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Tallahassee, Florida 32399-3000

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December 10, 2010

Mr. John Barrow
Division of Forestry
3125 Connor Blvd./C25
Tallahassee, Florida 32399-1560

RE: Myakka River State Forest


Dear Mr. Barrow:

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 Myakka River State Forest management plan. The next management plan update is due December 10, 2020.

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,



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

TEN-YEAR RESOURCE MANAGEMENT PLAN

FOR THE

MYAKKA STATE FOREST

SARASOTA COUNTY



PREPARED BY

FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

DIVISION OF FORESTRY

APPROVED ON

DECEMBER 10, 2010

TEN-YEAR RESOURCE MANAGEMENT PLAN

FOR THE

MYAKKA STATE FOREST



Approved by:

A black ink signature of Jim Karels, written over a horizontal line.

Jim Karels, Director
Division of Forestry

8.9.10

Date

A blue ink signature of David Core, written over a horizontal line.

David Core, Assistant Director
Division of Forestry

8-3-10

Date

A black ink signature of Steve Jennings, written over a horizontal line.

Steve Jennings, Chief
Forest Management Bureau

7-30-2010

Date

**TEN-YEAR RESOURCE MANAGEMENT PLAN
MYAKKA STATE FOREST**

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**MYAKKA STATE FOREST
TEN-YEAR RESOURCE MANAGEMENT PLAN**

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LAND MANAGEMENT PLAN EXECUTIVE SUMMARY

LEAD AGENCY: Florida Department of Agriculture and Consumer Services, Division of Forestry

COMMON NAME: Myakka State Forest

LOCATION: Sarasota County

ACREAGE TOTAL: 8,592.79

<u>Historic Natural Communities</u>	<u>Acreage</u>	<u>Historic Natural Communities</u>	<u>Acreage</u>
Mesic Flatwoods	6,073	Tidal Creek	34
Wet Flatwoods	1,119	Tidal Marsh	23
Depression Marsh	872	Scrub	16
Wet Prairie	404	Scrubby Flatwoods	6
Mesic Hammock	45		

LEASE/MANAGEMENT AGREEMENT NO.: 4102, 4327

Use: Single____ Multiple X

MANAGEMENT AGENCY

Division of Forestry

Florida Fish and Wildlife Conservation
Commission

Division of Historical Resources

Southwest Florida Water Management District

RESPONSIBILITY

General Forest Resource Management

Wildlife Resources and Laws

Historical and Archaeological Resource
Management

Water Resources

DESIGNATED LAND USE: Multiple-use State Forest

TYPE ACQUISITION: Conservation and Recreation Lands, Save our Rivers, and Division of Forestry
Preservation 2000 Inholding and Additions

ARCHAEOLOGICAL/HISTORICAL: None Recorded

MANAGEMENT NEEDS: Exotic species control, public access to parcel east of Myakka River,
upgraded recreational facilities

ACQUISITION NEEDS: Major acquisition needs are the two in-holdings and parcels to provide access
on the east side of the Myakka River

SURPLUS LANDS/ACREAGE: None

PUBLIC INVOLVEMENT: Management Plan Advisory Group meeting/public hearing and the
Acquisition and Restoration Council public hearing

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

ARC Approval Date: _____ BTIITF Approval Date: _____

Comments: _____

I. INTRODUCTION

The Myakka State Forest (MSF) is comprised of 8,593 acres located in the southwestern portion of Sarasota County, and is almost entirely within the city limits of the City of North Port. The MSF is ecologically diverse with mesic flatwoods and numerous depression marshes being the predominant vegetative community types. The Myakka River, designated as an Outstanding Florida Water, flows through the northeast portion of the forest. Significant wildlife species that can be found on the forest include the gopher tortoise, Eastern indigo snake, bald eagle, Florida sandhill crane and wood stork. Outdoor recreational activities available on the forest include hiking, camping, off-road biking, horseback riding, as well as small game hunting opportunities that include wild hog and a limited amount of fishing on the Myakka River.

A. General Mission, Goals for Florida State Forests, and Management Plan Direction

The Division of Forestry's (DOF) mission is to protect Florida and its people from the dangers of wildland fire and manage the forest resources through a stewardship ethic to assure these resources will be available for future generations. Multiple-use management is the overall concept used to perpetuate the sustainability of the forest's native ecosystems and biodiversity.

The goals of the DOF in managing Florida's state forests are:

- To restore, maintain, and protect in perpetuity, all native ecosystems;
- To ensure the long term viability of populations and species considered rare, endangered, threatened, or of special concern;
- To 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;
- To integrate human use through a total resource concept, not emphasizing any particular use over the others, or over restoration, maintenance and protection of native ecosystems;
- To protect known archeological and historical resources; and
- To practice sustainable forest management utilizing sound silvicultural techniques.

These overall goals are consistent with the goals for which the property was acquired.

This management plan is provided according to the requirements of Section 253.034, 259.032, and Chapter 373, Florida Statutes, and was prepared using guidelines outlined in Chapter 18-2.021 of the Florida Administrative Code. This management plan provides the general direction for management of MSF. It is not an annual work plan or detailed operational plan, but provides general guidance for management of the MSF for the next ten years and outlines the major concepts that will guide management activities on the forest.

B. Overview of State Forest Management Program

The area that has become MSF was a purchase of opportunity when Atlantic Gulf Communities Corporation (AGCC) made 8,532 acres available to the state. In 2000, an additional 61 acres to the north of the present Winchester Tract were acquired, and this piece is now under management by the DOF in cooperation with the Florida Department of Environmental Protection (DEP). This brings the total present land under management as the MSF to 8,593 acres.

This area was managed as a ranch with cattle grazing and farming prior to its acquisition by AGCC. The management plan of the FDOF is to restore the area to what it was prior to the ranch era while operating MSF under the state of Florida multiple use management concept, which includes recreational capabilities. Recreation is of major importance because of the location among populated centers and the need for quality natural outdoor recreational opportunities.

C. Past Accomplishments

A compilation of management activities and public use on the MSF is completed quarterly and an annual report completed at the end of each fiscal year. These reports are available from the forest manager. The table below has been prepared for this plan and summarizes the past accomplishments:

Table 1. Accomplishment Summary, MSF

PROGRAM	ACTIVITY		FY 2004- 05	FY 2005- 06	FY 2006- 07	FY 2007- 08	FY 2008- 09	Total
Reforestation /Restoration	Slash Bareroot	No.	73,000	0	0	0	0	73,000
		Acres	100	0	0	0	0	100
	Containerized Longleaf	No.	0	5,200	151,000	0	62,200	218,400
		Acres	0	15	200	0	100	315
	Containerized SF Slash	No.	0	72,800	31,000	68,000	0	171,800
		Acres	0	85	50	103	0	238
Seedling Survival	Survival Checks	Acres	100	100	250	103	100	653
Timber Inventory	Inventory Update	Acres	0	0	887	942	860	1,802
Site Preparation	Chop Tandem	Acres	1,062	0	450	100	20	1,632
	Burn	Acres	0	0	1,100	360	0	1,460
Exotic Species Treatments	Torpedo Grass	Acres	0	0	0	2	1	3
	Cogon Grass	Acres	0	0	0	4	3	7
	Tropical Soda Apple	Acres	1	0.5	0	0	0	1.5
	Meleluca	Acres	0	0	0	0	510	510
	Brazilian Pepper	acres	0	0	0	0	27	27

PROGRAM	ACTIVITY			FY 2004- 05	FY 2005- 06	FY 2006- 07	FY 2007- 08	FY 2008- 09	Total
Timber Stand Improvement	Herbicide Treatment	Banded	Acres	20	0	125	0	0	145
		Broadcast	Acres	80	0	0	0	0	80
	Mechanical Treatments	Mowing	Acres	1,492	0	125	0	0	1617
		Chopping	Acres	0	0	0	0	0	0
Timber Sales	Harvest	Salvage (pulp)	Tons	0	522	0	0	0	522
Recreation	Day Use		No.	3,355	3,763	3,573	3,270	3826	17,787
	Overnight - Primitive		No.	844	1,070	550	678	760	3,902
	Annual Entrance Pass		No.	19	24	14	18	26	101
Fire	Wildfire		No.	0	1	0	0	1	2
			Acres	0	35	0	0	65	100
	Prescribed Burning		Acres	1,037	1,946	1,100	382	2090	6,555
Roads & Bridges	Roads Graded		Miles	0	0	2.4	3.2	3	8.6
	Roads Constructed		Miles	0	0	0	0.1	0	0.1
	Roads Rebuilt		Miles	0	1.8	0	0.6	3	5.4
	Fire Lines		Miles	24	0	0	0	0	24
	Low W. Cross. Inst.		No.	0	0	1	0	0	1
Boundary Maintenance	Maintenance/Marking		Miles	0	6	5.1	0.5	3	14.6
Information & Educational Activities	Programs/Tours		No.	2	2	3	3	11	21
	Radio - TV - Articles		No.	0	0	4	2	4	10
	Scout Tours		No.	5	2	0	0	0	7
	Education./Research Projects		No.	5	0	1	0	1	7
Other Activities	Liaison Committee Mtg		No.	1	1	1	2	2	7
	Apiary Contracts		No.	0	0	1	1	1	3
	Fence Construction (miles)		Miles	0	0	2	0	1	3
	Hunting Days		No.	1,492	820	1,057	1,387	1969	6,725
	Volunteer		Hours	4,060	96	557	1,347	1,345	7,405

D. Goals/Objectives for the Next Ten Year Period

The following goals and objectives provide direction and focus for management resources over the next 10-year planning period. Agency priorities and wildfires (or 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.

GOAL 1: Habitat Restoration and Improvement

OBJECTIVE #1: Prescribe burn 2,000 acres per year. (Short Term Goal)

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

OBJECTIVE #2: Conduct habitat/natural community improvement on 1,000 acres. (Long Term Goal)

PERFORMANCE MEASURE: Number of acres with restoration underway.

OBJECTIVE #3: Restore ground cover where the native ground layer has been eliminated or impacted prior to acquisition. (Long Term Goal)

PERFORMANCE MEASURE: Number of acres restored.

OBJECTIVE #4: Develop a Fire Management Plan to address fire prevention, detection, and suppression, and prescribed burning plans. (Short Term Goal)

PERFORMANCE MEASURE:

- Completion of MSF Fire Management Plan.
- Plan updated annually.

OBJECTIVE #5: Restoration of the area surrounding proposed Education Pavilion. (Long Term Goal)

PERFORMANCE MEASURE: Number of acres restored with longleaf pine and wiregrass.

OBJECTIVE #6: Update Florida Natural Areas Inventory (FNAI) Field Report Forms with assistance of Florida Fish and Wildlife Conservation Commission (FWC) Biologist. (Long term Goal)

PERFORMANCE MEASURE: Completion of FNAI Report Forms.

OBJECTIVE #7: Develop and implement a program for surveying and monitoring of listed species of plants and wildlife. (Long Term Goal)

PERFORMANCE MEASURE:

- Surveys program implemented.
- Research/Map listed species, breeding areas and/or their habitat.

GOAL 2: Public Access and Recreational Opportunities

OBJECTIVE #1: Provide interpretive displays of Forest community types through completion of Education Pavilion. (Long Term Goal)

PERFORMANCE MEASURE: Education Pavilion completed.

OBJECTIVE #2: Cooperate with FWC to develop specific season quotas, bag limits and address other hunting issues to be agreed upon at annual meeting held at the State Office. (Short Term Goal)

PERFORMANCE MEASURE:

- Annual letter on agreed hunting issues.
- Rules posted on Kiosks at all Trailheads.

OBJECTIVE #3: Maintain public access and recreational opportunities to allow for a recreational carrying capacity of 494 visitors per day. (Short Term Goal)

PERFORMANCE MEASURE: Number of visitor opportunities/day.

OBJECTIVE #4: Develop additional public access and recreational opportunities to allow for a carrying capacity of 604 visitors per day. Proposed additions include establishing new access points and trailheads, along with trails and camping areas on the Winchester Tract and a canoe launch on the river, on the Myakkahatchee tract. (Long Term Goal)

PERFORMANCE MEASURE: Number of visitor opportunities/day.

OBJECTIVE #5: Coordinate with surrounding landowners and recreational user groups to promote appropriate recreational opportunities on the forest. (Short Term Goal)

PERFORMANCE MEASURE: Number of access points and trail heads installed along boundaries bordering developments and subdivisions.

OBJECTIVE #6: Develop and maintain interpretive trail system in conjunction with interested user groups. (Short Term Goal)

PERFORMANCE MEASURES: Miles of trail established and maintained.

OBJECTIVE #7: Enlist additional volunteers and volunteer organizations to assist with recreation and/or resource management. (Long Term Goal)

PERFORMANCE MEASURE: Number of Volunteer Hours.

GOAL 3: Hydrological Preservation and Restoration

OBJECTIVE #1: With cooperation of Southwest Florida Water Management District (SWFWMD) and assistance from the DOF Hydrology Section, prepare and implement a hydrological needs assessment/ inventory to address site-by-site restoration of wetlands throughout the State Forest, and assist SWFWMD on proposed mitigation projects for the State Forest. (Long Term Goal)

PERFORMANCE MEASURE:

- Completion of Hydrological Assessment.
- Number of mitigation projects completed.

OBJECTIVE #2: Protect water resources during management activities through the use of Silviculture Best Management Practices (BMP's) for public lands. (Long Term Goal)

PERFORMANCE MEASURE: Compliance with state lands BMP's.

OBJECTIVE #3: Close, rehabilitate, or restore those roads and trails that have evidence of erosion into surrounding water bodies causing alterations to the hydrology. (Short Term Goal)

PERFORMANCE MEASURE: Total number miles of roads and trails closed, rehabilitated, or restored.

OBJECTIVE #4: Conduct annual road inspection to determine the need for installation or replacement of culverts and low water crossing. (Long Term Goal)

PERFORMANCE MEASURE: Annual inspection and appropriate improvement completed.

GOAL 4: Sustainable Forest Management

OBJECTIVE #1: Prepare a silviculture management plan including reforestation, harvesting, prescribed burning, restoration, and timber stand improvement activities and goals. (Short Term Goal)

PERFORMANCE MEASURE: Completion of plan.

OBJECTIVE #2: Implementation of the silviculture management plan. (Long Term Goal)

PERFORMANCE MEASURE: Implementation of plan (acres treated).

OBJECTIVE #3: Implement a process, as outlined in the State Forest Handbook, 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). (Short & Long Term Goal)

PERFORMANCE MEASURE: Complete GIS database and re-inventory ALL attributes every 3-5 years or as needed.

OBJECTIVE #4: Conduct Forest Inventory updates each year, according to criteria established in the State Forest Handbook. (Short Term Goal)

PERFORMANCE MEASURE: Number of acres inventoried annually.

OBJECTIVE #5: Reduce hazardous fuel levels on wet and mesic flatwoods communities, with priority placed on urban-interface areas through prescribed burns, mechanical and chemical treatments. (Long Term Goal)

PERFORMANCE MEASURE: Total number of acres treated for fuel reduction. Areas will need to have a minimum of two (2) treatments to achieve successful reduction of hazardous fuels.

OBJECTIVE #6: Conduct timber sales at appropriate times to promote forest health and ensure sustainability of the resources. (Long Term Goal)

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

GOAL 5: Exotic and Invasive Species Maintenance and Control

OBJECTIVE #1: Develop a plan to locate, identify, and control non-native invasive plant species. (Short Term Goal)

PERFORMANCE MEASURE: Total number of acres identified and successfully treated.

GOAL 6: Capital Facilities and Infrastructure

OBJECTIVE #1: MSF staff will maintain all existing facilities, roads, and trails. (Long Term Goal)

PERFORMANCE MEASURE: The number of existing facilities, miles of roads, and miles of trails maintained.

OBJECTIVE #2: Maintain forest boundaries. (Long Term Goal)

PERFORMANCE MEASURE: The number of miles of boundary maintained.

OBJECTIVE #3: Prepare Road Maintenance plan. (Short Term Goal)

PERFORMANCE MEASURE: Road Maintenance plan completed.

GOAL 7: Cultural and Historical Resources

OBJECTIVE #1: Ensure all known sites are recorded in the FL Division of Historical Resources (DHR) Master Site file. (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. (Long Term Goal)

PERFORMANCE MEASURE: Number of sites monitored.

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

OBJECTIVE #1: Develop baseline imperiled species occurrence inventory list. (Long Term Goal)

PERFORMANCE MEASURE: Baseline imperiled species occurrence inventory list complete.

OBJECTIVE #2: Develop monitoring protocols for selected imperiled species. (Long Term Goal)

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

OBJECTIVE #3: Implement monitoring protocols for imperiled species. (Long Term Goal)

PERFORMANCE MEASURE: The number of species for which monitoring is ongoing.

E. Management Needs, Priority Schedule and Cost Estimates

Management activities on MSF during this management period must serve to conserve and protect the natural and historical resources and manage resource-based public outdoor recreation, which is compatible with the conservation and protection of this forest.

The management activities listed below will be addressed within the ten-year management period and are divided by priority levels:

Priority 1 - Activities considered as paramount to carrying out DOF's mission.

Priority 2 - Activities key to furthering the mission.

Priority 3 - Activities considered significant to our mission, but less urgent.

Cost estimates are provided below for DOF 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. Additional support may be requested from SWFWMD.

PRIORITY 1

1. Prescribed Burning

Prescribed burning is the primary management tool for the forest. Approximately 8,535 acres supports vegetative communities that are fire dependent, most of which will be burned on an average rotation of four years or less. Cost estimates are based on DOF's contract burning rate schedule. Manpower and equipment costs are included. (Annual)

Average Acreage Per Year: 2,000

Estimated Annual Cost (DOF): \$30,000

2. Restoration/Reforestation Pasture

Sites to be planted in longleaf will include prescribed burning, seedlings, and machine/hand planting.

Estimate Acreage Per Year: 100

Estimated Annual Cost (Contract): \$19,000

3. Exotic Species Control

Identification, mapping, eradication/control and monitoring of exotic species. (Annual)

Average Acreage Per Year: 50

Estimated Annual Cost: \$15,000

4. Forest Inventory

Continue annual pine inventory work. DOF staff will conduct inventories of 10% of the forest. (Annual)

Estimated Cost (DOF): \$800

5. Recreation

Development and implementation, recreation facility improvements, and maintenance of existing facilities.

Estimates are based on known needs and potential future improvements.

Estimated Total Cost to Complete:

- Update all kiosks to include revised maps, rules, etc. (Annual).....\$600
- Upgrade internal recreation signs (Annual).....\$500
- Upgrade three trail brochures and reprint. (Annual).....\$500
- Establish new kiosk at Winchester Tract with information on exotic flora & fauna and birding trail information.....\$800
- Picnic pavilion near main parking area.....\$30,000
- Maps/brochures for camping and canoe trail (Annual)\$1,500
- Boardwalk to cross wetland on South Loop Trail for hikers.....\$5,000
- Additional access points and trailheads\$6,000
- Develop trail water facilities for equestrian use.....\$5,000

6. Boundary Marking and Security

Post boundary with state forest boundary signage and initiate replacement of five miles of boundary fence (where it serves to protect against trespass and provide for needed protection of natural resources from adjacent land use) that is in poor condition. (Annual/As needed)

Estimated Annual Cost (DOF): \$600

7. Restoration of Scrub/Scrubby Flatwoods/Sandhill/Wet Prairie

Burning, monitoring, mechanical hardwood reduction, timber harvesting, and pine planting are all potential treatments. Cost estimates are for all restoration needed. Approximately 170 acres of degraded scrub will be restored during the ten year period covered by this plan.

Estimated Annual Cost (DOF): \$2550

Estimated Annual Cost (Contracted): \$10,000

PRIORITY 2

1. Fire line/Trails

Improvements and maintenance. Maintenance will be by DOF staff and volunteers.

Estimated Annual Cost \$3,600

2. Roads

Inventory, plan development, implementation and monitoring.

Cost estimates are dependent on needs identified in the road plan. (Annual)

Inventory and plan completed, will be updated as needed.

Implementation and monitoring will be as needed on an annual basis.

Estimated Annual Cost \$15,000

3. Recreation

Establish additional camping facilities and multi-use trails on the Winchester and Myakkahatchee Tracts.

Estimated Cost: \$26,000

4. Biological Survey and Vegetation Mapping

This is an on-going process being conducted by DOF and FWC staff. (Annual)

PRIORITY 3

1. Hydrological Plan

Needs assessment and plan development.

2. Silvicultural Plan

Plan development based upon forest inventory.

3. Plant and Animal Survey and Monitoring

Estimated Annual Cost: \$1,000

4. Hydrological and Wildfire Mitigation Projects

Needs assessment and prioritization of projects will be developed (as opportunity arises).

(Assessment and prioritization are ongoing at this time)

Table 2. Priority Needs and Cost Estimates

CATEGORY	PRIORITY 1	PRIORITY 2	PRIORITY 3	TOTAL
Resource Management:				
Exotic Species Control	\$15,000			\$15,000
Prescribed Burning	\$30,000			\$30,000
Timber Management	\$32,350			\$32,350
Hydrological Management				
Other	\$600		\$1,000	\$1,600
Administration:				
Units/Projects				

CATEGORY	PRIORITY 1	PRIORITY 2	PRIORITY 3	TOTAL
Capital Improvements:				
New Facility Construction	\$35,000			\$35,000
Facility Maintenance		\$18,600		\$18,600
Visitor Services/ Recreation:				
Information/Education Programs	\$19,900	\$26,000		\$45,900
Operations				
TOTAL	\$132,700	\$44,600	\$1,000	\$178,450

II. ADMINISTRATION SECTION

A. Descriptive Information

1. Common Name of Property

The common name of the property is Myakka State Forest (MSF).

2. Location, Boundaries and Improvements

MSF is located in the southwest portion of Sarasota County, Florida, and falls within the city limits of North Port. The boundaries are identified on the attached map (Exhibit A). At the time of acquisition in 1995, a windmill type pumping device, an abandoned non-functioning dam on Ainger Creek, an outhouse and dock on the Myakka River, and a monitoring well were the only improvements present.

Improvements since acquisition include an administration office, equipment storage facility, improved roads, picnic area, camping facilities, four parking areas, hiking, biking and horse trails, and the rebuilt dock on the Myakka River.

3. Legal Description and Acreage

The total acreage of the MSF is 8,593 acres. The property is in all or part of:

<u>Section</u>	<u>Township</u>	<u>Range</u>
All of sections: 23, 25, 26, 35, 36	40 South	20 East
Part of Sections: 1, 11, 12, 13, 14, 22 24, 27, 33, 34 & 28 (Peery Tract)	40 South	20 East

Parcel Name	Lease Date	Lease No.	Funding Source	County	Acres
ATLANTIC GULF	3/10/1997	4102	CARL/SOR	SARASOTA	8,532.39
PEERY, MICHAEL J.	8/30/2001	4327	DOF/P2000	SARASOTA	60.40
				TOTAL ACRES	8,592.79
				CARL & P2000	8,592.79
				DOF P2000	60.40
				CARL MGT. ACRES	8,592.79

4. Degree of Title Interest Held by the Board

The Board of Trustees of the Internal Improvement Trust Fund of the State of Florida (BOT) and the SWFWMD purchased this property as part of the Myakka Estuary Conservation and Recreation Land (CARL) project on October 13, 1995. The BOT and the SWFWMD hold joint fee simple Title to the 8532.39 acres of MSF.

Intergovernmental Lease Agreement Number 4102, between the BOT along with SWFWMD and the DOF, provides authority for the DOF to manage the MSF.

The BOT Lease Agreement Number 4327 for the Michael J. Peery parcel (60.4 acres) was executed on August 30, 2001. This lease agreement is for a period of 50 years ending on August 29, 2051.

5. Proximity to Other Public Resources

The following lands managed by State, Federal or Local government for conservation of natural or cultural resources that are located within approximately twenty miles of the MSF, these and additional public lands are mapped in Exhibit B.

TRACT	AGENCY	DISTANCE
Myakka River State Park	DRP	10 miles to the North
Gasparilla Sound Charlotte Harbor Aquatic Preserve	DRP	2 miles to the Southwest
Lemon Bay Aquatic Preserve	DRP	2 miles to the Southwest
James E. Cook Memorial Preserve	TNC	3 miles to the Southwest
Charlotte Harbor State Buffer Preserve	DRP	2 miles to the Southwest
Deer Prairie Creek	Sarasota/ SWFWMD	3 miles to the North
Island Bay National Wildlife Refuge	NFW	10 miles to the South
Don Pedro State Recreation Area	DRP	6 miles to the South
Port Charlotte Beach Recreation Area	DRP	3 miles to the Southwest
T. Mabry Carlton, Jr. Memorial Reserve	SC	6 miles to the North
Schewe Tract	SWFWMD	4 miles to the North

TRACT	AGENCY	DISTANCE
Fred C. Babcock/Cecil M. Webb Wildlife Management Area	FWC	15 miles to the South
Babcock Ranch Preserve	BRM, LLC/BRI	30 miles to the Southeast

BRI – Babcock Ranch, Inc.

DRP - Division of Recreation and Parks

DOF - Division of Forestry

FWC- Florida Fish and Wildlife Conservation Commission

SWFWMD – Southwest Florida Water Management District

BRM, LLC – Babcock Ranch Management, LLC

SC - Sarasota County

NPS - National Park Service

NFW - National Fish and Wildlife

TNC - The Nature Conservancy

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

The property is not within an aquatic preserve, is not a designated area of critical state concern and is not under study for such designation. MSF is within two miles of the Charlotte Harbor State Buffer Preserve and the Gasparilla Sound-Charlotte Harbor Aquatic Preserve.

B. **Acquisition Information**

1. **Land Acquisition Program**

The MSF was purchased in 1995 from AGCC as part of the Myakka Estuary CARL project. It was acquired using Preservation 2000 bond funds from the CARL program and from the Save Our Rivers Program. The western portions of the AGCC property, Tracts 21-708-101A, 21-708-101B and 21-708-106, are managed by the DOF as the MSF. These are the only portions of the purchase covered under this management plan.

The remainder of the AGCC property was assigned to the DEP, Coastal Aquatic Management Area (CAMA) for management as part of the Charlotte Harbor State Buffer Preserve.

2. **Legislative or Executive Constraints**

There are no known legislative or executive constraints specifically directed toward MSF.

3. **Purpose for Acquisition**

The main objectives identified by the CARL program for purchasing the property are:

- To conserve and protect environmentally unique and irreplaceable lands that contain native, relatively unaltered flora and fauna representing a natural area unique to, or scarce within, a region of this state or a larger geographical area;
- To conserve and protect native species habitat or endangered or threatened species;
- To conserve, protect, manage, or restore important ecosystems, landscapes, and forest, if the protection and conservation of such lands is necessary to enhance or protect significant surface water, ground water, coastal, recreational, and timber resources, or to protect fish and wildlife resources

which cannot otherwise be accomplished through local and state regulatory programs;

- To provide areas, including recreational trails, for natural resource-based recreation;
- To preserve archaeological or historical sites;
- To protect, preserve, and restore natural ecosystems, while maintaining specific timber management areas and provide recreational opportunities which are compatible with these purposes.

The objectives identified by the Save Our Rivers program are:

- To conserve and protect the water, natural resources, and natural areas along the Myakka River and Charlotte Harbor;
- To protect, preserve, and restore natural ecosystems, while maintaining a working commercial forest and providing recreational opportunities.

4. Designated Single or Multiple-Use Management

The MSF is designated for multiple-use management with the DOF acting as the lead agency as stated in the Lease Agreement Number 4102 and 4327. Authority for multiple-use management is given under Chapters 253, 259, and 589, Florida Statutes. Sound multiple-use management is an overall goal of the property.

Multiple-use includes, but is not limited to, the following activities: silviculture management, recreation, wildlife management, archaeological and cultural resource management, ecosystem restoration, watershed management and environmental education. The goals of the DOF are to protect and restore native ecosystems, to restore and maintain biological diversity, and to integrate public use through multiple-use management of the total resources. Multiple-use management of the ecosystem will provide for the greatest public benefit in perpetuity, while at the same time protecting all the values and resources of the land. Local demands and geographic factors influence the array of uses that can be applied to any area of the forest. Only uses compatible with the forest and the respective vegetative community type will be implemented.

The DOF is responsible for the overall management of MSF. Plans call for the FWC to assist the DOF in providing technical advice on the management of listed species, on the management of wildlife (game and non-game) populations, setting hunting seasons, establishing Bag limits, and the enforcement of rules and regulations related to the management of the wildlife resources. FWC has incorporated MSF into the Wildlife Management Area system as a Public Small Game Hunting Area (PSGHA). The DHR will cooperate with the DOF regarding appropriate management practices on historical or archaeological sites on this forest as stated in Section 253.034(4), Florida Statutes.

5. Alternate Uses Considered

No alternate uses are being considered at this time. The following uses were considered and determined not compatible: water resource development projects, water supply development projects, storm-water management projects, linear facilities and cell towers. 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.

6. Additional Land Needs

There are several parcels of land within and immediately adjacent to the property that should be considered for acquisition. The DOF will work with these property owners, on a willing seller basis, in an effort to acquire these parcels. Properties that would facilitate restoration, protection, maintenance, public access and management of the natural resource on MSF are included in the Optimal Management Boundary Map (Exhibit C). Highest emphasis for purchase should be given to privately owned property (in-holdings) within the boundaries of MSF.

The acquisition of several lot parcels along Campbell Boulevard would provide access to the Myakkahatchee tract on the East side of the Myakka River. There is currently no public access to this area of the forest.

7. Adjacent Conflicting Uses

During the development of this management plan, DOF 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, DOF staff met with adjacent land owners and maintains liaison with those land owners to ensure that any conflicting future land uses may be readily identified and addressed.

We welcome the opportunity to meet with any 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. We also look forward to hearing/sharing ideas on how the property owner(s)/developer(s) may develop the property adjacent to the shared property line, and perhaps provide buffers to minimize encroachment into the forest and to reduce any management impacts.

Nearby developed areas, both existing and planned, and adjoining road systems may hinder prescribed burning due to smoke management concerns. Populations of non-native invasive plant species found on adjacent properties threaten to spread onto MSF.

8. Surplus Land Assessment

All the property within the current boundaries of MSF are consistent with and appropriate for the multiple-use management approach that is being taken with the property, and none is considered or will be declared surplus.

C. Agency & Public Involvement

1. Responsibilities of Managing Agencies

The DOF is the lead agency responsible for the overall management of MSF. The FWC established MSF as a Wildlife Management Area (WMA), and is responsible for enforcing hunting regulations, setting hunting season dates with DOF input, and conducting other wildlife management activities. SWFWMD provided input in the development of this management plan.

The DOF will cooperate with the DHR regarding appropriate management practices on historical or archaeological sites on the property as stated in Section 267.061 (2)(d), Florida Statutes. The DHR will be notified prior to the initiation of any ground disturbing activity by DOF or any other agency involved with this forest. The SWFWMD will be consulted and involved in matters relating to water management and any other activities or projects not stated in this plan. The DOF will also work with the FNAI and FWC concerning inventory and management of listed species. The SWFWMD will be consulted and involved in matters relating to water management and hydrological restoration on MSF.

2. Public and Local Government Involvement

This plan has been prepared by DOF and will be carried out primarily by that agency. The DOF responds to public involvement through direct communication with individuals, user groups and government officials. The plan was developed with input from the MSF Management Plan Advisory Group and was reviewed at a public hearing on June 15, 2010. A summary of the advisory group's meetings and discussions, as well as written comments received on the plan, are included in Exhibit D. The Acquisition and Restoration Council (ARC) public hearing and meeting serve as an additional forum for public input and review of the plan. This plan will also be submitted to the SWFWMD Governing Board for review and approval.

3. Compliance With Comprehensive Plan

This plan was submitted to the Board of County Commissioners in Sarasota County for review and compliance with their local comprehensive plan (Exhibit E). Since most of MSF is within the limits of the City of North Port, the plan was also submitted for review of compliance with the city's comprehensive plan (Exhibit E).

III. RESOURCE SECTION

A. Past Uses

Portions of the property have been used for agricultural purposes in the past. Cattle grazing, turpentine (naval stores) operations and timber harvesting were the major factors to influence the property's appearance as it is today. On the larger tract west of the Myakka River, many areas were cleared to develop pastures for grazing. Most of these areas were leased for cattle grazing until the property was purchased by the State and the SWFWMD. In 1956, General Development Corporation (GDC) purchased the property and the area was soon rezoned for low density residential housing. A system of roads

designed for this type of housing were developed and installed but never paved. Many of these roads are still visible today, and make excellent access roads and trails throughout the forest. The property east of the Myakka River is more remote and less accessible than the larger western tract. A large borrow pit on the south end of the eastern tract provided fill material up until the 1940s.

B. Renewable and Non-Renewable Resources

1. Soil Types

See Exhibit F for soils information from the USDA, Soil Survey of Sarasota County, Florida.

2. Archaeological and Historical Resources

The review of information contained in the Florida Master Site File has determined that there are no archaeological or historical sites recorded within the MSF.

However, some areas within MSF, such as river banks and creek/stream areas, may contain significant historical resources. Areas that have a high probability to contain sites will be monitored during and after ground disturbing activities to see if sites are present. The DOF will comply with the procedures outlined in “Management Procedures for Archaeological and Historic Sites and Properties on State Owned or Controlled Lands” (Exhibit G) and will make every effort to protect known archaeological and historical sites. The DOF will utilize the expertise of the DHR Public Lands Archaeologists for detecting unknown resources.

3. Water Resources

The Myakka River runs through the northeast section of the forest, dividing the forest into two tracts - the larger tract to the west of the river and the smaller tract to the east. The Myakka River is designated as an Outstanding Florida Water as well as a Wild and Scenic River under the “Myakka River Wild and Scenic Designation and Preservation Act”, Florida Statutes 258.501. All of Myakka River south of the western line of Section 35, Township 39 South, Range 20 East, to Charlotte Harbor is designated as Class II waters. Class II Surface Waters are designated for Shellfish Propagation or Harvesting in accordance with Rule 62-302.400, F.A.C.

Big Slough (also known as Myakkahatchee Creek) enters the MSF at the northeast corner of the smaller Eastern tract and drains into the Myakka River. The headwaters of Ainger Creek, locally known as Rock Creek, is found on the Forest. Big Slough is designated as Class I waters from the headwaters south to U.S. Highway 41. Class I Surface Waters are designated for Potable Water Supplies. The larger Western Tract contains the headwaters of Rock Creek, a tributary to Lemon Bay, and is part of the Charlotte Harbor estuarine system. Some freshwater wetlands on the forest have been ditched to improve drainage and several restoration projects have been completed to restore the natural hydrology. Scattered depression marshes are found throughout the flatwoods of the forest. Small, tidal, salt marsh creeks drain into the river on both the east and west tracts where they border the river.

The small East tract contains a small lake that was once a borrow pit which can now be used for recreational activities such as fishing and canoeing.

4. **Fish and Wildlife**

MSF will be managed so as to achieve biological diversity and species composition consistent with the natural vegetative community types that are present in the forest. These communities will be restored and/or maintained through habitat management. All biological resources will be managed to maintain diversity of native species. Exhibit H contains a listing of all species currently observed on the forest.

5. **Endangered or Threatened Species**

Presence of listed species is based on information compiled from FNAI tracking records and FWC, as well as field observations by SWFWMD and DOF. A rare species survey will be conducted within this ten-year period. The following table contains species of management concern known to be on MSF:

Table 3. Endangered or Threatened Species on MSF

Common Name	Scientific name	FNAI Global Rank	FNAI State Rank	Federal Rank	State Status
Bachman's Sparrow	<i>Aimophila aestivalis</i>	G3	S3	N	N
Bald Eagle	<i>Haliaeetus leucocephalus</i>	G5	S3	N	N
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>	G5	S3	N	N
Eastern Indigo Snake	<i>Drymarchon couperi</i>	G3	S3	LT	FT
Florida Sandhill Crane	<i>Grus canadensis pratensis</i>	G5 T2 T3	S2 S3	N	ST
Gopher Tortoise	<i>Gopherus polyphemus</i>	G3	S3	N	ST
Great Egret	<i>Ardea alba</i>	G5	S4	N	N
Little Blue Heron	<i>Egretta caerulea</i>	G5	S4	N	SSC
Osprey	<i>Pandion haliaetus</i>	G5	S3 S4	N	SSC*
Roseate Spoonbill	<i>Platalea ajaja</i>	G5	S2	N	SSC
Snowy Egret	<i>Egretta thula</i>	G5	S3	N	SSC
Tricolored Heron	<i>Egretta tricolor</i>	G5	S4	N	SSC
Wood Stork	<i>Mycteria americana</i>	G4	S2	LE	FE
OTHER ELEMENTS					
Bird Rookery		G NR	S NR	N	N

***STATUS/RANK KEY**

FNAI Global Rank:

G1= Critically Imperiled, G2 = Imperiled, G3= Very Rare, G4= Apparently Secure, G5= Demonstrably Secure, GNR =Element not yet ranked (temporary), T#= Taxonomic Subgroup; numbers have same definition as G#s.

FNAI State Rank:

S1= Critically Imperiled, S2= Imperiled, S3= Very Rare, S4= Apparently Secure, SNR= Element not yet ranked (temporary).

Federal Status (USFWS): LE= Listed Endangered, LT= Listed Threatened, N= Non-listed

State Status (FWC): FE= Listed Endangered at the Federal level by USFWS, FT=Listed Threatened at the Federal level by USFWS, ST=State population listed as Threatened by FWC, SSC= Listed Species of Special Concern by FWC, SSC*=SSC status only in selected portions of its range in FL – this status applies to Monroe county only, N=Not currently listed, nor currently being considered for listing.

Florida Scrub Jays have not been found in the historic scrub natural communities on MSF, but have been identified in area of treeless mesic flatwoods on the southern portion of the Winchester Tract. This area (Exhibit O) is monitored on an annual basis by SWFWMD and DOF personnel.

6. Beaches and Dunes

No coastal beaches or dunes occur on the MSF.

7. Swamps, Marshes, or Other Wetlands

The water resources on MSF perform essential roles in the protection of water quality, groundwater recharge, flood control and aquatic habitat preservation. State forest management personnel will work with the DOF'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. Wetland restoration will be coordinated with SWFWMD.

Wetland restoration objectives on the state forest include erosion control; restoration of hydrology and/or hydro-period, and restoration of wetland plant and animal communities. To achieve these objectives, restoration activities may involve road and soil stabilization, water level control structure removal or installation, exotic species control, site preparation and re-vegetation with native wetland species, and project monitoring. These activities may be conducted individually or concurrently; implemented by DOF personnel or by non-DOF personnel under wetland restoration mitigation projects or grant contractual agreements. Wetland restoration projects, particularly those done for the purpose of wetland mitigation, should be conducted in adherence to the protocol established in the State Forest Handbook, and in conjunction with other restoration activities indicated elsewhere in this plan.

To the extent possible, MSF staff, with assistance from the Division's Hydrology Section, will pursue funding to develop and implement wetland restoration mitigation projects. In addition, cooperative research among the DOF, other state agencies, and the federal government will provide valuable information in determining future management objectives of wetland restoration.

8. Mineral Resources

There are no known commercial mineral deposits in the area.

9. Unique Natural Features

The MSF contains numerous natural communities including mesic flatwoods, depression marshes, scrub, tidal swamps and prairie hammock. The Myakka River, portions of which MSF borders, is designated as an Outstanding Florida Water (OFW).

10. Outstanding Native Landscapes

Not Applicable.

11. Timber Resource

The DOF will implement silvicultural practices, including harvesting, thinning, burning, and reforestation, in order to establish a healthy forest with an age distribution that best duplicates natural conditions. Well-timed and executed timber harvests play an integral role in the health of the forest by removing off-site trees to re-establish native species and thinning dense forest stands to better improve under-story habitat. This allows for less damaging prescribed burns and improved forest health. All on-going timber management practices will follow the recommendations for water quality protection and erosion control contained in the current version of the DOF's Silviculture Best Management Practices (BMP) Manual.

The management of timber resources on MSF will not seek to maximize short-term economic revenue, but rather to achieve a wide array of long-term public benefits, many of which are intrinsic and not easily quantified. Good stewardship and resource sustainability are essential goals for any proposed silvicultural activity. The health of the forest ecosystem is paramount in importance.

The DOF practices sustainable timber management in the state forest system, in which annual harvest volume on each state forest will not exceed the annual growth rate. This is accomplished by periodically obtaining accurate estimates of standing timber volumes in order to ensure that the timber resource will not be depleted.

IV. MANAGEMENT CONCEPTS BY NATURAL COMMUNITIES AND PROPOSED MANAGEMENT ACTIVITIES

A. Existing and Planned Uses

The forest will be managed under the multiple-use concept. Management activities will include restoration, maintenance, and protection of all native ecosystems; integration of appropriate human uses; and ensuring long-term viability of populations and species considered endangered, threatened, or of special concern. Existing and planned uses are as follows:

1. Property Boundaries Establishment and Preservation

Ninety-five percent of the forest boundary has been established, except along wetland boundaries. Boundary line posting was completed according to State Forest Handbook standards. Prior to acquisition, the entire forest was fenced and cross fenced to manage the cattle operation. The perimeter fences have been maintained

and replaced as needed, but the cross fences have been abandoned. The forest boundaries are inspected and maintained on an established schedule of 20% of the boundary completed each year. All boundary lines are completed within a 5 year period.

2. Soil and Water Protection

Currently there are no known soil or erosion problems present on MSF. Management activities will be executed in a manner to minimize soil erosion. MSF falls within the jurisdiction of the SWFWMD. The DOF will coordinate with SWFWMD, as necessary, on activities pertaining to water resource protection and management. If problems do arise, corrective action will be implemented by DOF staff under the direction of DOF Forest Hydrology Section.

Concern over a continuous, usable source of fresh water requires emphasis on protecting this vital resource. All silvicultural activities on MSF will be conducted in compliance with the most recent edition of the Silviculture BMP Manual.

3. Roads

The MSF is intersected or bounded by six city roads and two county roads (Exhibit I). The interior portions of the forest are accessible by approximately 50 miles of previously graded roads and numerous woods roads and trails. Approximately 22 miles of graded roads are used for management activities and maintained by the DOF. The roads on MSF are categorized as primary, secondary or service roads.

4. Recreation Management

The demand for resource-based outdoor recreation in Florida is expected to continue to grow in the next ten years. Because of its location in southwest Florida, MSF's natural environment makes the forest an increasingly important recreation destination for people seeking passive, dispersed, recreational opportunities. The DOF will continue to promote and encourage recreational use by the public while protecting resources and practicing multiple-use management. Recreational activities occurring on MSF include hiking, hunting, off-road bicycling, horseback riding, primitive camping, picnicking, bird watching, and nature study. The MSF staff will work to promote nature-based tourism in the area.

a. Public Access and Parking

The public has access to the forest year around from sun rise to sunset (Exhibit J). The main entrance to the forest is from South River Road on the west side of the forest. Additional access points are located on East River Road on the north side, Jennings Boulevard on the east, and off of Foresman Boulevard on the southeast side of the forest. Parking areas can accommodate cars, trucks and horse trailers, and are located at each entrance site. Informational kiosks are located at each parking area.

In addition a picnic area is set up to accommodate the physically handicapped forest user with a paved access to one of the sites and to the port-o-let.

b. Self-Service Pay Stations

The forest utilizes self-service pay stations, commonly referred to as “Iron Rangers”, as a means of collecting visitor user fees. These stations are based on the visitor honor system and located at the four entrances to the forest. Fee envelopes are provided at each station. Visitors complete the information needed on the envelope, include the appropriate fee, remove the perforated receipt and deposit the fee envelope in the Iron Ranger. Fee envelopes are collected at regular intervals and processed according to state forest established procedures.

c. Recreational Trails

The interior road system and firebreaks on MSF provide trails for hikers, off-road bicyclists, and horseback riders. Equestrians are restricted to trails, fire lines, and woods roads. Bicycling is allowed on all roads. Hiking trails have a port-a-let at the trail head of the North Loop and South Loop trails. Kiosks are located at the trail heads to give trail users information about the trails and the wildlife they may encounter.

Suitable locations are being explored for additional hiking trails, with emphasis on the Winchester and Myakkahatchee Tracts. The construction, maintenance and improvements of nature and hiking trails will be on-going. Exhibit K displays the recreational trails on MSF.

The following management policies are intended to regulate trail use:

- Trails will be designated and signed for specific types of use.
- A standard statewide trail sign system will be used to provide information to trail users such as the types of use permitted, the name of the trail section, distances to other trail sections and forest areas, and the location of facilities.
- Trail use will be monitored for negative impacts through the use of visitor sign-in boxes, photographic plots and routine observations.
- Significant ground disturbance may require the closing or rerouting of trails.

d. Camping

Primitive camping (no water and no electric) on the forest consists of both ‘drive-to’ and remote campsites. The ten ‘drive-to’ camp sites will accommodate campers in either tent or RV configurations. The remote camp sites can be accessed by hiking, horseback or bicycle or, in the case of our river site, by canoe, kayak or small boat. The Pine Straw campsite is designated for equestrian use. The river campsite has a floating dock. During the hunting season all campsites may accommodate hunters. Suitable locations are being explored for additional camping areas, with emphasis on the Winchester and Myakkahatchee tracts.

MSF has a limited number of campsites, so all camping is through, first a reservation system, and second on a ‘first come first serve’ basis. Camping

permits are obtained from the Administration Office at the main parking area (Exhibit K).

e. Hunting and Fishing

Hunting and fishing activities are regulated by FWC on the Public Small Game Hunting Area (PSGHA). Hunting began on the forest with the 2005-2006 hunting season. Hunting pressure is limited via a quota hunt permit system for the archery and small game hunts. Fishing is currently available on the Myakka River, and may also be available in the future at the old borrow pit on the Myakkahatchee tract east of the Myakka River.

f. Environmental Education/Ecotourism

The MSF environmental education program will include guided tours, self-guided tours, and hands-on events.

5. Fire Management

The DOF utilizes a total fire management program on state forests that includes prevention, detection, suppression of wildfires and prescribed burning. This program is the responsibility of the DOF under the direction of the Myakka River District (District-15). Emphasis will be placed on prescribed burning, wildfire prevention, and education to help reduce wildfire occurrence on the forest. The Incident Commander responding to wildfires on MSF has three paramount considerations, listed in priority order: protection of human lives, both the firefighters and the public's, protection of improvements, and protection of natural resources.

Prescribed fire is the most cost efficient tool utilized for resource management on this forest. The annual forest prescribed burning program produces multiple benefits. The purpose of prescribed burning on MSF is to restore, maintain, and protect in perpetuity all native ecosystems and maintain their ecological function. The long-term goal of prescribed burning is to simulate, as closely as possible, a natural fire regime in which the majority of acres are burned during the lightning season (April - September). Such fires are needed to reduce the height and cover of woody shrubs; stimulate the recovery of the native herbaceous and grassy ground cover; promote the regeneration of native pines; reduce disease; and maintain and enhance populations of fire-adapted threatened and endangered species. Lightning season burns will be utilized to the greatest extent feasible on all tracts. Areas with heavy fuel levels will receive one or more dormant season burns until they can safely support growing season burns. Fire management facilitates timber management operations and decreases fuel loading, and as an added benefit, enhances public safety. This, along with fire prevention education, will be used to help limit the impacts of wildfire.

In using prescribed fire in the various pyric communities on this forest, it is important to understand the ecological richness of the ecotones that divide them, especially those margins between wetland and upland communities. Every effort will be made to avoid the construction and/or maintenance of fire lines in these environmentally sensitive areas. Staff will be trained to recognize sensitive areas and will be provided

with guidelines for fireline construction. The biological diversity of these ecotones will benefit from prescribed fire being allowed to burn uninterrupted into the edges of the adjacent hydric communities. In this manner, fire also serves to limit the invasion of less fire-adapted, hydric species (e.g. loblolly-bay) into the adjacent, more mesic communities.

Proposed fire lines are categorized as exclusion lines, perimeter lines, and acreage reduction lines. Exclusion lines are intended to keep fire out of wetlands, or limit fire intensity in wetlands, when conditions are unfavorable. Perimeter lines are along property lines, roads, etc. Acreage reduction lines are intended to reduce the size of burn compartments to allow for safe one-day burn operations. Because of its location in a populated, urban area, and the surrounding development, fire and smoke management is critical on MSF. This makes small burn units an important tool necessary to promote and achieve prescribed burning goals.

All guidelines, as outlined in DOF Fire Management Policy, will be used on the forest. The smoke screening system will be used as a smoke management tool and to minimize the adverse impact of smoke.

Wetland communities, such as fresh water marshes and seasonal ponds, benefit from occasional fire which serves to limit peat accumulation and invasion of woody vegetation. This helps to prevent undesired transition to plant species associated with more mesic conditions. Where these wetland communities are not sufficiently hydrated to prevent undesirable fire intensity and smoke management problems, consideration will be given to delaying prescribed fire. When proceeding with burning in these conditions, and fire lines are required, these exclusion lines should be located well out of the ecotone (minimum of 100 feet) and up in the more mesic community type. These exclusion lines will be used only in areas highly susceptible to muck fires. Pre-suppression or prescribed fire control lines should avoid, at all costs, sensitive seepage slopes adjacent to swamps and in any other area that would disrupt the natural hydrology. These control lines will be harrowed.

A comprehensive fire management plan will be developed for MSF. This plan will be reviewed annually and amended as needed, based on current resource burning conditions and past year's accomplishments. State forest staff will conduct pre-burn and post-burn evaluations, essential elements to a successful prescribed fire program. Monitoring levels will vary from burn to burn, based on burn objectives. All pre-suppression fireline construction activities will follow the recommendations for water quality protection and erosion control contained in the current version of the DOF's Silviculture Best Management Practices (BMP) Manual.

6. Silvicultural Guidelines & Forest Resource Management Objectives

Timber is a valuable economic resource and timber harvesting for the purposes of biological restoration and improving forest health are recognized silvicultural objectives on state forests.

a. Objectives

The following objectives will be applied to silvicultural practices on MSF:

- i. 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 and South Florida slash pine.
- ii. To maintain the forest over the long term through natural regeneration, uneven-aged and even-aged management.
- iii. To create a naturally regenerating forest with old growth characteristics that yields sustainable economic, ecological, and social benefits.

b. Silvicultural Operations

The forest will be managed to promote and improve overall forest health. The removal of off-site species, reduction of fuel build-up through prescribed fire, selective thinning, restoration of native species, and even-age and uneven-age management of pine stands are all actions used to promote healthy forest stands. Mechanical and chemical treatments may be used to reduce undesirable species competition where pine is desired. Protection of native groundcover will be emphasized during all silvicultural operations.

Prescribed fire and mechanical applications will be the primary methods of site preparation prior to tree planting. On sites where chemical treatments are used, applications will be limited to reflect the desired effects on all site species. Thinning, group selection, shelterwood, and clear-cutting may all be necessary techniques for maintenance and restoration of timber stands and communities.

Timber harvesting guidelines are routinely developed for each sale on a site-specific basis to minimize damage to sensitive resources. These guidelines address the importance of snags for wildlife habitat, BMP's, special considerations (related to rare and endangered species), limitations on harvesting in wet periods, machinery use, road systems, protection of ground cover, and other items pertinent to a specific site. These items are addressed in the timber sale contract. Silvicultural prescriptions will be developed so as to favor the development of larger and older trees. Natural regeneration would be dependent on the site and species characteristics.

If the need arises for timber sales, areas proposed for timber harvests would be routinely surveyed for listed species, prior to marketing the sale. All harvesting on lands adjacent to lakes, rivers, and wetlands would be carried out in compliance with the public lands section of the "Silviculture Best Management Practices (BMP) Manual", and would be conducted so as to meet or exceed those guidelines.

c. Timber Inventory Control

MSF was initially inventoried in 1997 soon after it was established as a forest. This preliminary inventory was cursory as the site had previously been a cattle ranch with farming. Much of the area had been cleared for cattle or crops, and the timber component reduced accordingly. A complete timber inventory of MSF

was completed in March of 2010; subsequently, 10% of the total land area will be inventoried each year to maintain current timber data.

The stands of MSF are mixed South Florida slash pine and longleaf pine. The current (2010) inventory data of the Myakka State Forest yields the following:

South Florida slash: 18,980 tons of pulp
2,305 tons of chip-n-saw
8,248 tons of sawtimber

Longleaf: 12,110 tons of pulp
1,421 tons of chip-n-saw
2,686 tons of sawtimber

This updated inventory data will give a clear picture of the timber resource on the forest. The average basal area of this tract is less than 20 square feet per acre.

There have been two timber harvests on the forest since its inception. The first followed a wildfire that consumed approximately 2,000 acres on the western boundary in the year 2000. The salvage harvest from that incident was 2,740 tons of pulpwood. The second followed a large outbreak of Ips beetles on the northeastern portion of the forest. The salvage operation yielded 532 tons of pulp. This particular outbreak encompassed over 250 acres but due to wet conditions and the deterioration of the standing dead timber, only a little over 100 acres were harvested.

In the future, as the new planted stands mature, harvests will be conducted in a manner consistent with the small size of the forest situated in the midst of urban communities. The annual harvest volume on the forest will not exceed the annual growth for that forest. An accurate estimation of the standing timber will guarantee that the forest will not be depleted or reduced in health and vigor.

Each year 10 percent of the entire forest will be inventoried. The timbered portions of the forest will be inventoried first. Then the remainder of the stands (depressional marshes, mesic hammock, wet prairie, etc.) will be added to the total.

d. Timber Sales

Timber sales will follow the guidelines stated in Chapter 6.4 of the most current version of the State Forest Handbook.

e. Reforestation

Currently there are areas of cutover timberland, old fields and pastures that need to be reforested. These will be addressed in the reforestation plan. Reforestation will be a key component in restoring natural ecosystems. In preparing restoration areas for reforestation, site preparation techniques that will have the least

damaging impact on desired ground cover species, but still be effective, will be selected. Herbicides, scalping, mowing and roller chopping or combinations of the above may be necessary and will be prescribed if deemed necessary to facilitate timber stand establishment. Private vendors will be used whenever possible to implement silvicultural prescriptions.

Reforestation plans will be developed for each site on a site specific basis as outlined in Chapter 6 of the State Forest Handbook. Existing plant communities, listed species, stocking levels, species to be planted, and site preparation techniques will be addressed in the reforestation plan.

7. Research Projects/Specimen Collection

Research projects may be performed on certain areas of MSF on a temporary or permanent basis for the purpose of obtaining information that furthers the knowledge of forestry and related fields. The DOF cooperates with the U.S. Forest Service, the University of Florida and other educational institutions, and governing agencies and non-profit organizations, in the accumulation of this information. The DOF will consider assisting with research projects when funds and manpower are available.

All research projects to be considered on MSF must be approved by the DOF Forest Ecologist. Any requests for research projects should be submitted to the forester or forest biologist, who will then forward it through the Forest Resource Administrator and District Manager to the DOF Forest Ecologist for final approval. Requests must include a letter outlining the scope, methodology, and location of the proposed research project. Requests are subject to review by DOF foresters, biologists, the Forest Entomologist/Pathologist and the Forest Hydrology Section as needed. Permission to conduct research will require that the investigator provide copies of all reports or studies generated from research projects to the MSF staff. The status of existing projects will be subject to periodic review by the forest staff.

The following research/monitoring projects have been carried out on MSF:

- Groundwater monitoring - began February 2006, by the WMD and is ongoing.
- Lygodium survey by strike team personnel and DOF staff, led to treatment by the Lygodium Strike Team. Initial treatment January 2003, with follow-up in August 2004, and a follow-up inspection in April 2005.

8. Law Enforcement

The Florida Department of Agriculture and Consumer Services (FDACS), Office of Agricultural Law Enforcement (OALE) will handle primary law enforcement responsibilities. Wildlife officers from FWC will enforce fish and wildlife regulations, and provide assistance in enforcing state forest rules. Additional assistance is offered by the Sarasota County Sheriff's Office and the City of North Port police department as needed.

Chapter 5I-4 of the Florida Administrative Code were promulgated for the Department of Agriculture and Consumer Services, Division of Forestry, to manage the use of State Lands and better control traffic and camping in the State Forest. These rules are on file at MSF headquarters and at the DOF state office.

9. Wildlife and Fish Management

The DOF provides land management and general supervision following the multiple-use management concept. The FWC biologist headquartered in Lakeland has shared responsibility for the biological aspects of managing the wildlife and fish populations. The FWC is responsible for setting hunting season lengths, bag limits for game animals, all with DOF input, and monitors selected game and non-game species populations.

Hunting on the Myakka River State Forest, that is a Public Small Game Hunting Area (PSGHA), is provided through a series of quota hunts. Game animals include wild hogs and small game as outlined in the management area guidelines. A special hog hunt may be considered for the management period covered by this plan. The DOF Director must approve all changes in hunting and fishing regulations before implementation by FWC.

In order to enhance wildlife habitat, the following general forest management guidelines will be observed to best meet the needs of both wildlife and the forest resource:

a. Managing Non-Game Species

Non-game species will be managed and protected through the restoration and maintenance of native ecosystems found on the forest. Determination of specific locations and type of surveys will be determined through consultation with the DOF Ecologist, Senior Forester, and FWC Biologist. Research among cooperating agencies will provide valuable information in determining future management objectives of non-game species.

b. Sensitive Species

Specialized forest 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. Species-specific management plans will be developed when necessary. Continued field observations by the FWC Biologist and DOF Senior Forester will be conducted to determine locations of these species. Management needs of sensitive species will be carried out as directed in “Endangered and Threatened Species” section (III.B.5) of this plan. The management goals outlined in the “Description of Natural Communities and Proposed Management Activities” section (IV.B) will benefit sensitive species by improving, restoring or maintaining native communities that provide critical habitat.

The following management practices are recommended to protect and preserve threatened or endangered species that are present on the forest:

- i. Locate cover, habitat/foraging ranges and breeding areas used by rare and endangered species and include locations on a GIS vegetation map.
 - ii. Protect and properly manage habitat important to rare and endangered species.
 - iii. Implement other specialized management practices for rare and endangered species as deemed necessary.
- c. **Hunter Access**
Hunting season dates, limits and methods are established annually by FWC. Access to the Myakka River PSGHA is restricted to seasonally open designated roads as outlined in the WMA brochure printed annually.
- d. **Timber Management**
The DOF recognizes the importance of snags for their wildlife value. As a general rule, snags will be left alone in their natural environment, unless they are deemed to be a potential safety hazard. Areas with significant pine timber mortality will be salvaged as required by the severity of the situation.

10. Non-Native Invasive Species

The policy of DOF is to locate, identify, and control (eradicate if possible) non-native invasive plant species. DOF employees continually monitor the forest for these species while conducting management activities. When non-native invasive plant species are discovered, a control and eradication plan will be developed and implemented based upon the severity of the infestation, its location, native species impacted and the availability of personnel and funding. The DOF will solicit support from the FWC in efforts to control non-native animals when deemed to have a negative effect on native species. A standard non-native invasive species management plan is currently being developed and will be completed for MSF within this ten-year management period.

Numerous non-native invasive species, including Florida Exotic Pest Plant Council (FLEPPC) category I and II invasive plants have been observed in the forest. Invasive exotic plant species that have been identified on MSF include cogon grass (*Imperata cylindrical*), Melaleuca (*Melaleuca quinquenervia*), air potato (*Dioscorea bulbifera*), Brazilian pepper (*Schinus terebinthifolius*). These four species have a low occurrence levels and are primarily found in the areas previously converted to agriculture. Herbicide application has been used to initiate control of cogon grass and Brazilian pepper. Hand removal has been used on air potato, camphor (*Cinnamomum camphora*), Ear tree (*Enterolobium cyclocarpum*), and Chinese tallow (*Sapium sebiferum*). Current (2010) estimates of these invasive species encompasses approximately 350 acres. Approximately 510 acres (2008-2010) of melaleuca has been treated using grants from the Suncoast Upland Non-native Invasive Plant Council. The Lygodium Strike team has been utilized to treat lygodium outbreaks as

well as other grants and MSF personnel are used on Brazilian pepper sites on the forest.

Prescribed fire and proven mechanical methods will be the preferred method used to control invasive exotics whenever feasible. Use of appropriate herbicide to control invasive species will be limited to those locations and species where there is no practicable alternative. If the need occurs, SWFWMD may be able to supplement exotic control efforts with staff and funding.

Over this ten-year period, feral hog (*Sus scrofa*) monitoring will continue. This species currently has a small population; however, the number can change over a short period of time. DOF and FWC will collaborate on management decisions concerning this species.

11. Insects, Disease and Forest Health

With the exception of one Ips beetle outbreak there has been no epidemic and/or managerially important outbreaks of damaging insects or diseases. Given the forest's current and/or expected biodiversity, structure, and management plans, no such outbreak is anticipated. In the event of new and/or undesirable pest activity, the State Forest management staff will coordinate with the DOF's Forest Health Section to develop and implement appropriate scientifically sound responses and/or management prescriptions.

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. With the approval of this plan documenting this designation, the local arthropod control agency in Sarasota County will be notified of this designation.

As a result, prior to conducting any arthropod control activities on MSF, the local agency must prepare a public lands control plan, that addresses all concerns that DOF may have for protecting the natural resources and ecosystem values on the state forest. In this regard DOF will provide the local agency details on the management objectives for MSF. 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, DOF 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.

12. On-Site Housing

DOF has established two on-site housing (mobile/manufactured home) on MSF to alleviate security and management issues. Currently (July 2010) one of these residences is occupied. The need and feasibility specific for additional residences on the state forest will be evaluated and established if considered appropriate by the Center/District manager and approved by the DOF Director. On-site housing will only be available to individuals approved by the Director. 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 Center/District manager and approved by the 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 Division of State Lands (DSL) as well as packages to DHR and FNAI for review and recommendations. The package will contain a description of the project (location, number of units, type and amount of ground disturbance, affected natural community type and nearby known archaeological or historical sites), maps (topographic and aerial) and photographs of the area.

13. Utility Corridors and Easements

The use of state forest property for utility lines, pipelines, linear facilities and transportation corridors will be discouraged to the greatest extent possible. The placement of these linear facilities in a forest fragments the natural communities. Requests for linear facility uses will be handled according to the Governor and Cabinet's Linear Facilities Policy which can be found in Chapter 2 of the State Forest Handbook.

Currently, there is one (1) established utility corridor on MSF, a Florida Power and Light (FPL) high tension powerline. The DOF does not favor the fragmentation of natural communities with linear facilities; consequently, easements for such uses will be discouraged. 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 cause no damage to sensitive resources (e.g., listed species and archaeological sites), to avoid habitat fragmentation, and to limit disruption of management activities and resource-based multiple-use activities, such as recreation.

The DOF 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, and will follow the procedures outlined in Chapter 18-2, Florida Administrative Code covering easements.

14. Ground Disturbing Activities

Although the DOF's approach to handling ground disturbing activities is identified in various sections of this plan, the DOF's overall approach to this issue is summarized here. The DOF recognizes the importance of managing and protecting sensitive

resources and will take all necessary steps to insure that ground disturbing activities will not adversely impact sensitive resources. This includes areas such as archaeological and historical sites, ecotones, wetlands, and sensitive species.

The construction of new pre-suppression fire lines will be limited to the greatest extent practicable. When new pre-suppression firelines, recreational trails, or other low-impact recreational site enhancements are necessary, their placement will be carefully reviewed by state forest field staff and they will be developed so as to avoid sensitive areas. For other ground disturbing activities such as construction of buildings, parking lots and new roads the DOF will consult with the FNAI, and the DHR. DOF field staff will also consult with the State Lands Section of the Forest Management Bureau as outlined in the current State Forest Handbook.

15. Apiaries

There is currently one (1) apiary lease on MSF. The feasibility of pursuing and establishing additional apiary leases on MSF in areas where appropriate will be evaluated in accordance with guidelines stated in Chapter 9.1 of the State Forest Handbook.

16. Cattle Grazing

Cattle grazing can be a useful tool in fuel reduction planning and will be evaluated where appropriate.

17. Ground Cover

Management activities will be designed and conducted to protect and enhance the condition and integrity of the native ground cover. Management techniques, such as prescribed fire in the growing season, will be used to rejuvenate, recover, and maintain a diversity of native ground cover to the greatest extent practical.

18. Restoration

Like many areas in Florida, fire and hydrology represent the key ecosystem processes. Thus, the MSF restoration vision focuses on mimicking pre-Columbian fire and hydrologic patterns.

This restoration philosophy has produced the following three classes of restoration goals: restoring proper fire regime, hydrology, and species composition. These goals often interact and build upon each other. Specific actions that will be taken to accomplish restoration goals are outlined in the natural community management section IV.B of this plan

a. Fire

Prior to European settlement, fires in Florida generally burned on a landscape scale until stopped by rain, a body of water, or other natural fire barriers. These fires were frequent and burned most often in the lightning season. The combination of pronounced wet/dry seasons and nutrient poor soils produced a pyrogenic flora rich in small diameter one-hour and waxy fuels.

Management techniques to mirror ancient fire processes include: prescribing growing season burns at frequent intervals, burning across ecotones and transition zones, and restoring fuels to carry fire where the understory has been eliminated. Areas to be burned will be distributed throughout the forest in a mosaic pattern. An all-season burning program will be established utilizing existing information concerning prescribed fire practices. Whenever possible, roads and natural breaks will be utilized to contain and control prescribed and natural fires.

b. Hydrology

A marked wet and dry season coupled with permeable soils and lack of topographic relief results in great extremes of flooding and drought in Florida. Human habitation has made Florida rich in roads and canals, but has altered historic natural water flows. With the assistance of the DOF Hydrology Section, MSF staff will evaluate the need for hydrologic management or restoration. Any activities associated with hydrological restoration on MSF will be implemented with the approval and coordination of partnering agencies, and with the assistance of the DOF Hydrology Section. See Exhibit L for planned and completed wetland restorations on MSF.

c. Species Composition

Ensuring that species vital to ecosystem function are in place on MSF is a restoration priority. A continuous pyrogenic ground cover ~~in~~ of fire-adapted species is important, as is the presence of longleaf pine. Juvenile longleaf pine tolerates fire earlier than other woody vegetation allowing a shorter fire return interval to coexist with silviculture.

The multiple-use management approach should maintain habitat conditions suitable for the array of species typically found within the various forest communities. As restoration proceeds and the habitats on the forest are enhanced, monitoring will be conducted to determine whether there have been any changes in species composition on MSF.

There are no current plans to reintroduce any species that are thought to have been extirpated from MSF. However, habitat conditions for key species will be monitored and, if habitat conditions become suitable, the case for reintroduction will be examined and attempted if it makes sense ecologically and from the standpoint of species recovery.

Restoration also aspires to control non-native invasive species. Long-term monitoring is vital and will be conducted as staffing and funding allow.

B. Description of Natural Communities and Proposed Management Activities

The following is a brief description of the desired condition for each cover type, the current condition, and the management techniques that will be applied to reach the

desired condition. In 2004 FNAI surveyed the entire forest and provided a map of the Historic Natural Communities. The map can be found in Exhibit M.

Through an adaptive management process, the results of these initial restoration 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 4. Vegetation Types Found on MSF.

Vegetation Type	Acres Mapped (Historic)	Silviculturally Productive (Y/N)	Burn Interval (Years)
Mesic Flatwoods	6073	Yes	2-4
Wet Flatwoods	1119	Yes	2-4
Depression Marsh	872	No	1-8
Wet Prairie	404	No	2-4
Mesic Hammock	45	No	10+
Tidal Creek	34	No	N/A
Tidal Marsh	23	No	N/A
Scrub	16	Yes	6-15
Scrubby Flatwoods	6	Yes	4-10

1. **Mesic Flatwoods** - (6,073 acres)

Desired Future Condition

Overstory - The overstory in mesic flatwood areas will consist of uneven-aged stands of South Florida slash pine (*Pinus elliottii* var. *densa*), with varying amounts of longleaf pine (*Pinus palustris*) mixed in. This should be an open canopy with at least three age classes of trees with a basal area of 40 to 70 square feet per acre. The lower end of this range is already found in parts of the forest, notably the northwestern portion of the North Myakka tract.

Midstory - The midstory in mesic flatwood areas should be sparse to absent in tall shrub cover. The short shrub cover should be maintained at 35 to 65 percent coverage to allow ample light for herbaceous growth, which should be maintained

above 25 percent of the species composition with less than 5 percent weedy cover such as broomsedge, bushy bluestem, carpet grass.

Groundcover - The groundcover will be species that will accommodate cyclic prescribed burning. Preferred species are native grasses and herbs such as wiregrass (*Aristida stricta*), witchgrass (*Dicanthelium aciculare*), bottlebrush threeawn (*Aristida spiciformis*), blackroot (*Pterocaulon virgatum*) and others.

Fauna - Healthy and sustainable populations of flatwoods animal species typical of this area will be present in the flatwoods community. Species such as bobcat (*Lynx rufus*), Florida sandhill crane (*G. Canadensis pratensis*), wood stork (*Mycteria americana*), bald eagle (*Haliaeetus leucocphalus*), eastern indigo snake, (*Drymarchon couperi c.*) and gray squirrels (*Sciurus carolinensis*) will be indicators of a healthy community.

Edge Effect - There will be natural grading of habitats between the flatwoods and the adjoining and embedded plant communities. This edge effect will allow for a greater diversity of plants and animals because of the diverse microsystems available. The communities that are commonly associated with the mesic flatwoods in MSF are wet flatwoods or wet prairie with scattered depression marshes. This edge effect in the flatwoods will remain elastic and continue to change in shape, location and size depending upon environmental processes.

Prescribed Burning Requirements - 2 to 4 years. Historically, fires ignited by lightning during the early thunderstorm season (May - July) would have spread across the landscape burning the mesic - wet flatwood complex.

Hydrology - The hydrology of the flatwoods is cyclic, varying with weather patterns producing both wet and dry years. Ditch plugs and culverts may be necessary to restore natural hydrology to these areas. Existing firebreaks should be rehabilitated whenever possible. New fire lines should be only constructed in seasons with elevated to extreme fire potential. Mechanical disturbance in the transition zones and marsh areas of this mosaic will be restricted.

Silviculture - The mesic flatwoods of MSF is the primary vegetation type for long term silvicultural management. Management should focus on uneven-aged management of a mix of South Florida slash pine and longleaf pine. Stocking densities should be on the order of 40 to 70 square feet of basal area per acre. Saw palmetto (*Serenoa repens*) should be kept in check with a recurring combination of roller/chopping and prescribed fire.

Recreation Opportunities - Horseback, trail bike and hiking trails is the largest component of the recreational activities in the mesic flatwood. Both individual and groups will find the forest to be attractive for their recreational use. Geo-caching, compass tracking and nature/wildlife observation are some of the variations of the 'hiking' activity. Camping at designated sites is second in importance and is usually

done in conjunction with the former. Recreational activities are monitored for impact on the environment and modified as needed. This includes moving campsites when area is showing signs of overuse.

Current Condition

The mesic flatwoods currently at MSF vary from relatively undisturbed (resembling the presumed historic condition) to areas used for agricultural activities and then left fallow. They are frequently part of a mosaic with wet flatwoods or wet prairie with scattered depression marshes. Undisturbed areas typically have a canopy of longleaf pine. South Florida slash pine is present and dominates in areas that have been disturbed. Currently, the pine cover is sparse to moderate with canopy cover in the vicinity of 5 percent and basal area around 10 square ft/acre. Approximately 660 acres of open or understocked mesic flatwoods have been planted on the forest to date. There is typically a subcanopy of young pines indicating a good age structure. There are few tall shrubs in the undisturbed areas; wax myrtle (*Myrica cerifera*) is present in areas that have not burned in recent years. The short shrub layer is dominated by saw palmetto which typically covers 35 to 55 percent of the area. Other common shrubs are coastalplain staggerbush (*Lyonia fruticosa*), gallberry (*Ilex glabra*), and wax-myrtle.

Shiny blueberry (*Vaccinium myrsinites*), wild pennyroyal (*Piloblephis rigida*), fetterbush (*Lyonia lucida*), dwarf live oak (*Quercus minima*), winged sumac (*Rhus copallina*), fourpetal St. John's Wort (*Hypericum tetrapetalum*), netted pawpaw (*Asimina reticulata*) and tarflower (*Bejaria racemosa*) are less frequent. The herbaceous cover in the undisturbed areas is moderate to abundant, dominated by wiregrass, bottlebrush threeawn (*Aristida spiciformis*), witchgrass, lovegrass (*Eragrostis spectabilis*), flattop goldenrod (*Euthamia caroliniana*), broomsedge (*Andropogon virginicus*), bushy bluestem (*Andropogon golomeratus*), sedges (*Fuirena scirpoidea*, *Rhynchospora fascicularis*, *Scleria* sp.), daisy (*Erigeron vernus*), lopsided Indian grass (*Sorghastrum secundum*), milkworts (*Polgalla cruciata*, *P. nana*, *P. setacea*, *P. incarnata*, *P. balduinii*), and blue-eyed grass (*Sisyrinchium angustifolium*). Other herbs include blackroot, *Pterocaulon virgatum*, *Sabatia stellaris*, *Pityopsis graminifolia*, *Hypericum cistifolium*, *Hyptis alata*, and *Drosera capillaris*.

Disturbed areas may have many of these species but are dominated by weedy species such as broomsedge, bushy bluestem, carpet grass (*Axonopus furcatus*), *Euthamia caroliniana*, purple thistle (*Cirsium horridulum*), and Nuttall's thistle (*Cirsium nutallii*), pinebarren goldenrod (*Solidago fistulosa*), Mohr's thoroughwort (*Eupatorium mohrii*), dog fennel (*Eupatorium compositifolium* and *E. capillifolium*), blue maidencane (*Amphicarpum muhlenbergianum*) and wax myrtle.

Although not the preferred habitat for Florida Scrub Jay, this endangered species has been observed in areas of treeless mesic flatwoods on the southern portion of the Winchester Tract, see Exhibit O, and are monitored annually.

Restoration

Management goals for the mesic flatwoods of MSF should focus on maintaining the existing high quality areas through prescribed burning and upgrading areas that are over populated with saw palmetto by a combination of roller chopping, prescribed burning and exotic species control. In addition, planting of longleaf and South Florida slash pine at a minimum rate of 605 trees per acre where natural regeneration is not sufficient to yield the desired basal area should be undertaken. While the timing of prescribe burns ideally would be during the early lightning season, weather conditions, smoke management considerations, prescribed fire guidelines and local burning restrictions may dictate that it could be done prior to the onset of the lightning and thunderstorm season and as soon after the rainy season as possible (October through April). This presents a sizeable window for burning but when all factors are taken into consideration, it still is a challenge to get the required acreage burned to remain on the desired burn cycle. Prescribed fires should also be applied to disturbed areas (mostly old agricultural areas) to reduce the dense shrub cover and encourage native species recruitment and colonization. Roller chopping is an effective way to reduce the amount of saw palmetto. Aggressive exotic species monitoring program, with control treatments as needed, will have to be utilized when managing in this manner. Another option might be the seeding or planting of wiregrass and other native, pyrogenic species. This would help these areas to burn more effectively without encouraging weed and exotic species to proliferate.

Existing Conditions	Prescription for Restoration
Undisturbed even aged Flatwood	Relatively small portion of the forest is in these stands. Open areas should be chopped, if necessary, and burned prior to hand planting. In areas with sufficient seeds trees natural regeneration will be encouraged. The stands will be thinned periodically as needed to achieve uneven age stands. Planting should be of South Florida slash pine and longleaf pine trees. Spot herbicide treatment, if necessary, to reduce grass competition. Special efforts should be made to ensure prescribed burning goes according to 2-4 year recommendation. Invasive, exotic species should be addressed where encountered although this is not a major concern in this naturally occurring flatwoods. Effort needs to be made to keep from introducing exotic species into this system.
Old Pasture (not planted or failed planting)	Site prep should include chopping palmetto and prescribe burning. After hand planting, strip herbicide to control grass competition. Plant with a mix of South Florida slash pine and longleaf pine trees at a minimum rate of 605 trees per acre. Special efforts should be made to ensure prescribed burning goes according to 2-4 year recommendation. Control and preferably elimination of exotic invasive species will be a major undertaking.

Existing Conditions	Prescription for Restoration
Old Pasture (planted)	Herbicide and judicious prescribed burning to open up areas for subsequent hand planting of South Florida slash pine and longleaf pine trees to increase the stocking levels of the tree cover. The present density varies from less than 100 trees per acre to over 250. Areas less than 200 trees per acre should be planted to bring the density up to 300+ trees per acre. Control of weedy ground cover and control and elimination of invasive exotic species, especially Brazilian pepper, tropical soda apple (<i>Solanum viarum</i>) and cogon grass.
Treeless areas	This portion of the Winchester Tract was cleared and put into row crops by the former owner, prior to its inclusion in the state forest system; Florida Scrub Jays (FSJ) have moved into this area and taken up residence. This area was impacted by the construction of Winchester Blvd, with the FWC, FDOT, Sarasota and Charlotte Counties agreeing that the southern portion or “treeless area” of this tract should be ‘improved’ for the FSJ based on the presents of FSJ. Aggressive action is required to continue the improvement of habitat for the FSJ’s. Special management consideration will be given to the FSJs during this ten year period. Prescribed fire and mechanical alteration of vegetation will be used. Effective management of this species will require strategically planned restoration. At some future time small pine islands can be established that will benefit both the forest and the FSJs.

2. Wet Flatwoods - (1,119 acres)

Desired Future Conditions

Overstory - The overstory in wet flatwoods areas will be a mixture of South Florida slash pine and longleaf pine. The density of the pine would be a minimum of 20 to 40 square feet of basal area. The longleaf would establish in drier years and exist in areas with slight elevations from the surrounding sites allowing some drainage.

Midstory - In areas that burn regularly there will be no tall shrub layer however wax myrtle may be present in areas where fire is infrequent. The short shrub layer would be sparse, usually represented by small patches of saw palmetto or scattered wax myrtle. Short shrubs should cover less than 20 percent of the community.

Groundcover - Herb cover in the wet flatwood should be greater than 75 percent, with less than 5 percent weedy cover. Dominant species are wiregrass, nut rush (*Scleria ciliata*), panic grass (*Panicum tenarum*), and various sedges (*Fuirena*

scirpoidea, *Rhynchospora inundata*, *R. fascicularis*). Other common species include *Sebatia stellaris*, *Polygala cymosa*, *P. baldunii*, *Chaptalia tomentosa*, and *Hypericum myrtifolium*.

Fauna - Healthy populations of animal species typical of the wet flatwoods will be present. These would include bobcats (*Lynx rufus*), marsh rabbits (*Sylvilagus palustris*) and cotton tails (*Sylvilagus floridanus*), various mice and moles, gray squirrels (*Sciurus carolinensis*), indigo (*Drymarchon couperi* c.), garter (*Thamnophis s. similis*) and ring necked (*Diadophis p. punctatas*) snakes, chameleons (*Chamaeleonidae* species) and other lizards, bald eagles (*Haliaeetus leucocphalus*), fly catchers (*Myiarchus* species), mockingbirds (*Mimus polyglottos*), blue jays (*Cyanocitta cristata*) to name a few of the many species that inhabit the wet flatwoods community.

Edge Effect - There will be natural grading of habitats between the wet flatwoods and the adjoining and embedded plant communities. The communities commonly associated with the wet flatwood are the mesic flatwood and the wet prairie with scattered depression marshes. This edge of the wet flatwood will be constantly changing in shape location and size depending upon environmental processes.

Prescribed Burning Requirements – 2 to 4 years. The wet flatwoods naturally burns on a frequency similar to that of mesic flatwoods, possibly more frequent because of its fuels. The fine fuels that dominate this community are highly flammable and carry fire quickly across the landscape.

Hydrology - The hydrology of the wet flatwoods is cyclic, varying with weather patterns producing both wet and dry years. Ditch plugs and culverts may be necessary to restore natural hydrology to these areas. Fire breaks should be kept to a minimum to avoid unnecessary drainage and only constructed because of extreme fire potential. Mechanical disturbance in the wet flatwoods should be restricted.

Silviculture - The wet flatwoods of MSF are not a major productive vegetation type for long term silvicultural management. Stocking densities will probably be in the order of a minimum of 20 to 40 square feet of basal area per acre. Fire should be the main tool for keeping saw palmetto in check. Roller Chopping should be used sparingly because of the adverse effect on the herbaceous and grass component of this forest type.

Recreation Opportunities - As in the mesic flatwoods, the main, year round recreational activity in the wet flatwoods is horseback, biking and hiking coupled with nature watching. Hunting, in season, is possible in this area however camping is not an activity normally associated with this community. The wet flatwood is more sensitive than the mesic flatwood and may show impact from recreational activities sooner.

Current Condition

Wet flatwoods at MSF occur as a mosaic with mesic flatwoods or in broad poorly drained areas. This community is similar to wet prairie, but is dry enough to allow the establishment of pines and some shrubs. There is a sparse canopy of longleaf pine or south Florida slash pine or a mix with an average basal area of less than 10 square feet per acre. Typically there is no tall shrub layer, but wax myrtle may dominate in areas that have not burned regularly. The short shrub layer is sparse, usually represented by patches of saw palmetto or scattered wax myrtle. Herb cover is typically dense and diverse. Dominant species are wiregrass, nut rush (*Scleria ciliata*), panic grass (*Panicum tenarum*), and various sedges (*Fuirena scirpoidea*, *Rhynchospora inundata*, *R. fascicularis*). Other common species include *Sebatia stellaris*, *Polygala cymosa*, *Polygala baldunii*, *Chaptalia tomentosa*, and *Hypericum myrtifolium*. Former wet flatwoods areas likely occurred along with mesic flatwoods in areas modified for pasture or row crops (central portion of the main property). These areas are now dominated by wax myrtle and weedy grasses and forbs (*Andropogon glomeratus*, *Eupatorium compositifolium*, *Euthamia caroliniana*, and *Axonopus* sp.). Invasive exotics include Brazilian pepper, Old World climbing fern, melaleuca, cogon grass, and others with very limited extent at present.

Restoration

Management goals for the wet flatwoods of MSF should focus on natural regeneration to increase the canopy and where that is lacking, tree planting to bring the canopy up to a minimum of 20 to 40 square feet of basal area per acre. Timing of fires ideally should be during the early lightning season or as close to this period as practicable. Prescribed fires should also be applied to the mostly old agriculture areas to reduce the dense shrub cover and encourage native species recruitment and colonization. Chopping these areas may be an option, but exposed soil may encourage colonization by weedy and exotic species. Seeding or planting of wiregrass and other native, pyrogenic species, when the canopy has increase to the desired density, will allow these areas to burn more readily which will help reduce weedy and exotic species. Roller chopping should be avoided in areas that support wiregrass and other native species. Although chopping may reduce shrub cover in problem areas, it also reduces wiregrass cover and increases weedy species that are less likely to carry fire.

Existing Conditions	Prescription for Restoration
Undisturbed Wet Flatwoods	Maintain the existing high quality areas through frequent prescribed fires. Timing of fires ideally should be during the early lightning season or as close to this period as practicable.
Wet Flatwoods converted to pasture or cropland	Prescribed fires should also be applied to disturbed areas to reduce the dense shrub cover and encourage native species recruitment and colonization. Planting at the minimum rate of 605 trees per acre of South Florida slash pine should be undertaken to reforest the wet flatwoods.

Existing Conditions	Prescription for Restoration
	After overstory establishment, seeding or planting of wiregrass and other native species may be considered to increase fuel continuity for prescribe burning. Pyrogenic species will allow these areas to burn more readily which will help reduce weedy and exotic species. Although chopping may reduce shrub cover in problem areas, it also reduces wiregrass cover and increases weedy species that are less likely to carry fire.

3. Depression Marsh - (872 acres)

Desired Future Conditions

The depression marsh typically will have two or three zones of vegetation along the hydrologic gradient. Grasses and sedges should dominate the vegetation cover in all but the deepest areas of the marsh where maidencane (*Panicum hemitomon*), sawgrass (*Cladium jamaicense*) or pickerelweed (*Pontederia cordata*) may be present. Shrub cover should be zero to five percent except sandweed (*Hypericum fasciculatum*) which may be present in greater amounts.

The outer zone is characterized by longleaf threeawn (*Aristida palustris*), bluejoint panicum (*Panicum tenerum*), piedmont marshelder (*Iva microcephala*), clustered bushmint (*Hiptis alata*), camphorweed (*Pluchea rosea*), combleaf mermaidweed (*Proserpinaca pectinata*), climbing hempvine (*Mikania scandens*), blue maidencane (*Amphicarpum muhlenbergianum*) and heliotrope (*Heliotropium polyphyllum*).

The slightly deeper zone may have maidencane, Tracy's beaksedge (*Rhynchospora tracyi*), narrowfruit horned beaksedge (*Rhynchospora inundata*) sandweed, lemon bacopa (*Bacopa caroliniana*), bladderworts (*Utricularia* spp.) and water toothleaf (*Stillingia aquatica*).

Deeper pockets typically have pickerelweed, bulltongue arrowhead (*Sagittaria lancifolia*), and fireflag (*Thalia geniculata*), or may be dominated by sawgrass or Carolina willow (*Salix caroliniana*)

Fauna - Species found in the depression marsh will be those typical of this habitat. These would include the American alligator (*Alligator mississippiensis*), fish, and a wide variety of wading birds such as egrets (*Casmerodius* species), herons (*Egretta* species), coots (*Fulica* species), kingfishers (*Ceryle* species) and others. These would indicate a healthy and sustainable habitat.

Ecotones - The depression marsh is found in conjunction with and embedded in mesic flatwoods, wet flatwoods and wet prairie. The size and shape of the marsh will be dynamic over time and its perimeter will be a location where fauna from all of these three habitats will, on occasion, be found.

Burning Requirements - Depression marshes likely burned irregularly every 1 to 8 years depending on water levels at the time of fires on the landscape. Fires generally occurred early (April - June) in the lightning season when water was low and surrounding communities were dry.

Hydrology - Depression marshes will go through wet and dry cycles and swell or shrink accordingly. The marshes provide storage, filtration and re-charge service necessary for the health of the larger, surrounding area.

Silviculture - The depression marsh is not a timber producing component of the forest but still needs attention in the form of eradication of exotic species that invade the marsh. Such species as Old World climbing fern, melaleuca, rosary pea (*Abrus precatorius*), cogon grass, and others need to be eradicated or controlled when found.

Recreational Opportunities - Mainly consist of bird or nature observation. Hunting of waterfowl in season is also available. Fishing for the lone angler is potential but no provisions are to be made for larger numbers of people.

Current Conditions

Depression marshes at MSF range in condition from undisturbed to highly altered by agriculture. Several depression marshes have been ditched (visible on historic photos as well as current imagery) which has substantially shortened their hydrology. Although prescribed fire has been applied in the surrounding flatwoods, the presence of shrubs such as Carolina willow and wax myrtle along the edges or in ever increasing domes are evidences that the marshes generally have not burned in recent years.

Restoration

Marshes should generally be prescribe burned with the surrounding communities. Ideally fire should be prescribed at a time when water is low or absent in the marshes. Marshes with substantial shrub cover (either within the marsh or surrounding edges) should be targeted for repeated lightning season fires on a short return interval.

Existing Conditions	Prescription for Restoration
Undisturbed Depression Marsh	Prescribe burn with the surrounding areas. Eradicate exotics from the marsh using herbicides labeled for use in this environment. Monitor any activities that may adversely affect the marsh.
Altered Depression Marsh	Put on a short burn rotation for those areas that have not been burnt recently. Determine if ditch plugs are needed to restore the proper hydrologic cycle. Eradicate exotics with proper method, timing and materials.

4. Wet Prairie - (404 acres)

Desired Future Conditions

Vegetative cover - Wet prairies are herbaceous wetland communities that occur on topographically flat areas that are poorly drained. These situations may occur in low areas of the wet flatwoods or between basin wetlands such as depression marsh. There is typically no canopy or shrub layer. Short shrubs cover less than 20 percent of the community. Herb cover should be greater than 75 percent with less than 5 percent weedy cover. The herbaceous layer is dominated by wiregrass. Other species include gulfdune paspalum (*Paspalum monostachyum*), hairawn muhly (*Muhlenbergia capillaris*), yellow seed false pimpernel (*Lindernia dubia* var. *anagallidea*), narrow fruit horned beaksedge (*Rhynchospora inundata*), broomsedge bluestem (*Andropogon virginicus*), colicroot (*Aletris lutea*), Baldwin's milkwort (*Polygala balduinii*), procession flower (*Polygala incarnata*), Florida yellow flax (*Linum floridanum*), southeastern sneezeweed (*Helenium pinnatifidum*), Florida tickseed (*Coreopsis floridana*), rosy camphorweed (*Pluchea rosea*), fascicled beaksedge (*Rhynchospora fascicularis*), yellow eyed grass (*Xyris* spp.) clustered bushmint (*Hyptis alata*), blue maidencane (*Amphicarpum muhlenbergianum*), prairie fleabane (*Erigeron strigosus*), rose of Plymouth (*Sabatia stellaris*), largeflower rosegiant (*Sabatia grandiflora*), giant whitetop (*Rhynchospora latifolia*), and bluejoint panicum (*Panicum tenerum*).

Fauna - Healthy and sustainable populations of flatwoods animal species typical of this area will be present in the wet prairie community. These will include little blue heron (*Egretta caerulea*), Florida sandhill crane (*G. Canadensis pratensis*), bald eagle (*Haliaeetus leucocphalus*), other various turtles, snakes, lizards and small mammals.

Ecotones - The wet prairie are associated with wet flatwoods and depression marsh communities, all three of which are found in and adjacent to the mesic flatwood. This association is very dynamic and will continue to change in size, shape and even location. The changes between these communities created micro-habitats that add to the diversity of ecosystem.

Prescribed Burning Requirements – 2 to 4 years. Wet prairies naturally burn on a frequency similar to that of wet and mesic flatwoods, possibly more frequent because of its fuels. The fine fuels that dominate the community are highly flammable and carry fire quickly across the landscape.

Hydrology - The wet prairies are flat and poorly drained. Depending on the predominant weather patterns, the wet prairies may remain flooded for a large portion of the year. In any case the community is sensitive and care needs to be taken when constructing fire lines in or near the wet prairie.

Silviculture - There is no timber production in the wet prairie. Exotic, invasive plants need to be controlled and eradicated and practices such as burning and planting are undertaken to promote the establishment of native species.

Recreational Opportunities - Nature observation is the major recreational opportunity in the wet prairie. This can be coupled with horseback, trail biking and hiking. Hunting is possible in season.

Current Condition

Fire suppression has allowed the establishment of tall shrubs such as wax myrtle and in some cases even trees to encroach in the wet prairie. Small areas of the wet prairie have been modified for agriculture prior to purchase of the area by the state. In general, however, the wet prairies are in good condition. The indigenous species mentioned above are found presently in the wet prairie. They need to be encouraged to spread and species found that are not indigenous to this community should be eliminated.

Restoration

As with the flatwoods, management goals for the wet prairies of MSF should focus on maintaining the existing high quality areas through frequent prescribed fires. Timing of fires ideally should be during the early lightning season or as close to this period as practical. Prescribed fires should also be applied to disturbed areas (mostly old agriculture areas) to reduce the dense shrub cover and encourage native species recruitment and colonization. Chopping these areas may be an option but exposed soil may encourage colonization by weedy and exotic species. Seeding or planting of wiregrass and other native, pyrogenic species will allow these areas to burn more readily which will help reduce weedy and exotic species. Roller chopping should be avoided in areas that support wiregrass and other native species. Although chopping may reduce shrub cover in problem areas, it also reduces wiregrass cover and increases weedy species that are less likely to carry a fire, and may alter the hydrology of these sensitive communities.

Existing Conditions	Prescription for Restoration
Undisturbed Wet Prairie	Prescribe burn with the adjacent communities. Plant native grasses and herbaceous species if necessary. Watch for and mitigate any impact from recreational activities. Do not roller chop.
Altered Wet Prairie	Prescribe burn frequently to reduce wood vegetation. Roller chop only in extreme cases to reduce woody species encroachment. Plant native grasses and herbaceous plants. Be observant and do not let exotic weedy species get established after such activity. Monitor for adverse impacts from recreational and other activities.

5. Mesic Hammock - (45 acres)

Desired Future Condition

Overstory - The mesic hammock occurs on moderately poorly drained soils in area that receive infrequent fire. They are typically associated with wetland communities that inhibit the spread of fire on the landscape. At MSF mesic hammock occurs along small creeks and along the Myakka River. These hammocks are typically small, linear communities with few plant species. The canopy is dominated by either sabal palm (*Sabal palmetto*) or live oak (*Quercus virginiana*).

Midstory - The tall shrub layer is typically dominated by wax myrtle; sweet bay (*Magnolia virginiana*), red bay (*Persea borbonii*), and swamp dogwood (*Cornus foemina*), are occasionally present. The short shrub layer also may be dominated by wax myrtle; saw palmetto, myrsine (*Rapanea punctata*), coin vine (*Dahlbergia ecastaphyllum*), white stopper (*Eugenia axillaris*), randia (*Randia aculeata*) are occasionally present.

Groundcover - The herbaceous layer is variable in density and composition, depending on hydrology and location. Upper edges of the hammock may be dominated by midsorus fern (*Blechnum serrulatum*) or swamp fern (*Thelypteris palustris*). Other species include false nettle (*Boehmeria cylindrica*), and witchgrasses.

Fauna - Healthy and sustainable populations of animals that use the mesic hammock that are typical of this area will be present. Species such as bobcat (*Lynx rufus*), wood stork (*Mycteria americana*), eastern indigo snake (*Drymarchon couperi* c.), and gray squirrels (*Sciurus carolinensis*) will be indicators of a healthy community.

Ecotones - The mesic hammock is found in association with the tidal marsh, wet flatwoods and mesic flatwoods and in some cases, scrub and scrubby flatwood.

Prescribed Burning Requirements - Fire is infrequent in the mesic hammock, occurring catastrophically every ten years or more. In general, hammocks can be used as a fire break. In extremely dry years all efforts should be taken to keep fire out of the hammock.

Hydrology - Hardwood hammock species growing on hammock soils provide a community that has a wet hydrology in comparison to some of the bordering communities. Varying weather patterns produce both wet and dry years. The mesic hammock provides a natural fire break in normal years. However during extremely dry years it is imperative to construct fire breaks around the hammock to keep fires out.

Silviculture - The mesic hammock of MSF is not a vegetation type for silvicultural management. It is an area in need of constant monitoring to be aware of and control exotic, invasive plants from becoming established and then much harder to eradicate.

Recreational Opportunities - The mesic hammock tends to be an "oasis" and is a good resting place for hikers, hunters, fishermen and other forest users. It is an ideal location for boardwalks and observational structures for wildlife observers. They are often used by naturalists to give 'nature talks' to interested groups. The mesic hammock is also ideal for picnics provided that care is taken not to impact the community with overuse.

Current Condition

The current condition of the mesic hammock is very close to the desired future condition, with the exception of the presence of exotic species, mainly Brazilian pepper, which is dominant in both the tall and short shrub layer. Vines include poison ivy (*Toxicodendron radicans*), pepper vine (*Ampelopsis arborea*), Virginia creeper (*Parthenocissus quinquefolia*) and smilax (*Smilax tamnoides*).

Restoration

Management in mesic hammocks should be focused on removal of exotic species. Typical prescribed burns in the adjacent flatwoods should naturally extinguish along the hammock edge. Firebreaks should be discouraged to allow for the development of a natural ecotone and to help minimize invasion by weedy or exotic species.

Existing Conditions	Prescription for Restoration
Existing Mesic Hammock	Remove exotic species. Monitor to avoid future establishment of exotic, invasive plants. Avoid routine fire breaks on perimeter. Be careful of impact through over use.

6. Tidal Marsh - (23 acres)

Desired Future Condition

Shrubs - Tidal marsh is present at the mouths of the several small creeks that drain MSF. The upper edge typically has a variably dense (5 to 80% cover) tall shrub layer of one or more of the following species: marsh elder (*Iva frutescens*), red mangrove (*Rhizophora mangle*), Carolina willow (*Salix caroliniana*), and buttonwood (*Conocarpus erectus*).

Herbaceous layer - This is an herb dominated community. The herbaceous cover is also variable in cover and composition. It consists of patches of the following species: saltgrass (*Distichlis spicata*), cordgrass (*Spartina spartinae*), leather fern (*Acrostichum danaeifolium*), swamp lily (*Crinum americanum*), black needle rush (*Juncus roemerianus*) and bulrush (*Scirpus spp.*)

Fauna - Healthy populations of animal species typical of the tidal marsh will be present. These would include bobcats (*Lynx rufus*), marsh rabbits, lizards, frogs,

turtles, bald eagles(*Haliaeetus leucocphalus*) to name a few of the many species that utilize the tidal marsh.

Prescribed Burning Requirements - Tidal marsh burns irregularly every 5 to 50 years depending on position on the landscape. The small marshes at MSF likely burn during fires that move from the uplands into the marsh rather than fires that naturally started in the marsh.

Hydrology - The hydrology of the tidal marsh is very important in that it is acting as the initial filtering strata for water movement from the estuarine regime into the land proper and becomes a reservoir for rainwater runoff during the wet cycles of the year. Mechanical disturbance of the tidal marsh should be avoided.

Silviculture - The tidal marsh is not a vegetation type for silvicultural management. It is necessary to keep exotics under control if not eradicated.

Current Condition

The tidal marsh areas on the MSF are in excellent condition with the exception of some exotic species. Brazilian pepper will be controlled through regular monitoring and elimination.

Restoration

Remove invasive exotics; allow prescribed fires to extinguish naturally within the marsh.

Existing Conditions	Prescription for Restoration
Tidal Marsh	Control and eradicate invasive exotics within the community. Allow prescribed fires to extinguish naturally with the marsh

7. **Scrub** - (16 acres)

Desired Future Conditions

Overstory - There is no canopy in the Scrub community. The tall shrub layer is typically 10 to 15 feet tall, moderately dense, and composed of sand live oak (*Quercus geminata*) and Chapman's oak (*Quercus chapmanii*).

Understory - The short shrub layer is typically dense, and composed of sand live oak, myrtle oak (*Quercus myrtifolia*), saw palmetto, staggerbush (*Lyonia fruticosa*), and shiny blueberry.

Groundcover - Herb cover is sparse, represented by broomsedge, wiregrass, threeawn grass (*Aristida spp.*) and milkpea (*Galactic elliottii*).

Fauna - The scrub jay (*Aphelocoma coerulescens*) is the most quintessential denizen of the scrub community. However it probably is not present in the scrub of MSF

because of the small size of this community. Various scrub lizards, sand skinks, mice, moles and shrews inhabit this area. The fauna in general will probably not be typical of that found in other scrub communities because of the small size of the scrub community. Gopher tortoises (*Gopherus polyphemus*), exist in the edge of the scrub and transition to mesic flatwood.

Edge Effect - The ecotone will be pronounced because of its relative size in comparison with the total community. Species will be able to utilize the habitat from either the scrub or the mesic flatwood in their search for food and cover.

Prescribed Burning Requirements - Scrub fire requirements are highly variable, depending on landscape settings. Some references, including the FNAI natural community guide, state a fire return interval of 20 years or more; however current thought is that many scrubs naturally would have burned much more frequently (every 6 to 15 years).

Hydrology - The cut of the creek has produced an area of well drained soils and shadows a small area from frequent fire.

Silviculture - There are no major timber producing opportunities within this community.

Recreational Opportunities - The scrub community is so small within the forest that there are minimal recreational opportunities there. A certain amount of passive activities such a nature observation, hunting in season and a limited amount of fishing would be the recreational opportunities available.

Current Condition

Small patches of scrub are present along four small creeks in the northeastern portion of the main tract of MSF. These communities are in good condition because of their inaccessibility. Exotic species encroachment is the main threat rather than ground disturbing activities.

Restoration

Scrub management in Florida is typically directed at conditions favorable to scrub jays (oaks generally less than 6 feet tall and 20 percent bare soil). Although the scrub at MSF is not extensive enough to support scrub jays, this might be a reasonable goal. Composition is currently typical of scrubs in southwestern Florida.

Existing Conditions	Prescription for Restoration
Scrub	Allow fire from adjacent flatwoods to burn into the scrub. If the scrub does not burn during repeated burns of the flatwood, a specific prescription should be considered. There are currently old firebreaks between the scrub (and mesic hammock) and the surrounding flatwoods. These breaks should not be maintained so that a natural ecotone

	may develop.
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8. **Scrubby Flatwoods** - (6 acres)

Desired Future Condition

Overstory, Midstory - Widely spaced longleaf pine over a scrub oak (*Quercus geminata*, *Quercus chapmanii*, *Quercus myrtifolia*) dominated tall and short shrub layer which should not be over 6 feet tall. Other shrubs include saw palmetto, coastal plain staggerbush (*Lyonia fruticosa*), deerberry (*Vaccinium stamineum*), and shiny blueberry. Shrub density should be less than 80%.

Groundcover - Herb cover is sparse represented principally by scattered patches of wiregrass and broomsedge; other species include milk pea (*Galactia elliottii*), deer tongue (*Carphephorus corymbosus*), lopsided Indian grass (*Sorghastrum secundum*), wild pennyroyal (*Piloblephis rigida*), and bracken fern (*Pteridium aquilinum*).

Fauna - Gopher tortoise (*Gopherus polyphemus*), garter snakes, vinegaroons, skinks, mice, shrews, and moles are all inhabitants of the scrubby flatwood. The scrub jay (*Aphelocoma coerulescens*) is more an inhabitant of the scrub but may be found here also.

Edge Effect - The scrubby flatwoods of MSF are found in association with tidal marsh areas and mesic flatwood and mesic hammock. This provides for a wide diversity of species but is mitigated by the small size of the community.

Prescribed Burning Requirements - Scrubby flatwoods historically burned at a frequency between that of mesic flatwoods and scrub, likely in the range of every 4 to 10 years.

Hydrology - Like the scrub community the scrubby flatwood has sandy, well-drained soils and are protected from frequent fire.

Silviculture - No timber stores are available in the scrubby flatwood. The sparse overstory trees can be cut to salvage in the event of mortality through fire or insect damage, or they may be removed should the need arise to remove a mature/over-mature individual. This is not a major management tool for this community but can be included with the surrounding mesic flatwoods silviculture management practices as needed.

Recreational Opportunities - The scrubby flatwood is inaccessible to recreational use because that part of the forest is locked by development and the Myakkahatchee River. Nature observation because of the proximity to other natural communities would be the major recreational activity presented.

Current Condition

A small area of scrubby flatwoods is present in the northeastern portion of the northeastern tract. Species composition is currently characteristic of scrubby flatwoods in the region. The scrubby flatwoods on MSF is remote and no public access to it exists today.

Restoration

The scrubby flatwoods should be allowed to burn along with the adjacent mesic flatwoods. Environmental conditions will likely prevent the scrubby flatwoods from burning during each prescription for the area. If the scrubby flatwoods does not burn during repeated fires, a specific prescription may be necessary for this small area.

Existing Conditions	Prescription for Restoration
Scrubby Flatwoods	Allow to burn with the adjacent mesic flatwood. If it does not burn with repeated fires, write a separate prescription for this area.

C. Impact of Planned Uses on Property Resources

1. Silviculture management will be implemented to ensure a continuing renewable timber resource and diverse ecological resources for an indefinite time period.
2. Recreational uses will be monitored to evaluate impacts on the natural systems. Modification to recreational uses will be implemented, should significant negative impact be identified.
3. Historical/Archaeological - In the event of any significant ground disturbing activity, DHR will be contacted for review and comment. The DOF will then follow the management procedures outlined in Exhibit G and will comply with all appropriate provisions of Florida Statutes 267.061(2).
4. Water resources will be protected through the use of Florida's "Silvicultural Best Management Practices" and/or other appropriate measures as deemed necessary by DOF's Forest Hydrologist and/or Watershed Specialist.
5. Wildlife resources, both game and non-game species, will be protected through multiple-use management techniques coordinated between DOF and FWC.

V. MANAGEMENT SUMMARY

A. Operations Infrastructure

Personnel assigned to MSF are:

- 1 Senior Forester
- 1 OALE officer
- 1 Sr. Forest Ranger
- 1 Forest Ranger

The current annual operating budget (FY 2008/09) for MSF is \$47,066; however annual appropriations change. This amount includes OPS salaries, expense and operating capital outlay and is broken down as follows:

- Expense (general costs for fuel, supplies, parts etc.)
- Other Personal Services (1 administrative assistant)
- Operating Capital Outlay (Equipment)

To carry out the resource management work on the state forest as well as in order to maintain forest improvements such as trails, roads and facilities the following equipment has been assigned or is immediately available for work on MSF:

- 2008 4wd pickup Ranger
- 2006 4wd pickup F250
- 2006 4wd pickup F250
- 2002 4X4 Blazer OALE
- Type III tractor/Plow Unit
- 1987 Unimog
- 2000 ATV 4x4/with trailer
- 2007 E-Z Go utility ATV
- 6X4 gator utility ATV
- 1997 Farm Tractor
- 1999 heavy duty farm disk
- Two self propelled lawnmowers
- 1999 batwing mower
- Brown Tree Cutter
- 6' disk
- bushog
- box blade
- Tree planter
- Marden L7 Chopper

Facilities and improvements on the forest that provide infrastructure support for staff and equipment include:

- 1,655 sq. ft. headquarters office/visitor center
- 3,000 sq. ft. pole barn for equipment storage
- 50 sq. ft. pump house/storage building

Utilities serving the public and forest staff:

- 6" well for potable water located 200 feet north of office building
- One septic tank/drain field system at headquarters site
- Four telephone lines (three for headquarters/administration; one fax line) provided by BellSouth
- Electric service provided by Florida Power and Light

In order to supplement the staff assigned to MSF, the Senior Forester is responsible for recruiting interested volunteers that can bring needed experience and skills to assist with the management of the forest recreation program as well as the resource management activities. Volunteers have been used working on trail maintenance, vegetative inventory work, and educational events. Additional volunteer recruitment will be encouraged to assist with other activities to further DOF's mission.

In addition, a state forest liaison committee of private citizens and representatives of forest user groups has been meeting semiannually to provide input on forest management activities and volunteer their ideas to DOF staff to improve the state forest.

B. Plans to Locate Fragile, Non-renewable Natural and Cultural Resources

Representatives of SWFWMD, DHR and FNAI will be consulted prior to the initiation of any ground disturbing activity by DOF or any other public agency. The DOF will make every effort to protect known archaeological and historical resources. 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".

The DOF will arrange for at least one additional staff member from MSF to attend a DHR Archaeological Monitor Training class. Trained monitors will oversee ground disturbing activities in which DHR recommends monitoring. The DOF will utilize the services of DHR Public Lands Archaeologist to locate and evaluate unknown resources, and to make recommendations in the management of known resources. As information becomes available, and as staffing allows, known archaeological and historical sites will be identified on maps and training provided to aid state forest and law enforcement personnel in patrolling and protecting sites.

As mentioned above, all significant ground disturbing projects that are not specifically identified in an approved management plan will be sent to DHR for review. Recommendations outlined in the "Management Procedures for Archaeological and Historical Sites and Properties on State Owned or Controlled Lands" (Exhibit G) will be followed whenever and wherever appropriate.

DOF staff will consult with the State Lands Section of the Forest Management Bureau during the process of planning and implementing multiple-use management activities. The DOF and other assisting agencies will remain alert for any environmentally or archaeologically significant resources, and protective actions will be taken as necessary.

C. 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 Division of Forestry's management of public lands is derived from Florida Statutes, Chapters 253 and 589.

D. Multiple-Use Potential – Income Producing Activities

The abundance of areas previously used as cattle pastures have the potential to be used for a temporary cattle lease or a temporary sod lease. Where applicable, a one-time sod removal lease would provide for removal of exotic grasses in preparation for site restoration. An apiary lease has been implemented on MSF producing an annual income of approximately \$500.00.

E. Potential Use of Private Land Managers

The forest manager makes ongoing evaluations of use of private land managers, consultants and contractors to facilitate the restoration or management of this state forest. Opportunities for such outsourcing of land management work have included or are anticipated to include:

Site preparation – private equipment/forestry operations company hired to site prepare approximately 300 acres of mesic flatwoods overgrown with shrubs. DOF spent approximately \$19,500 for this contract.

Tree planting – private equipment/forestry operations company hired to machine plant areas, as well as the hand planting other appropriate pine species.

VI. REFERENCES

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

Florida Division of Forestry. Revised 2008. “Florida’s Silviculture Best Management Practices Manual.” Florida Department of Agriculture and Consumer Services, Division of Forestry. Tallahassee, Florida.

Florida Division of Forestry. December 2008. State Forest Handbook. Florida Department of Agriculture and Consumer Services, Division of Forestry. Tallahassee, Florida.

Florida Natural Areas Inventory. February 1990. “Guide to the Natural Communities of Florida.” Florida Natural Areas Inventory and Florida Department of Natural Resources.

VII. ACRONYMS

AGCC - Atlantic Gulf Communities Corporation

BMP - Silvicultural Best Management Practices

BOT - Board of Trustees of the Internal Improvement Trust Fund

BRI - Babcock Ranch, Inc.

BRM - Babcock Ranch Management, LLC.

CAMA - Coastal Aquatic Management Area

CARL - Conservation and Recreation Land

DEP - Florida Department of Environmental Protection

DHR - Florida Division of Historical Resources
DOF - Florida Division of Forestry
DSL - Division of State Lands
DRP - Division of Recreation and Parks
F.A.C. - Florida Administrative Code
FDACS - Florida Department of Agriculture and Consumer Services
FDOF - Florida Division of Forestry
FLEPPC - Florida Exotic Pest Plant Council
FNAI - Florida Natural Areas Inventory
FPL - Florida Power and Light
FS - Florida Statutes
FWC - Florida Fish and Wildlife Conservation Commission
GDC - General Development Corporation
GIS - Global Information System
MSF - Myakka State Forest
NFW - National Fish and Wildlife
NPS - National Park Service
OALE - Office of Agriculture Law Enforcement
OHV - Off-highway vehicles
OFW - Outstanding Florida Water
PSGHA - Public Small Game Hunting Area
RV - Recreational vehicle
SC - Sarasota County
SWFWMD - Southwest Florida Water Management District
TNC - The Nature Conservancy
WMA - Wildlife Management Area
WMD - Water Management District
USDA - United States Department of Agriculture