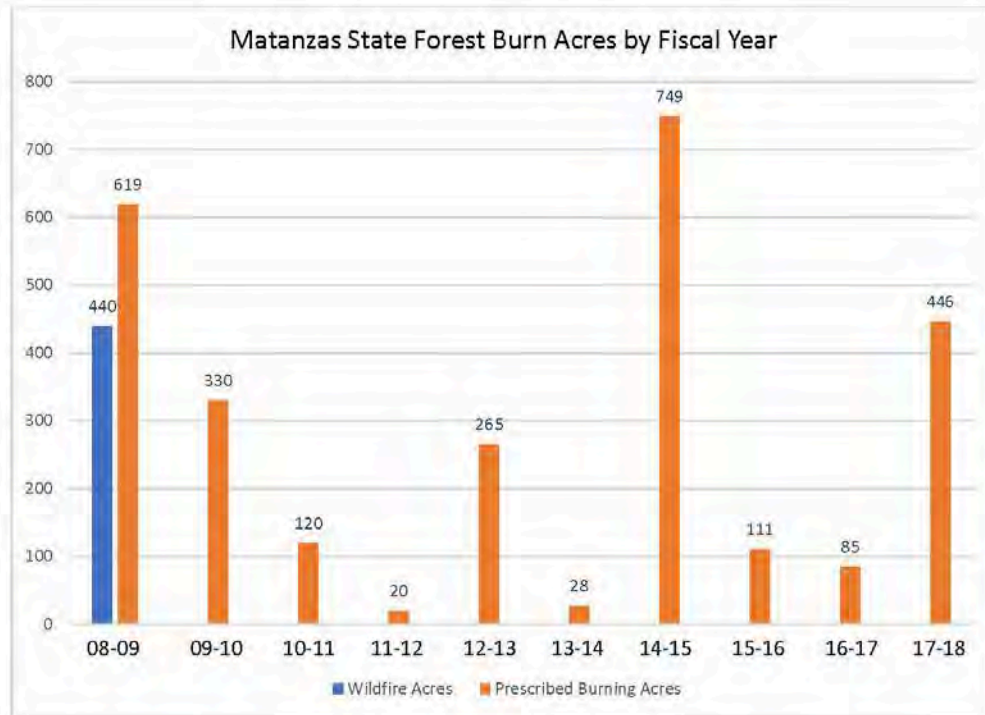


Florida Fish and Wildlife  
Conservation Commission  
MyFWC.com

FWC ID: 2017\_6219 August 7, 2017

## Exhibit O

### Fire History



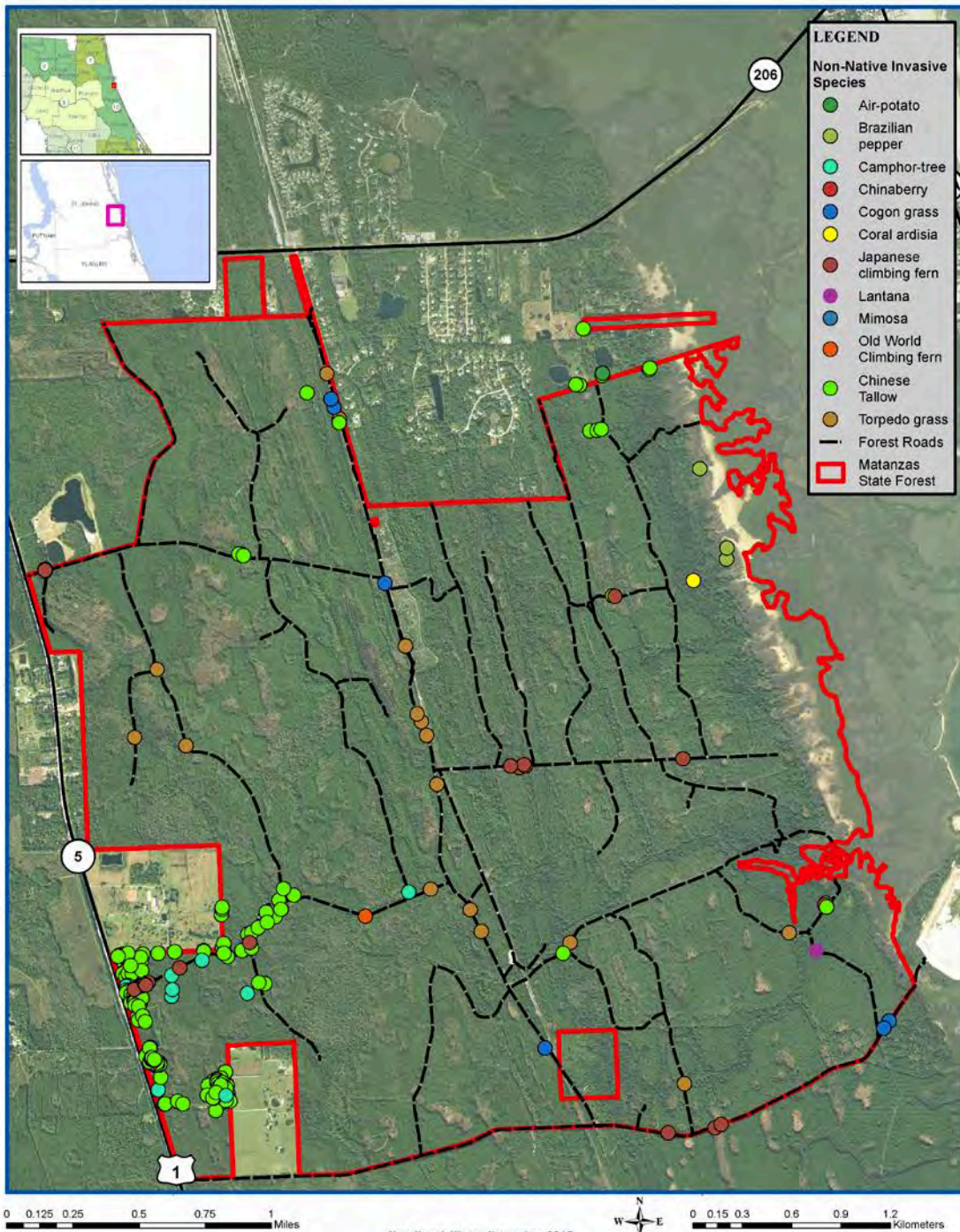
## Exhibit P

### Non-Native Invasive Species





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

[illegible][illegible]

## Exhibit Q

### Current Natural Communities





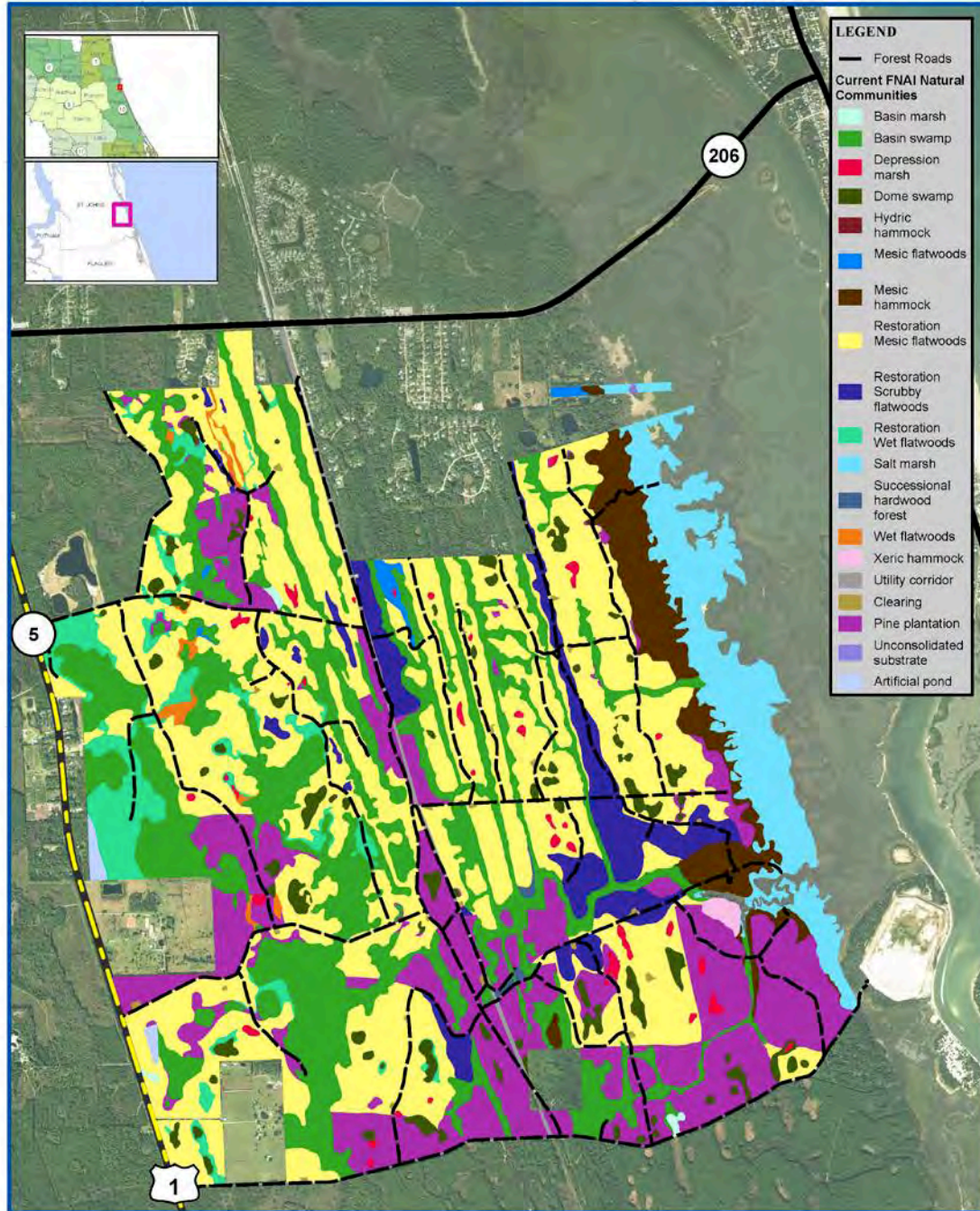
Florida Forest Service

Coordinate System: Florida Albers  
NAD 83/2011 StatePlane FWS (FWS) Datum

# Matanzas State Forest Current FNAI Natural Communities

**DISCLAIMER:**  
This map was prepared by the Florida Forest Service  
and is intended for informational purposes only. It is not  
guaranteed to be accurate and is not intended to be used  
for legal or financial purposes. The Florida Forest Service  
assumes no liability for any errors or omissions in this map.  
The Florida Forest Service reserves the right to modify or  
update this map at any time without notice.

Map Date: 12/15/2017  
Map Title: Matanzas State Forest (FWS) Map 104  
2017-2018



0 0.125 0.25 0.5 0.75 1 Miles

Map Month/Year: December 2017



0.8 0.4 0 0.8 Kilometers

## Exhibit R

### Historic Natural Communities





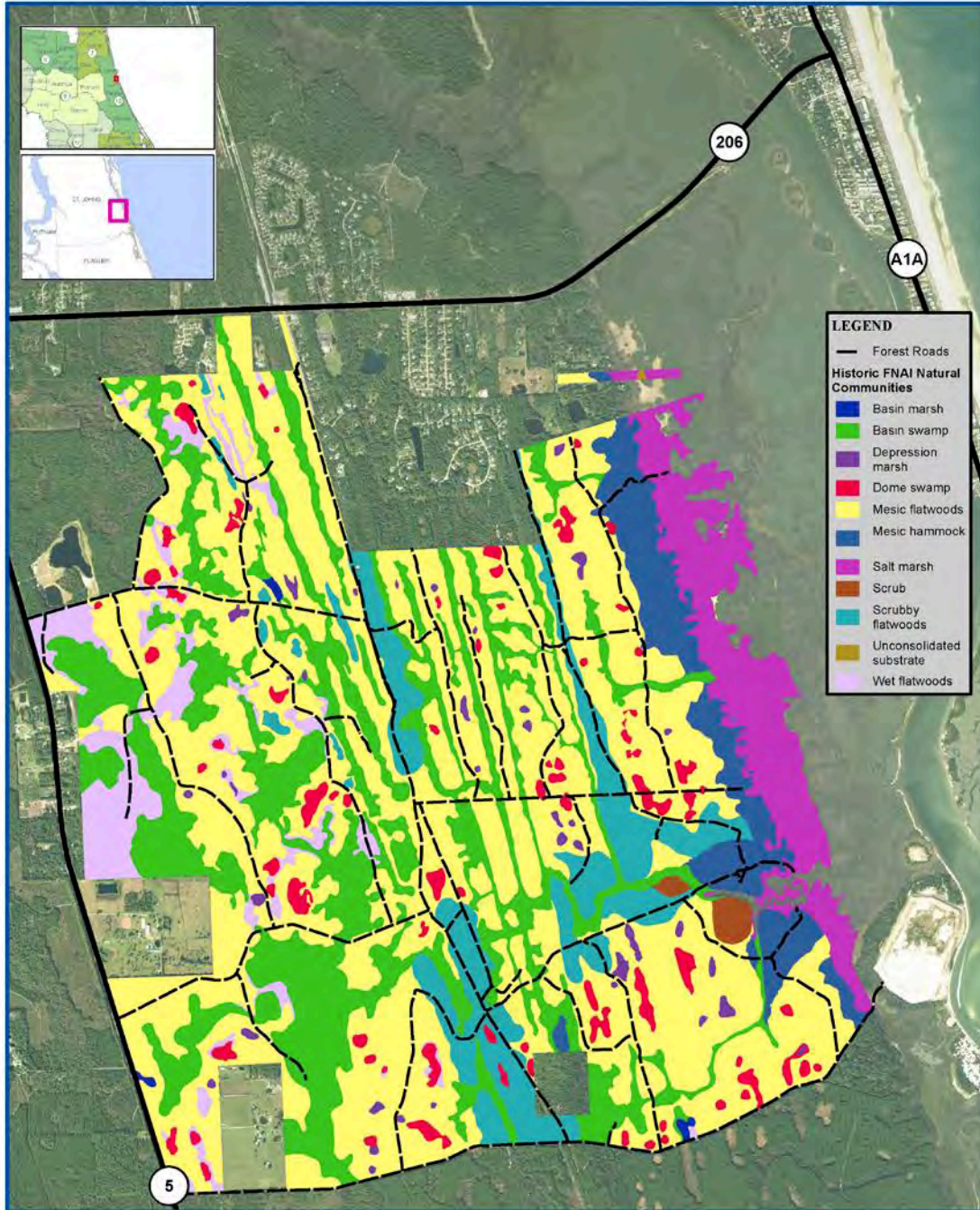
Florida Forest Service

Coordinate System: Florida Albers  
NAD 83/2011 State Plane (FWS) Datum

# Matanzas State Forest Historic FNAI Natural Communities

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not be used for any legal or regulatory purposes. The  
Florida Forest Service does not warrant the accuracy or  
completeness of the information contained herein.

Map Data: Aerial photography courtesy of  
the Florida Aerial Photography Program  
Boundary: State Natural Area (SNA) from the  
2010 Aerial Photo of Florida



0 0.125 0.25 0.5 0.75 1 Miles

Map Month/Year: December 2017



0 0.125 0.25 0.5 0.75 1 Kilometers



## Exhibit S

### Management Prospectus

# Northeast Florida Blueway

Duval, Flagler and St. Johns Counties

Climate Change Lands

## 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 – helps to maintain shoreline plant communities on the Tolomato & Matanzas rivers, benefiting the manatees that spend the warm season in these water; (2) Increase the amount of open space available in urban areas – serves as a vital connection in the Statewide System of Greenways and Trails; (3) Increase natural resource-based public recreation and educational opportunities – offers many resource-based recreation opportunities both directly and indirectly: fishing, canoeing, bicycling, and camping, to name a few; (4) Protect, restore, and maintain the quality and natural functions of land, water, and wetland systems of the state – connectivity with other areas contribute to ongoing governmental efforts to protect and restore the regional land and water; and (5) Increase the amount of forestland available for sustainable management of natural resources – areas observed within the Rayonier property that are capable of producing pine timber products have been site prepared and planted.

## Manager

The City of Jacksonville, the Florida Forest Service (FFS) of the Department of Agriculture and Consumer Services (DACS), and the Division of Recreation and

Parks (DRP) of the Department of Environmental Protection (DEP).

## General Description

This project is composed of many publicly and privately owned uplands and wetlands along both sides of the Intracoastal Waterway, the Tolomato and Matanzas rivers and selected tributaries, from the Duval County line south to the Flagler County line. Marshlands, open water, and small islands of shrub and hammock vegetation are 92 percent of the public lands. The intention of the project is to connect existing natural areas and greenspace to form a conservation lands corridor along the north-south waterway. It is adjacent to the following managed areas: Guana Tolomato Matanzas National Estuarine Research Reserve (several WMD Conservation Areas included therein), Faver-Dykes State Park, Guana River State Park, Deep Creek State Forest, and Ft. Matanzas National Monument.

## Public Use

This project would support primitive camping opportunities with canoeing and kayaking taking place within the waterway and associated creeks. Some of the larger parcels may have potential for archaeological interpretation and nature study trails, depending on the ability of the public to gain access. The DRP proposes to manage the St. Johns County portion north of Faver-Dykes State Park and south of a haul road between US

Northeast Florida Blueway FNAI Elements	
Manatee	G2/S2
Florida Black Bear	G5T2/S2
Gopher Tortoise	G3/S3
Wood Stork	G4/S2
Yellow Hibiscus	G4G5/S2
Roseate Spoonbill	G5/S2
American Oystercatcher	G5/S2
Eastern Diamondback Rattlesnake	G4/S3
Least Tern	G4/S3
Bald Eagle	G5/S3
Osprey	G5/S3S4
Little Blue Heron	G5/S4
16 rare species are associated with the project	

Placed on List	2001
Project Area (GIS Acres)	27,917
Acres Acquired (GIS)	15,801*
at a Cost of	\$32,438,430**
Acres Remaining (GIS)	12,116
Estimated (Tax Assessed) Value of	\$30,059,986

\*Acquisition Includes lands owned by public entities and NGOs.

\*\*Money spent includes funds spent by the Board of Trustees (current) and acquisition partners (requires updating).

Highway 1 and a spoil site on the Matanzas River. This section of the project contains about 5,000 acres. As a part of Faver-Dykes State Park, hunting would not be allowed. The property would expand the quality and quantity of recreational activity at the park including bicycling, hiking, horseback riding, camping (RV and primitive camping), environmental education, and picnicking.

The FFS proposes to manage the remainder of the project under a multiple-use management regime consistent with the State Forest system. A portion of the project will become part of the Deep Creek State Forest, managed for multiple uses including, but not limited to, timber management and restoration, low impact recreational opportunities, and protecting archeological and historic sites.

#### **Acquisition Planning**

On January 25, 2001, the Acquisition & Restoration Council (ARC) added the Northeast Florida Blueway – Phase I project to Group A of the Florida Forever (FF) 2001 Priority list. This fee-simple acquisition, located in Duval County and known as Pablo Creek, was sponsored by the City of Jacksonville (Preservation Project Jacksonville). It consisted of approximately 6,943 acres, multiple owners (private & public), and a 1998 taxable value of \$15,700,000 on the 4,867 acres in private ownerships. The entire project was designated as essential.

On December 6, 2001, the ARC approved Phase II, also known as Tolomato & Matanzas Rivers, to the project boundary. The fee-simple addition in St. Johns County consisted of approximately 27,929 acres, multiple owners (private & public), and a 2001 taxable value of \$18,610,780 on the 17,834 acres in private ownerships. St. Johns County sponsored this addition. The essential parcels were designated as Rayonier Timberlands, Ponce de Leon Resort, Flagler Development, Roberts, Rayland, Wadsworth, and Swan Development.

On August 15, 2003, the ARC approved two additions to the project boundary. The Office of Coastal & Aquatic Managed Areas (CAMA) sponsored a 20.26-acre addition with a single owner, Jacoby Development Inc., two parcels, and a 2002 taxable value of \$2,955,714. This fee-simple addition, located in St. Johns County, was added to Phase II. St. Johns County sponsored a 70-acre addition with a single owner,



Marina Park Properties, LLC, multiple parcels, and a 2002 taxable value of \$8,400,000. This fee-simple addition is located in Flagler County. On October 13, 2006, the ARC approved a redesign of the project boundary. A total of 2,000 acres no longer suitable for conservation were removed from the project, 180 in Duval County and 1,820 in St. Johns County, reducing the total project size to 32,564 acres. The updated total includes lands in public ownership and acres acquired. Previous project area estimates did not include lands in public ownership.

On December 9, 2011, ARC placed this project in the Climate Change Lands list of projects.

#### **Coordination**

The City of Jacksonville is an acquisition partner in Phase I, in Duval County. The city has contacted FEMA and they may contribute \$250,000 towards acquisition. Florida Communities Trust has already contributed acquisition funds with the City for several parcels, the SJRWMD has purchased some conservation easements and the Jacksonville Transportation Authority has mitigation funds to contribute towards acquisition. The Trust for Public Land will be the intermediary for negotiations.

Portions of Phase II, in St. Johns County, will likely be acquired through other conservation programs. St. Johns County, the Florida Communities Trust Program and the St. Johns River Water Management District (SJRWMD) may be partners on portions of the project.

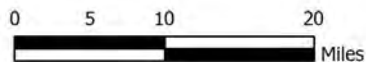
#### **Management Policy Statement**

To conserve and protect environmentally unique and irreplaceable lands that contain native, relatively unaltered flora and fauna representing a natural area unique to, or scarce within, a region of the state or a larger geographic area. To conserve and protect significant habitat for native species or endangered and threatened species. To conserve, protect, manage, or restore important ecosystems, landscapes, and forests, in order to enhance or protect significant surface water, coastal, recreational, timber, fish or wildlife resources. Finally, to preserve significant archaeological or historical sites.



## NORTHEAST FLORIDA BLUEWAY: OVERVIEW

**DUVAL, ST. JOHNS, AND FLAGLER COUNTIES**



MARCH 2016



### Management Prospectus

**Qualifications for State Designation** The lands in Phase I are rapidly disappearing as Duval County grows. The Preservation Project, the city's land acquisition program, seeks to protect and preserve the existing habitat and waterway as it exists today. It is the goal of the City of Jacksonville to manage this project to conserve, protect or restore important ecosystems while providing opportunities for natural-resource-based recreation. The City of Jacksonville proposes to manage the lands in accordance with the standards of the Acquisition and Restoration Council.

Phase II is of a size and diversity that makes it desirable for use and management as a state forest. Management by the FFS as a state forest is contingent upon acquiring fee simple title to the parcels of interest to FFS. The portion of the project of interest for management by the DRP is largely disturbed land that has been managed for silviculture. While much restoration work will be required over time, the quality of the property when restored will make it suitable for state park purposes.

**Manager** The City of Jacksonville will manage that portion of the project within Duval County. The DRP proposes to manage that portion of the Northeast Florida Blueway - Phase II project, approximately 5,000 acres, lying north of Faver-Dykes State Park, south of a haul road from US 1 to a spoil site on the Matanzas River, east of US 1 and west of the Matanzas River. The Florida Forest Service (FFS) proposes to manage the Rayonier parcel north of the spoil haul road (approximately 4,000 acres) plus two additional parcels, one adjoining Deep Creek State Forest and an adjoining Florida Natural Areas Inventory Addition (approximately 2,500 acres).

### Conditions affecting intensity of management

Initial management efforts of Phase I by the City of Jacksonville will concentrate on site security, resource inventory, removing trash, and having limited public access to the property. Steps will be taken to ensure that the public is provided appropriate access while simultaneously protecting sensitive resources. Intensive restoration will be needed on the portion of Phase II managed by DRP to restore natural communities disturbed by timber operations. Intensity of restoration will be dictated by study of the site. Any immediate action, such as prescribed burning, would increase the early intensity of management. The lands bordering the river are in relatively good shape and will not require intensive management.

The portions of Phase II managed by FFS can be restored with the help of carefully prescribed fires and hydrologic restoration. The use of fire must be carefully applied because of the fuel load and type of fuel in this

forest system. An inventory of the forest roads in this area would determine which stay open for public use, which would be used for management, and which would be closed.

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

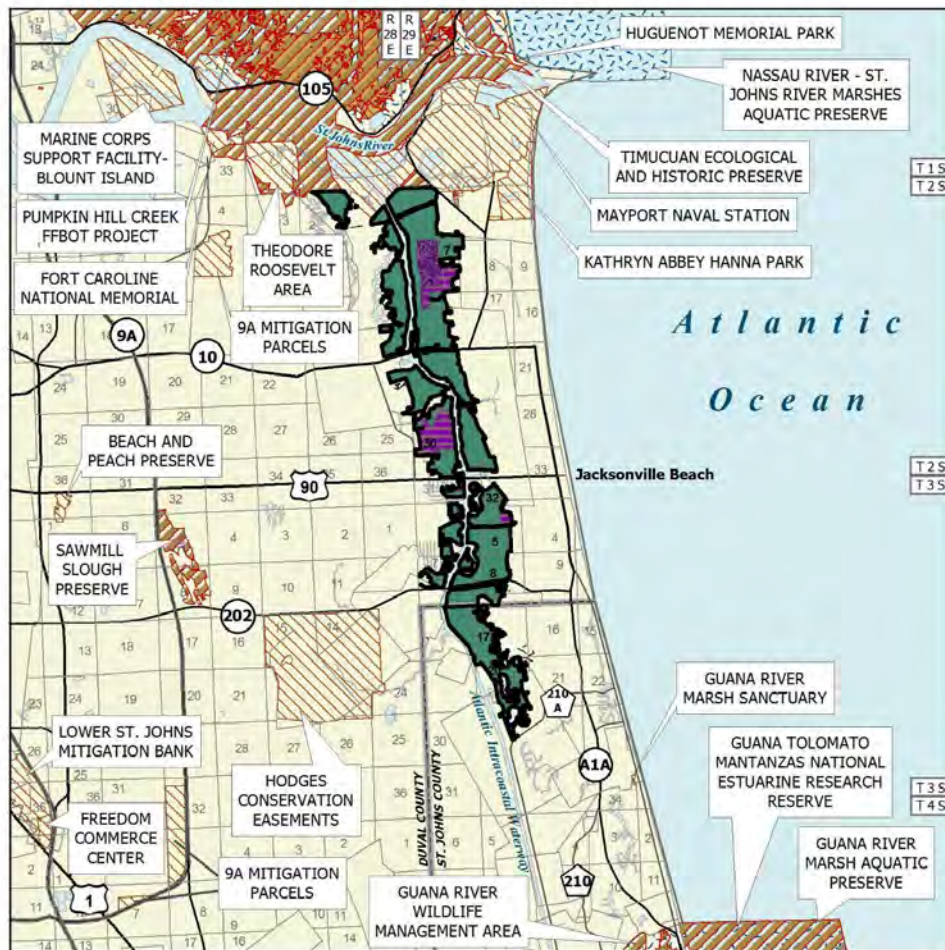
Jacksonville's land-acquisition program, Preservation Project Jacksonville, will be responsible for developing and implementing the management plans for Phase I. The Preservation Project set aside \$950,000 to hire a program manager to develop and implement management plans. As properties are acquired, the City will first inventory natural resources and develop a plan to protect and restore resources, including removing invasive and exotic species, before developing access plans. The DRP plans for its portion of Phase II that, upon fee title acquisition, public access will be provided for low-intensity, non-facility outdoor recreation. Within the first year after acquisition, management will concentrate on site security, natural and cultural resource protection, and developing a plan for long-term public use and resource management.

The FFS timetable for management of the remainder of Phase II also provides initial public access for diverse, low-intensity outdoor recreation. Management would be carried out by the FFS Bunnell District until additional personnel were available for resource management and restoration activity. Initial and intermediate management will concentrate on site security, public and resource management access, prescribed fire, reforestation, and removing trash.

**Revenue-generating potential** Phase II, the portion to be added to Faver Dykes State Park, will not initially make any significant revenue for the DRP. After acquiring and adding the land to Faver-Dykes State Park, it will probably be several years before significant public use facilities are developed. The amount of revenue generated will depend on the nature and extent of public use and facilities developed. The FFS plans to conduct timber sales as needed to improve or maintain desirable ecosystems. These sales will primarily be from merchantable pine stands and provide a variable revenue depending on a variety of factors. The condition of the timber stands on the property is such that the revenue generating potential is expected to be moderate.

**Cooperators in management activities** Although not required, the City of Jacksonville commits to





## NORTHEAST FLORIDA BLUEWAY: MAP 1 OF 3

### DUVAL AND ST. JOHNS COUNTIES

-  Florida Forever BOT Project Boundary
-  Acquired for Conservation (Fee Simple)
-  State Owned Lands
-  Other Conservation Lands
-  Essential Parcel(s) Remaining
-  Other Florida Forever BOT Projects
-  State Aquatic Preserves

0 1.25 2.5 5  
Miles



MARCH 2016



## NORTHEAST FLORIDA BLUEWAY: MAP 2 OF 3

### ST. JOHNS COUNTY

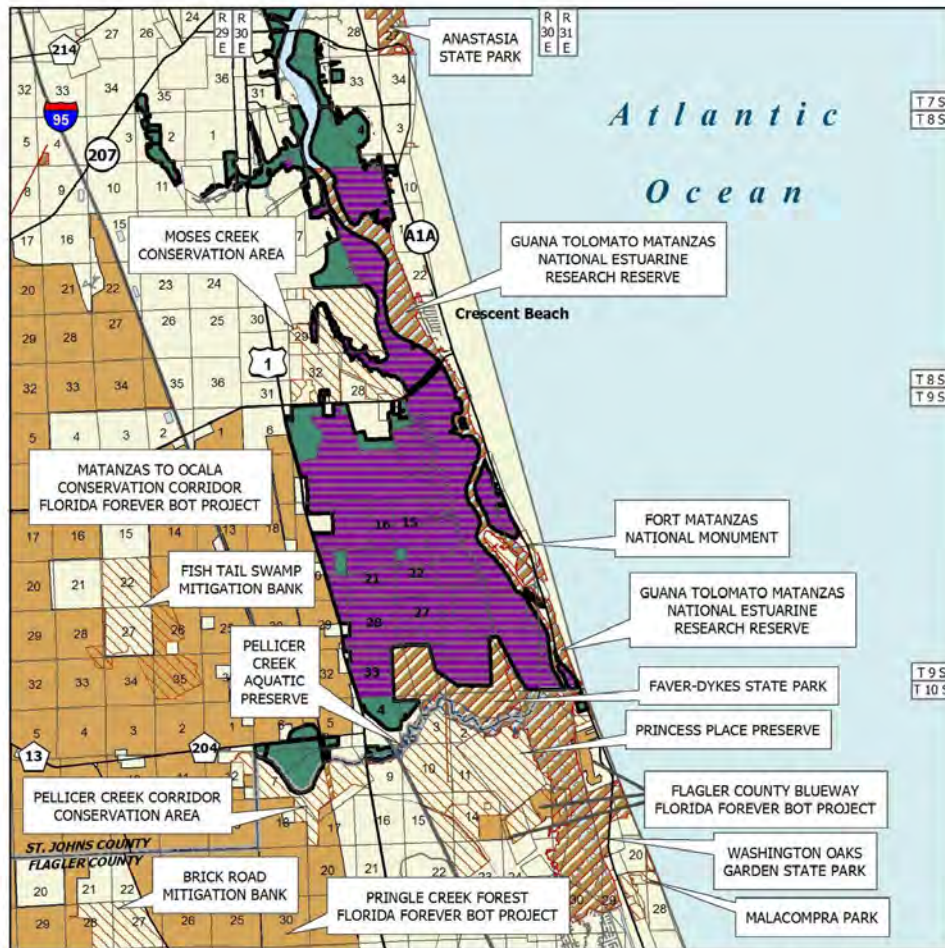
-  Florida Forever BOT Project Boundary
-  Acquired for Conservation (Fee Simple)
-  Essential Parcel(s) Remaining
-  State Owned Lands
-  Other Conservation Lands
-  State Aquatic Preserves

0 1.25 2.5 5  
Miles



MARCH 2016





## NORTHEAST FLORIDA BLUEWAY: MAP 3 OF 3

### ST. JOHNS AND FLAGLER COUNTIES

- Florida Forever BOT Project Boundary
- Acquired for Conservation (Fee Simple)
- Acquired for Conservation (Less-Than-Fee)
- Essential Parcel(s) Remaining
- Other Florida Forever BOT Projects
- State Owned Lands
- Other Conservation Lands
- State Aquatic Preserve

0 1.25 2.5 5  
Miles



MARCH 2016

submitting management plans for city-controlled properties in the Blueway to the Acquisition and Restoration Council for review and comment, even though properties may have been acquired with other sources. Doing so will ensure that the Preservation Project takes a system-wide approach to managing Blueway properties.

In Phase II, DRP will consult other federal, state, and local government agencies, as appropriate, to further resource management, recreational and educational opportunities and developing the property for state park purposes. FFS plans to cooperate with, and seek the assistance of, local government entities, interested parties as appropriate and the Florida Natural Areas Inventory. The FFS also intends to coordinate the recreational use of the Rayonier parcel with the DRP because of the potential for a recreation trail on the eastern portion of the property. The FFS will work with the Florida Fish and Wildlife Conservation Commission (FWC) in game and non-game management and related public use of the property.

The Blueway also includes a substantial amount of property owned by other government agencies. It is not the intent that the City or State acquire these properties. However, it is hoped that the Blueway boundary will be the catalyst for a voluntary, joint management approach to publicly owned lands within the corridor. Other agencies that own lands within the Blueway include the U.S. Navy, the National Park Service, Florida Inland Navigation District, the cities of Jacksonville Beach and Atlantic Beach, the City of Jacksonville, the Jacksonville Electric Authority and the St. Johns River Water Management District.

**Management Cost Summary  
Phase I Management Costs  
and Sources of Revenue:**

<b>Projected annual cost (FY 2001):</b>	
<b>Management plans</b>	<b>\$ 200,000</b>
<b>Security:</b>	<b>\$ 25,000</b>
<b>Invasion/exotics control:</b>	<b>\$ 25,000</b>
<b>One-time capital outlay</b>	<b>\$2,500,000</b>
<b>TOTAL</b>	<b>\$2,750,000</b>

The DRP has made general management estimates that would be adjusted based on approval of a unit management plan. Costs for fencing are included. Restoration costs are estimated at \$500 per acre, and until further study, the total of acres to be restored is not known.

**Phase II Management Cost Summary/DRP:**

<b>Category</b>	<b>Startup</b>	<b>Recurring</b>
<b>Source of Funds:</b>	<b>CARL</b>	<b>CARL</b>
<b>Salary</b>	<b>\$0</b>	<b>\$29,000</b>
<b>OPS</b>	<b>\$15,000</b>	<b>\$8,000</b>
<b>Expense</b>	<b>\$18,000</b>	<b>\$12,000</b>
<b>OCO</b>	<b>\$28,000</b>	<b>\$0</b>
<b>FCO</b>	<b>\$20,000</b>	<b>\$0</b>
<b>TOTAL</b>	<b>\$81,000</b>	<b>\$49,000</b>

The FFS anticipates that revenue funding will come from the CARL Trust Fund. Budget needs for interim management are estimated as follows:

**Phase II Management Cost Summary/FFS**

<b>Salary (3 FTE's)</b>	<b>\$79,518</b>
<b>Expense</b>	<b>\$215,000</b>
<b>OCO</b>	<b>\$37,800</b>
<b>TOTAL:</b>	<b>\$333,318</b>

*Updated April 13, 2016*

## Exhibit T

### Land Management Reviews



# 2015 Land Management Review Team Report for Matanzas State Forest

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## **1. Introduction**

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

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

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

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

### 1.1. Property Reviewed in this Report

**Name of Site:** Matanzas State Forest

**Managed by:** Department of Agriculture and Consumer Services (FDACS), Florida Forest Service (FFS)

**Acres:** 4,699.73

**County:** St. Johns County

**Purpose(s) for Acquisition:** Matanzas State Forest was acquired as part of the Northeast Florida Blueways Project. The forest was identified for acquisition by the SJRWMD in order to protect a regionally significant wood stork rookery, water resource, and ecological functions; and is recognized as a shared acquisition project with the Florida Forever acquisition program.

**Acquisition Program(s):** Florida Forever

**Area Reviewed:** Entire Property

**Original Acquisition Date:** 04/07/03

**Last Management Plan Approval Date:** 10/12/07

**Review Date:** 09/01/15

**Agency Manager and Key Staff Present:**

- Cathy Lowenstein,
- John Kern
- Todd Hannah
- Matt Kennard
- Gary Carpenter
- Jeff Darr

**Review Team Members Present (voting)**

- DRP District 3: Chris Matson
- FWC: Justin Ellenberger
- FFS: Doug Longshore
- DEP Northeast District: Allison Cala
- St. Johns SWCD: David Wiles
- St. Johns County: Ryan Mauch
- Conservation organization (FNPS): John Pospisil
- Private land manager (Rayonier): Billy Liphthrott

**Other Non-Team Members Present (attending)**

- Aric Larson, DEP/DSL
- Paul Ferry, DEP Northeast District
- John Kunzer, FWC/IPMS

## 1.2 Property Map



## 1.3. Overview of Land Management Review Results

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

**Yes = 8, No = 0**

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

**Yes = 8, 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

Table 1: Results at a glance.

Major Land Management Categories	Field Review	Management Plan Review
Natural Communities / Forest Management	3.52	4.45
Prescribed Fire / Habitat Restoration	2.83	4.18
Hydrology	3.55	4.11
Imperiled Species	4.06	4.48
Exotic / Invasive Species	3.76	4.10
Cultural Resources	3.94	4.19
Public Access / Education / Law Enforcement	4.04	4.51
Infrastructure / Equipment / Staffing	3.74	N/A

Color Code (See Appendix A for detail)

Excellent Above Average Below Average Poor 14



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*.

#### 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 FFS for well-established camping resources at Matanzas State Forest. (8+, 0-)
2. The team commends FFS for the continued excellent work on road improvements. (8+, 0-)
3. The team commends FFS for increasing state forest signage on U.S. 1. (8+, 0-)
4. The team commends FFS for using a combination of thinning and mechanical treatments to increase the total burnable area. (8+, 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 consider coordinating with area universities for the utilization of graduate students in performing floristic inventories. (8+, 0-)

**Managing Agency Response:** *Staff will continue the use of volunteers as available and look into the availability of university students.*

2. The team recommends that FFS consider acquiring additional staff and other management resources to increase treatment and monitoring of invasive plant species. (8+, 0-)

**Managing Agency Response:** *FFS recently added assistance of an OPS Park Ranger working as an invasive plant technician (position shared with Volusia area state forests).*

3. The team recommends that FFS consider incorporating a boardwalk/viewing platform in conjunction with the proposed flatwoods hammock trail. (8+, 0-) *FFS staff concurs and will incorporate into the current planning phase.*

**Managing Agency Response:**

4. The team recommends that FFS pursue funding opportunities to conduct a comprehensive hydrologic assessment to be used in developing a hydrologic restoration plan. (8+, 0-)

**Managing Agency Response:** *Matanzas SF personnel will work with FFS Hydrology Section to address this recommendation during the upcoming management plan update.*



5. The team recommends that FFS coordinate with the appropriate agencies regarding water manipulation activities / water control structures (i.e. installation of flashboards) on the property. (8+, 0-)

**Managing Agency Response:** *FFS will continue to coordinate with SJRWMD, DEP, and St. Johns County regarding this type of activity as needed.*

6. The team recommends that FFS coordinate with the appropriate law enforcement agencies in an effort to reduce ATV trespass issues; to include public outreach focusing on ATV impacts to resources. (8+, 0-)

**Managing Agency Response:** *FFS staff will continue to coordinate with FWC law enforcement on this issue, reinforce measures aimed at restricting access, and utilize signage, Liaison Committee contacts, etc. to focus public outreach on ATV impacts.*

## 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 basin swamp, estuarine tidal marsh, maritime hammock, and mesic hammock:
2. Listed Species Protection and Preservation; for animals in general, and specifically for wood stork:
3. Cultural Resources; specifically protection and preservation:
4. Forest management, specifically timber inventory:
5. Non-Native, Invasive & Problem Species; specifically control of plants and animals:
6. Hydro-alteration; specifically roads/culverts:
7. Ground Water Monitoring, specifically for water quality and quantity:
8. Resource Protection; specifically boundary survey, gates and fencing, and signage:
9. Public Access; specifically roads and parking:
10. Environmental Education and Outreach, specifically pertaining to recreational opportunities:
11. Management Resources; specifically waste disposal, sanitary facilities, buildings, and equipment:

### 2.2. Items Requiring Improvement Actions in the Field

The following items received low scores on the review team checklist, which indicates that management actions noted during the Field Review were not considered sufficient (less than 3.0 score on average).

Please note that overall good scores do not preclude specific recommendations by the review team requiring remediation. The management plan update should include information on how these items have been addressed:

1. Maintenance condition of natural communities, specifically mesic flatwoods, dome swamp, wet flatwoods, and wet prairie, received below average scores. The review team is asked to evaluate, based on information provided by the managing agency, what percentage of the natural community is in maintenance condition. The scores range from 1 to 5, with 1 being 0-20% in maintenance condition, 2 being 21-40%, 3 being 41-60%, 4 being 61-80% and 5 being 81-100%.

*Managing Agency Response:* This is a work in progress as management strategies are in place to thin, burn and remove off-site pine - which will assist in restoring these natural communities over the long term and continuing to increase the acreage considered to be in ecological maintenance condition.

2. Resource management, prescribed fire; specifically area being burned and frequency, received below average scores. The review team is asked to evaluate, based on information provided by the managing agency, the percentage that has been accomplished according to management objectives.

*Managing Agency Response:* Prescribed burning acres are expected to increase as on-going thinning and mechanical fuel reduction efforts allow for the re-introduction of fire. The long term goal is to work towards larger burn units where aerial ignition enable landscape scale burning and increase dramatically the number of acres considered to be with the desired fire rotation.

3. Restoration; specifically cypress domes, wet prairie, and hydrology, received below average scores. The review team is asked to evaluate, based on their perspective, whether restoration efforts are adequate.

*Managing Agency Response:* Hydrological function will continue to be assessed and appropriate restoration work will be implemented where appropriate. Staff will continue to use thinning harvests to remove encroaching pines from transition zones and despressional wetlands.

4. Hydrologic/Geologic function, specifically ditches and hydro-period alteration, received below average scores. The review team is asked to evaluate, based on information provided by the managing agency, whether consideration of past and present hydrologic and geologic functions is sufficient.

*Managing Agency Response:* Additional wetland assessment may identify additional opportunities for improving hydrologic/geologic function. On-going timber harvests can be expected to improve altered hydrologic/geologic function over the short run as bedded areas are flattened/eliminated over time.

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

**Managing Agency Response:** Funding levels for special projects may be expected to continue to improve as Amendment 1 funds are being allotted for equipment, roads, recreation, non-native invasive plant control, etc. In addition, operating expense budget allotments may be re-examined to determine sufficiency and possible adjustment.

### 2.3. Field Review Checklist and Scores

Field Review Item	Reference #	Anonymous Team Members								Average
		1	2	3	4	5	6	7	8	
<b>Natural Communities ( I.A )</b>										
Mesic Flatwoods	I.A.1	2		2	2	4	3	1	3	2.43
Basin Swamp	I.A.2	5		5	3	5	4	2	4	4.00
Scrubby Flatwoods	I.A.3	3		3	2	4	3	4	3	3.14
Estuarine Tidal Marsh	I.A.4	5	X	5	5	5	4	4	4	4.57
Maritime Hammock	I.A.5	5	X	5	5	5	4	4	4	4.57
Dome Swamp	I.A.6	4		2	2	3	2	2	4	2.71
Wet Flatwoods	I.A.7	2		2	1	2	3	1	4	2.14
Depression Marsh	I.A.8	3		4	3	4	2	2	4	3.14
Wet Prairie	I.A.9	2	X	1	1	1	3	1	4	1.86
Mesic Hammock	I.A.10	5		5	5	5	3	5	4	4.57
<b>Natural Communities Average Score</b>										<b>3.31</b>
<b>Listed Species: Protection &amp; Preservation ( I.B )</b>										
Animals (in general)	I.B.1	5	5	4	4	4	4			4.33
Wood Stork	I.B.1.a	5	5	4	3	5	3	4	4	4.13
Gopher Tortoise	I.B.1.b	5	5	4	2	X	3	3	4	3.71
<b>Listed Species Average Score</b>										<b>4.06</b>
<b>Natural Resources Survey/Management Resources (I.C)</b>										
Listed species or their habitat monitoring	I.C.2	5	4	3	2	4	4	1	4	3.38
Other non-game species or their habitat monitoring	I.C.3	3	4	3	4	3	3	2	4	3.25
Fire effects monitoring	I.C.4	4	4	4	5	3	5	2	4	3.88
Other habitat management effects monitoring	I.C.5	3	4	4	3	2	4	1	5	3.25
Invasive species survey / monitoring	I.C.6	4	4	4	4	3	4	2	5	3.75
<b>Cultural Resources (Archeological &amp; Historic sites) (II.A, II.B )</b>										
Cultural Res. Survey	II.A	4	4	5	2	5	3	2	4	3.63
Protection and preservation	II.B	5	4	4	2	5	5	4	5	4.25
<b>Cultural Resources Average Score</b>										<b>3.94</b>
<b>Resource Management, Prescribed Fire (III.A)</b>										
Area Being Burned (no. acres)	III.A.1	2	4	2	2	3	3	1	4	2.63
Frequency	III.A.2	2	4	4	2	2	4	1	4	2.88



Quality	III.A.3	4	4	4	4	3	3	1	4	3.38
Resource Management, Prescribed Fire Average Score										2.96
<b>Restoration (III.B)</b>										
Flatwoods	III.B.1	4	3	5	2	5	3	2	4	3.50
Cypress Domes	III.B.2	4	3	1	2	2	3	2	3	2.50
Wet Prairie	III.B.3	4		1	1	1	3	2	4	2.29
Hydrology	III.B.4	4		1	2	4		1	3	2.50
Restoration Average Score										2.70
<b>Forest Management (III.C)</b>										
Timber Inventory	III.C.1	4	4	4	3	5	5	4	4	4.13
Timber Harvesting	III.C.2	3	4	5	3	5	5	2	3	3.75
Reforestation/Afforestation	III.C.3		3	4	3		5	1	4	3.33
Site Preparation	III.C.4	4	3	4	3	4	4		4	3.71
Forest Management Average Score										3.73
<b>Non-Native, Invasive &amp; Problem Species (III.D)</b>										
<b>Prevention</b>										
prevention - plants	III.D.1.a	4	3	3	3	4	4	4	4	3.63
prevention - animals	III.D.1.b	4	3	4	3	4	5	3	4	3.75
prevention - pests/pathogens	III.D.1.c	4	3	3	3		4	3	4	3.43
<b>Control</b>										
control - plants	III.D.2.a	5	4	3	4	4	5	3		4.00
control - animals	III.D.2.b	4	4	4	4	5	5	4		4.29
control - pest/pathogens	III.D.2.c	4	4	3	4		4	2		3.50
Non-Native, Invasive & Problem Species Average Score										3.76
<b>Hydrologic/Geologic function Hydro-Alteration (III.E.1)</b>										
Roads/culverts	III.E.1.a	5	4	4	4	4	4	2	5	4.00
Ditches	III.E.1.b	X	2	1	X	4	2	X	5	2.80
Hydro-period Alteration	III.E.1.c	X	3	X	1	3	3	X	4	2.80
Water Level Alteration	III.E.1.d	X	X	X	X	4	X	2	X	3.00
Hydrologic/Geologic function, Hydro-Alteration Average Score										3.15
<b>Ground Water Monitoring (III.E.2)</b>										
Ground water quality	III.E.2.a	4		5	4	4	X	X		4.25
Ground water quantity	III.E.2.b	4		5	4	X	X	X		4.33
Ground Water Monitoring Average Score										4.29
<b>Surface Water Monitoring (III.E.3)</b>										
Surface water quality	III.E.3.a	X		3	3	X	5	1	4	3.20
Surface water quantity	III.F.3.b	X		3	3	X	5	1	4	3.20
Surface Water Monitoring Average Score										3.20
<b>Resource Protection (III.F)</b>										
Boundary survey	III.F.1	5		5	3	5	5	5	5	4.71
Gates & fencing	III.F.2	4		3	3	4	5	4	5	4.00
Signage	III.F.3	4		5	4	5	5	4	5	4.57
Law enforcement presence	III.F.4	3		3	3	4	4	2	5	3.43
Resource Protection Average Score										4.18



Adjacent Property Concerns (III.G)											
Land Use											
Expanding development	III.G.1.a	3		3	3	4	3	2	4		3.14
Exotics from Adjacent Residential	III.G.1.b	3		5	3	X	3	4	4		3.67
Inholdings/additions	III.G.2	3		4	3	5	4	2	4		3.57
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)											
Public Access											
Roads	IV.1.a	5		5	3	5	5	5	5		4.71
Parking	IV.1.b	4		5	3	4	5	4	4		4.14
Environmental Education & Outreach											
Wildlife	IV.2.a	4		5	3	4	4	3	4		3.86
Invasive Species	IV.2.b	4		4	3	3	2	3	4		3.29
Habitat Management Activities	IV.2.c	4		5	2	3	4	3	4		3.57
Interpretive facilities and signs	IV.3	4		5	2	4	3	3	4		3.57
Recreational Opportunities	IV.4	5		5	3	4	4	3	5		4.14
Management of Visitor Impacts	IV.5	5		4	3	3	4	3	5		3.86
Public Access & Education Average Score											3.89
Management Resources (V.1, V.2, V.3, V.4)											
Maintenance											
Waste disposal	V.1.a	4	4	5	4		3		5		4.17
Sanitary facilities	V.1.b	4	4	5	4	4	3	3	5		4.00
Infrastructure											
Buildings	V.2.a	5	5	4	4	4	4	4	4		4.25
Equipment	V.2.b	5	5	4	4	4	4	4	4		4.25
Staff	V.3	4	5	4	2	3	3	2	4		3.38
Funding	V.4	3	2	2	3	2	2	2	3		2.38
Management Resources Average Score											3.74
<div> <div>Color Code:</div> <div> <div>Excellent</div> <div>Above Average</div> <div>Below Average</div> <div>Poor</div> <div>Missing Vote</div> <div>Insufficient Information</div> </div> <div>See Appendix A for detail</div> </div>											

### 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 checklist scores did not identify items requiring improvements in the management plan.*

### 3.2 Management Plan Review Checklist and Scores

Plan Review Item	Reference #	Anonymous Team Members								Average
		1	2	3	4	5	6	7	8	
Natural Communities ( I.A )										
Mesic Flatwoods	I.A.1	4	4	5	5	4	5	5	4	4.50
Basin Swamp	I.A.2	5	4	5	5	5	4	4	4	4.50
Scrubby Flatwoods	I.A.3	4	4	5	5	3	4	5	4	4.25
Estuarine Tidal Marsh	I.A.4	5	5	5	5	4	4		5	4.71
Maritime Hammock	I.A.5	5	5	5	5	5	5	4	4	4.75
Dome Swamp	I.A.6	4	4	5	5	5		4	4	4.43
Wet Flatwoods	I.A.7	4	4	5	5	4	4	4	5	4.38
Depression Marsh	I.A.8	4	4	5	5	5	4	4	4	4.38
Wet Prairie	I.A.9	4	5	5	5	4	4	4	4	4.38
Mesic Hammock	I.A.10	4	5	5	5	5	5	5	5	4.88
Natural Communities Average Score										4.51
Listed species: Protection & Preservation ( I.B )										
Animals (in general)	I.B.1	5	5	5	5	3	5	3		4.43
Wood Stork	I.B.1.a	5	5	5	5	5	5	5	5	5.00
Gopher Tortoise	I.B.1.b	5	5	5	5	3	1	4	4	4.00
Listed Species Average Score										4.48
Natural Resources Survey/Management Resources (I.C)										
Listed species or their habitat monitoring	I.C.2	5	4	5	4	5	4	3	4	4.25
Other non-game species or their habitat monitoring	I.C.3	4	3	3	5	2	3	3	4	3.38
Fire effects monitoring	I.C.4	4	5	5	5	4	5	4	4	4.50
Other habitat management effects monitoring	I.C.5	4	4	4	4	2	3	2	4	3.38
Invasive species survey / monitoring	I.C.6	4	5	4	5	4	5	3	5	4.38
Cultural Resources (Archeological & Historic sites) (II.A,II.B )										
Cultural Res. Survey	II.A	5	4	5	4	5	4	3	4	4.25
Protection and preservation	II.B	5	4	4	4	5	4	3	4	4.13
Cultural Resources Average Score										4.19
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	4	4	5	5	4	5	5	4	4.50
Frequency	III.A.2	4	4	5	5	4	5	5	4	4.50
Quality	III.A.3	4	4	5	5	4	5	5	5	4.63
Resource Management, Prescribed Fire Average Score										4.54
Restoration (III.B)										
Flatwoods	III.B.1	5	4	5	5	4	3	5	4	4.38
Cypress Domes	III.B.2	5	5	5	5	1	2	4	4	3.88
Wet Prairie	III.B.3	5		5	5	1	3	4	4	3.86
Hydrology	III.B.4	5		5		1	2	3	3	3.17
Restoration Average Score										3.82



<b>Forest Management (III.C)</b>										
Timber Inventory	III.C.1	5	5	5	5	4	5	5	4	4.75
Timber Harvesting	III.C.2	5	4	5	5	5	5	4	3	4.50
Reforestation/Afforestation	III.C.3		5	4	5	4	5	4	3	4.29
Site Preparation	III.C.4	4	5	4	5	4	4	3	3	4.00
<b>Forest Management Average Score</b>										<b>4.38</b>
<b>Non-Native, Invasive &amp; Problem Species (III.D)</b>										
<b>Prevention</b>										
prevention - plants	III.E.1.a	5	4	5	4	4	4	4	4	4.25
prevention - animals	III.E.1.b	5	4	4	4	4	5	3	4	4.13
prevention - pests/pathogens	III.E.1.c	5	4	3	4	2	4	3	4	3.63
<b>Control</b>										
control - plants	III.E.2.a	5	4			4	4	4		4.20
control - animals	III.E.2.b	5	4			4	5	5		4.60
control - pest/pathogens	III.E.2.c	5	4			3	4	3		3.80
<b>Non-Native, Invasive &amp; Problem Species Average Score</b>										<b>4.10</b>
<b>Hydrologic/Geologic function, Hydro-Alteration (III.E.1)</b>										
Roads/culverts	III.F.1.a	5	4		5	4	5	5	4	4.57
Ditches	III.F.1.b		4	5	5	4	2	3	4	3.86
Hydro-period Alteration	III.F.1.c		4		3	4	3	1	5	3.33
Water Level Alteration	III.F.1.d		4		4	4		2		3.50
<b>Hydrologic/Geologic function, Hydro-Alteration Average Score</b>										<b>3.82</b>
<b>Ground Water Monitoring (III.E.2)</b>										
Ground water quality	III.F.2.a	4	5		5	4				4.50
Ground water quantity	III.F.2.b	4	5		5	4				4.50
<b>Ground Water Monitoring Average Score</b>										<b>4.50</b>
<b>Surface Water Monitoring (III.E.3)</b>										
Surface water quality	III.F.3.a		5		4	4		3	4	4.00
Surface water quantity	III.F.3.b		5		4	4		3	4	4.00
<b>Surface Water Monitoring Average Score</b>										<b>4.00</b>
<b>Resource Protection (III.F)</b>										
Boundary survey	III.G.1	5	5	5	5	5	5	5	5	5.00
Gates & fencing	III.G.2	4	5		5	4	5	5	5	4.71
Signage	III.G.3	5	5		5	4	5	5	5	4.86
Law enforcement presence	III.G.4	5	5		5	4	4	5	5	4.71
<b>Resource Protection Average Score</b>										<b>4.82</b>
<b>Adjacent Property Concerns (III.G)</b>										
<b>Land Use</b>										
Expanding development	III.H.1.a	4	5	3	5	3	3	4	4	3.88
Exotics from Adjacent Residential	III.H.1.b	4	5	5	5	4	3	3	4	4.13
Inholdings/additions	III.H.2	3	4	5	5	5	4	4	4	4.25
Discussion of Potential Surplus Land Determination	III.H.3	2	4	2	5	1	5	5	2	3.25
Surplus Lands Identified?	III.H.4	4	4	5	5	5	5	5	5	4.75

Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)											
Public Access											
Roads	IV.1.a	5	4	5	5	5	5	5	5	5	4.88
Parking	IV.1.b	5	5	5	5	5	5	5	5	4	4.88
Environmental Education & Outreach											
Wildlife	IV.2.a	4	4	5	4	3	4	4	4	4	4.00
Invasive Species	IV.2.b	4	5	4	4	3	2	3	4		3.63
Habitat Management Activities	IV.2.c	4	4	5	4	4	4	3	4		4.00
Interpretive facilities and signs	IV.3	4	4	4	4	4	3	4	4		3.88
Recreational Opportunities	IV.4	4	4	5	4	4	4	4	5		4.25
Management of Visitor Impacts	IV.5	5	4	4	4	3	4	4	5		4.13
Public Access & Education Average Score											4.20
Managed Area Uses (VI.A, VI.B)											
Existing Uses											
Recreational Trails	VI.A.1	5	5	5	2	4		5	4		4.29
Primitive Camping	VI.A.2	5	5	5	4	5	5	5	4		4.75
Hunting	VI.A.3	5	4	5	4	5	5	5	4		4.63
Environmental Education	VI.A.5	5	4	5	3	3	3	5	3		3.83
Bird Watching	VI.A.6	5	4	5	3	4	3	5	4		4.13
Silviculture	VI.A.7	5	5	5	3	5	5	5	4		4.63
Resource Conservation	VI.A.8	5	4	5	3	5	3	5	4		4.25
Proposed Uses											

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*

**Name of Site:** Matanzas State Forest

**County:** St. Johns County

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

**Acres:** 4,699.73 Acres  
**Area Reviewed:** Entire Tract

**Review Date:** 11/30/10

**Management Plan Approval Date:** 10/12/07



#### Review Team Determination

Managed in accordance with  
acquisition purpose? Yes = 5, No = 0



Management practices, including public access,  
in compliance with the management plan? Yes =5, No = 0



Categories	Management Plan Review	Field Review
Natural Communities	1.00	3.71
Listed Species	0.87	3.42
Natural Resource Survey	1.00	4.10
Cultural Resources	1.00	4.10
Prescribed Fire	1.00	3.67
Restoration	1.00	4.00
Exotic Species	0.70	3.88
Hydrology	0.75	4.00
Surface Water Monitoring	1.00	4.60
Resource Protection	0.95	3.55
Adjacent Property Concerns	0.75	3.37
Public Access & Education	0.77	3.71
Management Resources	N/A	2.90
Managed Area Uses	1.00	N/A
Buildings, Equipment, Staff & Funding	N/A	2.80

### 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 for establishing a prescribed fire program in all merchantable pine plantations and being creative in using pre-fire mechanical treatments to accomplish this objective. (VOTE: 5+, 0-)



2. The team commends the FFS staff for their efforts to improve forest roads and their installation of several hard bottom crossings. (VOTE: 5+, 0-)



3. The team commends the proactive exotic species control by teaming up with the GTMNERR and adjacent landowners. (VOTE: 5+, 0-)



4. The team commends the FFS for their efforts to restore pine plantations to a more natural flatwoods condition. (VOTE: 5+, 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 FFS pursue additional directional roadside signage to improve public awareness of the forest. (VOTE: 5+, 0-)



*Managing Agency Response: The recommended signage for State Forests (Entering/Leaving, entrance signage) is in place. DOT will be approached to request additional directional signage such as from CR 206/US 1 and US1/1-95 intersections.*

2. The team recommends that FFS pursue their plans to restore wetland ecotones through removal of off-site planted pines as the adjacent stands are thinned. (VOTE: 5+, 0-)



*Managing Agency Response: Management staff agrees and plans to include these areas in harvest plans. There is language addressing the need to remove pines in the Wet Prairie section (IV B.9) already included in the current management plan; however additional language addressing this can be incorporated during future management plan revisions.*

3. The team recommends that FFS assess the appropriate level of water quality monitoring at the DOT ditch discharge at Black Forest Stables. (VOTE: 5+, 0-)



*Managing Agency Response: Management staff will consult with SJRWMD/DEP to determine what is appropriate, and will include this information in the next management plan revision.*

### 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 basin swamps, estuarine tidal marsh, maritime hammock, depression marsh and mesic hammocks.

- Listed Species, regarding the animal inventory and wood storks.
- Natural Resource Survey, regarding listed species or habitat monitoring, fire effects monitoring, other habitat management effects and monitoring, and invasive species survey/monitoring.
- Cultural Resources, regarding the cultural resource survey, protection and preservation.
- Resource Management, regarding the frequency and quality of the burns.
- Restoration of Ruderal Areas, regarding the natural communities.
- Non-Native, Invasive & Problem Species, regarding the prevention and control of plants, animals and pests/pathogens.
- Hydrologic Geologic Function, regarding roads, culverts and ditches.
- Surface Water Monitoring, regarding surface water quality.
- Resource Protection, regarding the boundary survey and law enforcement presence.
- Adjacent Property Concerns, regarding inholdings and additions.
- Public Access & Education, regarding roads, parking, wildlife, habitat management activities, interpretive facilities and signs, recreational opportunities and management of visitor impacts.

#### **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. Hydrologic/Geologic Function, specifically ditches, with documentation in the management plan.**

*Managing Agency Response: Findings of the recent Wetland Needs Assessment conducted by the FFS Hydrology section and discussion of the DOT ditch will be included in subsequent Management Plan revisions. Staff will continue to address drainage improvements noted in the WNA via the Five Year Hydrology plan.*

**2. Adjacent Property Concerns, regarding the discussion of potential surplus land determination, with documentation in the management plan.**

*Managing Agency Response: State forest staff will make an assessment of potential surplus land and include a summary and any recommendations in the next management plan revision.*

**3. Discussion in the management plan regarding Public Access & Education, specifically boat access, wildlife and invasive species, with documentation in the management plan.**

*Managing Agency Response: The next Management Plan revision will address the status of boat access, although only kayak/canoe access is under consideration. Kayak access is currently being evaluated, and is included in the 5 Year Recreation Plan. Efforts for environmental education concerning wildlife have been made via interpretative events on the forest, and for invasive species via adjacent landowner contacts and assistance with encroaching invasive plant infestations. Documentation concerning the continuation of these efforts will also be included in the next Management Plan revision.*

#### **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. Management of Natural Communities, specifically wet flatwoods, with documentation in the management plan.**



*Managing Agency Response: Wet flatwoods stands will be burned and thinned to improve groundcover as per the management plan and five-year harvest schedule in order to move them towards maintenance condition.*

**2. Increased protection of Listed Species, regarding plant inventory, with documentation in the management plan.**

*Managing Agency Response: A plant inventory/list will be pursued and included in the next management plan revision.*

**3. Increased Resource Protection, specifically gates and fencing, with documentation in the management plan.**

*Managing Agency Response: Fencing costs are included in the current plan's Management Summary (p. 46). Resources to pursue fencing where encroachment is a concern along the north forest boundary in particular will be pursued via annual budget requests.*

**4. The need for increased Management Resources, specifically waste disposal, staff and funding, including documentation in the management plan.**

*Managing Agency Response: Waste disposal is not an issue on the forest at current visitation levels. Provision for waste disposal will be reconsidered if visitation and staffing levels indicate it is appropriate. The management plan currently includes documentation concerning staff and funding needs in the Management Summary. Needs will continue to be pursued via annual budget requests and in the Management Plan revision.*

**Florida Forest Service Manager and Key Staff Present:**

- Mike Kuypers
- Chris Kincaid
- Matt Kennard
- David Core
- Cathy Lowenstein
- Gary Carpenter

## Exhibit U

**Compliance with Local Comprehensive Plan(s)**  
(Will be inserted once received)

**From:** [Davis, Alan](#)  
**To:** "[alandepot@sjcfl.us](mailto:alandepot@sjcfl.us)"  
**Subject:** Matanzas State Forest  
**Date:** Wednesday, February 14, 2018 3:34:00 PM  
**Attachments:** [Draft LMPand Exhibits.pdf](#)

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4040 Lewis Speedway  
St. Augustine, Florida 32084

Good morning,

Attached is a copy of the Florida Forest Service's **Draft** Ten-Year Land Management Plan for the Matanzas State Forest (MaSF). Please review the plan and reply as to whether the plan is consistent with the St. Johns County Local Comprehensive Plan. If no response is received by March 2, 2018, FFS will assume the Draft Ten-year Land Management Plan for NLSF is consistent with the local comprehensive plan.

Please address all correspondence concerning this matter to me at the below address. I can be reached by telephone at (850) 681-5816 or email at [Alan.Davis@freshfromflorida.com](mailto:Alan.Davis@freshfromflorida.com) if you have any questions or concerns.

Thank you for your attention to this matter.

Sincerely,

Alan Davis  
Land Planning Coordinator

Attached: Matanzas State Forest Draft Ten-Year Land Management Plan and Exhibits

cc: Donald King, Forestry Supervisor II  
Jeff Darr, Forester

**Alan Davis**  
Land Planning Coordinator  
Florida Forest Service  
Florida Department of Agriculture and Consumer Services

(850)-681-5816  
(850)-681-5801 Fax

[Alan.Davis@freshfromflorida.com](mailto:Alan.Davis@freshfromflorida.com)

The Conner Building  
3125 Conner Boulevard, Room 238  
Tallahassee, FL 32399-1650

[www.FreshFromFlorida.com](http://www.FreshFromFlorida.com)

Please note that Florida has a broad public records law (Chapter 119, Florida Statutes). Most written communications to or from state employees are public records obtainable by the public upon request. Emails sent to me at this email address may be considered public and will only be withheld from disclosure if deemed confidential pursuant to the laws of the State of Florida.



## Exhibit V

### State Forest Management Plan Advisory Group Summary

**Management Plan Advisory Group Organizational Meeting**  
**Matanzas State Forest**  
**10 -Year Land Management Plan**

April 11, 2018

10:30 a.m.

**Meeting Minutes**

**MPAG Members Present:**

- |                      |   |
|----------------------|---|
| • Anthony Petellat   | Florida Forest Service (FFS)                            |
| • Justin Ellenberger | Florida Fish and Wildlife Conservation Commission (FWC) |
| • Heather Venter     | St. Johns River Water Management District (SJRWMD)      |
| • Chris Clauson      | Florida Department of Environmental Protection (FDEP)   |
| • Paul Waldron       | Local Elected Official (St. Johns County Commissioner)  |
| • Scott Lane         | Local Private Property Owner                            |
| • Ricky Lackey       | Local Conservation Organization (N.W.T.F.)              |

**MPAG Members Not Present:**

- |                  |  |
|------------------|--|
| • Chris Waderton | St. Johns Soil & Water Conservation District |
|------------------|--|

**Staff:**

- Alan Davis, FFS
- Bill Korn, FFS
- Donald King, FFS
- Jeff Darr, FFS
- Justina Jones, FFS
- Gary Carpenter, FFS
- Kevin Micieli, FFS

**Guests:**

- |                 |  |
|-----------------|--|
| • Judy Simms    | Back Country Horseman, First Coast Chapter |
| • Linda Matzke  | Back Country Horseman, First Coast Chapter |
| • Peggy Cook    | St. Johns County Audubon                   |
| • Chris DeVries | St. Johns County Environmental Division    |

**Meeting Start Time: 10:30 a.m.**

- Mr. Davis opened the meeting, introduced himself, and continued by explaining the purpose, statutory framework and management plan development process within which MPAG members are called upon to provide input into the draft land management plan.
- Mr. Davis also explained the Sunshine Law's role in the MPAG public hearings and MPAG member appointment timeframe.
- Mr. Davis provided an overview of how the meetings were advertised to the public.
- Mr. Davis stated the MPAG meeting was advertised through local newspaper (The St. Augustine Record), Florida Administrative Weekly, FFS webpage, as well as posted on the kiosk at the entrance to the forest. It was also announced at the St. Johns County Commission meeting on April 3, 2018.

- Mr. Davis provided a rundown of the various approvals the draft land management plan must go through both before and after the MPAG public hearings have occurred.
- Next, everyone in the room introduced themselves and explained what entity or organization they are with, and/or why they have interest in the meeting.
- Mr. Davis explained the notion of consensus and how it relates to the group's determinations. He also explained the fact that the FFS Director is the ultimate decider on any changes made to the draft plan.
- Mr. Davis explained that following a PowerPoint presentation at the public hearing, there would be a question/answer session and they were all welcome to ask questions. During the public hearing, Mr. Davis encouraged MPAG members to listen for the public's ideas/concerns. He advised that at the MPAG Workshop meeting to follow would be an opportunity to share their thoughts on what they'd heard from the public and their ideas on the draft management plan.
- The advisory group all agreed to designate Anthony Petellat as MPAG chair.
- Mr. Davis thanked everyone and adjourned the meeting.

Meeting End Time: 10:40 a.m.

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

April 11, 2018

11:00 a.m.

**Meeting Minutes**

**MPAG Members Present:**

- |                      |   |
|----------------------|---|
| • Anthony Petellat   | Florida Forest Service (FFS)                            |
| • Justin Ellenberger | Florida Fish and Wildlife Conservation Commission (FWC) |
| • Heather Venter     | St. Johns River Water Management District (SJRWMD)      |
| • Chris Clauson      | Florida Department of Environmental Protection (FDEP)   |
| • Paul Waldron       | Local Elected Official (St. Johns County Commissioner)  |
| • Scott Lane         | Local Private Property Owner                            |
| • Ricky Lackey       | Local Conservation Organization (N.W.T.F.)              |

**MPAG Members Not Present:**

- |                  |  |
|------------------|--|
| • Chris Waderton | St. Johns Soil & Water Conservation District |
|------------------|--|

**Staff:**

- Alan Davis, FFS
- Bill Korn, FFS
- Donald King, FFS
- Jeff Darr, FFS
- Justina Jones, FFS
- Gary Carpenter, FFS
- Kevin Micieli, FFS

**Guests:**

- |                 |  |
|-----------------|--|
| • Judy Simms    | Back Country Horseman, First Coast Chapter |
| • Linda Matzke  | Back Country Horseman, First Coast Chapter |
| • Peggy Cook    | St. Johns County Audubon                   |
| • Chris DeVries | St. Johns County Environmental Division    |

**Meeting Start Time: 11:00 a.m.**

- Mr. Davis introduced Mr. Petellat.
- Mr. Petellat, the MPAG Chairperson, welcomed everyone to the public hearing and thanked everyone for coming.
- MPAG members introduced themselves.
- Mr. Davis thanked everyone for being here and gave a general overview of the purpose of the public hearing.
- Mr. Davis stated at this time, two (2) speaker forms were filled out. He encouraged all visitors to complete a speaker form, which he reminded everyone could be used also to provide FFS with written comments on the plan.



- Mr. Darr welcomed everyone and gave a PowerPoint presentation on the draft plan, the plan included the location of Matanzas State Forest along with boundaries, Florida statutes concerning State Forests, historical data and nine (9) goals and objectives to be accomplished on the forest during the next ten (10) years. The presentation also included the current status of MaSF.
- Mr. Davis thanked Mr. Darr. Mr. Davis then asked FFS staff to the front of the room for a question/Answer session.
- Question - Ms. Simms asked about the possibility of FFS teaching a course on the identification of non-native plants for the public. Mr. Carpenter informed her that IFAS holds those types of classes for the public.
- Question – Ms. Cook wanted to know the exact location of the planned hiking trail. She was concerned that the area was too wet. She asked if any trees would be removed to install the trail. Mr. Darr commented that a portion of the trail would be re-routed around the wet areas and that no trees would be removed.
- With no other questions, Mr. Davis moved to the public input of the meeting by confirming from the Speaker Forms. There were two (2) people wishing to speak during the public hearing phase of the meeting. He asked if there was anyone else.

Speakers (2):

- Ms. Simms - Would like for equestrians to be able to ride from Faver-Dykes State Park north through MaSF. The Back County Horseman (BCH) First Coast Chapter can apply for grants to help make this possible. Improvements/requesting – signage, clear trails, horses can't walk on rocks that are in road material, can't walk on edge of roads because of ditches, and steep slope, parking area is too small, can't make the turn into the parking lot, would like to have a parking area/trailhead at a different location inside the forest (Pop Burney/Longleaf Roads).
- Ms. Matzke - group's purpose is to establish unpaved horse trails throughout St. Johns County, benefits/impacts (economic) of equestrians were listed. The BCH First Coast Chapter would eventually (long term goal) like to have an endurance competition (ride) from Princess Place to Moses Creek (through MaSF). Benefits (health) to horseback riders were explained. It was mentioned that trails provide an outdoor learning classroom for riders. BCH want to provide assistance to FFS to help get these things accomplished.
- Mr. Davis thanked Ms. Simms and Ms. Matzke for their comments and advised we would look at their concerns during the workshop meeting at 1:30 pm.
- With no other speakers, Mr. Davis thanked everyone for their time, and adjourned the public hearing.

Meeting End Time: 11:43 a.m.

**Management Plan Advisory Group Workshop Meeting**  
**Matanzas Lake State Forest**  
**10 -Year Land Management Plan**

April 11, 2018  
1:30 p.m.

**Meeting Minutes**

**MPAG Members Present:**

- |                      |   |
|----------------------|---|
| • Anthony Petellat   | Florida Forest Service (FFS)                            |
| • Justin Ellenberger | Florida Fish and Wildlife Conservation Commission (FWC) |
| • Heather Venter     | St. Johns River Water Management District (SJRWMD)      |
| • Chris Clauson      | Florida Department of Environmental Protection (FDEP)   |
| • Paul Waldron       | Local Elected Official (St. Johns County Commissioner)  |
| • Scott Lane         | Local Private Property Owner                            |
| • Ricky Lackey       | Local Conservation Organization (N.W.T.F.)              |

**MPAG Members Not Present:**

- |                  |  |
|------------------|--|
| • Chris Wadelton | St. Johns Soil & Water Conservation District |
|------------------|--|

**Staff:**

- Alan Davis, FFS
- Bill Korn, FFS
- Donald King, FFS
- Jeff Darr, FFS
- Justina Jones, FFS
- Kevin Micieli, FFS

**Meeting Start Time: 1:30 p.m.**

- Mr. Davis started the meeting by going over the meeting structure that would take place and specifics regarding staff and member responsibilities regarding the meeting minutes in the coming days/week.
- Mr. Davis declared a "page-by-page" process would be the way the group would be reviewing and commenting on the draft plan today. The notion of "consensus" was also once again discussed.
- Mr. Davis asked the group if they wanted to discuss the concerns expressed in the public meeting by Ms. Simms and Ms. Matzke about equestrian access, parking, and trails.
- Mr. Korn suggested some language.
- Ms. Venter suggested adding the Christmas bird survey and Brown Headed Nuthatch survey in the past accomplishments list. Mr. Korn suggested the language.
- Mr. Lackey commented that the prescribed burn acreages didn't add up when comparing the prescribed burn acreage goals with the fire interval. The group discussed reasons for the difference

in the acreages. Mr. Korn suggested that FFS will work on this. Ms. Venter suggested that this could be explained with a map.

- Ms. Venter - Goal (7) Cultural and Historical Resources - Change wording to say, "maintain number of archaeological monitors" instead of "increase". There was a consensus to remove objective 4.
- Mr. Ellenberger - Goal (8) Hydrological Preservation and Restoration - Mr. Ellenberger asked about the 2008 survey (objective 1) and what had been done since then. There was a consensus to add language - Update to hydrological survey from 2008 to show what has been accomplished.
- Mr. Petellat - page 27- asked about wood storks because during public hearing presentation Mr. Darr stated that the wood storks were no longer present. There was a consensus the sentence about wood storks be removed in section G-unique natural features.
- Mr. Ellenberger asked about camping. Are we going to expand? Section V. Public Access and Recreation, B. Planned, 3. Camping Page 29 - Group discussed obstacles with expanding. There was a consensus the language be changed to: Will evaluate the need for additional campsites.
- Ms. Venter - Page 30 - VI - Forest Management Practices - Section A - Prescribed Fire - Suggested that we need to explain the difficulties/challenges associated with burning (Seabreeze, US1, etc.)
- Mr. Korn - page 48 - Section G - Pine plantation - asked if pine plantations were included in restoration areas, consensus of yes.
- Mr. Korn asked if we considered this a fire dependent community. Page 50 - Salt Marsh - management needs - A consensus suggested wording be changed to "and cover resources for wildlife".
- Mr. Waldron asked if there was an opportunity to open these ponds (11 acres - old borrow pits) up to fishing. There was a consensus language should be added to existing recreation section -FFS will evaluate existing ponds for fishing.
- Mr. Petellat/Ms. Venter - page 54 - Wet Flatwoods - management needs - suggested that wording be changed to: Roller chopping may be used in areas to facilitate the safe and effective use of prescribed fire.
- Mr. Davis asked the group if everyone, as a consensus, was generally good with the plan. All agreed.
- Mr. Davis went around the table to each MPAG Member and asked for their overall general comments and if they had any other issues. They all thought it was a good plan and appreciated the invite to participate.
- Mr. Davis explained the next steps of the process; minutes and cleaning up the plan. He stated the FFS Director would be looking at the plan before it goes to the Acquisition and Restoration Council.
- Mr. Davis thanked everyone for their time and participation, then adjourned the meeting.

Meeting End Time: 3:15 p.m.

Written Comments Received:

1. Mary Farr - Back Country Horseman First Coast Chapter "Matanzas State Forest Long Term Plan Public Comment" document

## Exhibit W

### State Forest Summary Budget



# Matanzas State Forest

	MATANZAS STATE FOREST MGT. ONLY 15 16 EXPENDITURES	Percentages Based on Total Dollar Amount of Expenditures	MaSF Assessed Needed Funding Based Upon LMUAC Resource Management
<b>Resource Management</b>	<b>\$ 13,055</b>	<b>25.30%</b>	<b>\$ 24,358.68</b>
Exotic Species Control	\$ 2,123	3.60%	\$ 4,138.61
Prescribed Burning	\$ 5,558	4.70%	\$ -
Cultural Resources Management	\$ 61	0.10%	\$ 118.25
Timber Management	\$ 4,853	8.00%	\$ 9,459.68
Hydrological Management	\$ 425	0.70%	\$ 827.72
	\$ -		\$ -
<b>OTHER RESOURCE MANAGEMENT</b>	<b>\$ 5,035</b>	<b>8.30%</b>	<b>\$ 9,814.42</b>
Listed Species Management	\$ -		\$ -
Forest Pest and Disease	\$ -		\$ -
Plant Conservation Program	\$ -		\$ -
State Forest Research Projects	\$ -		\$ -
Boundary Surveys for State Forests	\$ -		\$ -
Other 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	\$ -		\$ -
			\$ -
<b>Administration</b>	<b>\$ 4,853</b>	<b>8.00%</b>	<b>\$ 9,459.68</b>
Central Office Headquarters	\$ 4,853	8.00%	\$ 9,459.68
District/Regions	\$ -		\$ -
Units/Projects	\$ -		\$ -
	\$ -		\$ -
<b>Support</b>	<b>\$ 19,595</b>	<b>32.30%</b>	<b>\$ 22,821.48</b>
Land Management Planning	\$ 1,213	2.00%	\$ 2,364.92
Land Management Reviews	\$ 243	0.40%	\$ 472.98
Training/Staff Development	\$ 5,157	8.50%	\$ 10,060.91
Vehicle Purchase	\$ 485	0.80%	\$ 943.97
Vehicle Operations and Maintenance	\$ 7,885	13.00%	\$ -
	\$ -		\$ -
<b>OTHER SUPPORT</b>	<b>\$ 4,611</b>	<b>7.60%</b>	<b>\$ 8,986.70</b>
State Forest Land Acquisition Support	\$ -		\$ -
Other Support Activities Also Include Computer Maintenance / Radio Maintenance / Technical Support / Management of Apiary and Cattle Leases / State Forest Easements and Other Various Activities	\$ -		\$ -
	\$ -		\$ -
<b>Capital Improvements</b>	<b>\$ 13,346</b>	<b>22.00%</b>	<b>\$ 26,014.12</b>
New Facility Construction	\$ 3,094	5.10%	\$ 6,030.55
Facility Maintenance	\$ 10,252	16.90%	\$ 19,983.57
			\$ -
<b>Visitor Services/Recreation</b>	<b>\$ 7,522</b>	<b>12.80%</b>	<b>\$ 14,662.50</b>
Information/Education	\$ 1,861	3.10%	\$ 3,665.63
Operations	\$ 5,642	9.30%	\$ 10,996.88
			\$ -
<b>Law Enforcement</b>	<b>\$ -</b>	<b>0.00%</b>	<b>\$ -</b>
			\$ -
<b>Total</b>	<b>\$ 60,665</b>	<b>100.00%</b>	<b>\$ 118,246.00</b>

## Exhibit X

### Arthropod Control Plans on MaSF

## Anastasia Mosquito Control District of St. Johns County

120 EOC Drive, St. Augustine, FL 32092

Telephone: (904) 471-3107 \* Fax (904) 471-3189 \* Web: [www.amcdsjc.org](http://www.amcdsjc.org)

### BOARD OF COMMISSIONERS

Gary Howell, Chairperson  
Catherine Brandhorst, Vice-Chairperson  
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Jacqueline Rock, Commissioner

### DISTRICT DIRECTOR

Dr. Rui-De Xue



September 25, 2017



Alan Davis  
Land Planning Coordinator  
Florida Forest Service  
Florida Department of Agriculture and Consumer Services

Mr. Alan,

I am writing this letter in response to your email from September 20, 2017. Anastasia Mosquito Control District of St. Johns County does not conduct any mosquito control activities in the Matanzas State Forest.

Sincerely,

Kay Gaines  
Operations Manager  
Anastasia Mosquito Control District