

**TEN-YEAR RESOURCE MANAGEMENT PLAN
FOR
TWELVE-MILE SWAMP CONSERVATION AREA
ST. JOHNS COUNTY**



PREPARED BY
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

APPROVED BY THE ACQUISITION & RESTORATION COUNCIL – AUGUST 2010

GOVERNING BOARD APPROVED – OCTOBER 2010

TWELVE MILE SWAMP CONSERVATION AREA
 TEN-YEAR RESOURCE MANAGEMENT PLAN
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LAND MANAGEMENT PLAN EXECUTIVE SUMMARY

LEAD AGENCY: St. Johns River Water Management District and the Division of Forestry

COMMON NAME OF PROPERTY: Twelve Mile Swamp Conservation Area

LOCATION: St. Johns County

ACREAGE TOTAL: 20,338 acres

<u>NATURAL COMMUNITY</u>	<u>ACREAGE</u>	<u>NATURAL COMMUNITY</u>	<u>ACREAGE</u>
Pine Flatwoods (Pine Plantation)	10,034	Mesic Hammock	30
Basin Swamp	9,662	Blackwater Stream	Not mapped
Depression Marsh	440	Impoundment/Artificial Pond	55
Floodplain Swamp	117	TOTAL	20,338

LEASE AGREEMENT: Lease #4400

USE: Multiple

SUBLEASE: None

ENCUMBERANCES: Rayonier Lease

TYPE ACQUISITION: P2000; Twelve Mile Swamp Conservation and Recreation Lands Project

FL MASTER SITES: Seven documented sites; four pre-historic, three historic.

UNIQUE FEATURES: Freshwater swamp that is the headwaters for six creeks.

ACQUISITION NEEDS/ACREAGE: FL Forever “Essential Parcels”: 3,434 acres.

SURPLUS LANDS/ACREAGE: There is an approximately 82 acre parcel located near the southeast corner of the Conservation Area that is not attached to the parent parcel that could be considered for exchange or surplus.

PUBLIC INVOLVEMENT: Management Plan Advisory Group Public Meeting, Acquisition & Restoration Council, Governing Board – St. Johns River Water Management District.

I. INTRODUCTION

This document provides guidelines for land management activities to be implemented at Twelve Mile Swamp Conservation Area (TMSCA) over the next ten years. This is a revision of the land management plan approved in 2003 by the State of Florida's Acquisition and Restoration Council and the Governing Board of the St. Johns River Water Management District (SJRWMD).

TMSCA includes approximately 20,338 acres within SJRWMD's Northern Coastal and Lower St. Johns River Basins. The property is located approximately 5 miles north of St. Augustine. It is situated west of U.S Highway 1, north of State Road 16, east of Interstate 95 and south of County Road 210. The property is located within numerous Sections of Townships 5, 6 and 7 South and Ranges 28 and 29 East.

The property was acquired in 2001 and is jointly owned by the Trustees of the Internal Improvement Trust Fund of the State of Florida and the St. Johns River Water Management District, 50/50 undivided interest, and is encumbered by a surface lands lease through 2025 on 97% of the property.

A. GENERAL MISSION & MANAGEMENT PLAN DIRECTION

The acquisition of TMSCA provides for the protection of important water resources and ecological functions. This acquisition is consistent with the goals of the Northern Coastal and Lower St. Johns River Basin projects set forth in SJRWMD's Land Acquisition and Management Five Year Plan, and SJRWMD's Water Management Plan. These goals are to:

- Restore, maintain, and protect native natural communities and diversity.
- Improve water quality, maintain natural hydrologic regime, and maintain flood protection by preserving important wetland areas.
- Provide opportunities for recreation where compatible with the above listed goals.

Within the limitations provided by the timber lease additional goals shall be:

- Restore, maintain, and protect in perpetuity all native ecosystems;
- Ensure long-term viability of populations and species considered rare, endangered, threatened, or of special concern;
- Restore, maintain, and protect hydrological functions related to the quality and quantity of water resources and the health of associated wetland and aquatic natural communities;
- Integrate compatible human use through multiple-use concept, not emphasizing any particular use over the others, or over restoration, maintenance and protection of native ecosystems;
- Protect known archeological and historical resources; and
- Practice sustainable forest management utilizing sound silvicultural techniques.

This management plan is provided according to requirements of Sections 253.034, 259.032, and 373, Florida Statutes, and was prepared utilizing guidelines outlined in Section 18-2.021 of the Florida Administrative Code. This plan provides general guidance for the management of TMSCA for the next ten years and outlines the major concepts that will guide management activities on the Conservation Area.

TMSCA was acquired from the Cummer Trust in February 2001. Prior to acquisition by the Trustees and SJRWMD, the uplands on the property were, and are, in active silviculture. Of the total 20,338 acres, approximately 298 acres are currently non-encumbered via a contract (surface-rights lease) with Rayonier. This contract was originally established between Cummer Lime & Manufacturing and Owens-Illinois in 1959. Upon acquisition, the Trustees and SJRWMD assumed the contract. This contract is effectively a surface-rights lease, which means Rayonier has nearly complete control over the 20,040 acres until lease termination in 2025.

In September 2001, the Trustees and SJRWMD purchased the timber rights on 7,533 acres from Rayonier. This represents the core area of the swamp itself. Although Rayonier sold the rights to harvest timber on those 7,533 acres, other surface rights on those acres from the original lease remain intact and in Rayonier's control. An additional 378 acres were part of this purchase, and comprise Twelve Mile Swamp Recreation Area. This area is open to the public but Rayonier retains the timber rights.

A summary of the lease follows:

- Rayonier has the right to harvest timber on the site until 2025 with the exception of the 7,533 acre portion of swamp that had the timber rights purchased and the 298 acres Section 41 parcel that was never encumbered.
- At the expiration of the lease, 2.27 cords of merchantable timber per acre must remain
- Rayonier is allowed to graze, hunt, and farm the site
- Rayonier can construct buildings for operations
- Rayonier has 50% interest in all oil, gas, and minerals
- If sold, Rayonier has the first right of refusal.

Of the total 20,338 acres, only 298 acres were originally unencumbered by the contract. This area has several inholdings and is near U.S. 1.

See Figure 3 for a depiction of the encumbered and unencumbered areas.

B. PAST ACCOMPLISHMENTS

Since acquisition in 2001, a small parking area, kiosk, and interpretive trail have been installed at the 378-acre Twelve Mile Swamp Recreation Area. Portions of the 298 acre Section 41 parcel have been fenced. In 2002, the Wildlife Management Area was established.

C. FUTURE GOALS & OBJECTIVES FOR THE NEXT TEN-YEAR PERIOD

The following goals and objectives provide direction and focus for management resources over the next ten-year planning period. Funding, agency priorities, resources, wildfire, and other natural disasters will be influential in determining the degree to which these objectives are met. Short-term goals shall be achievable within a 2-year planning period, and long-term goals shall be achievable within a 10-year planning period. These short-term and long-term management goals shall be the basis for all subsequent land management activities.

There is a timber/surface lands lease on 97% of the property until 2025 that precludes the SJRWMD from any management activity in these areas. Only the 298-acre Section 41 and the 378-acre Recreation Area (recreation goals only) have goals and objectives.

GOAL 1: Habitat Restoration and Improvement

OBJECTIVE 1: If, when security issues are resolved, implement prescribed burning (Section 41) on a three year interval. (Short Term/Long Term Goal)

PERFORMANCE MEASURES: a. Security issues resolved; b. Acres burned.

OBJECTIVE 2: Prescribe burn areas released for state management (after final harvest) on a three year interval. (Long Term Goal)

PERFORMANCE MEASURE: Number of acres burned during the dormant season & growing season.

OBJECTIVE 3: Conduct habitat/natural community improvement on pine flatwoods and ephemeral wetlands (after final harvest) through implementation of the prescribed burning plan, and thinning of pine stands to promote diversity and obtain desired future conditions. (Long Term Goal)

PERFORMANCE MEASURE: Number of acres with restoration underway.

OBJECTIVE 4: Restore ground cover in the pine flatwoods communities (after final harvest) where the native ground layer has been eliminated or heavily impacted from historical land use. Could involve mechanical and/or chemical techniques and prescribed fire to encourage native fire-dependent vegetation and reduce oak encroachment. (Long Term Goal)

PERFORMANCE MEASURE: Number of acres restored.

GOAL 2: Public Access and Recreational Opportunities

OBJECTIVE 1: Maintain public access (Recreation Area) and recreational opportunities to allow for a carrying capacity of 50 visitors/day. (Short Term/Long Term Goal)

PERFORMANCE MEASURE: Number of visitor opportunities/day.

OBJECTIVE 2: Coordinate with recreational user groups (Recreation Area) to promote appropriate recreational opportunities on the Conservation Area. (Long Term Goal)

PERFORMANCE MEASURE: Number of increased recreational opportunities.

GOAL 3: Hydrological Preservation and Restoration

OBJECTIVE 1: Protect water resources during management activities through the use of Silvicultural Best Management Practices (BMP's) for State Lands (Section 41). (Short Term Goal/Long Term Goal)

PERFORMANCE MEASURE: Percent compliance with State Lands BMPs.

GOAL 4: Sustainable Forest Management

OBJECTIVE 1: DOF, SJRWMD, and Rayonier will develop a restoration plan for those areas within the timber lease that Rayonier has conducted a final harvest and released to state management. (Long Term Goal)

PERFORMANCE MEASURE: Number of acres reforested.

OBJECTIVE 2: Implementation of the silviculture management plan (Section 41 and after final harvest). (Long Term Goal)

PERFORMANCE MEASURE: Implementation of plan and number of acres treated.

OBJECTIVE 3: Implement a process for conducting stand descriptions and forest inventory including a GIS database containing forest stands, roads & other attributes (including but not limited to: threatened & endangered species, archeological resources, exotic species locations, historical areas). (Long Term Goal)

PERFORMANCE MEASURE: Complete GIS database and inventory near the end of the planning term to facilitate reforestation.

OBJECTIVE 4: Conduct timber sales (Section 41), assuming security issues are resolved, at appropriate times to promote forest health and ensure sustainability of the resources. (Long Term Goal)

PERFORMANCE MEASURE: Conduct timber sales sustainable to Section 41's timber resources.

GOAL 5: Exotic and Invasive Species Maintenance and Control

OBJECTIVE 1: Locate, identify, map, and control non-native invasive plant species (Section 41 and Recreation Area). (Short Term Goal/Long Term Goal)

PERFORMANCE MEASURE: Total number of infested acres of Exotic Plant Pest Council (EPPC) Category I and II plants successfully treated.

GOAL 6: Capital Facilities and Infrastructure

OBJECTIVE 1: SJRWMD staff will maintain parking area, kiosk, and interpretive trail (Recreation Area). (Short Term/Long Term Goal)

PERFORMANCE MEASURE: The number of existing facilities, miles of trails etc.

OBJECTIVE 2: Continue annual maintenance of TMSCA boundary (Section 41 and Recreation Area). (Short Term Goal/Long Term Goal)

PERFORMANCE MEASURE: Percentage of boundary maintained.

GOAL 7: Protect Known Archaeological and Historical Resources

OBJECTIVE 1: Ensure all known sites are recorded in the Florida Division of Historical Resources (DHR) Master Site file (Section 41 and Recreation Area). (Short Term/Long Term Goal)

PERFORMANCE MEASURE: Number of recorded sites.

OBJECTIVE 2: Monitor recorded sites and send updates to the DHR Master Site File as needed. (Section 41 and Recreation Area). (Short Term/Long Term Goal)

PERFORMANCE MEASURE: Number of sites monitored.

OBJECTIVE 3: Produce a "Sensitive Areas" map, showing locations of wetlands, listed species, or archaeological/historical sites for use by SJRWMD and Rayonier staff. (Short Term Goal)

PERFORMANCE MEASURE: Map completed/updated and sensitive areas training conducted.

GOAL 8: Imperiled Species Habitat Maintenance, Enhancement, Restoration, or Population Restoration

OBJECTIVE 1: Develop baseline imperiled species occurrence inventory list (Section 41 and Recreation Area). (Short Term Goal)

PERFORMANCE MEASURE: Completion of baseline imperiled species occurrence inventory list.

OBJECTIVE 2: Develop monitoring protocols for selected imperiled species (Section 41 and Recreation Area). (Long Term Goal)

PERFORMANCE MEASURE: The number of imperiled species for which monitoring protocols are developed.

OBJECTIVE 3: Implement monitoring protocols for imperiled species (Section 41 and Recreation Area). (Long Term Goal)

PERFORMANCE MEASURE: The number of species for which monitoring is ongoing and monitoring report(s) completed.

D. MANAGEMENT NEEDS, PRIORITY SCHEDULE, AND COST ESTIMATES

Management activities at TMSCA will be designed to protect and conserve the natural, cultural, and recreational resources of the property. A priority schedule and a cost estimate for the proposed activities follows. All activities will occur on Section 41 and the Recreation Area. Most work will be done by SJRWMD staff. Some work could be contracted to the private sector, if appropriate.

PRIORITY 1

1. **Prescribed Burning** – If security issues can be resolved, a fire management plan will be developed to aid in the prevention of destructive wildfires and to restore the natural fire regime to the native communities that are fire dependent within Section 41. This plan will reduce fuel loading, increase public safety, facilitate timber management, and restore, maintain and protect native ecosystems. The burnable area is estimated to be 240 acres divided into 3 blocks; therefore an annual burn target is one burn per year.

Estimated cost per year: **\$2,000**

2. **Forest Management** – If security issues can be resolved, the silviculture plan will be implemented in Section 41.

Estimated cost per year: **To be determined**

3. **Non-Native Invasive Plant Control** - Locate, identify, map, and control non-native invasive plant species on Section 41 and the Recreation Area.

Estimated cost per year: **\$3,000**

4. **Maintenance of Existing Recreational Amenities** – Maintain the existing public facilities in the Recreation Area.

Estimated cost per year: **\$1,000**

PRIORITY 2

1. **Cultural Resource Assessment** - Monitor recorded sites within areas of SJRWMD responsibility. Have annual meeting with staff to discuss cultural resource issues and locations of known sites within the areas that SJRWMD has responsibility.

Estimated cost per year: **\$500**

2. **Boundary Marking** – There is fencing on portions of Section 41 and the Recreation Area. Both areas are also posted with Wildlife Management Area signs. Boundaries will be assessed on a routine basis and the entire boundary will be evaluated regularly to monitor for maintenance issues.

Posting boundary signs: **\$250**

Estimated cost of boundary maintenance per year: **\$1,000**

PRIORITY 3

1. **Additional Natural Community Mapping** – As restoration proceeds, the historic natural community map will be refined particularly with regards to mesic vs. wet flatwoods locations. This work will be performed by SJRWMD staff.

Estimated cost: **To be determined**

2. **Listed Species Survey, Occurrence Records and Mapping** - A rare and endangered animal and plant species inventory and monitoring program will be conducted by SJRWMD staff.

Estimated cost: **To be determined**

Estimated Ten-Year Expenditures Organized by Uniform Cost Accounting Council Categories

CATEGORY	PRIORITY 1	PRIORITY 2	PRIORITY 3	TOTAL
Resource Management:				
Exotic Species Control	\$30,000			\$30,000
Prescribed Burning	\$20,000			\$20,000
Forest Management	TBD			
Cultural Resources		\$5,000		\$5,000
Biological Monitoring			TBD	
Administration:				
Units/Projects				
Staff/Housing Needs				
Capital Improvements:				
New Facility Construction				

CATEGORY	PRIORITY 1	PRIORITY 2	PRIORITY 3	TOTAL
Facility Maintenance	\$10,000	\$2,500		\$12,500
Tools/Equipment				
Visitor Services/Recreation:				
Information/Education Programs				
Operations				
Law Enforcement/Security				
TOTAL	\$60,000	\$7,500	TBD	\$67,500

II. ADMINISTRATIVE SECTION

A. DESCRIPTIVE INFORMATION

1. COMMON NAME OF PROPERTY

The common name of the property is Twelve Mile Swamp Conservation Area.

2. LOCATION, BOUNDARIES, AND IMPROVEMENTS

TMSCA is located approximately 5 miles north of St. Augustine. It is situated west of U.S Highway 1, north of State Road 16, east of Interstate 95 and south of County Road 210 (see Figure 1). The conservation area's boundary is depicted on Figure 2. The only improvements to the property are a small parking area with a wooden fence, an interpretive trail, and a kiosk located on the 378 acre Recreation Area.

3. LEGAL DESCRIPTION & ACREAGE

TMSCA is approximately 20,338 acres in size. The property is located in St. Johns County, Florida in all or part of:

Township 05 South, Range 28 East, Sections 13, 22-24, 27, 34-39, and 42-45.

Township 05 South, Range 29 East, Sections 19, 29, 30-32, and 41-43.

Township 06 South, Range 28 East, Sections 2-3, 11-13, 23-25, 39, 41-42, and 48.

Township 06 South, Range 29 East, Sections 4-6, 17-19, 20-22, 27-29, 30-35, 47, 53-54, 60-61, 63-64, and 66-78.

Township 07 South, Range 29 East, Section 53.

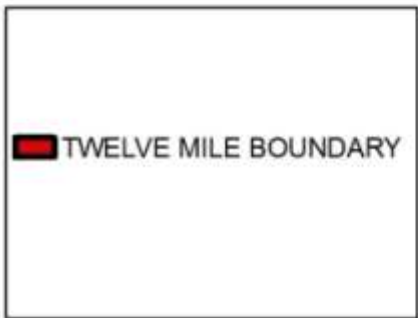
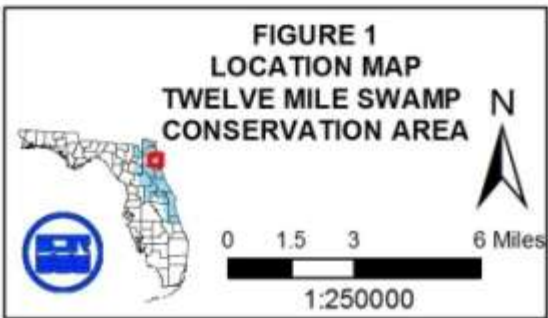
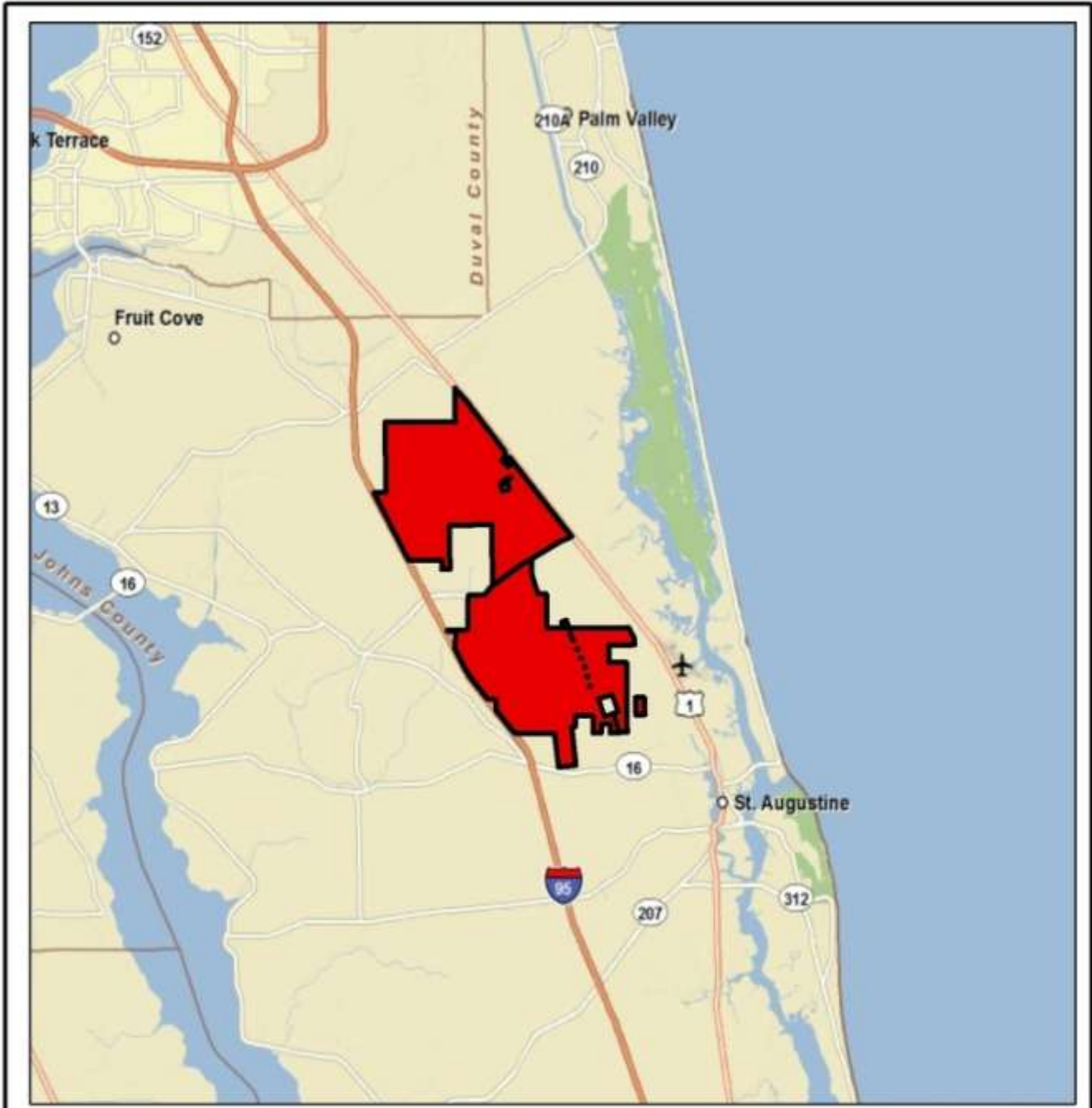
Please see Appendix 8 for a copy of the Deeds.

4. DEGREE OF TITLE INTEREST HELD BY BIITF

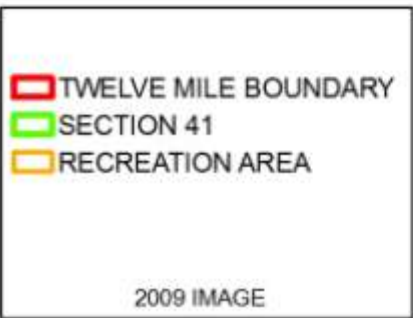
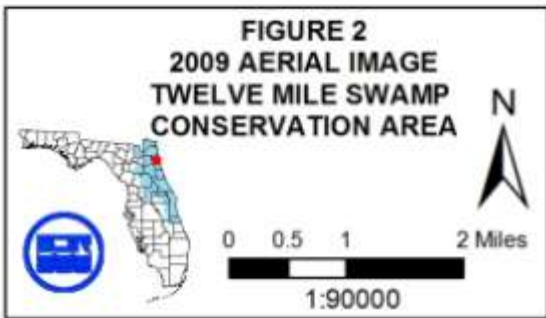
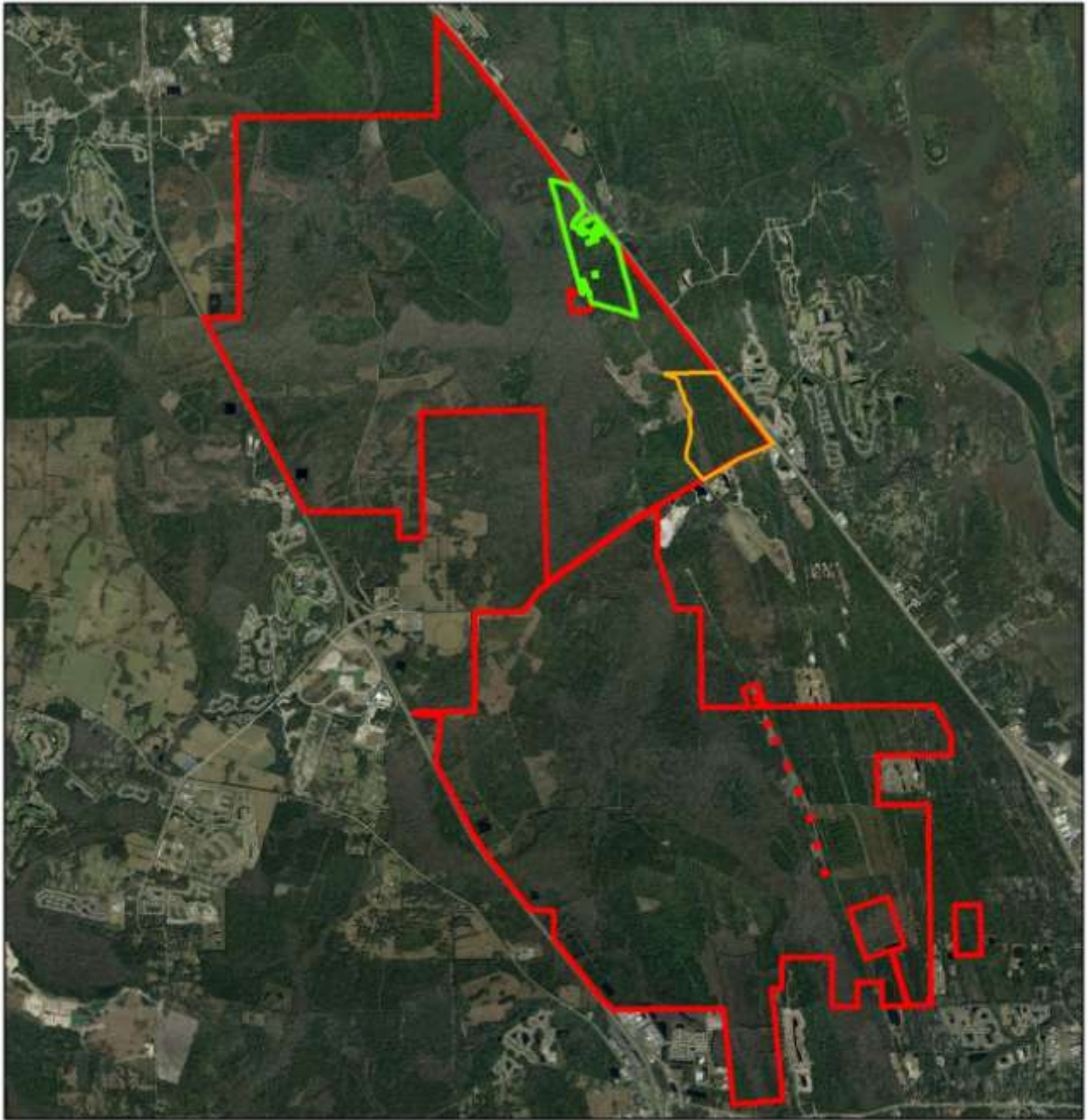
The Board of Trustees of the Internal Improvement Trust Fund and the St. Johns River Water Management District each hold 50% undivided interest in the approximately 20,338 acres of TMSCA. The acquisition was subject to a lease with Rayonier.

Trustees Lease # 4400 was executed on June 20, 2003 and encompassed 21,898.14 acres.

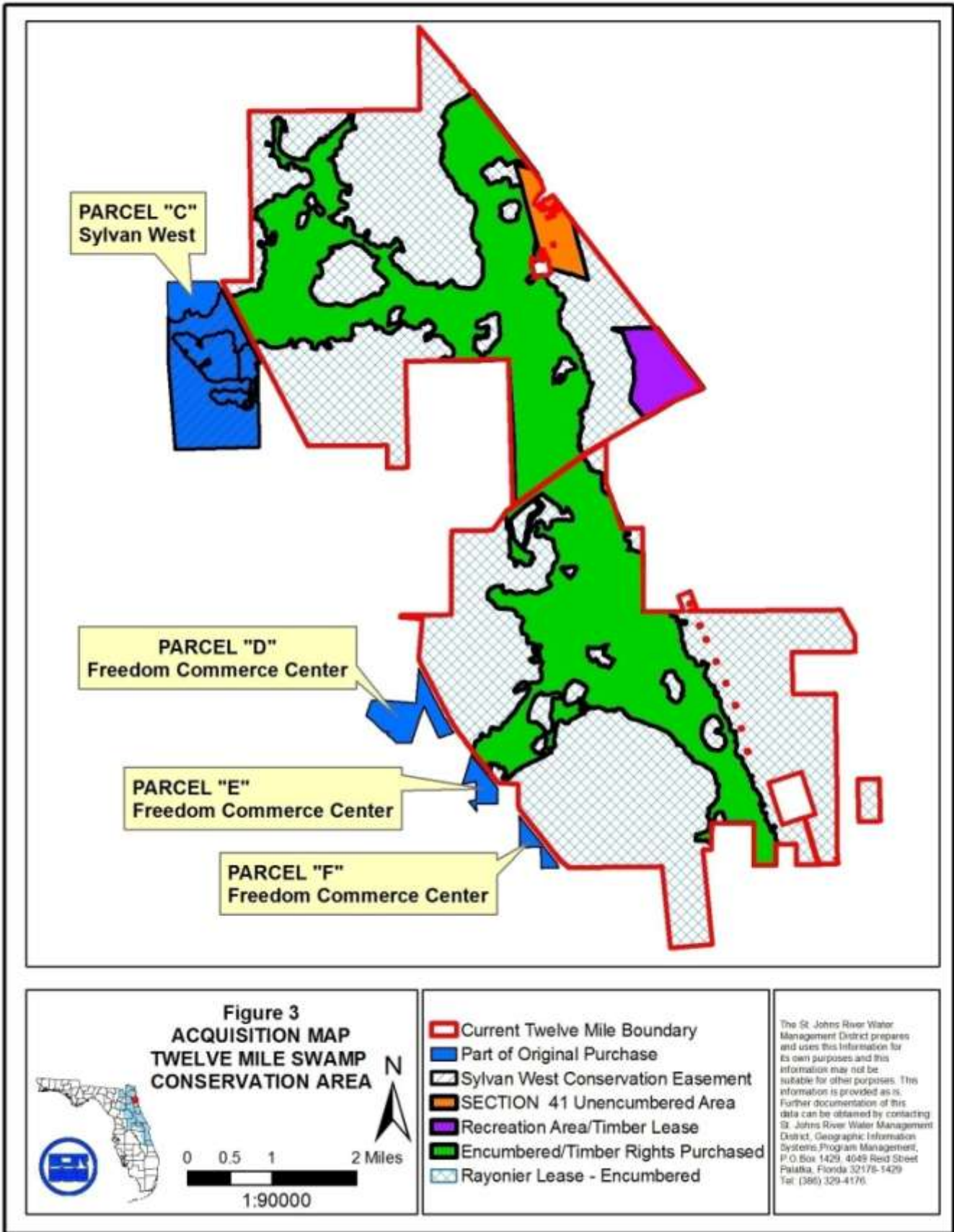
Since that time, four parcels totaling 1,560 acres have been exchanged for other conservation areas. Please see Section II.B below for a complete chronology of acquisition and subsequent exchanges associated with this property.



The St. Johns River Water Management District prepares and uses this information for its own purposes and this information may not be suitable for other purposes. This information is provided as is. Further documentation of this data can be obtained by contacting: DE, Johns River Water Management District, Geographic Information Systems, Program Management, P O Box 1429, 4049 Reid Street Palatka, Florida 32178-1429 Tel: (386) 329-4176.



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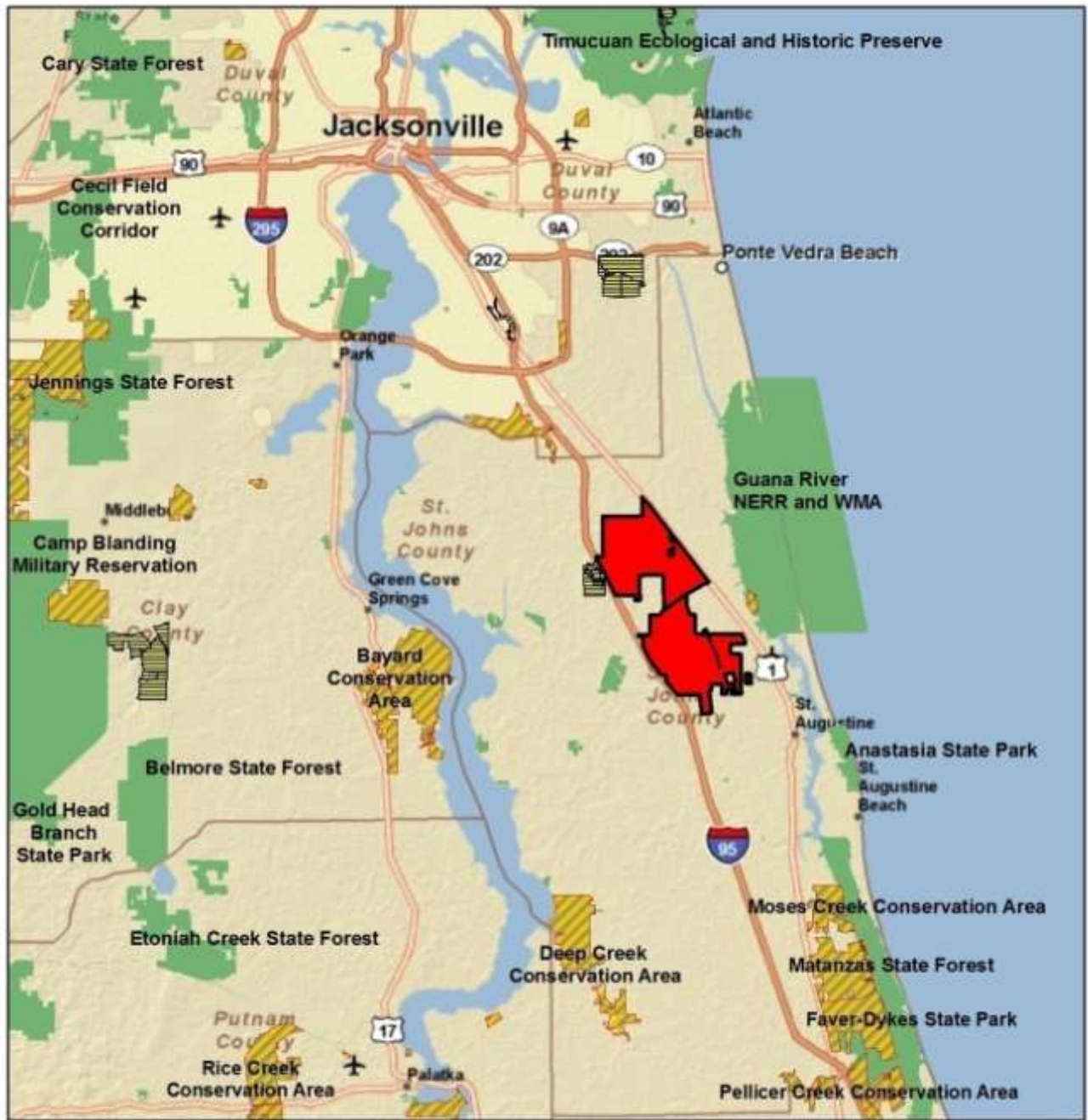


FIGURE 4
REGIONAL SIGNIFICANCE
TWELVE MILE SWAMP
CONSERVATION AREA

0 2.5 5 10 Miles
 1:450000



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5. PROXIMITY TO OTHER PUBLIC RESOURCES

There are over 200,000 acres of public lands found within a 25-mile radius of TMSCA that include federal, military, state, and local government natural areas. These include, Camp Blanding Military Reservation, Timucuan Ecological and Historic Preserve, Guana-Tolomato-Matanzas National Estuarine Research Reserve, Jennings and Cary State Forest, and Bayard and Moses Creek Conservation Areas. Please see Figure 4.

6. AQUATIC PRESERVE/AREA OF CRITICAL STATE CONCERN

The property is not within an aquatic preserve or an area of critical state concern, nor is it an area under study for such designation.

B. ACQUISITION INFORMATION

1. ACQUISITION HISTORY

The original purchase of 21,898 acres from Cummer Trust occurred in February 2001. Most of the property is encumbered by a contract for the surface rights until 2025. Later in 2001, the timber within 7,533 acres of hardwood swamp and the ability to provide recreation on the 378 acre Recreation Area were purchased from Rayonier. The Board of Trustees of the Internal Improvement Trust Fund and the St. Johns River Water Management District each hold 50% undivided interest for both of these acquisitions. In April 2004, an exchange occurred between SJRWMD, the Trustees, and Sylvan West Partnership, Ltd. (Sylvan). The Trustees and SJRWMD both conveyed their interest to Sylvan on a 1,189 acre parcel separated from the parent tract on the west side of I-95 (Parcel C). In return, the Trustees received full fee ownership on an approximately 228 acre parcel adjacent to Faver-Dykes State Park and SJRWMD held a conservation easement on 1,023 acres of the 1,189 acre Parcel C and received \$169,000 in cash. In 2007, SJRWMD conveyed parcels D, E, & F (total of 358 acres), all also isolated from the parent tract by I-95, to Freedom Commerce Centre, after having the title conveyed from the Trustees. In exchange, SJRWMD received 92.92 acres with a regulatory conservation easement. This site is within the same regulatory basin and is located approximately 10 miles northwest of TMSCA.

2. LAND ACQUISITION PROGRAM

Twelve Mile Swamp Conservation Area was purchased under the Twelve Mile Swamp Conservation and Recreation Lands Project using P2000 funds.

3. LEGISLATIVE OR EXECUTIVE CONSTRAINTS

There are no known legislative or executive constraints on the property. There is a contract between the Trustees/SJRWMD and Rayonier that grants Rayonier the surface rights on most of the property until 2025. Excluded are the timber rights on 7,533 acres of hardwood swamp, a 298 acre piece (Section 41) in the northeast part of the property and public recreation rights on the 378 acre Recreation Area parcel.

4. PURPOSE FOR ACQUISITION

TMSCA is a Florida Forever Project and was acquired to protect a large swamp that is the headwaters of six named creeks.

The primary objectives for acquisition of this property are:

- Restore, maintain, and protect native natural communities and diversity.
- Improve water quality, maintain natural hydrologic regime, and maintain flood protection by preserving important wetland areas.
- Provide opportunities for recreation where compatible with the above listed goals.

5. DESIGNATED SINGLE OR MULTIPLE USE MANAGEMENT

TMSCA is designated for multiple-use management with the St. Johns River Water Management District as the interim lead manager. In 2025, the Division of Forestry (DOF) is scheduled to become the lead manager. At that time, it is anticipated that DOF will employ its multiple-use goals and policies.

The primary purpose of the acquisition was to protect the large, regionally important swamp and associated uplands. Only uses compatible with the conservation and protection of the resources at TMSCA will be implemented.

6. ALTERNATE USES CONSIDERED

No alternate uses are being considered at this time. Once the property is unencumbered in 2025, DOF will be able to address alternate uses.

7. ADDITIONAL LAND NEEDS

Various parcels, especially portions of the remaining Twelve Mile Swamp Florida Forever project, should be considered for acquisition if they become available for purchase. Highest emphasis for purchase should be given to the “Essential Parcels” identified in the Florida Forever Five Year Plan and the Optimum Boundary map (Appendix 2). Of second interest for acquisition are all other adjoining lands as identified in the optimal management boundary map (Appendix 2). These are properties that would facilitate restoration, protection, maintenance, and management of the natural and cultural resources on TMSCA.

8. ADJACENT CONFLICTING LAND USES

There are no known conflicting land uses at this time.

9. SURPLUS LAND ASSESSMENT

The Florida Department of Transportation and St. Johns County have identified a potential transportation corridor (S.R. 313) through, or possibly along, the boundary of the conservation area. Depending on the final location of the road, small areas severed from the main property might be considered for exchange or surplus.

There is an approximately 82-acre parcel in the southeast corner of TMSCA that is disjunct from the parent parcel. It is a candidate for exchange or surplus.

C. AGENCY AND PUBLIC INVOLVEMENT

1. RESPONSIBILITIES OF MANAGING AGENCIES

Currently, Rayonier is responsible for the overall management of approximately 20,040 acres within TMSCA. This comprises nearly 99% of the property's uplands. There is currently a Wildlife Management Area on the northern half of the Rayonier leased area that is cooperatively-managed with the Florida Fish & Wildlife Conservation Commission (FWC).

All cultural resource issues will be coordinated by the St. Johns River Water Management District in consultation with the Division of Historical Resources.

2. PUBLIC AND LOCAL GOVERNMENT INVOLVEMENT

This plan was prepared with input from the Twelve Mile Swamp Conservation Area Management Plan Advisory Group. A public meeting was conducted on March 26, 2010. Comments and information from the group were compiled and discussed with local DOF staff.

A draft copy of the management plan was made available to participants of SJRWMD's Northern Recreational Public Meetings, a bi-annual noticed public meeting coordinated by SJRWMD. There are over 150 people, both agency and private citizens, on the meeting's contact list.

The Acquisition and Restoration Council (ARC) public hearing and meeting provide a forum for public input and review.

SJRWMD's Governing Board will be approving this management plan. The Governing Board's Project & Lands Committee reviews the draft plan and votes to either place the plan on the consent agenda for the full Governing Board or require the plan to be brought before the full Governing Board. This is the fourth forum for the public to provide input and comments about the plan.

3. COMPLIANCE WITH COMPREHENSIVE PLAN

A copy of this plan was submitted to the planning section at St. Johns County. In addition, county planning staff participated in the Management Plan Advisory Group.

III. RESOURCE SECTION

A. PAST USES

Silviculture practices have been in place at TMSCA for the last 50 years. Photo interpretation from aerial images from 1943 show what appears to be active cattle grazing in the uplands.

B. PHYSIOGRAPHY & TOPOGRAPHY

TMSCA is located within three physiographic regions – Mandarin Plain, Hastings Plain, and the St. Augustine Ridge Sets (Figure 5). The Mandarin Plain is part of the Sea Island District and is a poorly drained marine terrace associated with sea level fluctuations in the Pleistocene and Recent times. The Hastings Plain is part of the Eastern Flatwoods District and consists of estuarine and lagoonal deposits from the Late Pleistocene. The St. Augustine Ridge Sets is also part of the Eastern Flatwoods District and consists of a barrier island relic with ridge and swale topography.

Elevations at TMSCA range between 20 and 55 feet with the highest elevations occurring on the eastern portion of the property (Figure 6). The majority of the swamp is at an elevation between 25-35 feet and is consistent from north to south.

C. RENEWABLE AND NON-RENEWABLE RESOURCES

1. SOIL TYPES

The U.S. Department of Agriculture Soil Survey of St. Johns County identifies 30 different soil types from TMSCA. Most of the property contains hydric and partially hydric soils. The dominant soil types in the swamp are Bluff, Holopaw, Myakka, and Riviera. The mesic flatwoods are dominated by Immokalee soils. The dominant non-hydric soils are Paola, Pomello and Astatula.

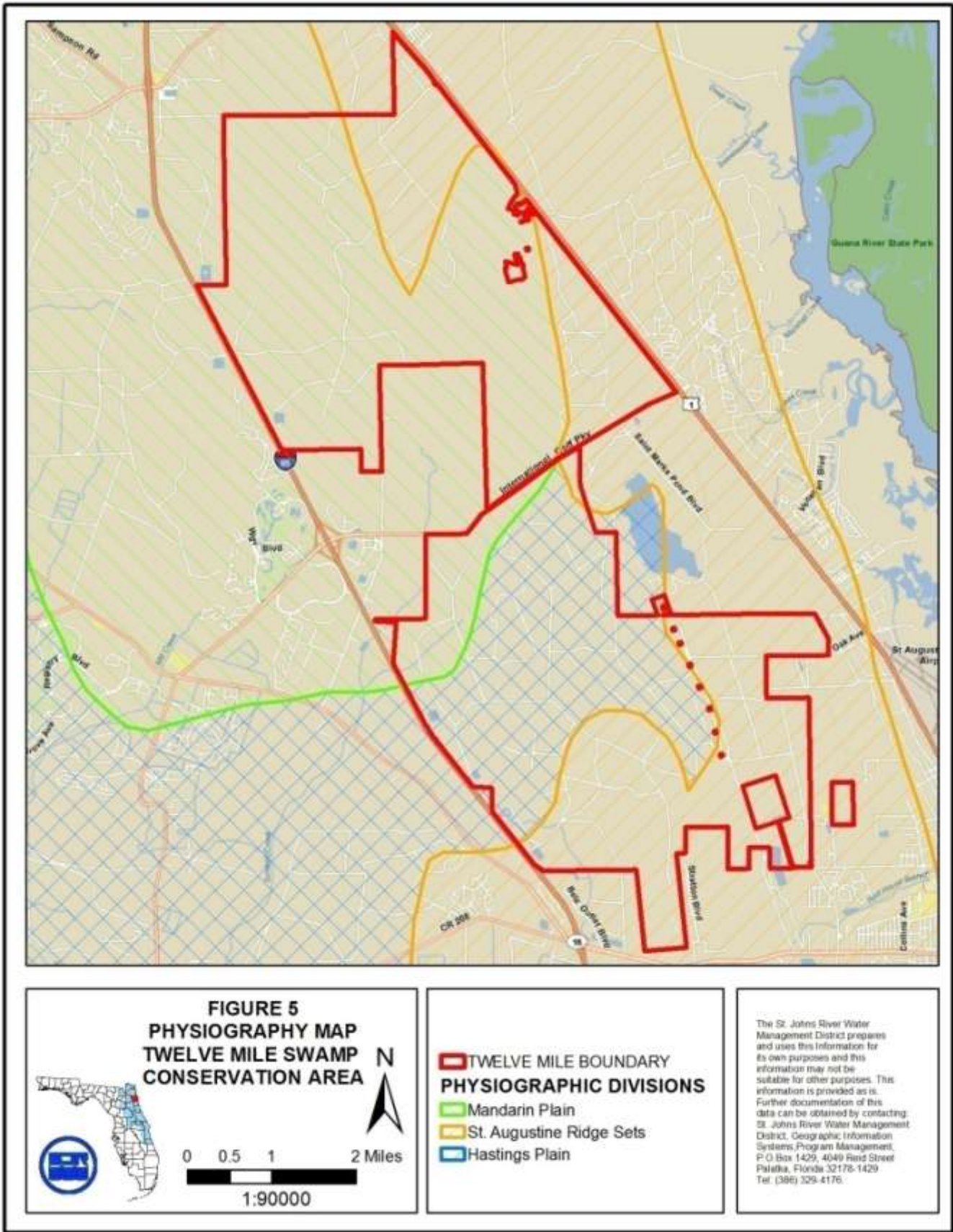
See Figure 7 for a map and Appendix 4 for a complete list and brief description of all of the known soil types from TMSCA.

2. ARCHAEOLOGICAL AND HISTORICAL RESOURCES

There are seven, documented Florida Master Sites located on the conservation area. Four have documented prehistoric components and three are historic. Within the area that

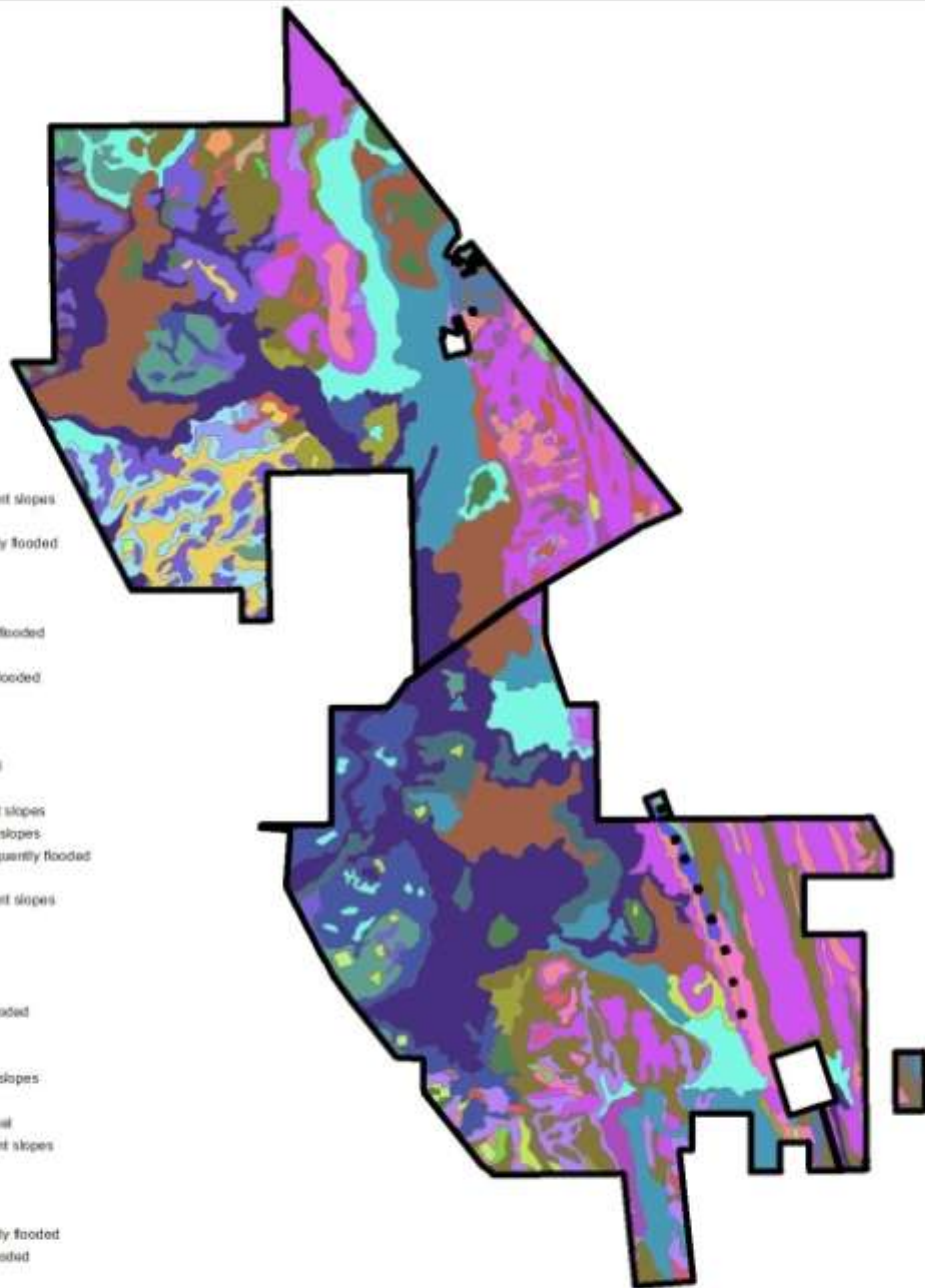
SJRWMD has authority, the SJRWMD will comply with guidelines outlined in “Management Procedures for Archaeological and Historical Sites and Properties on State-owned or Controlled Lands (see Appendix 5).

The Conservation Area has not been formally surveyed. No specific assessment of cultural resources has been done on the site.



SOIL TYPE

- Adamsville fine sand
- Astetula fine sand, 0 to 8 percent slopes
- Belenville muck
- Bluff sandy clay loam, frequently flooded
- Caccia fine sand
- EauGalle fine sand
- Etzey fine sand
- Floridana fine sand, frequently flooded
- Holopaw fine sand
- Holopaw fine sand, frequently flooded
- Immolalee fine sand
- Jonathan fine sand
- Myakka fine sand
- Myakka fine sand, depressional
- Ona fine sand
- Orsino fine sand, 0 to 5 percent slopes
- Paola fine sand, 0 to 6 percent slopes
- Parkwood fine sandy loam, frequently flooded
- Pits
- Pomalo fine sand, 0 to 5 percent slopes
- Portuna fine sand
- Poltsburg fine sand
- Riviera fine sand
- Riviera fine sand, depressional
- Riviera fine sand, frequently flooded
- Samsula muck
- Symma fine sand
- Sperr fine sand, 0 to 5 percent slopes
- St. Johns fine sand
- St. Johns fine sand, depressional
- Taverner fine sand, 0 to 5 percent slopes
- Troon fine sand
- Tumpka muck
- Water
- Wescomett fine sand, frequently flooded
- Windsor fine sand, frequently flooded
- Zoffo fine sand



**FIGURE 7
SOILS MAP
TWELVE MILE SWAMP
CONSERVATION AREA**

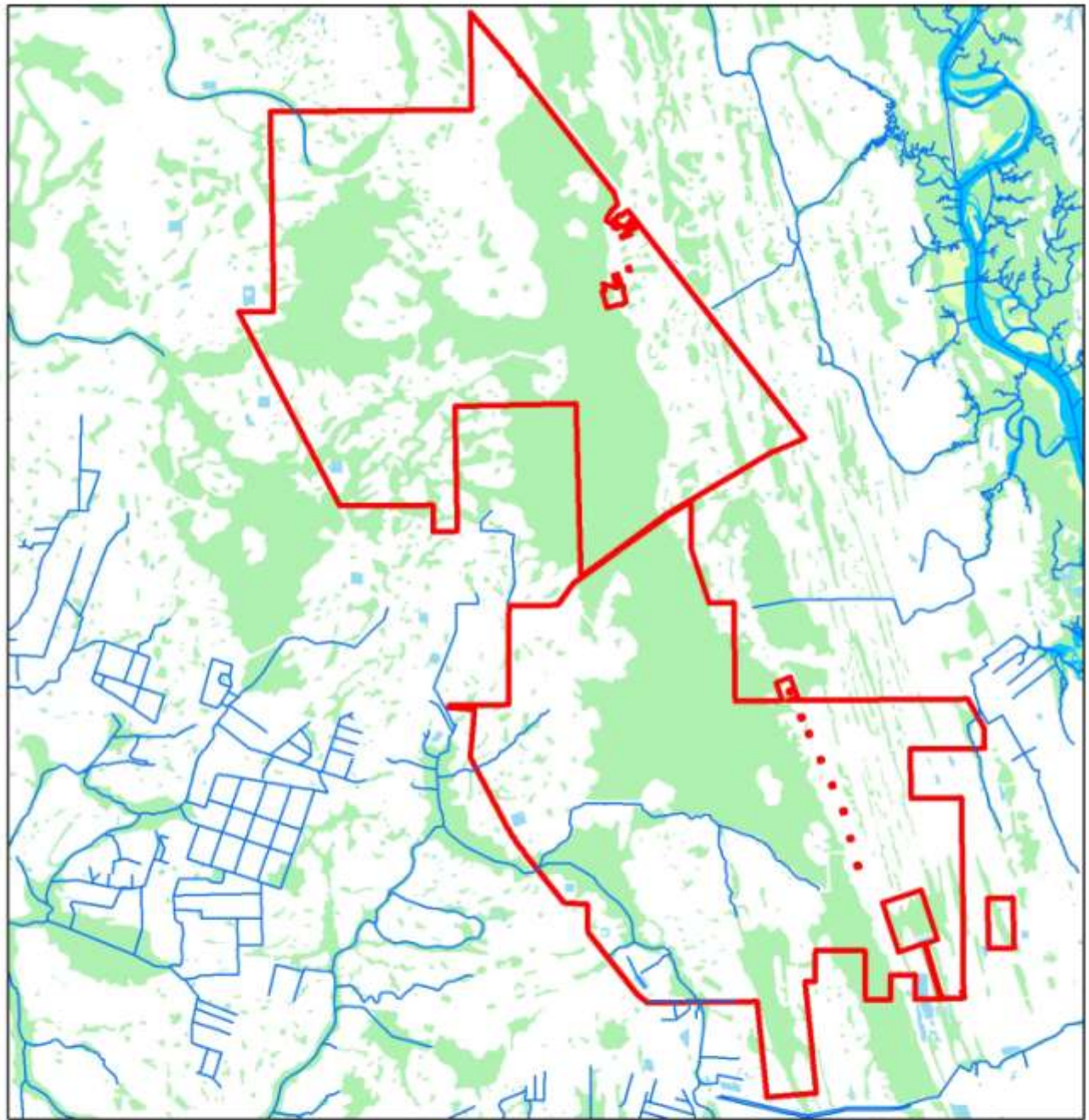


0 0.5 1 2 Miles
1:90000



TWELVE MILE BOUNDARY

The St. Johns River Water Management District prepares and uses this information for its own purposes and this information may not be suitable for other purposes. This information is provided as is. Further documentation of this data can be obtained by contacting St. Johns River Water Management District, Geographic Information Systems, Program Management, P.O. Box 1429, 4048 Reid Street Palatka, Florida 32178-1429 Tel: (386) 329-4176



SJRWMD has provided locations of the documented Florida Master Sites on the timber lease to Rayonier.

3. WATER RESOURCES

Surface Water

TMSCA contains, and protects, most of Twelve Mile, Five Mile and Six Mile Swamps, and a portion of Four Mile Swamp. Collectively these swamps are the headwaters of six creeks that flow into the St. Johns River to the west and the Matanzas River to the east and south. Please see Figure 8 for a surface water map.

St. Johns River Drainage

Sampson Creek flows from the property north and west until its confluence with Durbin Creek. Durbin Creek combines with Julington Creek to form a major tributary to the St. Johns River at the Duval and St. Johns County line.

A major branch of Trout Creek flows from the west side of the property. Both Mill and Turnbull Creeks have their headwaters in TMWCA. These two creeks both flow into Six Mile Creek. Trout and Six Mile Creeks both flow into the St. Johns River at Palmo Cove.

Matanzas River Drainage

Red House Branch flows south and then east into the San Sebastian River. An un-named drain flows south from TMSCA into Cowan Swamp, which then becomes Moultrie Creek. Both Moultrie Creek and the San Sebastian River flow into the Matanzas River.

Ground Water

The eastern portion of TMSCA contains some well-drained soils (Paola, Pomello, and Astatula series) and reach the highest elevation on the property. SJRWMD modeling estimates that recharge to the Floridan Aquifer on the east side of TMSCA averages between 1-4 inches per year. All of the other portions of the conservation area are areas of discharge from the surficial aquifer.

The City of St. Augustine has a public utility well field located on the southeast side of TMSCA. The well locations can be identified on the general property map as a series of inholdings trending north to south. SJRWMD has two ground water monitoring wells on TMSCA – one in the Floridan Aquifer and the other in the Intermediate Aquifer.

4. FISH AND WILDLIFE

To date, only minimal plant and animal species surveys and lists have been completed. Over the next ten years, additional surveys will occur. SJRWMD has a biological inventory database that will store this information. See Appendix 4 for a list of documented plants and animals from TMSCA.

5. ENDANGERED & THREATENED SPECIES

At this time, 13 listed species have been observed at TMSCA. This list includes U.S. Fish & Wildlife Service, Florida Department of Agriculture & Consumer Services, Florida Fish & Wildlife Conservation Commission, and FNAI-tracked species. The two most notable are the Florida black bear and gopher tortoise. The FL Natural Areas Inventory provided a tracking report for the property. It listed one element - the known bald eagle nest.

A complete list is located in Appendix 5.

6. BEACHES AND DUNES

There are no beaches and dunes on this property. Of interest is the presence of a physiographic feature located in the southeast portion of the property called the St. Augustine Ridge Sets. This area was once a barrier island. What is evident today is the ridge/swale topography left over from the old dunes.

7. SWAMPS, MARSHES, AND OTHER WETLANDS

TMSCA contains at least four wetland natural communities. They include: basin swamp, floodplain swamp, depression marsh, and blackwater stream.

8. MINERAL RESOURCES

There are no known mineral resources on this property.

9. UNIQUE NATURAL FEATURES

The large basin swamp known as Twelve Mile Swamp is a unique natural feature. It is the headwaters of six blackwater streams, four of which provide important surface flow contributions to the St. Johns River (Sampson Creek, Trout Creek, Mill Creek, and Turnbull Creek).

10. OUTSTANDING NATIVE LANDSCAPES

Twelve Mile Swamp and its tributaries are an outstanding native landscape. There are some areas that are excellent examples of mature hardwood swamp with very large water hickory, cypress, swamp chestnut oak, ash, etc. The swamp provides flood and water quality protection, and quality wildlife habitat - particularly for Florida black bears.

11. TIMBER RESOURCE

The timber lease encumbers virtually all of TMSCA during the life of this plan except the 7,533 acres of timber rights that were purchased in 2001. The only upland portion that will be managed by SJRWMD in the next ten years is the 298 acre Section 41 parcel. Unfortunately, much of this parcel has been subject to multiple wildfires since acquisition. A silviculture plan for Section 41 is located in Appendix 7.

IV. MANAGEMENT CONCEPTS BY NATURAL COMMUNITIES AND PROPOSED MANAGEMENT ACTIVITIES

A. EXISTING AND PLANNED USES

The 378 acre Recreation Area and the 298 acre Section 41 will both be managed under the multiple-use concept. Activities at TMSCA will include: forest management, protection of the natural and cultural resources, and recreation management. No additional uses are planned in the next ten years.

1. PROPERTY BOUNDARIES ESTABLISHMENT AND PRESERVATION

The entire boundary has been established. Rayonier has marked the lease area with their signage. The boundary of the Wildlife Management Area is properly posted, as well. Portions of Section 41 are fenced.

2. SOIL AND WATER PROTECTION

The acquisition of TMSCA provides tremendous water resource protection benefits. These include flood protection to the surrounding area and water quality protection to both the St. Johns and Matanzas Rivers.

Rayonier closely follows silviculture BMP's established by the FL Division of Forestry. SJRWMD and DOF will follow all forestry and soil erosion BMP's in the management of this property.

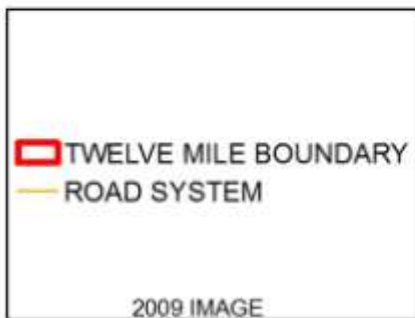
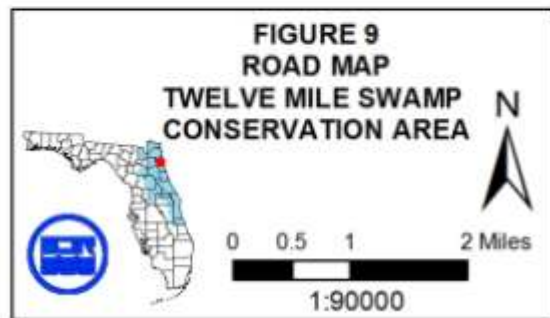
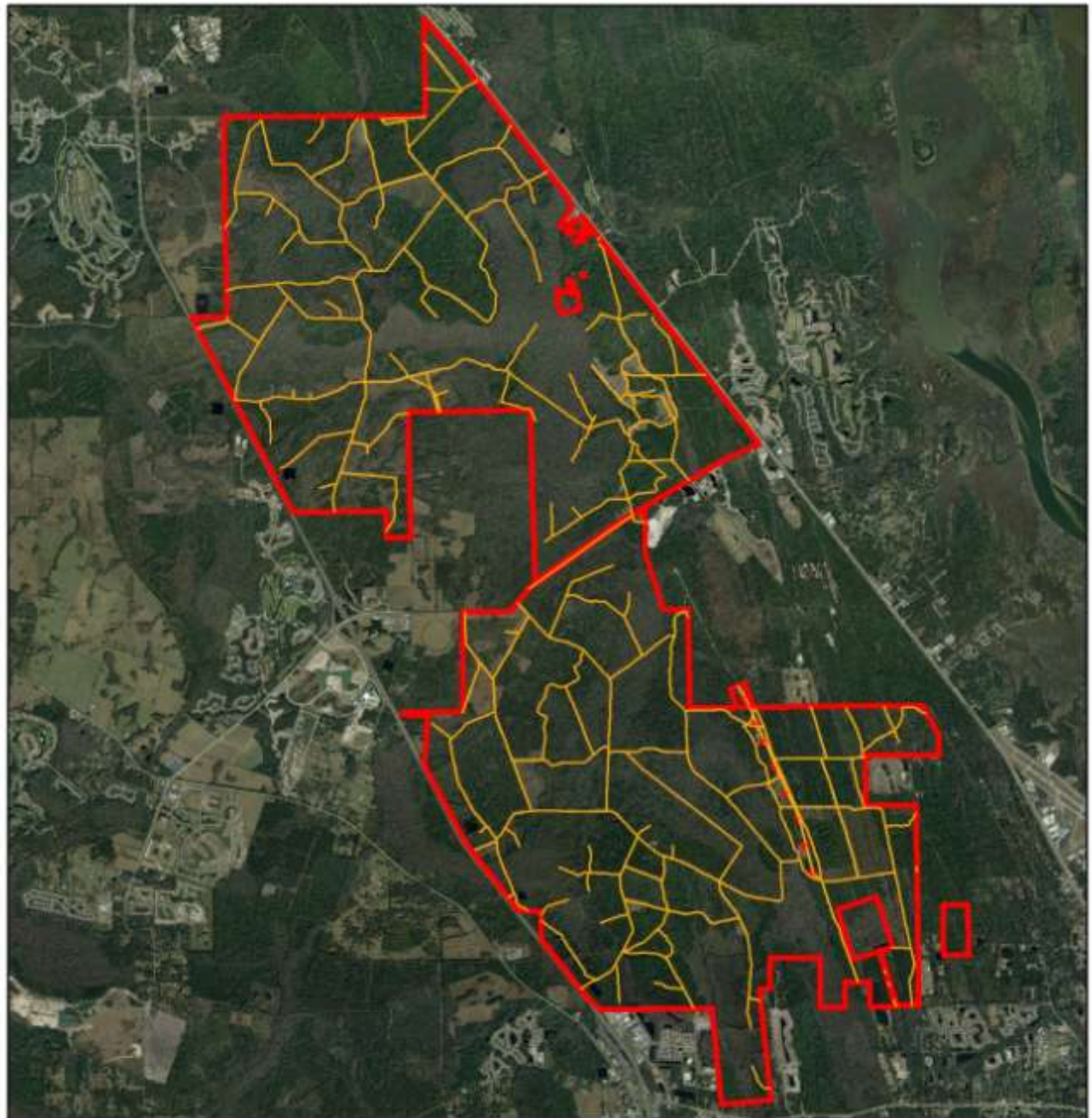
3. ROADS AND BRIDGES

The leased portion of TMSCA has an extensive network of internal roads that are maintained by Rayonier and are utilized by Rayonier in their timber operations and by the recreational-use permit holders on the Wildlife Management Area. The road system has been mapped.

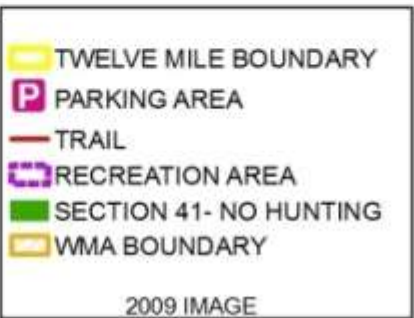
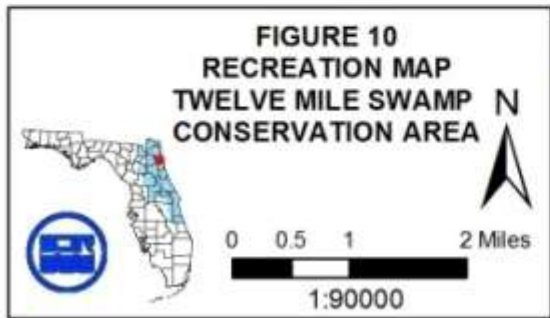
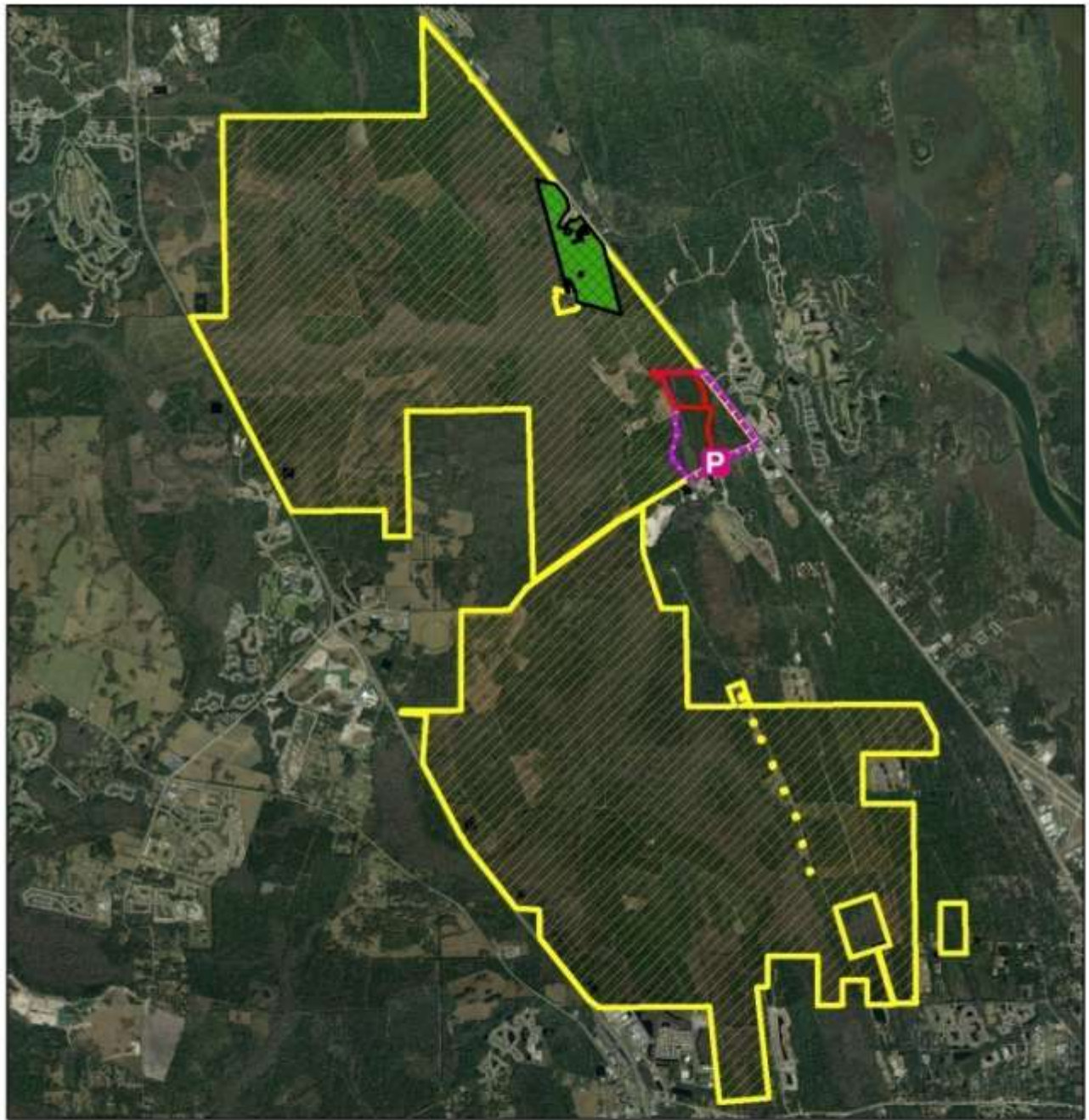
4. RECREATION MANAGEMENT

The general public access point is the 378-acre Recreation Area located off International Golf Parkway (Nine Mile Road) where one can hike, bike, horseback ride, or view wildlife.

The Wildlife Management Area (WMA) utilizes a recreational use permit. Permit holders are allowed on the WMA from two weeks prior to archery season to the last day of spring turkey season. Many of the permit holders enjoy other forms of recreation on the WMA besides hunting.



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a. EXISTING FACILITIES/INFRASTRUCTURE/RECREATIONAL FACILITIES

The Recreation Area contains a small parking area with wooden fencing, a kiosk and a self-guided interpretive trail. A copy of the Guide can be seen in Appendix 3.

The WMA has two entrances with many miles of forest roads. There is a small game cleaning station.

b. PLANNED RECREATIONAL FACILITIES

No additional recreational facilities or uses are planned during the life of this plan.

5. FIRE MANAGEMENT

There are limited opportunities for prescribed fire at TMSCA until 2025. During the next ten years, the only opportunities for prescribed fire will occur on Section 41 and areas that Rayonier has conducted their final harvest on the lease area.

It is not anticipated that Rayonier will be conducting any prescribed burns on the leased portion of TMSCA.

6. SILVICULTURAL GUIDELINES & FOREST RESOURCE MANAGEMENT OBJECTIVES

The objectives of forest resource management at TMSCA are:

- To restore health and vigor to the forest ecosystem through thinning, prescribed burning, and reforestation, both naturally and artificially with species native to the site, including longleaf pine and slash pine.
- To manage the forest for the long-term using natural regeneration, uneven-aged, and even-aged timber management techniques.
- To create a naturally regenerating forest with old growth characteristics that yields sustainable economic, ecological, and social benefits.

A silviculture plan is written for the Section 41 parcel and is located in Appendix 7.

As areas within the timber lease undergo Rayonier’s final harvest, SJRWMD, DOF, and Rayonier will work together to plan for restoration/reforestation of those sites.

7. RESEARCH PROJECTS/SPECIMEN COLLECTION

SJRWMD has in place a Special Use Authorization (SUA) license process (Chapter 40C-9.360 FAC). The applicant must provide reasonable assurance that the proposed use is consistent with the Land Management Plan and will not harm the environmental resources of the property.

8. LAW ENFORCEMENT

Law enforcement responsibilities at TMSCA are handled by FWC officers and St. Johns County sheriff officers. In addition, SJRWMD's contract security firm is available to respond to issues at Section 41 and the Recreation Area.

9. WILDLIFE AND FISH MANAGEMENT

FWC works in cooperation with Rayonier to manage the game resources on the Wildlife Management Area. This includes setting seasons, establishing bag and season limits, installing and maintain food plots, and providing law enforcement.

Section 41 is a no hunting area within the WMA. The Recreation Area is not part of the WMA, so hunting is prohibited in this area.

10. NON-NATIVE INVASIVE SPECIES

SJRWMD and Rayonier are responsible for the control of invasive plants in their respective areas. The goal of SJRWMD's Invasive Plant Program is to reduce populations of invasive plants to a maintenance level.

11. INSECTS, DISEASE & FOREST HEALTH

SJRWMD and Rayonier are responsible for their respective areas. If insect or disease outbreaks occur that affect forest health, SJRWMD will consult with DOF's Forest Health Section.

12. ON-SITE HOUSING

There is currently no on-site housing on TMSCA. None is anticipated over the life of this plan.

13. UTILITY CORRIDORS AND EASEMENTS

There is an easement for access and maintenance of the City of St. Augustine drinking water wells. The wells are accessed via a dirt road.

There is a local distribution powerline that runs along the north boundary of TMSCA.

There are multiple easements that provide access to the inholdings within the Section 41 parcel.

SJRWMD and the Trustees both have linear facility policies. SJRWMD's rule (Chapter 40C-9.380 FAC) discourages the use of SJRWMD lands for right-of-way purposes.

14. GROUND DISTURBING ACTIVITIES

It is the intent of the SJRWMD to do as little disturbance to the ground as possible in order to protect natural and cultural resources. If significant ground disturbance is unavoidable, the appropriate agencies will be notified and consulted in accordance with State Lands policy.

15. APIARIES

There are currently no apiary leases on TMSCA.

16. CATTLE GRAZING

There are no cattle grazing leases on TMSCA. None are anticipated within the life of this plan.

17. GROUND COVER

There are few upland areas within TMSCA that have any intact native ground cover. Most areas have been impacted by silviculture activities. There are no plans to conduct any ground cover enhancement or restoration efforts on the Section 41 parcel during the life of this plan.

18. RESTORATION

a. Upland

The timber lease encumbers virtually all of the uplands at TMSCA. The Section 41 parcel contains the only uplands at TMSCA on which upland restoration can occur. There are no plans to conduct any upland restoration on this parcel within the life of this plan.

b. Wetland

Rayonier strictly follows state BMP's when removing timber from wetlands. If requested, SJRWMD will assess the road network within the timber lease to insure that there are no negative hydrological impacts to the property resulting from the roads.

B. DESCRIPTION OF NATURAL COMMUNITIES AND PROPOSED MANAGEMENT ACTIVITIES

The historic (Figure 11) and the current (Figure 12) natural communities were both mapped.

1. PINE FLATWOODS (Pine Plantation) (10,034 acres)

Based on the 1943 imagery for the property, TMSCA historically contained scrubby, mesic and wet flatwoods. For the purposes of this plan, they have been lumped into pine flatwoods. In addition, there are small areas of scrub embedded in the scrubby flatwoods within the timber lease. These areas currently have dense stands of sand pine. As these areas are harvested by Rayonier, they will be assessed and mapped appropriately as either scrub or scrubby flatwoods.

Current Condition

At TMSCA, almost all of the flatwoods have been converted to commercial pine plantation. The few small areas not converted are wet flatwoods that are now dominated by hardwoods (primarily sweet bay, loblolly bay and red maple).

Desired Future Condition

Unfortunately, there are no areas of flatwoods at TMSCA that can be used as examples for restoration. In general, what is desired for a mesic flatwoods at TMSCA is an open canopy with a mixed age of longleaf and slash pines, a canopy closure <50%, and a basal area of 60-90 square feet/acre. The mid-story is dominated by regenerating pines, gallberry, staggerbush, and saw palmetto. The shrub height should be less than 3 feet. The groundcover is typically a diverse assemblage of grasses, sedges and forbs. For wet flatwoods, the structure would be similar but the canopy would be a mixture of slash and pond pine, and the mid-story components would include fetterbush and doghobble.

Typical scrubby flatwoods have an open canopy of mixed age longleaf and slash pine with a basal area of 60-90 square feet/acre. The mid-story is dominated by 2-6 ft. scrub oaks (myrtle, Chapman, and sand live oak) and rusty lyonia. The groundcover should consist of grasses, sedges, runner oak, and forbs with numerous, small, open patches of bare sand.

Restoration

The reintroduction of fire will be the most important management action that can occur to begin the restoration of the flatwoods. Fire will be reintroduced after the timber lease has expired. At that time, the flatwoods (pine plantations) will be of varying ages (time since site preparation). The shrub layer on the older areas will need to be lowered by either fire, mechanical, or herbicides treatments, or a combination of the above. The ground layer will most likely need to be enhanced by seeding or planting.

Silviculture

Currently, more than 99% of the uplands at TMSCA are in pine plantation. When the timber lease expires, the property will contain varying ages of pine plantation. Once Rayonier conducts their final harvest, DOF and SJRWMD will cooperate with Rayonier to develop plans for reforestation. Site preparation will not include bedding, but may include mechanical or chemical techniques.

2. **BASIN SWAMP** (9,662 acres)

The core area of Twelve Mile Swamp is a basin swamp. There are no recognizable streams until one reaches the periphery of the swamp. It appears that this swamp is just a large basin that fills up and flows out through multiple outlets. Distinguishing the basin

swamp from the floodplain swamp is difficult. Some of the areas mapped as basin swamp are probably hydric hammock. Further refinement of the hardwood wetland natural communities will occur in the next few years.

Current Condition

Basin swamps are large irregularly shaped basins not associated with rivers. Basin swamps are thought to have developed in oxbows of former rivers or in ancient coastal swales and lagoons that existed during higher sea levels. Species compositions of this natural community type at the TMSCA are similar to those of the floodplain swamp.

The basin swamps within the TMSCA are either dominated by, or include, a heavy component of cypress and have a typical hydroperiod of approximately 200-300 days. Though infrequent, fire is essential for the maintenance of this natural community. Fire return intervals in basin swamps may range from 5 to 150 years, with lower return intervals occurring on the edges.

There are areas of the basin swamp at TMSCA that have been timbered, but most are in good condition.

Typical plants associated with this natural community at TMSCA include bald cypress, swamp tupelo, pop ash, laurel oak, smartweed and royal fern.

Typical animals include southern leopard frog, bullfrog, green tree frog, squirrel tree frog, cottonmouth, pileated woodpecker, barred owl, raccoon, bobcat and black bear.

Desired Future Condition

The desired condition is a mature forest with large, buttressed trees and a long hydroperiod.

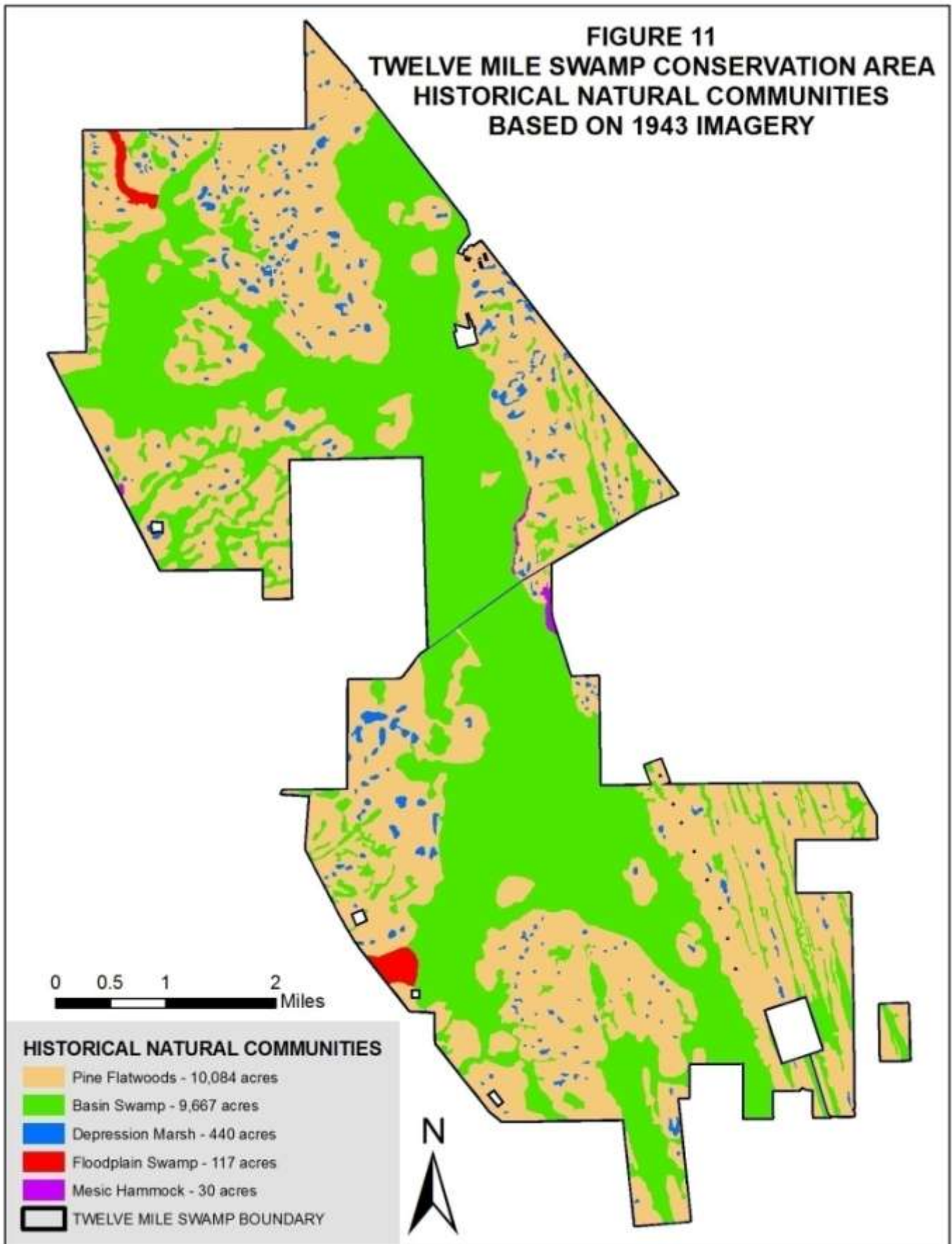
Hydrology

A healthy basin swamp has a long hydroperiod which is important to maintain. The road system throughout TMSCA will be evaluated to ensure that it is not impacting the hydrology of the property.

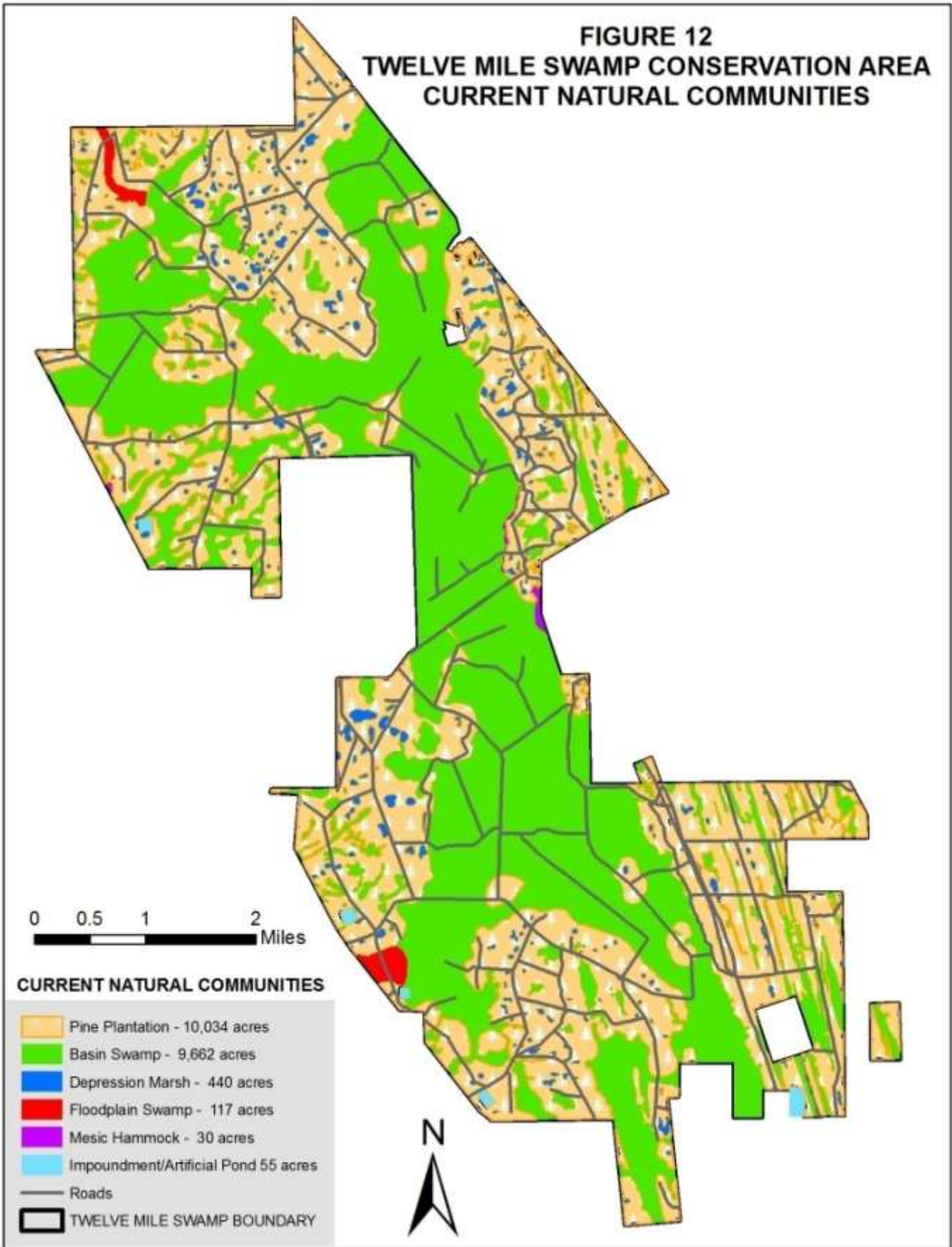
Silviculture

There will be no timber harvesting in the portions of the basin swamp owned by the Trustees and SJRWMD. There are some small, isolated basin swamps that are within the timber lease that Rayonier has the option to harvest.

**FIGURE 11
TWELVE MILE SWAMP CONSERVATION AREA
HISTORICAL NATURAL COMMUNITIES
BASED ON 1943 IMAGERY**



**FIGURE 12
TWELVE MILE SWAMP CONSERVATION AREA
CURRENT NATURAL COMMUNITIES**



3. **FLOODPLAIN SWAMP** (117 acres)

Floodplain swamps occur on flooded soils along stream channels and in low spots and oxbows within river floodplains. This natural community is generally characterized by the presence of buttressed and hydrophytic trees such as cypress and tupelo and a sparse understory and groundcover.

This community type is maintained by hydrologic regimes and is not fire dependant. Floodplain swamp communities within the conservation area appear relatively undisturbed.

There are two discernable floodplain swamps on TMSCA. They are associated with Sampson and Turnbull Creeks. They are very similar in plant and animal species composition to the basin swamp (see above). Both appear to be in good condition.

Desired Future Condition

The desired condition is a mature closed-canopy forest with large, buttressed trees.

Hydrology

A healthy floodplain swamp has a long hydroperiod. The road system throughout TMSCA will be evaluated to ensure that it is not impacting the hydrology of the property.

Silviculture

There will be no timber harvesting in this natural community at TMSCA.

4. **MESIC HAMMOCK** (30 acres)

Current Condition

This natural community is found in small patches throughout the property with the largest piece perhaps reaching 15 acres in size. Some of the areas appear to be fire-protected, while others may be overgrown wet flatwoods. They appear to be in good condition. Typical plants at TMSCA include live oak, laurel oak, pignut hickory, southern magnolia, cabbage palm, and Carolina laurelcherry. The common animals are green and squirrel tree frog, green anole, barred owl, gray squirrel, and white-tailed deer.

Desired Future Condition

The desired condition is a closed canopy with very large specimens of live oak and southern magnolia that are covered with epiphytes. Very limited mid or understory.

Silviculture

All of the hammocks are within the timber lease that Rayonier has the option to harvest.

5. **DEPRESSION MARSH** (440 acres)

A depression marsh or ephemeral pond is characterized as a shallow, usually rounded depression in sand substrate with herbaceous vegetation. Depression marsh communities provide important foraging and breeding habitat for many species of reptiles and amphibians found within the conservation area. Natural hydrologic conditions vary with most depression marshes drying in most years. Hydroperiods can range from 50 to 200 days per year.

Fire is important in maintaining this community type by restricting the invasion of shrubs and trees and the formation of peat. Fire return intervals for this plant community are generally determined by the fire frequency of surrounding uplands.

Current Condition

The flatwoods at TMSCA are full of depression marshes. Many have been impacted by silviculture activities, particularly the upland edges. Most of the depression marshes were dominated by graminoids in the 1942 aerials. Some were hardwood dominated though and may actually have been dome swamps. In the future, they can all be ground-truthed and properly classified. Some are in good condition, but many are in poor to fair condition.

Today, most have significant pine and hardwood encroachment. This is likely due to a lack of fire and a shortened hydroperiod.

The depression marshes at TMSCA are dominated by maidencane, beaksedges, and hypericum. Tree species that have encroached include slash pine, cypress, and blackgum. At this time there are no animals recorded from the depression marshes. Some limited herpetological surveys will be initiated on the site in the next few years.

Desired Future Condition

The desired condition is a treeless and shrub-less wetland dominated by grasses, sedges, and rushes and well maintained by fire.

Restoration

The single most important thing to be done to restore this natural community is to re-introduce fire. In marshes heavily invaded by hardwoods and pines, removing the trees will be beneficial.

Hydrology

The road system throughout TMSCA will be evaluated to ensure that it is not impacting the hydrology of the property.

6. **BLACKWATER CREEK** (No acreage calculation done)

Current Condition

There are six creeks that have their headwaters within TMSCA. Only two, Sampson and Turnbull Creeks, appear to have perennial flow and an associated floodplain swamp. The water quality is unknown at this time. They appear to be in good condition.

Desired Future Condition

The desired condition is a perennial stream with good to excellent water quality and a high diversity of aquatic benthic invertebrates (high Stream Condition Index).

Restoration/Hydrology

The road system throughout TMSCA will be evaluated to ensure that it is not impacting the hydrology of the property. Also, the same areas will be evaluated to make sure that sediments are not impacting the streams.

C. IMPACT OF PLANNED USES ON RESOURCES OF THE PROPERTY

1. TIMBER

Rayonier practices sustainable forestry and follows DOF's silviculture BMP's. This should be sufficient to ensure sustained timber and ecological resources.

2. WILDLIFE

The northern half of TMSCA is currently a Wildlife Management Area managed in cooperation with FWC. The fish and wildlife resources are protected by enforcement from FWC officers.

3. WATER

SJRWMD and Rayonier both carefully adhere to the state silviculture BMP's.

4. HISTORICAL/ARCHAEOLOGICAL

On the unencumbered portions of the property, SJRWMD will follow the management procedures outlined in "Management Procedures of Archaeological and Historical Sites and Properties on State-owned or Controlled Lands" (Appendix 5). DHR and will be contacted regarding any significant ground-breaking activity.

SJRWMD has provided locations of the documented Florida Master Sites on the timber lease to Rayonier.

V. MANAGEMENT SUMMARY

A. OPERATIONS INFRASTRUCTURE

TMSCA does not have a budget or any assigned positions to it. SJRWMD's Northern Land Management Region is responsible for management at this site.

B. PLANS TO LOCATE FRAGILE, NON-RENEWABLE NATURAL & CULTURAL RESOURCES

1. ARCHAEOLOGICAL RESOURCES

SJRWMD will make every effort to protect cultural resources. SJRWMD land management staff have maps depicting the known FL Master Sites on TMSCA. These have been shared with Rayonier staff.

As stated previously, on the unencumbered portions of the property, SJRWMD will follow the management procedures outlined in "Management Procedures of Archaeological and Historical Sites and Properties on State-owned or Controlled Lands" (Appendix 5). DHR and will be contacted regarding any significant ground-breaking activity.

2. SOIL & WATER RESOURCES

Nearly all of the uplands have received significant disturbance caused by intensive forestry operations. Most of the forested wetland areas have received fewer disturbances. The forest roads will be assessed for impacts to the wetlands, which will include possible hydrology and sediment impacts.

The silviculture BMP manual developed by DOF will be followed as will all other BMP's for the protection of soil and water resources.

3. OTHER RESOURCES

Additional plant and animal surveys will be conducted focusing on certain taxa; specifically trees, amphibians, reptiles, and birds in an attempt to identify areas of higher quality habitat.

C. CONFORMATION TO STATE LANDS MANAGEMENT PLAN

Management of TMSCA under the multiple-use concept complies with the State Lands Management Plan. Even though most of the uplands of the property are encumbered by a timber/surface lands lease, the property still provides public utilization of the property.

D. MULTIPLE-USE POTENTIAL – INCOME-PRODUCING ACTIVITIES

Multiple-use management allows for a variety of activities to occur on the property, with some of these activities having income producing potential.

During the life of this plan, the only revenue that can be generated is a timber sale on the Section 41 parcel when the timber becomes merchantable.

E. POTENTIAL USE OF PRIVATE LAND MANAGERS

During the life of this management plan, it is not anticipated that any private land managers will be utilized on the unencumbered portions of this property.

Most of the property will be managed by Rayonier, a private entity, until 2025. In Section 41, SJRWMD does not plan to contract manage but may contract specific tasks to private companies.