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Secretary

October 11, 2012

Ms. Cori Hermle
Land Planning Specialist
Florida Forest Service
3125 Conner Boulevard
Tallahassee, FL 32399-1650

RE: Deep Creek State Forest – Lease number 3556

Dear Ms. Hermle:

The Division of State Lands, Office of Environmental Services, acting as agent for the Board of Trustees of the Internal Improvement Trust Fund, hereby approves the Deep Creek State Forest land management plan. The next management plan update is due October 11, 2022.

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

Sincerely,

A handwritten signature in blue ink that reads 'M S Gengenbach'.

Marianne S. Gengenbach
Office of Environmental Services
Division of State Lands

TEN-YEAR RESOURCE MANAGEMENT PLAN

FOR THE

DEEP CREEK STATE FOREST

ST. JOHNS COUNTY



PREPARED BY

FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

FLORIDA FOREST SERVICE

APPROVED ON

OCTOBER 11, 2012

TEN-YEAR RESOURCE MANAGEMENT PLAN
FOR THE
DEEP CREEK STATE FOREST



Approved by:

Jim Karels, Director
Florida Forest Service

7/18/12
Date

David Core, Assistant Director
Florida Forest Service

6-6-12
Date

Winnie Schreiber, Chief
Forest Management Bureau

Date

**TEN-YEAR RESOURCE MANAGEMENT PLAN
DEEP CREEK STATE FOREST**

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**TEN-YEAR RESOURCE MANAGEMENT PLAN
DEEP CREEK STATE FOREST**

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LAND MANAGEMENT PLAN EXECUTIVE SUMMARY

LEAD AGENCY: Florida Department of Agriculture and Consumer Services (DACs), Florida Forest Service

COMMON NAME: Deep Creek State Forest

LOCATION: St. Johns County

<u>-Natural Communities</u>	<u>Acreage</u>
Salt Marsh	71.5
Scrubby Flatwoods	40
Ruderal	8.5
Total Managed Acres:	120
<u>Sovereign Submerged Lands</u>	<u>259.8</u>
Total Acreage:	379.8

LEASE/MANAGEMENT AGREEMENT NO.: #3556 USE: Single Multiple:

MANAGEMENT AGENCY	RESPONSIBILITY
Florida DACs, Florida Forest Service	General Forest Resource Management
Florida Fish and Wildlife Conservation Commission	Wildlife Resources & Laws
St. Johns Water Management District	Water Resource Protection & Restoration
Division of Historical Resources	Historical and Archaeological Resource Management

DESIGNATED LAND USE: Multiple-use State Forest

SUBLEASE(S): None

ENCUMBRANCES: Easement No. 22527

TYPE ACQUISITION: Fee Simple Title

UNIQUE FEATURES: Intracoastal Shoreline

ARCHAEOLOGICAL/HISTORICAL: None

MANAGEMENT NEEDS: Survey, Prescribed Burning

ACQUISITION NEEDS: None

SURPLUS LANDS/ACREAGE: None

PUBLIC INVOLVEMENT: Management Plan Advisory Group and a Public Hearing, and the Acquisition and Restoration Council public hearing.

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

ARC Approval Date: _____ BTITF Approval Date: _____

Comments: _____

I. Introduction

Deep Creek State Forest (DCSF) is comprised of 379.8 acres, located directly west of the Intracoastal Waterway (Tolomato River) from the Guana River Wildlife Management Area and straddles Deep Creek from which it gets its name. DCSF is 11 miles north of St. Augustine in St. Johns County, Florida. Boundaries are identified on the Location Map, Exhibit A. Natural communities above the mean high water line account for approximately 32% of DCSF. There are no structures and minimal improvements on the property, although an artesian well does exist.

A. General Mission and Management Plan Direction

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

Management strategies for DCSF center on the multiple-use concept, as defined in sections 589.04(3) and 253.034(2) (a) Florida Statutes. Implementation of this concept will utilize and conserve state forest resources in a harmonious and coordinated combination that will best serve the people of the state of Florida, and that is consistent with the purpose for which the forest was acquired. Multiple-use management for DCSF will be accomplished with the following strategies:

- Practice sustainable forest management for the efficient generation of revenue and in support of state forest management objectives;
- Provide for passive, outdoor recreation opportunities for multiple interests.
- Restore, manage and protect native ecosystems, and ensure the long-term viability of populations and species listed as endangered, threatened or rare, and other components of biological diversity including game and nongame wildlife and plants;
- Protect known archaeological, historical, cultural and paleontological resources;
- Restore, maintain and protect hydrological functions related water resources and the health of associated wetland and aquatic communities.

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 (F.A.C). It is not an annual work plan or detailed operational plan but provides general guidance for the management of DCSF for the next ten-year period and outlines the major concepts that will guide management activities on the forest.

B. Past Accomplishments

A compilation of management activities and public use on DCSF has been completed monthly and is available from the forest manager. Since the approval of the previous

management plan in April 30, 2002 there have been several developments and accomplishments, including the following:

- In 2003, a series of culverts (5) were installed to increase hydrologic flow between the tidal marshes and creeks.
- Posting of boundary signage along the upland pine acreages.
- Inventorying of timber on the forest in FY 2007/2008.

C. Goals/Objectives for the Next Ten Year Period

The following goals and objectives provide direction and focus management resources for the next ten-year planning period. Funding, agency program priorities, and the wildfire situation during the planning period will determine the degree to which these objectives can be met. Management activities on DCSF during this management period will serve to conserve, protect and enhance the natural and historical resources and manage resource-based public outdoor recreation, which is compatible with the conservation and protection of this forest. The majority of the management operations will be conducted by the FFS, although appropriate activities will be contracted to private sector vendors. All activities will enhance the property's natural resource or public recreational value.

The management activities listed below will be addressed within the ten-year management period and are defined as short-term goals, long-term goals or ongoing goals. Short-term goals are goals that are achievable within a two year planning period, and long-term goals are achievable within a ten year planning period. Objectives are listed in priority order for each goal. Cost estimates are provided below for FFS services and contract services where sufficient information is available to make projections. Costs for some activities cannot be estimated at this time. Other activities will be completed with minimal overhead expense and existing staff.

➤ **GOAL 1: Sustainable Forest Management**

Objective 1: Prepare a silviculture management plan including reforestation, harvesting, restoration and timber stand improvement activities and goals. (Short Term)

Performance Measure: Completion of plan.

Objective 2: Implementation of the silviculture management plan. Estimated cost to be determined. (Long Term)

Performance Measure: Implementation of plan (acres managed).

Objective 3: Continue conducting stand descriptions and forest inventory on 40 acres of upland, including a Geographical Information System (GIS) database containing forest stands, roads and other attributes (including but not limited to: threatened and endangered species, archaeological resources, exotic species locations, historical areas). (Ongoing)

Performance Measures:

- Complete GIS database and reinventory all attributes as required by FFS procedures.
- Number of acres inventoried.

Objective 4: Conduct forest inventory updates on ten year cycle, according to established criteria. (Ongoing)

Performance Measure: Number of acres inventoried.

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

Objective 1: Assess the property to determine opportunities for public access and recreation. (Long Term)

Performance Measure: Assessment completed.

➤ **GOAL 3: Habitat Restoration and Improvement**

Objective 1: Utilize prescribed burning to enhance native groundcover and reduce palmetto. Initially, prescribe burn the 40 acre pine stand every two to four years. The long-term goal is to burn this stand on a five to eight year interval. Estimated Cost is \$2,988. (Ongoing)

Performance Measure: Number of acres prescribe burned.

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

Objective 1: Develop baseline imperiled species occurrence inventory list. Estimated cost to be determined. (Long Term)

Performance Measure: Baseline imperiled species occurrence inventory list complete.

Objective 2: Develop monitoring protocols for selected imperiled species, if found. Estimated cost to be determined. (Long Term)

Performance Measure: The number of imperiled species for which monitoring protocols are developed.

Objective 3: Implement monitoring protocols for imperiled species, if applicable. Estimated cost to be determined. (Long Term)

Performance Measure: The number of species for which monitoring is ongoing.

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

Objective 1: Develop a plan to survey, monitor and treat as appropriate non-native invasive plant species (Bermuda grass). (Short Term)

Performance Measures:

- Plan completed.

- Total number of acres identified/mapped.
- Acres treated (if needed).

➤ **GOAL 6: Cultural and Historical Resources**

Objective 1: There are presently no recorded sites on the forest, according to Division of Historical Resources (DHR). Ensure any sites identified in the future are recorded in the DHR Florida Master Site file. (Long Term)

Performance Measure: Number of recorded sites.

Objective 2: If identified, monitor any recorded sites and send updates to the DHR Florida Master Site File as needed. (Ongoing)

Performance Measure: Number of sites monitored/updates submitted.

Objective 3: Train St. Johns County FFS personnel as certified archaeological monitors. Estimated Cost is \$500. (Long Term Goal)

Performance Measure: Number of personnel trained as monitors.

➤ **GOAL7: Hydrological Preservation and Restoration**

Objective 1: Conduct or obtain a site assessment/study to identify potential hydrology restoration needs. (Short Term)

Performance Measure: Assessment conducted.

Objective 2: Protect water resources during management activities through the use of Silvicultural Best Management Practices (BMPs) for public lands. (Long Term)

Performance Measure: Compliance with state lands BMPs.

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

Objective 1: Continue maintenance of 1/2 mile of state forest northern boundary and 1 mile of upland stand boundary with signage. Estimated cost is \$75.00 for 1.5 miles of signs/fuel. (On-going)

Performance Measure: Miles of forest boundary maintained.

Objective 2: FFS staff will maintain existing 0.3 miles of service road. (Short Term)

Performance Measure: The miles of road maintained.

II. Administration Section

A. Descriptive Information

1. Common Name of Property

The common name of the property is the Deep Creek State Forest (DCSF).

2. Legal Description and Acreage

The DCSF is comprised of one tract totaling 379.8 acres, of which 259.8 acres are sovereign submerged lands.

The DCSF is located in the St. Johns County, Florida. The forest lies north of St. Augustine along the Intracoastal Waterway (ICW), also known as the Tolomato River. The legal description is found in lease agreement #3556. The property is located in Section 22, Township 5 South, Range 29 East, less exceptions described in the lease #3556.

A complete legal description of lands owned by the Board of Trustees of the Internal Improvement Trust Fund (BOT) is on record at the Dupont Forestry Station office, Florida Department of Environmental Protection (DEP), and the FFS state office in Tallahassee.

3. Proximity to Other Public Resources

Lands managed by state, federal or local government for conservation of natural or cultural resources that are located within approximately 10 miles of the DCSF are included in Exhibit B as well as the table below:

Table 1. Nearby Public Conservation Land and Easements

TRACT	AGENCY	DISTANCE
Nocatee Preserve	St. Johns County	1/10 mile
Guana River Wildlife Management Area	FWC	1 mile
Guana Tolomato Matanzas National Estuarine Research Reserve	GTMNERR	1 mile
Guana River State Park	DRP	1 mile
Stokes Landing Conservation Area	SJRWMD	4 miles
Twelve Mile Swamp Conservation Area	SJRWMD	5 miles
Turnbull Creek Mitigation Area	St. Johns County	10 miles
Fort Mose Historic State Park	DRP	10 miles

DRP – Florida Department of Environmental Protection, Division of Recreation and Parks

FWC – Florida Fish and Wildlife Conservation Commission

GTMNERR – Guana Tolomato Matanzas National Estuarine Research Reserve

SJRWMD – St. Johns River Water Management District

B. Management Authority, Purpose and Constraints

1. Purpose for Acquisition/Management Prospectus

There is no management prospectus for DCSF, and while the history of acquisition is unclear, it is believed that the state forest has always been State property. The DCSF falls within the boundaries of the Guana Tolomato Matanzas National Estuarine Research Reserve (GTMNERR).

2. Degree of Title Interest Held by the Board

The Board of Trustees of the Internal Improvement Trust Fund (BOT) holds fee simple title to the DCSF property. The parcel was assigned to FFS for management under the Amendment to Lease Agreement Number 3556. This agreement, between the BOT, Florida Department of Agriculture and Consumer Services (FDACS), and FFS, was executed on November 5, 1992.

3. Designated Single or Multiple-Use Management

The DCSF is managed under a multiple-use concept by the FFS, under the authority of Chapters 253 and 589, Florida Statutes. The FFS is the lead managing agency as stated in Management Lease Number 3556.

Multiple use is the harmonious and coordinated management of timber, recreation, conservation of fish and wildlife, forage, archaeological and historic sites, habitat and other biological resources, or water resources so that they are utilized in the combination that will best serve the people of the state, making the most judicious use of the land for some or all of these resources and giving consideration to the relative values of the various resources. Local demands, acquisition objectives, and other factors influence the array of uses that are compatible with and allowed on any specific area of the forest. This management approach is believed to provide for the greatest public benefit, by allowing compatible uses while protecting overall forest health, native ecosystems and the functions and values associated with them.

4. Revenue Producing Activities

Revenue producing activities will be considered when they have been determined to be financially feasible and will not adversely impact management of the forest. The potential for income producing activities is quite limited at this time; however some potential uses are identified below:

- *Timber Harvests* – There are 40 acres of pine for which there is limited revenue potential from thinning harvest due to the small acreage and isolated location.
- *Camping* – Primitive camping with honor fee collection may be a future possibility, however limited management access and location present questions as to the efficacy of this.
- *Day Use Fees* – There is limited potential for day use fees due to the lack of developed facilities and limited management access.

5. Conformation to State Lands Management Plan

Management of the forest under the multiple-use concept complies with the State Lands Management Plan and provides optimum balanced public utilization of the property. Specific authority for the FFS's management of public land is derived from Chapters 589, 259 and 253, Florida Statutes.

6. **Legislative or Executive Constraints**

There are no known legislative or executive constraints specifically directed towards the DCSF.

7. **Aquatic Preserve/Area of Critical State Concern**

A Memorandum of Agreement (MOA) between the DEP's Office of Coastal and Aquatic Managed Areas (CAMA) and the FFS for the cooperative management of the Guana Tolomato Matanzas National Estuarine Research Reserve (GTMNERR) was executed on September 27, 2004 (FDACS Contract Number 009260). The area under the agreement is comprised of the National Estuarine Research Reserve (NERR), and the Guana, Tolomato, and Matanzas (GTM) River systems. The purpose of the MOA is to help protect this estuarine ecosystem through promotion of research and education, while allowing public access in compliance with the environmental needs of the area. This is a coordinated attempt between local, state, and federal governments in an effort to address the problem of current and potential degradation of coastal areas brought about by competing demands for these resources.

C. **Capital Facilities and Infrastructure**

1. **Property Boundaries Establishment and Preservation**

The DCSF has 0.7 miles of boundary lines that are managed by state forest personnel in accordance with the guidelines stated in Chapter 11 of the State Forest Handbook (FFS 2008). DCSF has not been surveyed and is defined by the mean high water line along some boundaries, presenting difficulties in posting boundaries. Only a ½ mile of the DCSF north boundary line, bordered by the St. Johns County's Nocatee Preserve and 0.2 miles along the ICW, are maintained by posting. The ICW (Tolomato River) is the east boundary, small and large private property owners make up the west boundary, and the south boundary extends to the south of Deep Creek.

2. **Improvements**

There is one existing service road that provides management access to the 40 acre pine stand from the north (Exhibit C). Two culverts were installed in the service road in 2002 as a Best Management Practice where the road passed through portions of the tidal marsh.

3. **On-Site Housing**

FFS may establish on-site housing (mobile/manufactured home) on DCSF if deemed necessary to alleviate security and management issues. The need and feasibility specific for the state forest will be evaluated and established if considered appropriate by the District Manager and approved by the FFS Director. Prior to the occurrence of any ground disturbing activity for the purpose of establishing on-site housing, a notification will be sent to the DHR and Florida Natural Areas Inventory (FNAI) for review and recommendations. This type of housing will not exceed three homes per location with the possibility of more than one on-site housing location occurring if considered necessary by the District Manager and approved by the Director.

4. **Operations Infrastructure**

Operations will be conducted using equipment assigned to Matanzas State Forest. Currently, DCSF has no allocated budget so management funds will come from the Matanzas State Forest budget. FFS staff assigned to St. Johns County will be responsible for management activities. These include personnel assigned to Matanzas State Forest, Bakersville Forestry Station, and Durbin Tower Site. Implementation of any of the activities within this management plan is contingent on the availability of funding, resources, and other statewide priorities.

D. **Additional Acquisitions and Land Use Considerations**

1. **Alternate Uses Considered**

During this management period the following uses were considered and determined to be not compatible: water resource development projects, water supply development projects, storm-water management projects, linear facilities, and communication towers and antennas. Other uses will be considered as requests are made and will be accommodated as appropriate if they are determined to be compatible with existing uses and with the management goals and objectives of the forest.

2. **Additional Land Needs**

DCSF is completely bounded by conservation lands to the north, east, and south. Lands to the west and southwest are primarily private lands designated for residential development, including New Town and a large Development of Regional Impact (DRI) according to the St. Johns County Future Land Use map. The Northeast Florida Blueway, a Florida Forever project, includes 500 acres, more or less, of private timberlands to the west and southwest of DCSF within this area designated for possible acquisition and addition to the state forest. However, the logistics of managing additional acreage across the marsh and tidal creek divide would be difficult and should be considered in assigning management responsibility. See Exhibit D.

3. **Surplus Land Assessment**

All of the land within the forest is suitable and necessary for this management plan and none should be considered or declared surplus. However, an evaluation should be made as to whether optimum public and natural resource management benefits and objectives might be realized through alternative local (St. Johns County, Nocatee Preserve) or state (FWC, DEP, or SJRWMD) management agencies as lead manager.

4. **Adjacent Conflicting Uses**

During the development of this management plan, FFS staff identified and evaluated adjacent land uses, reviewed current comprehensive plans, and future land use maps in making the determination that there are currently no known conflicting adjacent land uses. Additionally, FFS staff met with adjacent landowners and maintains liaison with those landowners to ensure that any conflicting future land uses may be readily identified and addressed.

FFS will cooperate with adjacent property owner(s), prospective owner(s), or prospective developer(s) to discuss methods to minimize negative impacts on management, resources, facilities, roads, recreation, etc., and discuss ways to minimize encroachment onto the forest.

Management activities may be affected by developments surrounding DCSF. Residential areas in the area may affect prescribed burning parameters along with unauthorized access and poaching.

5. Compliance With Comprehensive Plan

This plan was submitted to the Board of County Commissioners in St. Johns County for review and compliance with their local comprehensive plans (Exhibit E).

6. Utility Corridors and Easements

There are no utility corridors located on the forest. Easement #22527 was granted to the Florida Inland Navigation District (FIND) on July 7, 1960 for a permanent spoil disposal easement. Dredging spoils have been placed here over the years as the ICW has been improved and deepened for boat traffic. This easement will not affect the planned management of this tract. A portion of the easement, 10.8 acres in the northeast corner of the property, was quit-claimed back to the BOT by FIND in 1961 according to FIND Memorandum of December 18, 2002 from D. Roach (FIND) to J. Grubbs (FFS), as shown in Exhibit F.

Easement #22972 was granted to James Appell on December 29, 1961 in conjunction with a General Purpose Lease #1722 on January 16, 1962. The General Purpose Lease has expired, and Easement #22972 is still active. The FFS during this ten year period will revoke Easement #22972. See Exhibit G for the easement and lease with map.

The FFS does not favor the fragmentation of natural communities with utility lines - consequently, easements for such uses will be discouraged to the greatest extent practical. The FFS does not consider DCSF suitable for any new linear facilities.

When such encroachments are unavoidable, previously disturbed sites will be the preferred location. The objectives, when identifying possible locations for new linear facilities, will be to minimize damage to sensitive resources (e.g., listed species and archaeological sites), to minimize habitat fragmentation, and to limit disruption of management activities and resource-based multiple use activities, such as recreation.

Collocation of new linear facilities with existing corridors will be considered, but will be used only where expansion of existing corridors does not increase the level of habitat fragmentation and disruption of management and multiple use activities. The FFS will further encourage the use of underground cable where scenic considerations are desirable. Easements for such utilities are subject to the review and approval of the BOT. Requests for linear facility uses will be handled according to the Governor and the Cabinet's linear facilities policy.

E. Agency & Public Involvement

1. Responsibilities of Managing Agencies

The FFS is the lead managing agency, responsible for overall forest management and public recreation activities, as stated in Management Lease Number 3556. The Florida Fish and Wildlife Conservation Commission (FWC) has law enforcement responsibilities, enforces hunting regulations, cooperatively sets hunting season dates with FFS, and conducts other wildlife management activities with input from FFS. The FFS will cooperate with the DHR regarding appropriate management practices on any historical sites that may be identified on the property as stated in Section 267.061, Florida Statutes. They will be notified prior to the initiation of any ground disturbing activities by the FFS or any other agency involved with the forest. The St. Johns Water Management District (SJRWMD) will be consulted and involved in matters relating to water resources as appropriate.

2. Law Enforcement

Primary law enforcement responsibilities will be handled by law enforcement officers from the FWC. Additional assistance is provided by the St. Johns County Sheriff's Offices as needed.

Special rules under Chapter 5I-4 of the F.A.C were promulgated for Department of Agriculture and Consumer Services, Florida Forest Service, to manage the use of State Lands and better control traffic, camping, and other uses in the State Forest.

3. Public and Local Government Involvement

This plan has been prepared by FFS and will be carried out primarily by that agency. The FFS responds to public involvement through direct communication with individuals, user groups and government officials.

The Acquisition and Restoration Council (ARC) public hearing and meeting to review this management plan also will serve as an additional forum for public input and review of the plan.

4. Volunteers

Volunteers are potentially important assets to DCSF. Depending upon the type of volunteer service needed, volunteer activities may be one-time events or long-term projects. Volunteer recruitment may be encouraged to assist with other activities to further the FFS's mission.

III. Archaeological/Cultural Resources and Protection

A. Past Uses

In the early 1960s, James Appell attempted to homestead the land under the State's old homestead laws. During this period, a well was dug, several buildings were erected, and

swimming holes were dug. At one point there were plans for a small airport. However, in 1964, Hurricane Dora destroyed all the buildings and ended Mr. Appell's homestead attempt. There remains part of a footer which DHR recommends FFS pursue recording as an archaeological site. Several sections of the property were leased to private individual(s) under lease number 1719, 1720, 1721, and 1722. These leases have expired and are now inactive. The land reverted to the state and was officially assigned to the FFS to manage in 1992.

B. Archaeological and Historical Resources

A review on July 28, 2011 of information contained in the DHR's Florida Master Site file has determined that there are no known recorded sites on DCSF.

C. Ground Disturbing Activities

Representatives of DHR and FNAI will be consulted prior to the initiation of any proposed significant ground disturbing activity, not listed in this plan, by FFS or any other public agency. The FFS will make every effort to protect known archaeological and historical resources. The FFS will follow the "Management Procedures for Archaeological and Historical Sites and Properties on State Owned or Controlled Lands" Exhibit I and will comply with all appropriate provisions of Section 267.061(2) Florida Statutes. Ground disturbing activities not specifically covered by this plan will be conducted under the parameters of the "List of ARC/Division of State Lands Approved Interim Management Activities".

D. Survey and Monitoring

Currently there are no FFS personnel in St. Johns County trained by DHR as an archaeological site monitor. FFS will pursue opportunities for getting local personnel trained. FFS will consult with public lands archaeologists at DHR to determine an appropriate priority and frequency of monitoring any future found sites, as well as any protection measures that might be required.

As information becomes available, and as staffing allows, future archaeological and historical sites will be identified on maps to aid state forest and law enforcement personnel in patrolling and protecting sites. Applicable surveys will be conducted by FFS staff or others during the process of planning and implementing multiple-use management activities. FFS personnel will remain alert for any environmentally significant resources and protective actions will be taken as necessary. In addition, FFS will seek the advice and recommendations of DHR regarding any additional archaeological survey needs. Trained monitors will oversee ground disturbing activities in which DHR recommends monitoring. The FFS will utilize the services of DHR Public Lands archaeologists, when available, to locate and evaluate unknown resources, and to make recommendations in the management of known resources.

IV. Natural Resources and Protection

A. Soils and Geologic Resources

1. Resources

Soils information for DCSF was obtained from the St. Johns County Soil Survey. For detailed information on soils, including a soils map for the property, see Exhibit J.

2. Soil Protection

Currently there are no known major soil or erosion problems present on DCSF. Some erosion has been observed along the intracoastal shoreline due to boat wake action along the channelized portions of the ICW. Management activities will be executed in a manner to minimize soil erosion. If problems arise, corrective action will be implemented by FFS staff under the direction of the FFS Forest Hydrology section in conjunction with recommendations as contained in the most current version of the Florida Silviculture Best Management Practices Manual.

B. Water Resources

The water resources on DCSF perform essential roles in the protection of water quality, groundwater recharge, flood control and aquatic habitat preservation. In the interest of maintaining these valuable resource functions, state forest management personnel will work with the FFS's Hydrology Section to incorporate wetland restoration into the overall resource management program as opportunities arise, particularly where wetland systems have been impaired or negatively impacted by previous management activities or natural disasters.

1. Resources

DCSF has 331.3 total acres of tidal salt marsh that floods twice daily, 71.5 acres of which is included in management by this plan and 259.8 acres of sovereign submerged lands. There are two brackish ponds located along the northern boundary and one creek, Deep Creek, with an estuary within DCSF.

2. Water Protection

Water resource protection measures, at a minimum, will be accomplished through the use of Best Management Practices (BMPs) as described in the most current version of Silviculture Best Management Practices Manual.

A series of culverts were installed by FFS in 2002 to help stabilize the natural flow of water into the two ponds. There were three culverts installed for the easternmost pond and two culverts installed for the westernmost pond. The installation of these culverts was imperative for natural flow of tidal water into these ponds.

C. Wildlife Resources

1. Threatened and Endangered Species

FFS employees monitor the forest for threatened or endangered species while conducting management activities. Specialized management techniques will be used, as necessary, to protect or increase endangered and threatened species and species of special concern, as applicable for both plants and animals.

To date, FNAI has not completed an inventory and natural community mapping project on DCSF. Exhibit K lists rare species and natural communities documented or reported for St. Johns County. The species listed in Table 2 are known to occur in the vicinity of DCSF, and was compiled from FNAI biodiversity matrix query results from October 2011 (Exhibit K). These species are considered likely to occur within the forest because 1) the documented occurrence of the species overlaps the forest and adjacent areas, but the documentation isn't precise enough to indicate which areas the species is actually located in; or 2) there is a documented occurrence in the vicinity of DCSF and there is suitable habitat for that species within the forest.

Table 2. Endangered or Threatened Species with potential to inhabit DCSF

Common Name	Scientific Name	Federal Status *	State Status*	FNAI Global Rank *	FNAI State Rank*
Eastern Indigo Snake ± §	<i>Drymarchon couperi</i>	LT	FT	G3	S3
Bald Eagle ♦	<i>Haliaeetus leucocephalus</i>	N	N	G5	S3
Wood Stork ±	<i>Mycteria americana</i>	LE	FE	G4	S2
Atlantic Sturgeon §	<i>Acipenser oxyrinchus oxyrinchus</i>	C	SSC	G2T3	S1
Southern Milkweed §	<i>Asclepias viridula</i>	N	LT	G2	S2
Wagner's Spleenwort §	<i>Asplenium heteroresiliens</i>	N	N	GNA	S1
Mant-flowered Grass-pink §	<i>Calopogon multiflorus</i>	N	LE	G2G3	S2S3
Bartram's Ixia §	<i>Calydorea coelestina</i>	N	LE	G2G3	S2S3
Sand Butterfly Pea §	<i>Centrosema arenicola</i>	N	LE	G2Q	S2
Florida Toothache Grass §	<i>Ctenium floridanum</i>	N	LE	G2	S2
Gopher Tortoise §	<i>Gopherus polyphemus</i>	N	ST	G3	S3
Nodding Pinweed §	<i>Lechea cernua</i>	N	LT	G3	S3
Pondspice §	<i>Litsea aestivalis</i>	N	LE	G3	S2
Curtiss' Loosestrife §	<i>Lythrum curtissii</i>	N	LE	G1	S1
Florida Spiny-pod §	<i>Matelea floridana</i>	N	LE	G2	S2
Pygmy Pipes §	<i>Monotropsis reynoldsiae</i>	N	LE	G1Q	S1
Celestial Lily §	<i>Nemastylis floridana</i>	N	LE	G2	S2
Atlantic Salt Marsh Mink §	<i>Neovison vison lutensis</i>	N	N	G5T3	S3
Florida Beargrass §	<i>Nolina atopocarpa</i>	N	LT	G3	S3
Florida Pine Snake §	<i>Pituophis melanoleucus mugitus</i>	N	SSC	G4T3	S3
Giant orchid §	<i>Pteroglossaspis ecristata</i>	N	LT	G2G3	S2

Common Name	Scientific Name	Federal Status *	State Status*	FNAI Global Rank *	FNAI State Rank*
Florida Mountain – mint §	<i>Pycnanthemum floridanum</i>	N	LT	G3	S3
Florida Willow §	<i>Salix floridana</i>	N	LE	G2	S2
Manatee §	<i>Trichechus manatus</i>	LE	FE	G2	S2
Florida Black Bear	<i>Ursus americanus floridanus</i>	N	ST	G5T2	S2

*** STATUS/RANK KEY**

Federal Status (USFWS): LE= Listed Endangered, LT= Listed Threatened, SAT = Listed Threatened due to similarity of appearance to a threatened species, N = Not currently listed.

State Status (FWC): FE = Listed as Endangered Species at the Federal level by the USFWS, FT = Listed as Threatened Species at the Federal level by the USFWS, LE= Species of plants listed as Endangered, LT=Species of plants listed as Threatened, ST = State population listed as Threatened by the FWC, SSC = Listed as Species of Special Concern by the FWC, N = Not currently listed, nor currently being considered for listing.

FNAI Global Rank: G1= Critically Imperiled, G2 = Imperiled, G3= Very Rare, G4= Apparently Secure, G5= Demonstrably Secure, T# = Taxonomic Subgroup; numbers have same definition as G#'s, G#Q = Rank of questionable species, GNA = Ranking is not applicable because the element is not a suitable target for conservation

FNAI State Rank: S1= Critically Imperiled, S2= Imperiled, S3= Very Rare, S4= Apparently Secure.

♦ Documented: There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit.

± Likely: The species or community is *known* to occur in this vicinity, and is considered likely within this Matrix Unit because:

- 1) Documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; or
- 2) There is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit.

§ Potential: This Matrix Unit lies within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and land cover.

The biodiversity matrix uses FNAI's element occurrence data to identify potential, likely, and documented species within each square mile in Florida. An element is any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature. An element occurrence is an area of land and/or water in which a species or natural community is, or was, present. This data is very useful when trying to get an idea of species and community existence without ground surveys.

Eastern indigo snakes are a likely species to be found living, breeding, or moving across the flatwoods of DCSF. Prescribed burning is a very important part of providing quality habitat for the benefit of eastern indigo snakes and other wildlife which could be a food source for the snakes.

Bald Eagles have not been observed nesting on DCSF but long term timber management could provide adequate nesting trees and potential food sources. The ICW is an important factor in the survival of bald eagles due to the food sources of fish and other marine life. Management of the uplands with prescribed fire also provides quality habitat for the survival and thriving of bald eagle populations in the area.

Wood storks are not known to nest on the state forest but the surrounding areas provide excellent habitat that the storks need to thrive. The marshes on DCSF provide a great habitat for species both high and low on the food chains. Management of the marshes along the ICW is very important to the survival of the wood stork. There has been no species-specific plans or official surveys completed on DCSF.

2. Game Species and Other Wildlife

Wildlife management will play an important role in the management of resources on DCSF. Typical game species seen on DCSF may include white-tailed deer (*Odocoileus virginianus*), gray squirrel (*Sciurus carolinensis*), wild turkey (*Meleagris gallopavo*), wild pig (*Sus scrofa*), and a plethora of fish, migratory birds, and waterfowl. A complete list of wildlife species observed on and adjacent to the property to date is found in Exhibit L.

The state forest currently is not managed as a part of any Wildlife Management Areas. The FWC provides cooperative technical assistance in managing the wildlife and fish populations, setting seasons, establishing bag and season limits and overall wildlife and fish law enforcement.

There are no permanent wildlife openings or planted food plots on the DCSF. Should they be needed, wildlife openings and food plots will be established and maintained in accordance with Chapter 7 of the FFS State Forest Handbook.

Non-game species will be managed and protected through the restoration and maintenance of native ecosystems found on the forest. The current State Forest Handbook gives additional details for such things as snag management and retention.

3. Survey and Monitoring

To date there have been no biological surveys conducted to determine locations of imperiled species. During this ten-year period FFS will assess the need for imperiled species surveys and/or monitoring.

D. Sustainable Forest Resources

The FFS practices sustainable multiple-use forestry, to meet the forest resource needs and values of the present without compromising the similar capability of the future. Sustainable forestry involves practicing a land stewardship ethic that integrates the reforestation, managing, growing, nurturing, and harvesting of trees for useful products with the conservation of soil, air and water quality, wildlife and fish habitat, and aesthetics. This is accomplished by maintaining and updating accurate estimates of standing timber in order to assure that the timber resources retain their sustainability.

Although DCSF has limited timber producing potential, every effort will be made to promote an even aged overstory structure and natural regeneration. Future timber inventories will guide management to appropriate silviculture practices to ensure a viable

timber resource for the benefit of the multi-use objectives. Inventories will be updated on a continual basis according to guidelines established by FFS's Forest Management Bureau. The most recent inventory date was March 25, 2008. The upland 40 acres of scrubby flatwoods was found to have a basal area of 68 square feet per acre, 2,023 tons of timber products, and 225 trees per acre.

E. Beaches and Dune Resources

No beaches or dunes occur on the DCSF.

F. Mineral Resources

There are no known significant mineral deposits of commercial value on DCSF. FIND has deposited small amounts of spoil on DCSF, some of which were utilized for road improvement in 2002.

G. Unique Natural Features and Outstanding Native Landscapes

This area along the Intracoastal Waterway provides spectacular landscapes and seascapes with the transitions from the marshes to the upland pines. The meandering creeks through the marsh provide great scenery and attract an abundance of wildlife.

H. Research Projects/Specimen Collection

To date, no research projects/specimen collections have been initiated on the property. Research projects may be performed on certain areas of the forest on a temporary or permanent basis for the purpose of obtaining information that furthers the knowledge of forestry and related fields. The FFS cooperates with other governmental agencies, non-profit organizations, and educational institutions, whenever feasible, on this type of research. The FFS will consider assisting with research projects when funds and manpower are available.

All research projects to be considered on DCSF must be considered accordance with the guidelines stated in Chapter 4 of the State Forest Handbook (FFS 2008). Any requests for research projects should be submitted in writing to the appropriate field staff to be forwarded to the Forest Management Bureau for approval. Requests must include: a letter outlining the purpose, scope, methodology, and location of the proposed research project. Requests are subject to review by FFS Foresters, Biologists, the Forest Entomologist or the Forest Pathologist, and the Forest Hydrology Section, as appropriate. Authorization to conduct research will require that the investigator provide copies of any reports or studies generated from research projects to the District FFS staff. Other special conditions may be applicable and the authorization may be terminated at any point if the study is not in compliance.

I. Ground Disturbing Activities

Although the FFS's approach to handling ground disturbing activities is identified in various sections of this plan, the FFS's overall approach to this issue is summarized here. The FFS recognizes the importance of managing and protecting sensitive resources and will take steps to ensure that such resources are not adversely impacted by ground

disturbing activities. This includes areas such as known archaeological, fossil, and historical sites, ecotones, wetlands, and sensitive species.

When new pre-suppression firelines, recreational trails, or other low-impact recreational site enhancements are necessary, their placement will be reviewed by state forest field staff to avoid sensitive areas. For ground disturbing activities such as construction of buildings, parking lots and new roads the FFS will consult with the FNAI, DHR, and when necessary, the ARC.

V. Public Access and Recreation

Overall the primary FFS recreation objective is to provide the public with dispersed outdoor recreational activities that are dependent on the natural environment. The FFS will continue to promote and encourage public access and recreational use while protecting resources and practicing multiple-use management. There is no public access to this State Forest from any public roads. Access by water can be from the Intracoastal Waterway or crossing the salt marsh with a small boat. Recreation activities available on DCSF include hiking, birding, fishing, picnicking, hunting, biking, and photography.

Periodic evaluations will be conducted by FFS staff to monitor recreational impacts on resources should they exist. Modifications to recreational uses will be implemented, should significant negative impacts be identified. New recreation opportunities and facilities, which are compatible with the primary goals and responsibilities of the FFS, will be considered only after the FFS determines their compatibility with other forest uses and forest resources.

A. Existing

Public access is limited by topography, property size, and lack of public road proximity. There is currently no land-based public access to the property due to private property ownership on the western perimeter. Only water-based access is possible for the public, however there is no designated boat access point. Visitors who reach DCSF via the Tolomato River by powerboats, kayaks, canoes, or personal watercraft may picnic, observe wildlife, hike, and hunt or fish in accordance with statewide wildlife regulations. There are currently no developed recreation areas or any formal recreation program in place on DCSF.

B. Planned

While access for the general public is limited, there may be potential in the future for limited recreation improvements. It is important that consideration to develop improvements includes management capacity (funding, staff, etc.) to monitor impacts, provide maintenance, and or law enforcement needs associated with the public use.

C. Hunter Access

FFS currently has no restrictions on hunting on DCSF. Due to size and access constraints there are no current plans to institute a Wildlife Management Area (WMA). Hunting season dates, limits, and methods are established annually by FWC, in consultation with FFS.

VI. Habitat Restoration & Management Practices

A. Prescribed Fire

The FFS utilizes a total fire management program on state forests that includes wildfire prevention, detection and suppression, and prescribed burning. This program is the responsibility of the FFS's Bunnell District. Emphasis is placed on prescribed burning, wildfire prevention and education to help reduce wildfire occurrence on the forest. The FFS has three paramount considerations regarding wildfires, and these are listed in priority order: 1) protection of human lives, both the firefighter's and the public's, 2) protection of improvements, and 3) protection of natural resources.

The annual forest prescribed burning program produces multiple benefits. The purposes of prescribed burning on DCSF are to facilitate forest management operations and enhance wildlife and listed species habitat, to decrease fuel loading, consequently enhancing public safety, and to restore, maintain, and protect all native ecosystems, ecotones, and their ecological processes. FFS personnel are responsible for planning and implementing the annual prescribed burn program for DCSF, which will consist of growing and dormant season burns. Burns are planned by the State Forest staff with input from cooperating agencies as appropriate. A DCSF Prescribed Burn Plan, updated as needed, identifies the 40 acre scrubby flatwoods burn unit prescription, whether the unit is on a growing or dormant season rotation, map of burn unit, and other information specific to the burn unit. The smoke screening system will be used as a smoke management tool to minimize the adverse impact of smoke that may affect residential communities, public roads, schools, and other smoke sensitive areas.

The scrubby flatwoods stand on DCSF is estimated to have historically occupied approximately 40 acres, and to have burned at approximately 5 - 8 year intervals. This historically fire dependent community is currently unable to carry prescribed fire due to dredging of the Intracoastal Waterway and stocking of sediment. Based on current conditions and management objectives, the forest manager will plan for the 40 acre scrubby flatwoods site to be prescribed burned initially every 2-4 years to reduce fuel loads to a manageable level, and then burn on a 5-8 year rotation when the burn unit is in maintenance condition. Depending on tide levels, burns may be allowed to continue into adjacent marsh areas until extinguishing naturally. Meeting prescribed fire goals will be largely dependent on weather conditions, personnel, and statewide emergency situations such as wildfires, hurricanes and other natural disaster response and relief.

Pre-suppression fire lines will be constructed in accordance with BMPs. Whenever possible, alternatives to plowed firelines, such as harrowed lines or natural breaks should be used. Post burn evaluations will be performed to monitor effectiveness of the prescribed burns. The procedures for conducting post burn evaluations are outlined in the Forest Health section of the State Forest Handbook.

B. Sustainable Forestry & Silviculture

Timber is a valuable economic and ecological resource, and timber harvesting for the purposes of generating revenue, improving stand viability, forest health, and biological restoration and maintenance, is critical to the silvicultural objectives on the state forest.

1. Strategies

The following strategies will apply to silvicultural practices on DCSF:

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

2. Silvicultural Operations

Silvicultural operations on DCSF will be directed toward maintaining forest health, wildlife habitat, biologic and economic sustainability. Herbicide applications may be necessary to control woody competition and to re-establish desired natural species of both overstory and ground cover. Site preparation methods may include prescribed fire, mechanical vegetation control, and herbicide application.

Prescribed fire is the most desirable method of vegetation control for fire dependent ecosystems; however, due to the existence of areas where fuel loads have reached dangerous levels or urban interface dictates prescribed fire is not suitable, mechanical vegetation control (roller chopping/gyro tracking) is a consideration. Mechanical vegetation control will be utilized where appropriate as determined by FFS staff for wildlife enhancement, fuel mitigation and reforestation.

Maintenance and restoration of timber stands and plant communities through timber harvesting will include thinning for maintenance and regeneration, and clear-cutting to remove off site species.

All silvicultural activities (including timber harvesting and reforestation) will meet or exceed the standards in the FFS's Silviculture Best Management Practices (BMPs) and the State Forest Handbook.

3. Timber Inventory Control

The purpose of a forest inventory is to provide FFS resource managers with information and tools for short and long range resource management and planning. Approximately 68% of the forest is sovereign submerged lands. Due to the small size of non-submerged acreage (120 acres) on this forest, the entire scrubby flatwoods timber stand will be re-inventoried once every ten years to provide an accurate estimation of the standing timber and to ensure that stands will be managed sustainably.

4. Timber Sales

Timber sales are generally advertised for competitive bids and sold on a per unit, composite, or lump sum basis. All timber sales are conducted according to guidelines specified in the State Forest Handbook.

C. Non-Native Invasive Species Control

FFS employees continually monitor the forest for non-native invasive species while conducting management activities. The practice of the FFS is to locate, identify and apply control measures with the intent to eradicate or control non-native invasive plant species. When these species are discovered, an eradication or management plan will be developed with the assistance of the Forest Management Bureau's Forest Health Section as needed. The plan will be implemented based upon the severity of the infestation and the availability of personnel and funding. State Forests are periodically surveyed by FFS staff, and detection of populations of non-native invasive species are noted and prioritized for appropriate control action. Known occurrences of non-native invasive species are prioritized and treated as funding and personnel allow, with the intention of ultimately eradicating such pests from State Forest property. These occurrences are recorded in the GIS database and updated as new plants are discovered. Should any large infestations of Japanese climbing fern (*Lygodium japonica*) be discovered, assistance from the FWC Invasive Plant Management Section's Lygodium Strike Team will be utilized. Adjacent landowners who are known to have these species on their property will be approached in an effort to cooperate on control measures. The FFS will enlist support from the FWC in the effort to control non-native invasive animals.

Training in the identification and control of invasive species will be scheduled for personnel as time and resources permit. Training concerning non-native invasive plants will be coordinated with the Forest Management Bureau's Forest Health Section. Control of non-native invasive pest plants will be target specific and use a variety of methods including appropriately labeled and efficacious herbicides.

The Forest Management Bureau's Forest Health Section conducted a non-native invasive species survey in 2006. The survey consisted of several transects through the uplands and marsh areas. Bermuda grass was the only invasive plant discovered during this survey around transition zones from the marsh to the upland flatwoods (Exhibit M). Treatment is extremely difficult due to the location in the marsh and water. The main defense against non-native invasive species is keeping the marsh and uplands undisturbed, which serves to discourage establishment of invader species.

D. Insects, Disease and Forest Health

Currently, there are no insect or disease problems on DCSF. In the event of an outbreak, consultation with the Forest Management Bureau's Forest Health Section will be sought to formulate an appropriate and effective response.

In compliance with section 388.4111, Florida Statutes and in Sec. 5E-13.042, F.A.C., all lands have been evaluated and subsequently designated as environmentally sensitive and

biologically highly productive. Such designation is appropriate and consistent with the previously documented natural resources and ecosystem values and affords the appropriate protection for these resources from arthropod control practices that would impose a potential hazard to fish, wildlife and other natural resources existing on this property.

As a result, prior to conducting any arthropod control activities on DCSF, the local agency must prepare a public lands control plan, that addresses all concerns that FFS may have for protecting the natural resources and ecosystem values on the state forest. In this regard FFS will provide the local agency details on the management objectives for DCSF. This public lands control plan must be in compliance with DACS guidelines and using the appropriate DACS form. The plan must then be approved and mutually adopted by the county, FFS and DACS, prior to initiation of any mosquito control work. Should the local mosquito control district not propose any mosquito control operations on the property, no arthropod control plan is required.

E. Use of Private Land Contractors

The forest manager makes ongoing evaluations of the use of private contractors and consultants to facilitate resource management activities of this state forest. The opportunities for outsourcing land management work include or are anticipated to include possibly reforestation and timber harvests.

VII. Proposed Management Activities for Natural Communities

To date, FNAI has not completed an inventory and natural community mapping project on DCSF. Current natural communities and cover types can be found in Exhibit N. The following desired future conditions, existing condition descriptions, and management recommendations are taken from the Guide to the Natural Communities of Florida (FNAI 2010), as well as from the knowledge and experience gained by FFS during forest inventory efforts and routine field work on DCSF.

For the purposes of this management plan, restoration is defined as the process of returning ecosystems or habitats to the appropriate structure, function and species composition, based on soil type and climate. Management during this ten-year period will begin with a forest wide assessment of the fuel loading, timber densities and groundcover to determine the most appropriate steps necessary to re-introduce prescribed burning. Strategies may include thinning of overly dense pine plantations, mowing or chopping in areas of heavy fuel buildup and/or application of cool dormant season fires. The results of these initial efforts will be monitored and more refined and detailed restoration plans will be made. Fire return intervals are included as a guide and may vary depending upon specific conditions. The intention is to use fire in a manner and frequency that will attain the desired habitat goals. Fire frequency is generally increased or decreased depending upon the conditions of the specific area.

Table 3. Natural Community Types Found on DCSF

Natural Community Type	Acres Mapped (Current)	Burn Interval (Years)
Salt Marsh	71.5	5-8
Scrubby Flatwoods	40	5-8
Ruderal	8.5	0

A. Salt Marsh

The following, utilizing DCSF staff knowledge and the 2010 FNAI Guide to the Natural Communities of Florida, describes the desired future condition for this natural community. Salt marsh is a largely herbaceous community that occurs in the portion of the coastal zone affected by tides and seawater and protected from large waves, either by the broad, gently sloping topography of the shore, by a barrier island, or by location along a bay or estuary. The width of the intertidal zone depends on the slope of the shore and the tidal range. Salt marsh may have distinct zones of vegetation, each dominated by a single species of grass or rush. Saltmarsh cordgrass (*Spartina alterniflora*) dominates the seaward edge and borders of tidal creeks, areas most frequently inundated by the tides. Needle rush (*Juncus roemerianus*) dominates higher, less frequently flooded areas.

Current Condition

The salt marsh is mostly undisturbed and in its natural state along the ICW and creeks, with little evidence of wild hog damage. To date, no herbicides have been used to control the only known non-native invasive species, Bermuda grass, along the transition zone between the marsh and the scrubby flatwoods site. The area has not been burned in recent years, but fire may be reintroduced as the fuels and tides allow when burning the adjacent scrubby flatwoods stand. This community also includes two miles of meandering blackwater stream through the southern portion of the property to the western portion of the state forest.

Management Actions

To achieve the objectives outlined in this plan, the following management activities will be performed during the next ten year planning period. Goals, desired future conditions, standards, and guidelines provide management area direction. These goals and desired future conditions may take many planning cycles to attain. This community is currently in desired future condition and will continue to be managed by reintroducing fire. Prescribed fire will be allowed to creep into salt marsh when adjacent upland scrubby flatwoods stand is burned until naturally extinguished by low fuels and tides when appropriate. Management of this community will continue to be minimal to keep the marsh in an undisturbed, natural state.

B. Scrubby Flatwoods

The following, utilizing DCSF staff knowledge and the 2010 FNAI Guide to the Natural Communities of Florida, describes the desired future condition for this natural community. Scrubby flatwoods have pine trees and a low, shrubby understory dominated by scrub oaks and saw palmetto, often interspersed with areas of barren white sand. Principal canopy species are longleaf pine (*Pinus palustris*) and slash pine (*P. elliottii*) in northern and Central

Florida. The shrub layer consists of one or more of the four scrub oaks: sand live oak (*Quercus geminata*), myrtle oak (*Q. myrtifolia*), Chapman's oak (*Q. chapmanii*), and scrub oak (*Q. inopina*). Typical shrubs of mesic flatwoods including saw palmetto (*Serenoa repens*), gallberry (*Ilex glabra*), rusty staggerbush (*Lyonia ferruginea*), fetterbush (*L. lucida*), coastalplain staggerbush (*L. fruticosa*), and deerberry (*Vaccinium stamineum*). The shrub layer of scrubby flatwoods is not solely comprised of oaks; grasses and dwarf shrubs make up a substantial portion of the cover. Grasses include wiregrass (*Aristida stricta* var. *beyrichiana*), broomsedge bluestem (*Andropogon virginicus*), and little bluestem (*Schizachyrium scoparium*); dwarf shrubs include dwarf live oak (*Quercus minima*), runner oak (*Q. elliotii*), dwarf huckleberry (*Gaylussacia dumosa*), gopher apple (*Licania michauxii*), and shiny blueberry (*Vaccinium myrsinites*). A fire regime of 5-8 years is needed to maintain the scrubby flatwoods ecosystem.

Current Condition

Currently, this community on DCSF is composed of 40 acres of slash pine mixed with scattered longleaf pines in the overstory. The slash pine is approximately 24 years old, with a basal area averaging 68 square feet per acre. The stand was seeded in 1987 after a wildfire in 1986. The midstory is made up of red cedar, cabbage palm, and scattered oak varieties. The understory consists of high palmetto rough, timber litter, and a mix of smilax species throughout the stand.

Management Actions

To achieve the objectives outlined in this plan, the following management activities will be performed during the next ten year planning period. Goals, desired future conditions, standards, and guidelines provide management area direction. These goals and desired future conditions may take many planning cycles to attain. Prescribed burning will be the main management activity in the short term. A prescribed burning rotation of five to eight years will be needed to maintain this ecosystem for the long-term goals. A burn rotation of 2-4 years may be needed in the short term to reduce ground fuels and fuel loads in order to reach the longer term maintenance goal of 5-8 years. There are no planned timber sales in the near future, but stocking will be reassessed periodically through inventory collection; silviculture activities will be planned accordingly.

C. Other (Ruderal)

Current Conditions

Ruderal areas noted on DCSF include disturbed areas around the old homestead site and spoil areas from past dredging activities in the Tolomato River. Some erosion along the ICW shoreline has been observed.

Management Actions

To achieve the objectives outlined in this plan, the following management activities will be performed during the next ten year planning period. Goals, desired future conditions, standards, and guidelines provide management area direction. These goals and desired future conditions may take many planning cycles to attain. There may be limited potential for recreational improvements in this area. Spoil from Florida Inland Navigation District

(FIND) deposits may have some limited value as fill, but is generally too poor to support any plantings.

VIII. References

Division of Historical Resources. Revised 2007. Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Lands. Department of the State, Division of Historical Resources. Tallahassee, Florida.

Florida Department of Agriculture and Consumer Services. Revised 2008. Silviculture Best Management Practices (BMPs) for Florida. Florida Department of Agriculture and Consumer Services, Florida Forest Service.

Florida Department of Agriculture and Consumer Services. Revised 2004. State Forest Handbook. Florida Department of Agriculture and Consumer Services, Florida Forest Service.

Florida Natural Areas Inventory (FNAI). 2010. Guide to the natural communities of Florida: 2010 edition. Florida Natural Areas Inventory, Tallahassee, FL.

IX. Glossary of Abbreviations

ARC	Acquisition and Restoration Council
BMP	Best Management Practices
BOT	Board of Trustees of the Internal Improvement Trust Fund
DCSF	Deep Creek State Forest
CAMA	Office of Coastal and Aquatic Managed Areas
DEP	Florida Department of Environmental Protection
DRP	Division of Recreation and Parks
DHR	Division of Historical Resources
DRI	Development of Regional Impact
F.A.C	Florida Administrative Code
FFS	Florida Forest Service
FDACS	Florida Department of Agriculture and Consumer Services
FDOT	Florida Department of Transportation
FIND	Florida Intracoastal Navigation District
FNAI	Florida Natural Areas Inventory
FWC	Florida Fish and Wildlife Conservation Commission
FY	Fiscal Year
GIS	Geographical Information System
GTMNERR	Guana Tolomato Matanzas National Estuarine Research Reserve
GTM	Guana Tolomato Matanzas
ICW	Intracoastal Waterway
MOA	Memorandum of Agreement

NERR.....National Estuarine Research Reserve
SJRWMD.....St. John's River Water Management District
WMAWildlife Management Area