



Florida Department of Environmental Protection

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3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

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Secretary

February 24, 2011

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

RE: Indian Lake State Forest Management Plan - Lease 4577


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 Indian Lake State Forest management plan. The next management plan update is due February 24, 2021.

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

MSG/bh

TEN-YEAR RESOURCE MANAGEMENT PLAN

FOR THE

INDIAN LAKE STATE FOREST

MARION COUNTY



PREPARED BY

FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

DIVISION OF FORESTRY

APPROVED ON

FEBRUARY 24, 2011

TEN-YEAR RESOURCE MANAGEMENT PLAN

FOR THE

INDIAN LAKE STATE FOREST



Approved by:

A handwritten signature in blue ink, appearing to read "Jim Karels", written over a horizontal line.

Jim Karels, Director
Division of Forestry

10.12.10

Date

A handwritten signature in blue ink, appearing to read "David Core", written over a horizontal line.

David Core, Assistant Director
Division of Forestry

Oct. 4, 2010

Date

A handwritten signature in black ink, appearing to read "Steve Jennings", written over a horizontal line.

Steve Jennings, Chief
Forest Management Bureau

Oct. 1, 2010

Date

TEN-YEAR RESOURCE MANAGEMENT PLAN
INDIAN LAKES STATE FOREST

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TEN-YEAR RESOURCE MANAGEMENT PLAN
INDIAN LAKES STATE FOREST

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LAND MANAGEMENT PLAN EXECUTIVE SUMMARY

Lead agency: Florida Department of Agriculture and Consumer Services, Division of Forestry

Common Name: Indian Lake State Forest

Location: Marion County, Florida

Acreage Total: 4,462.09

Acreage Breakdown:

<i>Historical Natural Communities</i>	<i>Acreage</i>	<i>Historical Natural Communities</i>	<i>Acreage</i>
Sandhill	4141.69	Basin Swamp	11
Mesic Flatwoods	113	Sinkhole Lake	8
Mesic Hammock	76	Depression Marsh	7
Baygall	62	Dome Swamp	4
Basin Marsh	39	Sinkhole	0.4
			Total 4,462.09

Lease/Management Agreement: No. 4577

Use: Single ☐ Multiple ☒

Management Agencies

Division of Forestry

St. Johns River Water Management District

Division of Historical Resources

Florida Fish and Wildlife Conservation
Commission

Responsibility

General forest resource management

Water resource protection, restoration management &
protection

Historical & archaeological resource management

Wildlife resources and laws

Designated Land Use: Multiple-use State Forest

Type Acquisition: Florida Forever and Marion County Funds

Archaeological/Historical: Thirteen (13) known sites.

Management Needs: Restoration and maintenance of native ecosystems through prescribed burning, hardwood control, pine harvests and/or reforestation with native species. Approximately half of the sandhill is restorable with prescribed fire and hardwood control alone. The other half is a combination of abandoned agricultural fields, old sod farms, and improved pastures. Some of this was recently replanted to longleaf pine by DOF. Non-native invasive species control. Thin longleaf and slash pine stands for natural regeneration and to promote forest health. Complete interpretive/forest education trails and exhibits. Evaluate developing camping sites. Replace and improve signage on boundary. Construct and maintain perimeter firebreaks. Complete and maintain a boundary maintenance plan, road plan, silvicultural plan, and fire management and prescribed burning plan.

Acquisition Needs/Acreage: Adjacent parcels, inholdings, remainder of Heather Island/Ocklawaha River Florida Forever project, and portions of Indian Lake Prairie

Surplus Lands/Acreage: 21 acres, see section II. B. 8, and Exhibit D

Public Involvement: Management Plan Advisory Group meeting/public hearing and the Acquisition and Restoration Council public hearing, ILSF Forest Liaison Group, the Silver Springs Working Group.

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

ARC Approval Date: _____

BTIITF Approval Date: _____

Comments: _____

I. INTRODUCTION

Indian Lake State Forest (ILSF) is comprised of approximately 4,462 acres located just north of Silver Springs in Marion County, Florida (Exhibit A). This property was acquired in 2007 and 2008 under the Florida Forever program, with the assistance from The Nature Conservancy (TNC), Department of Environmental Protection (DEP), and Marion County. The natural community types found on the forest include sandhills, sinkholes, depression marshes, and mesic flatwoods. Another unique feature is Indian Lake, a sinkhole lake located east of Baseline Road (County Road 35).

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

The primary mission of the Division of Forestry (DOF) in managing ILSF is to protect and manage the unique resources of the forest through a stewardship ethic to assure these resources will be available for future generations. This will be accomplished by implementing sound multiple-use management principles, the main objective of which will be:

- To restore, maintain, and protect in perpetuity, all native ecosystems;
- To ensure 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 the multiple-use concept, not emphasizing any particular use over the others or over restoration, maintenance, and protection of native ecosystems;
- To protect known archaeological and historical resources; and
- To practice sustainable forest management utilizing sound silvicultural techniques.

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

B. Overview of State Forest Management Program

Studies by a team of scientists delineated the areas of water recharge that feed Silver Springs, including the land now known as ILSF (Farrell and Upchurch 2005, Shoemaker, et.al 2004). As a result, ILSF was purchased under the Florida Forever Springs initiative project with the assistance of Marion County and The Nature Conservancy (TNC). Rolling sandhills on a sinkhole rich, karst topography dominate the property, although most of this has been converted to till agriculture or improved pasture. The land uses prior to acquisition have allowed exotic plant invasion, and have replaced or displaced historic vegetation in many areas. One of the major goals of the Florida Forever purchase was to restore these altered areas and eliminate any adverse impacts these alterations might have upon the Silver Springs system for water flow and water quality.

As a result of all these factors, it will be the intent of DOF to implement management and restoration activities that minimize impact on surface and ground water. Special efforts will be

needed to treat and monitor invasive plants throughout the property, re-introduce prescribed fire in relatively intact natural communities and re-establish a native pine canopy to extensive areas of abandoned cropland and improved pasture. In addition, a focus of management will be to design and implement a balanced program of public access that includes recreational opportunities such as day use and picnicking areas, interpretive kiosks, hiking and equestrian trails and primitive campsites.

C. Past Accomplishments and Status of Previous Plan's Goals/Objectives

Since the acquisition of ILSF, DOF has worked diligently to achieve various accomplishments, including posting boundaries, installing gates, exotic plant control, reforestation, and the implementation of a prescribed burning program. However, accomplishments have been restricted by limited funding. The following is a summary of past accomplishments permitted under the Acquisition and Restoration Council (ARC)/Division of State Lands (DSL) Approved Interim Management Activities.

Table 1. Accomplishment Summary, Indian Lake State Forest

PROGRAM	ACTIVITY	FY 2007-08	FY 2008-09	FY 2009-10
Prescription Burns	Acres burned-Dormant	0	250	377
	Acres burned-Growing			492
	Firelines established (miles)	0	30	25
Silviculture	Annual forest inventory (Acres)	4,300	425	100
	Site preparation - scalp or mow (Acres)	0	68	200
	Pine reforestation - longleaf pine (Acres)	0	68	200
Ecology	Kestrel boxes installed	0	4	0
Exotic Species	Species/Acres treated	Cogon/1	Cogon, Chinaberry, Chinese Tallow/45	Cogon/2
Boundary	New boundary surveyed	Initial survey done	0	0
	Gates installed	0	2	4
Other Activities	Tours, radio/TV spots, articles	0	2	3

D. Goals/Objectives for the Next Ten Year Period

The following goals and objectives provide direction and focus for managing resources over the next ten-year planning period. Funding, agency program priorities and the wildfire situation during the planning period will determine whether these objectives can be met. Short-term goals shall be achievable within a two-year planning period, and long-term goals shall be achievable

within a ten-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: Approximately 4,000 acres of this property consists of a mix of relatively intact pyrogenic ecological communities and abandoned agricultural land. The highest priority for burning will be placed on the intact natural upland communities (2,209 acres) – however the abandoned cropland/improved pasture (1,704 acres) and wetland communities and/or their ecotones (123 acres) will also benefit from routine prescribed fire. ILSF current objective is to burn this area on an average of a 1 – 3 year rotation (burn rotation may be longer in areas with pine regeneration). Prescribe burn between 1,300 – 4,000 acres per year on the average. (Short Term/Long Term Goal)

PERFORMANCE MEASURE: Number of acres burned per year.

OBJECTIVE 2: Implement a prescribed fire regime which includes a mix of dormant season and growing season burns that ensures the prescribed fire program is effectively implemented to increase forest health. (Short Term/Long Term Goal).

PERFORMANCE MEASURE:

- Number of acres burned per year.
- Completion of a Fire Management Plan and annually updated.

OBJECTIVE 3: Conduct habitat/natural community improvement by establishing longleaf pine forests on 1,436 acres of abandoned cropland and improved pastures. (Long Term Goal)

PERFORMANCE MEASURE: Acres of longleaf pines planted.

OBJECTIVE 4: Protect integrity of natural communities and provide public access through acquisition of adjacent parcels or parcels within the optimal boundary. (Long Term Goal)

PERFORMANCE MEASURE: Acres acquired from willing sellers.

GOAL 2: Public Access and Recreational Opportunities

OBJECTIVE 1: Maintain public access and recreational opportunities (with current special use permit system) to allow for a recreational carrying capacity of 212 visitors per day. (Short Term Goal)

PERFORMANCE MEASURE: Number of visitor opportunities/day.

OBJECTIVE 2: Develop additional public access and recreational opportunities to allow for an additional carrying capacity of 276 visitors/day. (Long Term Goal)

PERFORMANCE MEASURE: Number of additional visitor opportunities/day.

OBJECTIVE 3: Develop and implement a 5-Year Outdoor Recreation Plan and update annually. (Short Term Goal)

PERFORMANCE MEASURES:

- Completion of the 5-Year Outdoor Recreation Plan.
- Annually update the 5-Year Outdoor Recreation Plan.

OBJECTIVE 4: Meet with recreational users to plan and promote appropriate recreational opportunities on the forest. (Short Term Goal)

PERFORMANCE MEASURE: Number of meetings held.

OBJECTIVE 5: Develop a color ILSF brochure to distribute to recreation users. (Long Term Goal)

PERFORMANCE MEASURE: Brochures printed.

OBJECTIVE 6: Conduct an annual organized activity or media promotion for State Forest Awareness Month. (Short Term Goal)

PERFORMANCE MEASURE: State Forest Awareness Month Activity (October) or article completed annually.

OBJECTIVE 7: In consultation with FWC, designate ILSF as a WMA for quality hunting opportunities. (Short Term Goal)

PERFORMANCE MEASURE: WMA established.

GOAL 3: Hydrological Preservation and Restoration

OBJECTIVE 1: Conduct a site assessment/study to identify potential hydrology restoration needs and assess the earthen dam associated with Indian Lake Prairie. (Short Term Goal)

PERFORMANCE MEASURE: Assessment conducted.

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: Participate in the meetings and support the activities of the Silver Springs Working Group. (Short Term/Long Term)

PERFORMANCE MEASURE: Number of quarterly meetings attended.

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: Number of acres treated.

OBJECTIVE 3: Implement the process, as outlined in the State Forest Handbook, for conducting stand descriptions and forest inventory including a GIS database containing forest stands, roads and other attributes (including but not limited to: imperiled species, archaeological resources, exotic species locations, historical areas). (Short Term/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 stated in the State Forest Handbook. (Short Term/Long Term Goal)

PERFORMANCE MEASURE: Number of acres inventoried annually.

OBJECTIVE 5: Reduce hazardous fuel levels on wet and mesic flatwoods communities 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.

GOAL 5: Exotic and Invasive Species Maintenance and Control

OBJECTIVE 1: Develop and implement a Non-Native Invasive Species Control Plan, including guidelines for detection, monitoring, prevention, and treatment of such species identified on the state forest. (Short Term/Long Term Goal)

PERFORMANCE MEASURES:

- Completion of plan.
- Number of acres treated.

GOAL 6: Capital Facilities and Infrastructure

OBJECTIVE 1: ILSF staff will maintain approximately 25 miles of existing firelines and open areas to facilitate public access and fire management. (Short Term/Long Term Goal)

PERFORMANCE MEASURE: Miles of firelines maintained.

OBJECTIVE 2: Construct approximately two miles of hiking trail, including sections of boardwalk, and associated trailhead infrastructure at Indian Lake. (Long Term Goal)

PERFORMANCE MEASURE:

- Number of trail head related infrastructure built.
- Miles of trail constructed.

OBJECTIVE 3: Construct up to twelve miles of multi-use trails and associated trailhead facilities west of Baseline Road. (Long Term Goal)

PERFORMANCE MEASURE:

- Number of facilities built.
- Miles of trail constructed.

OBJECTIVE 4: Construct five to ten primitive camping sites near old RV campground area. (Long Term Goal)

PERFORMANCE MEASURE: Number of camping sites constructed

OBJECTIVE 5: Construct educational/interpretive trail adjacent to Ocala Springs Elementary School. (Long Term Goal)

PERFORMANCE MEASURE: Trail completed.

OBJECTIVE 6: Construct two miles of paved multi-use trail and associated trailhead facilities. (Long Term Goal)

PERFORMANCE MEASURE:

- Number of facilities built.
- Miles of trail constructed.

OBJECTIVE 7: Evaluate a permanent forest headquarters and Forestry Station on site, complete with offices, shop, and storage capabilities that would eventually replace the current Ocala Forestry Station, and serve as the ILSF headquarters and visitor center. (Long Term Goal)

PERFORMANCE MEASURE: Completion of evaluation of these type facilities.

OBJECTIVE 8: Establish and maintain State Forest boundaries. Perimeter lines will be harrowed in uplands to clearly define property boundaries and assist in fire control. All fences, boundary makings and property signage will be maintained. (Short Term Goal)

PERFORMANCE MEASURES:

- Miles of line harrowed.
- Miles of boundary maintained.

OBJECTIVE 9: Develop a Five Year Road Management Plan to address road standards, maintenance, evaluate new road construction, and decommissioning non-essential roads. (Short Term Goal).

PERFORMANCE MEASURE: Plan completed.

OBJECTIVE 10: Coordinate with Marion County to ensure ILSF has appropriate comprehensive plan/land use designation. (Short Term Goal)

PERFORMANCE MEASURE: Appropriate land use designation confirmed.

OBJECTIVE 11: Assess demolition and removal of buildings and utility infrastructure of obsolete Ocala Springs Campground. (Short Term Goal)

PERFORMANCE MEASURE: Assessment completed.

GOAL 7: Cultural and Historical Resources

OBJECTIVE 1: Conduct a historical and cultural survey with the Division of Historical Resources (DHR) during this planning period. (Long Term Goal)

PERFORMANCE MEASURE: Completion of surveys and update site maps to include identified cultural and historical sites.

OBJECTIVE 2: Ensure all known sites are recorded in the DHR Florida Master Site file. (Long Term Goal)

PERFORMANCE MEASURE: Number of recorded sites.

OBJECTIVE 3: Based on direction from DHR establish monitoring needs for Florida Master Site File sites as needed. (Long Term Goal)

PERFORMANCE MEASURE:

- Monitoring needs established by DHR.
- Number of sites monitored periodically.

OBJECTIVE 4: Train personnel as archaeological monitors. (Short Term Goal)

PERFORMANCE MEASURE: Number of personnel trained as monitors.

OBJECTIVE 5: Inventory and map legible headstones at Indian Lake Cemetery. Protect area from vandalism, fire, etc. by maintaining boundary fence and harrowed firelines. (Long Term/Short-Term Goal)

PERFORMANCE MEASURES:

- Inventory completed.
- Fence maintained.

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

OBJECTIVE 1: Develop a baseline imperiled species occurrence inventory list using FNAI contractors. (Long Term Goal)

PERFORMANCE MEASURE: Baseline imperiled species occurrence inventory list completed.

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.

OBJECTIVE 4: Establish and update a series of photo plots that will be used to monitor sensitive areas and define management needs for those areas. (Short Term/Long-Term Goal)

PERFORMANCE MEASURE: Photo plots established and updated at least once every two years.

OBJECTIVE 5: Assess current population of gopher tortoises and quality of habitat/foraging zones for potential gopher tortoise mitigation. (Long-Term Goal)

PERFORMANCE MEASURE:

- Gopher tortoise population assessed.
- Mitigation potential assessed.

OBJECTIVE 6: Survey and map natural communities compiling list of plants and animals observed. (Long-Term Goal)

PERFORMANCE MEASURE: Survey and mapping completed.

E. Management Needs, Priority Schedule and Cost Estimates

A priority list of management activities and the estimated cost are listed below and summarized in Table 2. The majority of the management operations will be conducted by the DOF, although appropriate activities will be contracted to private sector vendors. All activities will serve to enhance the property's natural resource or public recreational value. Cost estimates are provided 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 by utilizing existing staff. An Operational Plan will be developed to address each of these items.

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. ILSF currently has a part-time park ranger, and a budget of \$17,800 (FY 2010/11). The Ross Prairie State Forest staff, Marion County rangers, and other Waccasassa Forestry Center personnel provide support as needed.

PRIORITY 1

1. Prescribed Burning

Prescribed burning is the primary management tool for the forest. Approximately 94% of the acreage will grow fire dependent communities, most of which will be burned on an average rotation of every 1 to 3 years which would mean 1,300 to 4,000 acres per year. There may be occasions in which the burn rotation will be longer (young pine regeneration, periods of extended drought, etc.), but the goal is to mimic the natural burn cycle as much as possible. The Fire Management Plan will be updated as necessary. Since much of the forest is not yet burnable (trees are too young, not enough fuel to support a fire, etc), the short term goal is to burn 1,350 acres per year due to (Annual cost of \$20,250 based on Fire Manual rates for contract burning and plowing). Eventually, as the forest matures and the burnable acreage increases, the annual goal will be to prescribe burn 2,650 per year (Annual cost of \$39,750) as more acreage is converted from the restoration stage to the maintenance stage. It is estimated to take 20 hours of equipment time to harrow firelines per year. Cost estimates are based on the DOF's contract burning and equipment rates. Burning (\$300,000) and fireline preparation (\$13,000) costs are included:

Estimated Ten Year Cost: \$313,000

2. Restoration/Reforestation

In order to restore the natural longleaf pine-wiregrass ecosystem on the old farmland and pastures 1,436 acres of additional bare root longleaf pine will be planted during this

planning period at \$30/acre for site preparation and \$50/acre for machine planting plus \$55/acre for seedlings.

Estimated Ten Year Cost: \$193,860

3. Boundary

The state forest boundary must be maintained. Boundaries (28.5 miles) will be patrolled on a routine basis and the entire boundary will be marked twice during this planning period. Perimeter firelines (5.7 miles (20%) per year so 7 hours a year at \$57/hour) will be established if necessary and existing lines will be harrowed.

Estimated Ten Year Cost: \$3,990

4. Non-Native Invasive Plant Control

Control and monitor plant locations. Herbicides available through the FWC Herbicide Bank Program and application assistance through grants will be used when possible.

Estimated Ten Year Costs: \$25,000

5. Hiking Trail

Develop a hiking trail system, initially consisting of a parking area, information kiosk, and signage

Estimated Total Costs: \$5,000

6. Multi-Use Trail

Develop an equestrian/multi-use trail network, initially consisting of a parking area, information kiosk, and signage.

Estimated Total Costs: \$10,000

7. Brochures

Develop and print full color brochures of ILSF for distribution to the general public to increase awareness of the state forest, recreational opportunities and increase visitation. Reprint every three years

Estimated Total Cost: \$3,500

PRIORITY 2

1. Listed Species Survey, Occurrence Records and Mapping

Survey of historical communities, and biological surveys including listed species.

Estimated Total Costs: \$20,000

2. Install primitive camping area with 5-10 sites:

Estimated Total Cost: \$3,000

3. Road/Trail Restoration

Continue to maintain and upgrade roads, and intermittent stream crossings. Road upgrades (stabilization materials) and maintenance per year

Estimated Ten Year Cost: \$60,000

4. Forestry Tools/Heavy Equipment

Various tools and equipment necessary for the active management of ILSF are listed below.

4x4 Off-Road Utility Vehicle: \$10,000

40-60 gal herbicide tank w/electric pump: \$950

4 gal per minute @ 3000 psi pressure washer: \$1,200

Estimated Total Cost: \$12,150

5. Education Trail Adjacent to Ocala Springs Elementary

Interpretive signs, brochures.

Estimated Total cost: \$3,500

PRIORITY 3

1. Restroom at Hiking Trailhead

If adequate funding can be obtained during this planning period, construct a restroom at the hiking trailhead.

Estimated Costs: \$100,000

2. Restroom at Equestrian Trailhead

If adequate funding can be obtained during this planning period, construct a restroom at the multi-use trailhead.

Estimated Costs: \$100,000

3. Forest Headquarters and Forestry Station

If adequate funding can be obtained during this planning period, construct a permanent forest headquarters and Forestry Station.

Estimated Costs: \$600,000

4. Lakeside Trail and Boardwalk

If adequate funding can be obtained during this planning period, contract construction of a trail and boardwalk in the vicinity of Indian Lake, compliant with the Americans with Disabilities Act (ADA).

Estimated Costs: \$135,000

5. Paved Multi-Use Trail

If adequate funding can be obtained during this planning period, contract construction of a paved multi-use trail for running, walking, rollerblading, bicycling, etc.

Estimated Costs: \$500,000

6. Campground Area Restoration

Demolition and removal of existing buildings and other infrastructure at obsolete Ocala Springs Campground.

Estimated Costs: \$75,000

Table 2. Estimated Ten Year Expenditures Organized by Uniform Cost Accounting Council Categories

CATEGORY	PRIORITY 1	PRIORITY 2	PRIORITY 3	TOTAL
Resource Management:				
-Exotic Species Control	\$25,000			\$25,000
-Restoration	\$193,860			\$193,860
-Prescribed burning	\$313,000			\$313,000
-Timber Management				
-Hydrological Management				
-Other				
-Biological surveys		\$20,000		\$20,000
Administration:				
- Units/Projects	\$3,990			\$3,990
Capital Improvements:				
-New Facility Construction	\$15,000	\$6,500	\$1,435,000	\$1,456,500
-Facility Maintenance		\$60,000	\$75,000	\$135,000
Visitor Services/Recreation:				
-Information/Education Programs	\$3,500			\$3,500
-Operations				
Tools and Equipment		\$12,150		\$12,150
TOTAL	\$554,350	\$98,650	\$1,510,000	\$2,163,000

II. ADMINISTRATION SECTION

A. Descriptive Information

- Common Name of Property**
Indian Lake State Forest (ILSF)

2. Location, Boundaries and Improvements

ILSF is located in central Marion County, just north of Silver Springs. The forest boundaries are identified on the attached map (Exhibit A). ILSF can be accessed from either HWY 326 or CR 35 (Baseline Road). There are no usable buildings or improvements on ILSF at this time. The abandoned RV campground buildings will require substantial restoration if any of them are used in the future. The current headquarters for ILSF is located at the Ocala Forestry Station at 2735 E Silver Springs Blvd. In the future, this forestry station and forest headquarters may be relocated to the forest.

3. Legal Description and Acreage

The total acreage for ILSF is 4,462.09. The property is located in all or part of Sections 12, 13, 14, 22, 23, 24, 25, 26, 27, and 36 of Township 14 south, Range 22 and also Sections 7, 18, and 19 of Township 14 South, Range 23 East, Marion County Florida.

4. Degree of Title Interest Held by the Board

As of July 1st 2010, the Board of Trustees of the Internal Improvement Trust Fund (BOT) holds fee simple title to the 4,462.09 acres. The lease agreement number 4577 can be viewed at the offices of the Department of Environmental Protection (DEP), Division of State Lands in Tallahassee, and the DOF Forest Management Bureau in Tallahassee.

5. Proximity to Other Public Resources

ILSF is located in central Marion County and is within twelve miles to a number of public natural resource areas including:

Table 3. Proximity to Other Public Lands

TRACT	AGENCY	DISTANCE*
Coehadjoe Park	Marion County	2.5 Miles S
Marjorie Harris Carr Cross Florida Greenway	OGT	3 Miles S
Silver Springs Headsprings and Attraction	DSL and Palace Entertainment	3.5 Miles S
Silver Springs Conservation Area	Marion County	4 Miles S
Silver River State Park	DRP	4 Miles S
Heritage Nature Conservancy	City of Ocala	5.3 Miles N
Ocala National Forest	USFS	7 Miles E
Black Sink Prairie	SJRWMD	8.5 Miles N
Fort King Property	City of Ocala	5 Miles S
Scott Spring/Celebration 2000 Community Park	City of Ocala	8.7 Miles SW
Ocklawaha Prairie Restoration Area	SJRWMD	11.5 Miles SE
Orange Creek Restoration Area	SJRWMD	12 Miles N

DSL = Division of State Lands
OGT = Office of Greenways and Trails
USFS = United States Forest Service

DRP = Division of Recreation and Parks
SJRWMD = St. Johns River Water Management District

* Distance is measured from center of ILSF to nearest edge of the other property.
See Exhibit B for a map of nearby public lands.

6. Aquatic Preserve/Area of Critical State Concern

Although one of the purposes for acquisition was spring protection, this property is not within an aquatic preserve and does not fit the statutory definition of an area of critical state concern.

B. Acquisition Information

1. Land Acquisition Program

This property was acquired by the Board of Trustees (BOT) in July 2007 from Avatar Properties Inc. as part of the Florida Forever's statewide "Florida's First Magnitude Springs" project established in 1990 and as amended in 2003 to include this addition – known as the "Silver Springs Addition". This part of the Springs project, located just north of the 550 million gallon per day Silver Springs, was composed of approximately 4,452-acres of land - planned by Avatar, Inc. for development of a strip mall and a 13,000 residential unit subdivision. As the development was slated for the Silver Springs recharge area, the purchase was sponsored by the Silver Springs Basin Working Group in an effort to protect the integrity of this sensitive recharge area. The purchase agreement was facilitated through The Nature Conservancy who made the initial purchase directly from Avatar, Inc and subsequently sold it to the Board of Trustees over the course of two state budget funding cycles.

In addition, Marion County assisted in the acquisition through a substantial contribution of \$2,500,000 towards the purchase price and closing costs. This contribution was made with conveyance of no title interest. In Resolution No. 06-R-524, adopted in November 2006, Marion County defined the intent of their participation in the public acquisition was to "benefit the people of Marion County by preserving from residential development, and placing [the property] in public hands for perpetual conservation, the habitat of rare and threatened wildlife, archaeological and historic sites, and the watershed of Silver Springs and the Silver River, which are valuable resources and areas of scenic beauty of this state."

2. Legislative or Executive Constraints

There are no known Legislative or executive constraints specifically directed toward ILSF.

3. Purpose for Acquisition

The purposes identified by the Florida's First Magnitude Springs Florida Forever program (Exhibit C), including Indian Lake State Forest are:

Large springs of clear, continuously flowing water are among Florida's most famous and important natural and recreational resources. The cavernous, water-filled rocks of the Floridan Aquifer supply the largest springs. By preserving land around springs, this project will protect them - and the Floridan Aquifer - from the effects of commercial, residential, and agricultural runoff; clearcutting and mining; and unsupervised recreation. This project will ensure that Floridians and visitors from all over the world will be able to enjoy Florida springs for years to come.

In addition, Florida Forever acquisitions have as their general purpose:

- 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 geographic area;
- To conserve and protect native species habitat or endangered or threatened species;
- To conserve, protect, manage, or restore important ecosystems, landscapes, and forests, 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 or 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 historic sites.

4. Designated Single or Multiple-Use Management

ILSF is designated for multiple-use management and is managed under the Authority of Chapters 253 and 589, Florida Statutes.

One of the DOF's primary goals in managing ILSF will be to implement multiple-use management. The forest will be managed so as to restore, protect and manage ecosystem functions while allowing compatible public uses. Multiple-use management includes, but is not limited to silvicultural management, recreation, wildlife management, archaeological and cultural resource management, ecosystem restoration, environmental education and watershed management. Only uses compatible with the conservation of ILSF and its ecosystems will be implemented. Compatible multiple uses may include such activities as bird watching, horseback riding, hiking, hunting, bicycling, fishing, picnicking, primitive camping, and nature study.

5. Alternate Uses Considered

The following uses are considered not compatible: water resource development projects, water supply projects, storm-water management projects, linear facilities, off-highway vehicles used for recreation, or communication towers and antennas, except as otherwise outlined in this plan.

The following special projects were considered not compatible and do not conform with DOF's passive dispersed recreation philosophy: renovating and reestablishing the full-service RV campground near Indian Lake; a shotgun shooting range; an archery range with permanent facilities; and a large multi-purpose, multi-agency training facility and inmate cattle farming operation. These requests would require permanent infrastructure, significant forest acreage set-aside for a single user group, and may be incompatible with other passive recreational uses.

6. Additional Land Needs

Purchasing of additional land within the optimal management boundary (Exhibit D) would facilitate restoration, protection, maintenance, and management of the natural resources on

ILSF. The Heather Island/Ocklawaha River Florida Forever BOT Project is located east of ILSF. If acquired, this area would be managed as part of ILSF. Adjacent to the northwest boundary of ILSF, there is a 102 acre parcel which would also be a desirable acquisition. There is an undeveloped 200 acre platted subdivision (Silver Springs Park) inholding with a number of small privately-owned parcels scattered throughout. These parcels are located in Section 26, township 14 South, Range 22 East.

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.

DOF welcomes 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. DOF also looks 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.

ILSF is fragmented by several highly traveled roads, including State Road 326, and Baseline Road (County Road 35). These roads may hinder prescribed burning due to smoke management concerns.

8. Surplus Land Assessment

Most land within ILSF is suitable for its proposed use and will not be declared surplus except possibly for two small areas. (See Optimal Boundary, Exhibit D). The first parcel is five non-contiguous acres east of Baseline Road that may be exchanged for different parcel(s) of public conservation land. The second is a 16.5 acre parcel, adjacent to Fire Station 1, north of State Road 326 on the northwest side of ILSF. The Marion County Fire Department has submitted a request for the parcel to be used as a fire training facility. Since this area is not contiguous with the rest of the forest, and it is a disturbed hardwood hammock, the DOF has no objection to surplus the parcel and the lease of this site for use by the fire department (Exhibit D).

C. Agency & Public Involvement

1. Responsibilities of Managing Agencies

The DOF is the lead managing agency, responsible for overall forest management and public recreation activities. The Florida Department of Agriculture and Consumer Services (DACS) Office of Agricultural Law Enforcement (OALE) has law enforcement responsibilities. The Florida Fish and Wildlife Conservation Commission (FWC) is responsible for the enforcement of wildlife management laws. The DOF will cooperate with the DHR regarding appropriate management practices on historical sites on the property as stated in Section 267.061, Florida Statutes. They will be notified prior to the initiation of any ground disturbing activities by the DOF or any other agency involved with the forest. The St Johns River Water Management

District (SJRWMD) will be consulted and involved in matters relating to watershed and springshed management.

2. Public and Local Government Involvement

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

This plan was developed with input from the ILSF Management Plan Advisory Group through a process of review and comment. The advisory group also conducted a public hearing on August 10, 2010 to receive input from the general public. A summary of the advisory's group's meetings and discussions, as well as written comments received on the plan, are included in Exhibit E.

The Acquisition and Restoration Council (ARC) review of the plan also serves as an additional forum for public review of the plan.

The Silver Springs Working Group was established in 1999 as a public/private, multiple stakeholder work group whose mission is to restore and protect water quality and quantity in the Silver Springs groundwater basin. The group consists of representatives from federal, state, regional and local agencies, the University of Florida, local governments, the business community, agriculture, environmental groups, and concerned citizens. They were instrumental in the acquisition of ILSF, and DOF will continue to communicate and cooperate with them on issues pertaining to groundwater and springshed protection.

3. Compliance With Comprehensive Plan

This plan along with a letter (Exhibit F) was submitted to the Board of County Commissioners of Marion County for review of compliance with their local comprehensive plan.

III. RESOURCE SECTION

A. Past Uses

Prior to state ownership ILSF was known as the Avatar Tract and was owned for about 30 years by Avatar Properties, Inc., a real estate development company. Avatar leased this property for farming, hay, sod, and cattle grazing many years before the state purchase of this property. A developed campground (Ocala Springs RV Park), comprising approximately 40 acres, was located near the shore of Indian Lake, and is currently abandoned.

B. Renewable and Non-Renewable Resources

1. Soil Types

There are eleven different soil series found on ILSF, ranging from deep, droughty sands to the poorly drained soils associated with the marshes. A soils map and general description of each soil series is listed in Exhibit G. When site index is used in reference to soil series, it indicates the productive capacity of an area of forestland for a pine species (longleaf pine for ILSF) based on the height (in feet) of the dominant trees at 50 years of age.

2. **Archaeological and Historical Resources**

A complete Cultural Resource Assessment is planned for Indian Lake State Forest. A review of information contained in the Florida Master Site File has determined that there are thirteen known recorded sites on ILSF.

Mt Olive Cemetery (#MRO3292) and Indian Lake Cemetery (#MRO3293) are both listed by the DHR as sensitive areas. Established in 1894, the Mt Olive Cemetery is an African-American cemetery. It is an outparcel, within the ILSF boundary, and not under DOF jurisdiction. It is maintained by the local members of the Mt. Olive Church. The State Forest land surrounding Mt Olive is also listed (Site # MRO3305), but it's not as sensitive. Established in 1851, the Indian Lake Cemetery, located within ILSF east of Baseline Road, contains the graves of several Civil War veterans as well as other early Marion County residents. The boundary fence and gates have been replaced to help protect this historical resource. An interpretive sign will be placed at Indian lake Cemetery, explaining its history and significance.

In addition to these historic cemeteries, DHR Florida Master Site File lists eleven other sites which are mainly lithic scatters concentrated within one mile of Indian Lake.

Site Name	Site File Number	Description
F - 46	MRO1062	Pre-historic burial mound with human remains from an indeterminate cultural period.
Indian Lake East	MRO3295	Pre-historic campsite from the Archaic period (8500 B.C. – 1000 B.C.).
Indian Lake South	MRO3296	Pre-historic campsite from multiple periods with variable scatter of artifacts, including pre-historic pottery.
Indian Lake Prairie East	MRO3297	Pre-historic campsite from multiple periods with low density artifact scatter, including pre-historic pottery.
Indian Lake Northwest	MRO3298	Pre-historic campsite from multiple periods with low density artifact scatter, including pre-historic pottery.
Indian Lake North	MRO3299	Pre-historic terrestrial site from multiple periods with low density artifact scatter, including pre-historic pottery.
Indian Lake Camp Northwest	MRO3300	Pre-historic campsite, lacking any pottery.
Straight Knoll	MRO3301	Pre-historic campsite from multiple cultures.
Mt. Olive Sinkhole	MRO3302	Pre-historic campsite from multiple periods with low density artifact scatter, including pre-historic pottery.
Indian Lake Camp South East	MRO3303	Pre-historic campsite, lacking pottery.
North of Cemetery	MRO3305	Pre-historic terrestrial site, lacking pottery.

The DOF will comply with the procedures outlined in “Management Procedures for Archaeological and Historic Sites on State-Owned and Controlled Lands” (Exhibit H) and all appropriate provisions of Chapter 267.061, Florida Statutes. The DHR will be contacted before any significant ground disturbing activities are conducted on the forest. All known archaeological and historical sites will be monitored and protected. Local staff will utilize the expertise of the DHR state public lands archaeologists for detecting unknown resources. Currently there are three (3) local district DOF personnel trained by DHR as archaeological site monitors. DOF will pursue opportunities for getting additional personnel trained. DOF will consult with public lands archaeologists at DHR to determine an appropriate priority and frequency of monitoring at each of the 13 listed sites, as well as any protection measures that might be required. DOF field staff will monitor the listed sites to note condition and any existing or potential threats. In addition, DOF will seek the advice and recommendations of DHR regarding any additional archaeological survey needs.

3. Water Resources

Indian Lake and Indian Lake Prairie are the main water bodies on ILSF. In addition to this sinkhole lake system, some cypress domes and bays occur in a small area on the eastern side of the forest. At least 83 sinkholes are scattered throughout the sandhills, however they do not hold water. All surface waters on ILSF are classified as Class-III-Recreation, Propagation, and Maintenance of a healthy population of fish and wildlife. (Rule 62-302.400, Florida Administrative Code). The rest of the Forest is entirely devoid of surface waters or streams.

ILSF is critical to Silver Springs because it lies within its two year and ten year recharge areas. (Shoemaker et.al 2004, Pandion Systems 2006, Phelps 2004, Phelps 2006). ILSF comprises roughly 4,500 acres of vital recharge area for this major Florida spring system. Hydrological modeling was used by SJRWMD and DEP to calculate the two-year, ten-year and 100-year recharge areas of Silver Springs. Water from local rainfall infiltrates into the ground via these recharge areas and then flows underground through porous limestone to Silver Springs, one of the largest first magnitude springs in the nation, and the third-largest natural spring in Florida that yields some 530,000 gallons of water per day (Farrell and Upchurch 2005).

One of the main threats to the Floridan aquifer on this property was a scattering of abandoned wells, some up to twelve inches in diameter. A well-closure contract was initiated by DEP and thirteen wells were capped or welded shut. As a result, all known abandoned wells on the property have been capped. There are also four SJRWMD monitoring wells on ILSF. No active wells or septic systems are being used by DOF on the property as of 2010. However, in the future as recreation and administrative sites for on-site forest use are planned, water supply wells and septic systems will be necessary. They will be sited and designed to comply with all pertinent state, water management district, and local regulations, and with the sensitive nature of the property in mind.

4. Fish and Wildlife

ILSF is not currently a Wildlife Management Area (WMA). DOF will consult with FWC to designate ILSF as a WMA for quality hunting opportunities. Management of this area will be directed to the production of biological diversity and species composition consistent with

existing natural community types. Such communities will be restored and/or maintained through habitat management. All biological resources will be managed to maintain diversity.

5. **Endangered or Threatened Species**

An FNAI survey for rare animals, plants, and natural communities of ILSF has not yet been conducted. The FNAI Managed Area Tracking Summary table below addresses species of management concern known to be on ILSF. See also Exhibit I, the FNAI Managed Area Summary. Ephemeral pond breeding amphibians such as gopher frogs and striped newts could potentially be on ILSF, but have not been surveyed. A baseline survey for gopher tortoise burrow density will be done, likewise for gopher tortoise commensals such as indigo snakes and Florida mice.

Table 4. Endangered or Threatened Species found on ILSF

Common Name	Species Name	Global Rank	State Rank	Federal Status	State Status	Last Date Observed
Florida Pine Snake	<i>Pituophis melanoleucus mugitus</i>	G4T3	S3	N	SSC	1983
Short-tailed Snake	<i>Lampropeltis extenuate</i>	G4	S3	N	LT	1971
Gopher Tortoise	<i>Gopherus polyphemus</i>	G3	S3	N	LT	2010
Sherman's Fox Squirrel	<i>Sciurus niger shermani</i>	G5T3	S3	N	SSC	2010
Southeastern American Kestrel	<i>Falco sparverius paulus</i>	G5T4	S3	N	LT	2010
Florida Black Bear	<i>Ursus americanus floridanus</i>	G5T2	S2	N	LT	2009
Bald Eagle	<i>Haliaeetus leucocephalus</i>	G5	S3	DL	DL	2009

FNAI RANKS indicate the global (G) and state (S) rarity of a species: 1 = critically imperiled; 2 = imperiled; 3 = rare, restricted, or otherwise vulnerable to extinction; 4 = apparently secure; 5 = demonstrably secure. (www.fnai.org/ranks.htm)

STATUS indicates if a species is listed as endangered (LE), threatened (LT), potential listing under review (LR) delisted (DL) or of management concern (LS) by either federal (US) or state (FL) agencies, or not listed (N).

There are old FNAI records for Florida pine snake and short-tailed snake near ILSF. These species are notoriously cryptic and hard to survey; they will not be systematically monitored. If a specimen is observed on ILSF, the element occurrence will be recorded and forwarded to FNAI.

Gopher tortoise will be periodically monitored on ILSF with active burrow surveys. This species is listed as threatened by the state of Florida. The goal of monitoring is to demonstrate presence/absence of gopher tortoises in suitable upland areas, and to determine if some of the ruderal sites are also inhabited. The burrow surveys also allow for opportunistic surveys for listed commensals such as indigo snakes and Florida mice. As discussed in section IV.B.1, if ILSF becomes a mitigation recipient site, a much more extensive monitoring protocol, for both foraging habitat and gopher tortoise population, will need to be followed.

Fox squirrels are seen in the sandhills east of Baseline Road and in the sandhills north of the Seminole Electric powerline easement. The fragmentation of ILSF creates the problem of road

kills. No formal monitoring is proposed for this species, but casual encounters and road kills will be noted.

Three southeastern American kestrel nest boxes have been installed on the property. They will be maintained and monitored.

The FWC black bear road-kill database was reviewed for the area around ILSF. As of 2009, the only local road-killed Florida black bear was located on the east boundary of Indian Lake Prairie crossing Anthony-Burbank Road. No road kills were noted interior to the forest on SR326, although two were noted east of the property on this road. The FWC nuisance call database lists several reports of bears interacting with private landowners to the south east of ILSF. As of 2010, bear evidence on ILSF has only been found east of Baseline Road. Florida black bear will not be systematically monitored, but bear evidence including scat and scratch trees will be recorded.

No bald eagle nesting site is known on ILSF, although bald eagles are occasionally seen on the property. The nearest known nesting site is MR124 on the edge of Indian Lake Prairie, about two miles north of the state forest. If a nest is found on the property, it will be mapped and reported to FWC.

As prescribed fire is reintroduced back into the more intact sandhills, and into wetland ecotones in the flatwoods areas, the potential to find rare plants will increase. At that point, a rare plant survey effort would be desirable. Potential plants might include a variety of terrestrial orchids, Florida spiny-pod, or longspurred mint.

6. Beaches and Dunes

No beaches or dunes occur on ILSF.

7. Swamps, Marshes, or Other Wetlands

The main area of ILSF wetlands, including Indian Lake and Indian Lake Prairie (a basin marsh), are on the eastern side of the forest. The east side of the forest also contains dome swamps, depression marshes, baygall and other smaller isolated wetlands. Most ILSF wetlands are hydrologically intact, although fire dependent communities have been fire-suppressed. While these wetlands only compose 3% of the landbase of the forest, maintaining the integrity of the wetlands natural community is a high priority. The remaining forest area is extremely well-drained sandhill without surface water features. However, this is a vital groundwater recharge area, and the location and integrity of sinkholes will be considered while doing any management activity that might impact the aquifer.

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

8. Mineral Resources

There are no known significant mineral deposits of commercial value on ILSF.

9. Unique Natural Features

Indian Lake is a deep lake directly connected to the Floridan aquifer. The surrounding karst uplands are vital to the water quality of Silver Springs.

10. Outstanding Native Landscapes

Although ILSF was purchased for its value to the springshed, a number of beautiful sandhill areas have large uneven-aged longleaf pine growing amongst an intact, diverse wiregrass understory. The string of hat-rack cypress growing between Indian Lake Prairie and Indian Lake is a stirring reminder of old Florida.

11. Timber Resource

There are two different pine components found on ILSF as well as some natural hardwoods. There are approximately 2,000 acres of natural longleaf pine, 268 of young planted longleaf and 120 acres of natural slash pine. There is a small area of pond cypress located around Indian lake and up to Indian Lake Prairie. Little or no timber management activities have been conducted on ILSF in the past 50 years.

There are no plans to harvest cypress timber during this ten-year planning period.

The natural longleaf pine contains two and sometimes three distinct age classes. There is a minor overstory of mature pine, a large midstory of sapling to pulpwood size trees and a minor class of smaller pre-commercial trees. Due to the lack of fire on ILSF in the past there is also a fairly dense population of turkey and sand post oaks mixed in with the longleaf pine. Most of the ILSF was previously used for cattle grazing. Only a few of the longleaf areas were harvested to increase the grazing area. Since acquisition, 268 acres of abandoned cropland and Bahia grass pasture have been planted in longleaf pine.

The current area of slash pine was clearcut in the 1940s and has naturally regenerated from the residual slash pines left after the harvest. Fire has been excluded from this area and as a result the understory is very dense with palmetto and gallberry.

Pine stands will be thinned as needed to maintain forest health. A regular prescribed burning program will be followed to ensure that off-site (a native tree in an inappropriate location) species are controlled. These sites will be prescribed burned in both the dormant and growing seasons to reduce hardwood encroachment, promote healthy ground cover, and to encourage natural regeneration of longleaf pine. Also, mechanical or chemical treatments may be used to control hardwoods.

Uneven-aged and even-aged management are methods utilized for managing pines on state forest lands. In either case, managing to increase the old growth component will be emphasized.

DOF will implement silvicultural practices, including timber harvesting, prescribed burning, and reforestation, in an attempt 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 ecosystems in the forest. Thinning dense forest stands helps to improve understory composition, forest health, and helps facilitate prescribed burns. Timber harvesting is also used in reestablishing native species by removing off-site species. In instances where prescribed burning alone does not provide sufficient control of undesirable species, mechanical or chemical treatments may also be used.

Within the State Forest System, the annual harvest volume on each forest will be determined by the forest health needs. Good stewardship and resource sustainability are essential goals for any proposed silvicultural activity. The health of the forest ecosystem is paramount in importance.

DOF practices sustainable timber management in the state forest system, which means annual harvest volume on state forests is not to exceed the annual growth rate. This is accomplished by maintaining and updating accurate estimates of standing timber in order to assure that the timber resources retain their sustainability. All forestry activities will be conducted in accordance with the “Silviculture Best Management Practices Manual” guidelines (FDACS 2008).

The DOF recognizes the importance of snags for their wildlife value. As a general rule, hardwood and pine snags will be left alone in their natural environment, unless they are deemed to be a potential hazard. Areas with significant pine timber mortality will be salvaged as required by the severity of the situation.

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 (prescribed burning, silvicultural management, wildlife management, soil, and water resources protection, etc.); integration of compatible human uses (recreation management); 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

ILSF has 28.5 miles of boundaries which were marked and posted as part of the initial acquisition survey. The state forest boundary lines are to be maintained at least twenty percent (20%) per year by clearing, repainting and reposting, and placement of state forest boundary signs by DOF personnel.

2. Soil and Water Protection

Currently, there are no known soil or erosion problems present on ILSF. Management activities will be executed in a manner to minimize soil erosion. If problems do arise,

corrective action will be implemented by DOF staff under the direction of DOF's Forest Hydrology Section. All silvicultural activities on ILSF will be conducted in compliance with the most recent edition of the Silviculture Best Management Practices (BMPs) Manual. Specific guidelines are outlined in the BMP Manual as well as applications for use on public lands.

The ILSF falls within the jurisdiction of the St. Johns River Water Management District (SJRWMD). The DOF will coordinate with either SJRWMD or DEP as necessary on activities pertaining to water resource protection and management. Any activities requiring water management district permits will be handled accordingly. The DOF will work with SJRWMD to ensure that levels and quality of ground and surface water resources are appropriately monitored.

Since one of the primary purposes for acquisition of the ILSF property was to protect Silver Springs and the Floridan Aquifer from damaging effects, management actions that can protect and improve groundwater quality are desirable. Potential management actions are discussed in sections III.B.7, IV.A.18.c, and sections IV.B.3, 4, 8, and 9. When thinking about ILSF in relation to Silver Springs, it is useful to consider its recharge area and the aquifer vulnerability assessment. ILSF lies within the two year and ten year recharge area of the Silver Springs springshed. The recharge, or capture, area that supplies ground water to Silver Springs was estimated using hydrological models that consider the amount of rain recharging the ground-water system, the amount of water flowing out of Silver Springs and associated spring vents, the amount of water pumped from area wells, depth to water table across the potential recharge area, the locations of streams, the location of area cave systems, and geological properties of the area.

These hydrological models show Silver Springs captures water outside of the immediate area surrounding the spring, and the shape of this area is not a neat circle with a spring in the middle of it. Water infiltrates into the ground in surface watersheds a good distance north and then flows underground to Silver Springs. This hydrological model shows that a surface watershed does not exactly overlay a ground-water system. Ground water can flow across surface topographic and political boundaries. In general, the farther south you are on ILSF, the faster infiltrating surface water (and its contaminants) will flow to Silver Springs. It is estimated that infiltrating water south of Indian Lake would be expected to flow out of Silver Springs within two years. Another hydrological model, the Marion County Aquifer Vulnerability Assessment (MCAVA), was developed for Marion County to determine how sensitive-specific areas of the surface are to contaminating the Floridan Aquifer, ranking them in four classes from most vulnerable to less vulnerable. In general, this model showed that historical sandhills as well as the areas surrounding Indian Lake and Indian Lake Prairie are in the most vulnerable class. Marion County is currently considering recommendations by the Marion County Water Resources Stakeholders Group on land use changes within the two and ten-year recharge area of Silver Springs, to protect water quality and quantity.

3. Roads

ILSF is bisected by one major road, State Road 326. The eastern side of ILSF is accessed by Baseline Road (See Exhibit A2). Anthony Burbank Road bounds the northern edge of ILSF.

Interior forest roads are unimproved, except for some sites along the major power line. Most old roads were dirt trails surrounding farm fields. Some abandoned paved asphalt roads wind through the old campground area. A Five Year Road Management Plan will be developed designating which new and existing roads will be improved and maintained. ILSF is bisected by State Road 326 and Baseline Road. These existing paved roads provide good access to potential trailhead sites (Exhibit L). Interior roads will need to be improved such as capping with limerock for forest management purposes.

All state forest roads will be maintained by DOF. Designated roads and trails will be also available for use by hikers, bicyclists, and equestrians. ILSF will use the guidelines and regulations for road closures, maintenance, etc. outlined by the DOF Road Standards. Plans for the establishment of any new roads will be reviewed by the DOF State Office and then processed appropriately.

4. Recreation Management

See Exhibit L for the approximate locations of existing and planned sites. The final trail routing is still undetermined, but the trails will be located in the general areas shown on the map.

a. Existing Facilities/Infrastructure/Recreational Activities

i. Current Access and Recreation

Currently there are no improved facilities, trails, etc on ILSF. Access to ILSF is available through State Forest Use Permits issued through the Ocala Forestry Station. Permits are issued to the public for hiking, nature study, and wildlife photography. The DOF has also sponsored two staff-led public events (one nature hike, one equestrian ride) tied in with Marion County's annual Springs Festival. This festival promotes preserving Marion County's springs through awareness and stewardship.

ii. Abandoned Campground

A full-service campground (Ocala Springs RV Park) was operated on this property until the early 1980s. The footprint of the old camping area encompasses about 30 acres. This campground has been abandoned for decades and would require substantial funding to return to active use. The original campground had over 90 designated sites, with most having electric, water, and sewer hook-ups. The campground also had a centrally located bathroom/shower facility. Additional buildings from the abandoned campground include an office, shop, and a recreation/social hall located by Indian Lake.

iii. Abandoned Asphalt Campground Roads

Roads next to Baseline Road leading to the old camping areas were paved in the 1980s. The total length of the abandoned asphalt roads is eight tenths of a mile. The asphalt is in poor to bad condition; cracked and overgrown with vegetation in numerous places. Vehicle access is currently allowed on ILSF by Special Use Permit only.

iv. Cleared Subdivision Rights of Way

Prior to acquisition, the Avatar developers cleared unimproved rights-of-way in some sandhills. This area is adjacent to the corner of Anthony Burbank Road and Baseline Road. The disturbed areas are approximately 60 feet wide and covered in Bahia grass, with a scattering of native groundcover. Some previously cleared areas may be converted to service roads or equestrian trails. Others will be replanted to longleaf pine and allowed to revert to native vegetation.

b. Planned Recreational Activities

i. Hiking/Indian Lake Day Use Area

A loop trail approximately four-miles long will be cleared and marked in the tract of land east of Baseline Road. This area includes the namesake of the forest, Indian Lake, as well as shady oak hammocks, stretches of sandhill, and small sinkholes and will be a natural draw to the public (Exhibit L).

The first priority will be the construction of a parking area, trailhead, and the trail. The trail will be laid out so that hikers will get to experience the diversity, wildlife, and beauty of this area. Trails will be laid out and constructed with the goal of minimizing impacts to the resources while keeping maintenance costs down. Later development will consist of a restroom at the trailhead and a boardwalk along Indian Lake. DOF will investigate the use of solar power at this site.

ii. Equestrian

A network of multi-use trails will be developed in the tract of land west of Baseline Road and north of State Road 326. These trails will be developed with the equestrian user in mind, but they may also be used by hikers and joggers. This area of the forest is most appropriate for equestrian trails because it is the only contiguous tract of the forest that provides enough acreage to plan the mileage needed for a desirable trail system with minimal impact to the overall resource. The priority for these multi-use trails will be the construction of a parking area, trailhead, and trails. This trailhead will require a larger parking area in order to accommodate vehicles with trailers. The trailhead will be placed in an area that provides for easy access into and out of the forest, such as Baseline Road (See Exhibit L). Later, if funding becomes available a restroom will also be constructed at this trailhead. DOF will investigate the use of solar power at this site.

iii. Camping

Initially, five to ten primitive camping sites will be developed in the area of the old campground. Each site will consist of an area to pitch a tent, along with a picnic table and fire-ring. The sites will utilize previously impacted areas which are not environmentally sensitive.

iv. Environmental Education and Information

The DOF may partner with Ocala Springs Elementary School to construct an educational/interpretive trail adjacent to the school. The focus of the trail will be natural ecosystems and nature. Forest brochures and pamphlets will be produced as

needed, with the highest priority being the development of a full color ILSF brochure for distribution to the general public. The brochure will include Firewise and prescribed burning information for educational outreach.

v. Bicycling

Bicycling will be allowed on all roads and trails which are not designated for other single uses. However, much of ILSF consists of sandy soils which do not lend themselves to bicycling.

vi. Paved Multi-Use Trail

If there is sufficient demand and funding, a paved multiple use trail could be developed in the region south of the Seminole Electric Transmission Line and south of SR 326 and NE 40 Avenue. The trail would be approximately two miles in length and provide recreational opportunities for bikers, joggers, rollerbladers, and hikers. This trail would also require a small developed trailhead with parking and restroom facilities located off of Baseline Road.

vii. Indian Lake State Forest Headquarters/Ocala Forestry Station/Visitor's Center

If funded and approved, the Ocala Forestry Station may be relocated to the state forest property and serve as the forest headquarters and visitor center. A staff residential trailer site may be appropriate to locate on this site to enhance security. (See Sections IV.12 & V. A).

viii. Hunting and Fishing

DOF will consult with FWC to designate ILSF as a Wildlife Management Area (WMA) for quality hunting opportunities. The location, seasons and types of hunting to be allowed will need to be carefully considered to avoid conflicts with other recreation users and nearby residents. Due to the small size of Indian Lake, fishing will need to be carefully regulated, and limited to designated special events.

Each state forest has a Five Year Outdoor Recreation Plan that is updated annually and submitted to DOF's state office. This plan is an effective and efficient way for the forest to annually review accomplishments as well as prioritize and budget for upcoming projects.

5. Fire Management

The DOF utilizes a total fire management program on state forests that includes wildfire prevention, detection, and suppression as well as prescribed burning. Wildfire prevention, detection, and suppression are the responsibility of the DOF's Waccasassa Forestry Center, particularly the rangers assigned to this forest. The DOF's approach to handling fire on ILSF is outlined in the ILSF Fire Management Plan (available at the Ocala Forestry Station). Emphasis is placed on prescribed burning, fire prevention, and education to help reduce occurrence of wildfires on the forest. The Incident Commander responding to wildfires on ILSF has three paramount considerations, listed in priority order: protection of human lives, of both the firefighter and the public; protection of improvements; and protection of natural resources. The Fire Management Plan includes a sensitive areas map which identifies the

types of areas fire crews must consider for special protection when conducting fire control, pre-suppression, and other activities in ILSF. All guidelines as outlined in DOF's 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.

Prescribed fire is the primary tool utilized for resource management on this forest. The long-term goal of prescribed burning is to develop a healthy forest ecosystem which will include both dormant and growing season burns. Natural fire frequencies will be used when possible for each community in a maintenance status. Target fire frequencies may be shorter in areas that require restoration due to lack of fire. The majority of the forest will be burned on average every one to three years, however in areas where pine seedlings are present, burning may be delayed a year or two to protect them. Areas to be burned will be spread over the forest in a mosaic pattern. Areas with heavy fuel levels will receive one or more dormant season (December through February) burns until they can safely support growing season (March through August) burns. This, along with fire prevention education, will be used to limit wildfire occurrence.

4,000 acres are ecosystems or covertypes maintained by frequent fire. While 1,300 - 4,000 acres is the target prescribed burn acreage based on natural community classification, prescribed acreage during earlier stages of restoration may be reduced until the improved pastures and abandoned cropland are planted to longleaf pine. The highest priority for burning will be placed on the intact natural upland communities (2,209 acres) – however the abandoned cropland/improved pasture (1,704 acres) and wetland communities and/or their ecotones (123 acres) will also benefit from routine prescribed fire. The average one to three year fire return interval forest-wide (burn rotation may be longer in areas with pine regeneration) translates into an annual prescribed burning goal of 2,650 acres per year. 2,650 acres was the figure used to estimate management costs related to fire.

New and existing firelines will be harrowed. Any new or pre-suppression firelines will follow the recommendations for fireline construction in the Silviculture Best Management Practices Manual. New pre-suppression lines will not be created in wetlands or transition areas. Perimeter firebreaks are being established around most of ILSF.

In using prescribed fire in the various pyric communities on ILSF, it is important to understand the ecological richness of the ecotones that divide them, especially those margins between wetland and upland communities. Staff will be trained to recognize sensitive areas and will be provided with guidelines for fireline construction. Whenever possible, existing roads and natural firebreaks will be used to contain and control prescribed and natural fires. 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.

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 and helps to prevent the undesired transition to plant species associated with more mesic

conditions. In addition, moderately intense fire in swamps can benefit cypress and retard invasion of less fire-adapted hardwood species. Where these wetland communities are not sufficiently hydrated to prevent undesirable fire intensity, consideration should be given to delaying prescribed fire. When proceeding with burning in these conditions, and fire lines are required, they should be located well out of the ecotone and up in the more mesic community type. Pre-suppression lines should avoid transition zones next to wetlands and in any other area that would disrupt the natural hydrology.

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 objectives of these timber management guidelines are:

- 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 pine and 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. Restoration of native species, even-aged and uneven aged management of pine stands, selected thinning, removal of off-site species, and prescribed fire are all actions used to promote healthy forest stands. Mechanical and chemical treatments may be used to reduce hardwood competition where pine is desired. On sites with a heavy under growth of hazardous vegetative fuels, a roller chopping or “walk down” method of knocking down this vegetation will be used. In some cases, mowing may be used to reduce the fuel buildup. The use of these methods will not remove the vegetation but make it easier and safer to burn. After the vegetation is knocked down, prescribe fire in the area will help remove the vegetation. Protection of native groundcover will be emphasized during all silvicultural operations. A discussion of silviculture and springshed improvement is written in section IV.A.18.b of this plan.

Prescribed fire and mechanical applications will be the primary methods of site preparation and timber stand improvement. Planted seedlings will be used to restore abandoned cropland and improved pastures to productive longleaf communities. On sites where herbicides are necessary due to past fire exclusion, applications will be limited to achieve the desired effects on all on-site species. Residual oak snags will be left behind on stands that have been treated with herbicides.

Single tree selection, group selection, shelterwood, seedtree, and clear-cutting may all be necessary techniques for maintenance and restoration of timber stands and communities.

c. Timber Inventory Control

Within the State Forest System, the annual harvest volume on each forest will be determined by the health of the forest. To insure that the timber will not be depleted, an accurate estimate of the standing timber is documented. Selected stands on the forest will be re-inventoried each year, according to parameters established by the Forest Management Bureau. Overall volume will be determined using this inventory update data and the growth and yield model for the remaining stands.

d. Timber Sales

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

e. Reforestation

Reforestation will be a key component in restoring the natural ecosystems on ILSF. Reforestation plans as part of an uneven-aged system will be developed for each under stocked site on a site-specific basis, with emphasis on reforesting the 1,700 acres of abandoned cropland and improved pastures. Natural regeneration is the preferred method of reforestation in areas where appropriate. Although the ultimate goal of DOF's reforestation in abandoned crop fields and pastures is to mimic tree densities found in natural communities, over time initial tree planting densities are much higher (just like natural systems). Higher planting density leads to early crown closure resulting in the desirable forest characteristics of tall straight trunks and few lower branches. This initial high density will be decreased over time, as a result of natural mortality and periodic thinning operations. Planting closed-crown forests will also help with the restoration of groundcover species, by shading out some of the undesirable non-native species. Stocking levels, species selection, and site preparation techniques will be addressed in the Silviculture Management Plan. In preparing restoration areas for reforestation, site preparation techniques will be selected that have the least damaging impact on existing desired ground cover species. Fire will be the preferred technique; however herbicide applications, mowing, scalping, and roller-chopping or combinations of the above may be necessary. Private vendors will be used whenever possible to implement silvicultural prescriptions.

7. Research Projects/Specimen Collection

Research projects may be performed on certain areas of ILSF on a temporary or permanent basis, for the purpose of obtaining information which expands the knowledge of and assists in management of ecosystems. The DOF cooperates with other governmental agencies, non-profit organizations, and educational institutions whenever feasible on this type of research. Research projects that do not require specimen collection (observation only) may be conducted after obtaining an Indian Lake State Forest Special Use Permit. However, research projects that require specimen collections must be approved by the DOF Forest Ecologist before they are initiated. All requests for research projects should be submitted in writing to the ILSF Senior Forester or to the Waccasassa Forestry Center Forest Resource Administrator to be

forwarded to the Forest Management Bureau for approval. Requests must include a letter outlining the scope, methodology, and location of the proposed project. Requests are subject to review by DOF Biologists, the Forest Entomologist or the Forest Pathologist, as appropriate. Permission to conduct research will require that the investigator provide copies of all reports or studies generated from research projects to the state forest staff. The status of existing projects will be subject to periodic review by state forest staff.

8. Law Enforcement

Primary law enforcement responsibilities will be handled by law enforcement officers from the DACS, Office of Agriculture Law Enforcement (OALE). Additional assistance is provided by officers of the FWC, Marion County Sheriff's Office, and DEP. Special rules of the DACS (Chapter 5I-4, Florida Administrative Code) have been promulgated for the public use of state lands and control of forest traffic and camping.

9. Wildlife and Fish Management

Wildlife management will play an important role in the management of resources on ILSF. FWC provides technical support when needed in the biological aspects of managing the wildlife and fish populations. During this planning period, DOF will consult with FWC regarding establishment of a wildlife management area program on this property.

The DOF recognizes the importance of snags for their wildlife value. As a general rule, hardwood and pine snags will be left alone in their natural environment, unless they are deemed to be a potential hazard. Areas with significant pine timber mortality will be salvaged as required by the severity of the situation.

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

a. Non-Game Wildlife Species

Non-game wildlife species will be managed and protected through the maintenance and restoration of the native ecosystems. Research will provide valuable information in determining future management objectives for non-game wildlife 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. As time and resources permit, continued biological surveys will be conducted to determine locations of these species. Species-specific management plans will be developed when necessary. Management needs of sensitive species will be carried out as directed in the "Endangered and Threatened Species" section (III.B.5.) of this plan. The management goals that are outlined in section (IV.B.1.) 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 endangered or threatened 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 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.

10. Non-Native Invasive Species

The practice of the DOF is to locate, identify, and eradicate or control non-native invasive species. Forest employees continually monitor the forest for non-native invasive species while conducting management activities. When such species are discovered, an eradication plan will be developed and implemented based upon the severity of the infestation and the availability of personnel and funding. Adjacent landowners, such as Marion County Public Works, who are known to have these species on their property, will be approached in an effort to cooperate on control measures. The DOF will enlist support from the FWC in the effort to control non-native invasive animals. In regards to the invasive plant populations on ILSF, personnel will be scheduled for training in the identification and control of invasive species as time and resources permit. Non-native invasive plants training courses will be coordinated by DOF's Forest Health Section. Control/eradication of non-native invasive species will be plant specific, and may require the use of treatments such as herbicides. When appropriate, DOF will interact with the local weed management district, the Marion County Invasive Species Management Council (MCISMC). A discussion of exotic plants growing in sinkholes and springshed improvement is written in section IV.A.18.b of this plan.

A non-native invasive plant survey was completed in the fall of 2007 by the DOF's Forest Health Section. DOF staff updates this data as new exotic sites are found, or as known sites are treated. An exotic plant map showing this data can be found in Exhibit M1. The following listing of confirmed occurrences is based on that survey and follow-up field work. A second map in Exhibit M2 shows treatment efforts through 2010. Table 5 below lists these species and some of their impacts.

Table 5. Invasive Species Found on ILSF

Scientific Name	Common Name	FLEPPC/ Noxious weed lists	Acres Impacted	Increasing/ Decreasing
Trees				
<i>Albizia julibrissin</i>	mimosa	I	29.71	Increasing
<i>Broussonetia papyrifera</i>	paper mulberry	II	2.14	Increasing
<i>Cinnamomum camphora</i>	camphor tree	I	1.3	Increasing
<i>Koelreuteria elegans</i>	flamegold	II	0.1	Increasing
<i>Melia azedarach</i>	Chinaberry	II	3.75	Decreasing
<i>Sapium sebiferum</i>	Chinese tallow	I, N	0.02	Decreasing
Shrubs				
<i>Lantana camara</i>	lantana	I	0.01	Increasing

Scientific Name	Common Name	FLEPPC/ Noxious weed lists	Acres Impacted	Increasing/ Decreasing
<i>Ligustrum sinense</i>	Chinese privet	I	0.01	Increasing
<i>Nandina domestica</i>	heavenly bamboo	I	0.01	Increasing

Vines

<i>Antigonon leptopus</i>	coral vine	II	0.11	Increasing
<i>Dioscorea alata</i>	winged yam	I,N	0.03	Increasing
<i>Dioscorea bulbifera</i>	air-potato	I,N	5.1	Increasing
<i>Lonicera japonica</i>	Japanese honeysuckle	I,N	0.01	Increasing
<i>Lygodium japonicum</i>	Japanese climbing fern	I,N	0.01	Decreasing
<i>Macfadyena unguis-cati</i>	cat's-claw vine	I	2.23	Increasing
<i>Wisteria sinensis</i>	Chinese wisteria	II	0.46	Increasing
<i>Pueraria montana</i>	kudzu	I,N	0.2	Stable

Forb

<i>Crotalaria spectabilis</i>	showy rattlebox		0.05	Increasing
<i>Indigofera hirsuta</i>	rough hairy indigo		unknown	Increasing
<i>Solanum viarum</i>	tropical soda apple	I,NU	0.23	Increasing

Fern

<i>Nephrolepis cordifolia</i>	sword fern	I	0.01	Increasing
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Grasses

<i>Cynodon dactylon</i>	Bermuda grass		1.5	Increasing
<i>Imperata cylindrica</i>	cogon grass	I,NU	35.44	Decreasing
<i>Paspalum notatum</i>	Bahia grass		670	Decreasing
<i>Melinis repens</i>	Natal grass	I	0.44	Increasing
<i>Sorghum halepense</i>	Johnson grass		12.94	Increasing

Fauna

<i>Sus scrofa</i>	wild hog		5	Increasing
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FLEPPC categories are from the 2009 Florida Exotic Pest Plant Council List.

Abbreviations: N = Noxious weed listed by Florida Department of Agriculture & Consumer Services; U = Noxious weed listed by U.S. Department of Agriculture.

The main control priority up to 2010 has been cogon grass (See Exhibit M2). Cogon grass is a notorious county-wide problem, and has been a focus of MCISMC. A comparison of exhibits K and M shows cogon grass growing among areas that have been site-prepped for longleaf pine reforestation, and areas that will be planted in the future. Twenty-one acres of cogon

grass was treated by contractors in fall 2008. The large swards along NE 40th Avenue Road were treated using a USDA cogon grass control grant obtained by the Forest Health Section. Adjacent cogon grass on the county right of way was also treated. Adjacent cogon grass on school district property was not treated. Some of these areas on ILSF were replanted to longleaf pine in January 2010. Using the same grant, a couple acres of isolated cogon grass patches between the Seminole Electric powerline easement and Baseline road growing under remnant sandhill overstory were also treated. Other isolated spots continue to need an initial treatment, and previously treated sites will need diligent follow-up.

An FWC Upland Invasive Plant Management Grant funded the herbicide treatment of scattered chinaberry and other FLEPPC listed trees in spring 2009, targeting areas with a high priority for reforestation. Some of these areas were planted to longleaf pine in January 2010.

Finally, the small areas with Japanese climbing fern were treated with the same FWC grant because it is so invasive. Since the fern spread from adjacent construction landfills, reinvasion is essentially guaranteed.

Future control priorities will be:

1. Monitoring and retreatment if necessary of previous control efforts.
2. Areas targeted for reforestation.

To achieve these priorities, substantial exotic sites within a ¼ mile of the CSX Railroad bed, and also the far southern end of ILSF within ¾ mile of NE 35th Street will be triaged. On these sites, exotics will be monitored but the resources for control are not expected to be available during this planning period.

11. Insects, Disease and Forest Health

Forest management practices will be conducted in such a way as to avoid insect and disease problems. If outbreaks do occur, operational and strategic plans will be implemented to control any infestations. Specific long range strategies to avoid and/or minimize losses to such outbreaks in the future will be the management objective. State forest staff will consult with the Forest Health Section to develop 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 Marion County will be notified of this designation.

As a result, prior to conducting any arthropod control activities on ILSF, 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 ILSF. 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 may establish on-site housing (mobile/manufactured home) on ILSF if deemed necessary to alleviate security and management issues. The need and feasibility specific for the state forest will be evaluated and established if considered appropriate by the Waccasassa Forestry Center 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 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 as well as packages to the 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. Seminole Electric has a large electric transmission power line running about a mile west to east along the south boundary of the forest, then bisecting the forest for about a half mile.

ILSF has four in-holdings with ingress and egress access easements: a 40 acre parcel, a developed lot in Silver Springs Park Addition, and two cemeteries. The Ocala Springs Elementary School is on an inholding, but has frontage on NE 40th Avenue Road.

The DOF does not favor the fragmentation of natural communities with linear facilities. Consequently, easements for such uses will be discouraged. The DOF does not consider ILSF suitable for any new linear facilities. When such encroachments are unavoidable, previously disturbed sites will be the preferred location. The objectives, when identifying possible locations for new linear facilities, will be to cause no damage to sensitive resources (e.g., listed species and archaeological/historical sites), to avoid habitat fragmentation, and to limit disruption of management activities and resource based recreation.

Co-location with existing corridors will be considered, but will be used only where expansion of existing corridors does not increase the level of habitat fragmentation or disrupt

management and multiple-use activities. The DOF will further encourage the use of underground cable where scenic considerations are desirable. Easements are subject to approval by the BOT and will follow the procedure 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, research projects, parking lots and new roads the DOF will consult with the FNAI and the DHR.

15. Apiaries

There are currently no apiary leases on ILSF. The feasibility of pursuing and establishing apiary leases on ILSF in areas where appropriate will be evaluated in accordance with guidelines stated in Chapter 9.1 of the State Forest Handbook (DOF 2004).

16. Cattle Grazing

There are currently no cattle leases on ILSF. Prior to state acquisition, the property was leased for cattle grazing.

17. Ground Cover

The quality of the groundcover varies tremendously across ILSF. Some sites have intact sandhills needing only fire for restoration, while extensive areas are covered with Bahia grass, Bermuda grass, Johnson grass, hairy indigo or typical early successional abandoned cropland vegetation.

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 ILSF restoration vision focuses on 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 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. There were two primary sources of ignition for these fires. Most were started by lightning strikes in the spring and early summer, but Native Americans also used fire as a means of clearing their cropland and opening up forests for improved hunting. These fires occurred much more frequently and burned much larger areas than today's fires. The combination of pronounced wet/dry seasons and nutrient poor soils produced a pyrogenic flora rich in one-hour and waxy fuels.

Prescribed burning provides numerous benefits to the forest. Many plant and wildlife species are adapted to frequent fires. Wiregrass and longleaf pine in particular are dependent on fire. Burning improves wildlife habitat by promoting the growth of tender new vegetation. This new vegetation is utilized by deer, rabbits, and many other animals, while quail and other birds prefer the seeds produced by recently burned plants. Burning opens up the forest and helps control competing vegetation. Prescribed burning also reduces fuel build-up, and so reduces the chance of detrimental wildfires.

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

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 water flows. With the assistance of the DOF Hydrology Section, ILSF staff will evaluate the need for hydrologic management or restoration. Small-scale restoration of individual roads and firelines on the forest is achievable and productive. Any activities associated with hydrological restoration on ILSF will be implemented with the approval and coordination of partnering agencies and under the direction of the Hydrology Section. An abandoned earthen dam is discussed in Section IV.B.8.

ILSF was purchased as part of the strategy to reverse the decline of water quality in Silver Springs, such as increases in nitrate concentration. ILSF's karst topography west of Indian Lake does not feature any riparian areas, either permanent or ephemeral. These rolling sandhill soils are dotted with numerous dry sinkholes (Exhibit J). Preliminary mapping has found 83 sinkholes, not including the holes under Indian Lake itself. Although some of these sinkholes hold water for a short time, standing water is not a dominant feature of this part of the forest. A forested watershed helps to moderate storm flows and recharge

aquifers by allowing more precipitation to infiltrate the soil and reducing overland runoff, a particular concern with swallets, a sinkhole that drains surface water. In summary then, DOF will institute an initial program of restoration that focuses on invasive plant treatment, reforestation of ruderal/agricultural areas and prescribed fire in such a manner as to protect the inherent sensitivity of this very unique and threatened hydro-geologic condition.

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 mitigation or grant contractual agreements. Wetland restoration projects should be conducted in conjunction with other restoration activities indicated elsewhere in this plan.

To the extent possible, ILSF, with assistance from the Division's Hydrology Section, will pursue funding to develop and implement wetland restoration 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. See also IV.A.18.b

c. Species Composition

Ensuring that species vital to ecosystem processes are in place on ILSF is a restoration priority. A continuous pyrogenic ground cover in 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.

About half of the historical sandhills have had their native groundcover completely removed by prior land uses (sod farming, conversion to improved pastures, and till agriculture). Due to these past activities, these sites are prone to invasion by upland exotic plants including cogon grass and Japanese climbing fern. A further concern on this property is the desire to minimize negative water quality impacts to Silver Springs. To help prevent exotic weed invasion, extensive groundcover restoration is not scheduled during this planning period. Longleaf pine reforestation will provide quick and easy groundwater protection, and other expensive difficult restoration practices will not be needed initially.

In contrast, the remaining half of the sandhills have a relatively intact understory with enough native warm-season grasses, such as wiregrass, to easily carry prescribed fire under a variety of prescriptions. Despite a history of fire suppression prior to state ownership, these areas have responded to prescribed fire with a profusion of native groundcover, and the resulting positive effects on native plant and animal species.

The multiple-use management approach should maintain habitat conditions suitable for the array of species typically found within the various ecosystems. If habitat conditions become suitable, reintroducing previously extirpated species will be examined and attempted if it makes sense ecologically and from the standpoint of species recovery. The potential for reintroducing red cockaded woodpeckers is discussed in section IV.B.1. Gopher tortoises are present on ILSF. Some potential may exist to translocate more gopher tortoises onto ILSF, if their local population is found to be insufficient in some areas. Any translocation of gopher tortoises must follow DOF and FWC guidelines. The potential for gopher tortoise translocation is discussed in Section IV.B.1.

B. Description of Natural Communities and Proposed Management Activities

Listed below are the vegetation types found on ILSF along their desired future conditions, existing conditions, and the management actions that will be used to restore these natural community types. These initial historical communities (Exhibit J, Table 1) and current cover types (Exhibit K) are based on surveys by DOF staff during 2008 and 2009. A more refined historical community map will be delineated by FNAI in the future. As prescribed fire is reintroduced into the property after a long absence, and as further field work finds other patches of remnant vegetation, the community classification may be modified.

Table 6. Historic and Existing Community Types on ILSF

Historic Natural Community	Vegetation Type	Acres Mapped (Existing)	Burn Interval (Years)
Sandhill	Sandhill-Relatively Intact	2095.69	1-3
	Xeric Hammock	342	N/A
	Improved Pasture	788	2-4
	Abandoned Cropland	648	1-3
	LLP Plantation	268	1-3
Mesic Flatwoods		113	2-4
Sinkhole		0.4	N/A
Mesic Hammock		76	N/A
Sinkhole Lake		8	N/A
Baygall		62	25-75
Depression Marsh		7	2-4
Basin Marsh		39	25-75
Basin Swamp		11	N/A
Dome Swamp		4	2-5
Total		4462.09	

1. Sandhill

Desired Future Condition

Sandhills have a scattered open tree canopy over a dense, grassy understory. The ridge-tops and slopes of well-drained, rolling hills slope gradually into flatwoods, or more steeply into sinkholes. Longleaf pine (*Pinus palustris*) is the primary overstory tree species with various oak species such as turkey oak (*Quercus laevis*) or sand post oak (*Quercus margaretta*) interspersed ($BA \leq 10 \text{ ft}^2/\text{ac}$). Pine stands are uneven-aged, containing at least three age classes including large old trees, with an average basal areas ranging from 60-80 ft^2 per acre. This basal area goal is for fully stocked stands. There will be times and places where the basal area will be lower, such as: stands in the early stages of regeneration, areas thinned to promote natural regeneration, and stands managed for red-cockaded woodpeckers (RCW). The midstory is a patchy mix of longleaf regeneration, both saplings and seedlings, and hardwoods in varying densities. Offsite or exotic species such as sand pine (*Pinus clausa*), slash pine (*Pinus elliotii*), loblolly pine (*Pinus taeda*), Chinaberry (*Melia azedarach*) and laurel oak (*Quercus laurifolia*) are virtually non-existent. Scrubby inclusions with myrtle oak (*Quercus myrtifolia*), Florida scrub oak (*Quercus inopina*) and scrub palmetto (*Sabal etonia*) are sparsely scattered. Frequent fires, approximately every one to three years, burn across the sandhills. The continuous, grassy understory is species rich. Dominant grass species include wiregrass (*Aristida stricta*), lopsided indiagrass (*Sorghastrum secundum*), and pineywoods dropseed (*Sporobolus junceus*). Common herbaceous species like blazing star (*Liatris spp.*), deer tongue (*Carphephorus spp.*), blackroot (*Pterocaulon pycnostachyum*), and Florida elephant's-foot (*Elephantopus elatus*) occur, and have intense flowering triggered by growing season fires. Occasional patches of woody shrubs also occur.

Isolated wetlands, restricted to the sandhills east of Baseline Road near Indian Lake, have an open sedgy fringe because fires from the surrounding sandhill sweep across them with no firelines or barriers. These deep, sandy, well-drained soils have no creeks flowing through the sandhill sites; precipitation percolates through the soil or drains directly into sinkholes. Sinkholes range between a hundredth acre to a half acre in size and can be scattered across all the sandhills. Approaching the edge of larger sinkholes, the community changes to a mesic overstory.

Sandhill animals are dispersed throughout the community type in healthy, sustainable populations. Species such as gopher tortoise (*Gopherus polyphemus*), gopher frog (*Lithobates capito*), eastern indigo snake (*Drymarchon corais couperi*), striped newt (*Notophthalmus perstriatus*), pocket gophers (*Geomys pinetis*), Sherman's fox squirrel (*Sciurus niger shermani*), Eastern diamondback rattlesnake (*Crotalus adamanteus*), Florida pine snake (*Pituophis melanoleucus mugitus*), Bachman's sparrow (*Aimophila aestivalis*), and red cockaded woodpecker (*Picoides borealis*) can be located with reasonable ease. Microhabitats such as large trees, stump holes, bare sand, and logs contain the appropriate associated fauna. Brown-headed nuthatches (*Sitta pusilla*) are frequently heard calling during the day, indicating good fire history and site quality.

Existing Conditions

Nearly 2,100 acres of ILSF's sandhill has a relatively intact understory and a mixed pine/oak canopy that's easily restored and maintained using prescribed fire. Native groundcover is present in this half of ILSF's historically sandhill areas (Exhibit K). These areas have had long-term fire suppression and have a pronounced duff layer. 1,119 acres have been burned through June 2010 (Exhibit N). Although most of these areas of sandhill have a reasonably intact understory, large patches are succeeding to an oak dominated canopy. Forty percent of all pine stands have at least three age classes. The remaining 1,700 acres of historical sandhill have been drastically altered by hardwood competition, old-field weeds, pasture grasses (Bahia and Bermuda grass), or by noxious grasses (cogongrass and Johnson grass) to the point where more intensive restoration treatments in addition to fire may be required to return the stands to the desired conditions. Since acquisition, 268 acres of altered sandhill have been planted to longleaf pine by DOF (200 acres of abandoned cropland and 68 acres of improved pasture).

Restoration

Sandhill restoration will focus on replanting abandoned cropland and improved pastures, hardwood control, and reintroduction of a natural fire regime. Considering the value of a forested landscape for water quality, as money and resources allow, DOF will replant abandoned cropland and improved pastures to longleaf pine stands. Fire and mechanical means will be the preferred site-preparation techniques, but at times chemical treatments may be necessary. Silvicultural mid-rotation herbicide and fertilizer use is also typically minimized on state forests, in favor of prescribed fire.

For the more intact half of this community type (labeled "sandhill" on the map in exhibit K), spring and summer fires on a 1-3 year interval will rejuvenate the native groundcover species. There may be occasions in which the burn rotation will be longer (young pine regeneration, periods of extended drought, etc.), but the goal is to mimic the natural burn cycle as much as possible. In areas with heavy oak encroachment and very sparse groundcover, herbicide treatment may be needed before a fire can carry through the stand. This will stimulate groundcover species including wiregrass. Broadcast herbicides will not be sprayed in a buffer strip around sinkholes, and aerial application will not be used. In addition, because of concerns about herbicide use too close to sinkholes, chopping or mowing may be a better oak treatment in some karst areas. See discussion in IV.A.18.b.

The groundcover in the more ruderal half of the historic sandhills labeled Ruderal-Abandoned Cropland, or Ruderal-Improved Pasture-Successional Sandhills in Exhibit K, is dominated by exotic pasture grasses, hairy indigo, invasive exotic grasses, or early successional weeds. Invasive exotic species will be controlled and the sites will be burned but groundcover restoration will not be a primary focus. Instead, the planting of longleaf pine will be the initial target of management. In areas of thick non-native grasses and heavy sod, scalping may be prescribed prior to planting pines. Some scalping may be accomplished by using sod harvests. Spot herbicide treatments may be used as well to ensure good initial survival of longleaf pine seedlings.

Timber management practices in the sandhill, in general, will focus on creating even-aged or uneven-aged stands of longleaf pine that have old growth characteristics and include a small oak component. The oak density will be determined by the fire regime and individual site

characteristics. Silvicultural activities may include thinnings in denser stands, site preparation, burning, machine planting, and hand planting. An average basal area of 60 to 80 ft²/ac is desired to maintain a healthy forest.

Initial site surveys for ephemeral pond breeding amphibians and gopher tortoise burrow commensals will be done on ILSF. Also, red-cockaded woodpeckers (RCW) are present on Salt Springs Island of the Ocala National Forest, 13 miles east of ILSF. The southeast border of ILSF is less than 5 miles from historic RCW clusters northwest of Lake Charles in the Lacota area (part of the Ocala National Forest RCW reintroduction plan), and 8 miles from the area in the Church Lake unit which is tentatively scheduled for reintroduction of RCWs in the fall of 2010. As restoration and good forest stewardship proceeds on ILSF, RCWs could naturally migrate into the older longleaf pine stands on the site.

Restocking of gopher tortoises is a potential restoration activity on ILSF sandhills. Any translocation of gopher tortoises must follow FWC guidelines and DOF guidelines as described in the State Forest Handbook. Translocation projects must be approved by the Forest Management Bureau Chief. A gopher tortoise strategy for ILSF will be developed in consultation with FWC during the next five years. Part of this strategy will be an assessment of this area as a potential mitigation site. Currently, gopher tortoise densities vary greatly among sandhill areas depending on the various habitat conditions. Potential future densities will depend on the success of restoration activities.

Existing Condition	Prescription for Restoration
Sandhill – Restorable. Uneven aged natural stand. with relatively intact groundcover - 2,095.69 acres	These stands will be burned on a 1 to 3 year fire return interval (burn rotation may be longer in areas with pine regeneration). Dormant season fuel reduction burns will be followed by April to August burns in future years. Some areas will need oak-killing herbicides applied in order to allow fire to carry across the stand. Natural longleaf pine regeneration should be encouraged within and adjacent to these stands. Thinning to lower basal areas will also serve as a fuel reduction treatment to allow more frequent, less catastrophic fire.
Improved Pastures- Ruderal Sandhills – 788 acres.	These areas will be prescribed burned and planted to longleaf pine where soil types allow. Sod harvest, scalping, mowing, single drum chopping and or band-spray herbicide treatments may be necessary in areas to facilitate survival of planted seedlings. Invasive exotic plants will be controlled.
Abandoned Cropland - Ruderal Sandhills – 648 acres.	These areas will be prescribed burned and planted to longleaf pine where soil types allow. Scalping, mowing, single drum chopping and or band-spray herbicide treatments may be necessary in areas to facilitate survival of planted seedlings. Invasive exotic plants will be controlled.

Existing Condition	Prescription for Restoration
Xeric Hammock Ruderal Sandhills – 342 acres.	These sites will be evaluated for restoration potential versus their value as recreation areas. Potential recreation sites will be left oak-dominated, while sites targeted for restoration will be treated with fuel-wood sales, herbicide and or prescribed fire. Many of these sites have serious problems with invasive, upland exotic plants to be controlled.
LLP Plantation- Ruderal Sandhills - 268 acres	These improved pastures and abandoned cropland planted to longleaf pine by DOF using various site preparation and planting techniques will be burned and exotic plants will be controlled. Pine straw may be harvested.
Current Condition classes shown on Exhibit K. Small sinkholes are scattered throughout the area that was historically sandhill.	

2. **Mesic Flatwoods**

Desired Future Condition

The desired future condition of mesic flatwoods is a forest (60-80 BA) of longleaf pine and slash pine with little to no midstory hardwoods. The pines occur in clusters of different ages, including both old growth pines and patches of regeneration. The sparse canopy and sub-canopy allow ample sunlight to reach the ground to support a diverse groundcover of long-lived native perennial grasses (with wiregrass dominant), forbs and low shrubs. Small areas of scrubby flatwoods, wet flatwoods and baygall are included community types; the former occur as patches of understory scrub oaks in the low shrub layer on sandy rises within the mesic flatwoods matrix. Wet flatwoods occur in depressions and may have scattered wetland shrubs in the midstory. Baygalls occur as inclusions in the mesic flatwoods matrix in depressions and are characterized by wetland hardwood trees and the presence of organic soils with a seepage hydroperiod.

Existing Conditions

This 113 acre stand is 50 years old, and has not been bedded and planted to slash or loblolly pine. It is mainly natural slash pine with a one acre longleaf pine inclusion. Due to the lack of fire, hardwood, palmetto, and woody shrub encroachment is a problem in most areas.

Restoration

Mesic flatwoods should be maintained with prescribed fire. Multiple dormant season burns (December through February) may be required to reduce the amount of fuels in the understory to allow for growing season burns (March through August) every two to four years. There may be occasions in which the burn rotation will be shorter or longer (1–5 years), but the goal is to mimic the natural burn cycle as much as possible. Prescribed fire and thinning to open the overstory and midstory is the most effective way of allowing sunlight to reach the ground and rejuvenate remnant native groundcover. Frequent prescribed fire is needed to maintain an open canopy and midstory, and to allow sunlight to reach the groundcover. With the assistance of the DOF Hydrology Section, ILSF staff will evaluate the need for hydrologic

management or restoration in the flatwoods, which may include small-scale restoration of individual roads and firelines.

Silvicultural management will focus on creating uneven-aged mixed species stands dominated by longleaf and slash pines. Each species will be allowed to inhabit its natural area within the community. Timber in these areas will be harvested using different methods, including selective thinning and small patch clear-cuts. Stocking densities and basal areas averaging (60-80 BA) will be managed to allow adequate sunlight to maintain abundant grassy groundcover. The stand should be thinned to maintain forest health, prevent wildfires and allow reintroduction of prescribed fire as soon as possible. Existing longleaf pines and good quality slash pines will be retained when thinning to allow for natural regeneration. Timber harvest will be limited to drier periods to prevent rutting and damage to remnant groundcover. The one acre longleaf pine inclusion will be treated in a way which will allow the area to gradually increase in size. The area immediately surrounding this inclusion will be thinned more heavily allowing natural longleaf regeneration to take place.

Existing Condition	Prescription for Restoration
Mesic Flatwoods 50 year old natural stand.	This stand will be burned on a 2 to 4 year fire return interval. Several dormant season fuel reduction burns will be followed in future years by April to August burns. Most areas will need thinning. Some areas may need mowing, thinning, or roller chopping to safely burn the stand. Natural regeneration of slash and longleaf pine will be encouraged within and adjacent to these stands. With regular prescribed burning and natural regeneration, the natural boundary of this forest type will become more defined.

3. Sinkhole Lake

Desired Future Conditions

Indian Lake, the sinkhole lake on ILSF, contains clear, alkaline, hard water with high mineral content. It provides habitat for many species also found in accompanying subterranean natural communities. Although the main depression is relatively permanent, water levels fluctuate dramatically. Typical plants include swamp smartweed (*Polygonum hydropiperoides*), needlepod rush (*Juncus scirpoides*), southern yellow bladderwort (*Utricularia juncea*), lesser duckweed (*Lemna aequinoctialis*), Columbian watermeal (*Wolffia columbiana*), American waterfern (*Azolla filiculoides*). Typical animals could include crayfish, isopods, amphipods, pirate perch (*Aphredoderus sayanus*), redeye chub (*Notropis harperi*), yellow bullhead (*Ameiurus natalis*), mud turtle (*Kinosternon subrubrum*).

Existing Condition

Indian Lake is currently in its desired future condition. Sinkhole Lakes, like Indian Lake, occur typically in deep, funnel-shaped depressions in a limestone base. Indian Lake is a linear series of sinkholes grading into Indian Lake Prairie. The vegetation in the main pool of Indian Lake is limited to a narrow fringe of emergents at the edge of the water which is reported to be 85 feet deep. The other nearby sinkholes in the depressed area are more ephemeral. Sinkhole

lakes in Florida are threatened by erosion, which causes destruction of surrounding vegetation, and by pollution and other threats to the aquifers with which they are connected.

4. Sinkhole

Desired Future Conditions

ILSF's sinkholes are cylindrical or conical depressions with steep limestone walls. Depending on the slope of the walls, their vegetation may either grade into the surrounding sandhill, or in steeper sinkholes there may be an abrupt community boundary. Where sands cover the rock or the sides of the sinkholes are moderately sloped, the sinkholes' vegetative structure is a well-developed forest, with no exotic plants. These conditions are typically confined to the upper portions and around the rim of the sinkhole. Steeper rock walls are generally more or less covered by mosses, liverworts, and ferns with occasional herbs and shrubs in crevices. Typical plants include devilwood (*Osmanthus americanus*), southern magnolia (*Magnolia grandiflora*), sweetgum (*Liquidambar styraciflua*), wax myrtle (*Myrica cerifera*), summer grape (*Vitis aestivalis*), woodbine (*Parthenocissus quinquefolia*), poison ivy (*Toxicodendron radicans*), partridgeberry (*Mitchella repens*), greenbrier (*Smilax* spp.), water oak (*Quercus nigra*), sparkleberry (*Vaccinium arboreum*), live oak (*Quercus virginiana*), pignut hickory (*Carya glabra*), beautyberry (*Callicarpa americana*), and gum bumelia (*Sideroxylon lanuginosum*). Sinkholes provide mesic habitat for relict populations of many species of salamanders and invertebrates that are unable to survive in drier areas.

Existing Conditions

The conditions of ILSF's sinkholes are largely a reflection of its sandhills. Since so many sandhills have been converted to improved pasture and cropland, the microclimate of included sinkholes has been altered. Sinkholes embedded in these cover types are dryer than sinkholes in an intact sandhill. Sinkholes are extremely fragile communities. Their popularity as recreational areas subjects their flora to trampling and their steep walls to severe erosion.

ILSF sinkholes have historically been used as dump sites. At the time of acquisition, TNC put tremendous effort into evaluating dump sites, and contractors were hired to clean up this junk.

The delicate microclimate of sinkholes may also be easily disturbed by activities in the surrounding areas. Clearing of the surrounding canopy will increase both insolation and sedimentation levels, while major soil disturbances in the surrounding uplands could disrupt seepage water sources. Large withdrawals of groundwater nearby could substantially lower water tables and reduce the hydroperiods of Sinkhole Lakes. Any of these activities could significantly alter the microclimate and induce undesired vegetational responses. Likewise, the invasion of exotic plant species is a huge problem at ILSF, especially in highly disturbed former sandhill sites. Any patch of trees in improved pasture or abandoned cropland visible from an aerial photo of ILSF is probably a sinkhole, and it will likely have mimosa, chinaberry, rain tree or Chinese tallow growing in it.

Restoration

An accurate sinkhole map is being developed by DOF to avoid incompatible uses near sinkholes. Known sinkholes are noted on Exhibit J. Dumping and sedimentation have affected historical water quality in the ILSF sinkholes and so eventually the underground

aquifer and Silver Springs. Litter and refuse will be removed promptly when discovered. An intensive clean up of numerous dumpsites occurred prior to state acquisition. Similarly, pollution of the water supplies (aquifer and seepage sources) should be avoided. Although extensive exotic plant control efforts are needed within sinkholes, only the minimum herbicide application necessary to accomplish this weed control will be used. When selecting sites for offices, shops, buildings, or recreation areas, careful consideration will be given to avoiding impacts on sinkholes. Silvicultural operations will avoid impacts on sinkholes, and buffers will be maintained around them when useful and appropriate. See also Section IV.A.6.b

Most of the sinkholes on ILSF are modest, less than 30 feet in diameter (0.02 acres). As old sinkholes are found and new holes are formed, the GIS sinkhole layer will be updated. A native, forested cover is preferred in these sinkholes, and in a buffer around their edge. Longleaf pine and/or hardwood trees will be replanted around the rim of these sinkholes. In the ruderal sites, forest cover over intermittent sinkholes is dominated by exotic trees, mainly chinaberry, but also including paper mulberry, mimosa, flamegold and Chinese tallow. Exotic plant control herbicide applications will strive to minimize damage to the residual native stand and to minimize herbicide use. All herbicide labels will be strictly followed. Mechanical treatment or pulling up seedlings will be pursued if practical.

5. Mesic Hammock

Desired Future Condition

Mesic hammock is a well developed evergreen hardwood and palm forest on soils that are rarely inundated. The canopy is typically closed and dominated by live oak (*Quercus virginiana*), with cabbage palm (*Sabal palmetto*) common in the canopy and subcanopy. Southern magnolia (*Magnolia grandiflora*) and pignut hickory (*Carya glabra*) may be occasional in the subcanopy. Water oak and laurel oak (*Quercus hemisphaerica*) may also be present in this community. Other than pignut hickory, only a few deciduous species such as sweetgum (*Liquidambar styraciflua*) and sugarberry (*Celtis laevigata*) are found in the canopy and subcanopy layers. Pine trees, particularly slash pine (*Pinus taeda*), form a sparse emergent layer.

The shrubby understory is composed of a mix of saw palmetto (*Serenoa repens*), American beautyberry (*Callicarpa americana*), American holly (*Ilex opaca*), sparkleberry (*Vaccinium arboreum*), hog plum (*Ximenia americana*), common persimmon (*Diospyros virginiana*), highbush blueberry (*Vaccinium corymbosum*), Carolina laurelcherry (*Prunus caroliniana*), yaupon (*Ilex vomitoria*), wild olive (*Osmanthus americanus*), and/or wax myrtle (*Myrica cerifera*).

The herb layer is often sparse or patchy and consists of various grasses and sedges, including low panic grasses (*Panicum spp.*), witchgrasses (*Dichanthelium spp.*), woodsgrass (*Oplismenus hirtellus*), longleaf woodoats (*Chasmanthium laxum* var. *sessiliflorum*), sedges (Cyperaceae), and whip nutrush (*Scleria triglomerata*), as well as various ferns and forbs such as bracken fern (*Pteridium aquilinum*) and partridgeberry (*Mitchella repens*).

Toothpetal false rein orchid (*Habenaria floribunda*) and other ground orchids are occasional. Abundant epiphytes on live oaks and cabbage palms are a characteristic feature of mesic hammocks.

Existing Condition

Upland ecotones between this community and sandhill were altered by past land uses visible in the 1940's aerial photos (Exhibit J2). Historically, some of this area, perhaps reflecting a relatively rich soil type, was converted to agricultural fields. These abandoned croplands may have grown back into xeric hammock, so some of this community may have been lost in this process (See Xeric Hammock Ruderal Sandhills discussion in IV.B.1). Also, no southern red oak (*Quercus falcata*) has been found on ILSF.

Restoration

Minimal restoration work is proposed for this community. Mesic hammock is vulnerable to invasion by upland exotic plants, although this has not been a problem thus far. Exotic plants will be monitored and treated if necessary.

6. Baygall

Desired Future Condition

Baygalls are wetlands formed on areas where sheet flow has reached an impermeable layer of soil. These communities are almost always moist, however they rarely flood. Soils are nutrient poor, acidic peats. The overstory consists of dense hardwood vegetation, very similar to the current condition on ILSF. Primary species are swamp bay (*Persea palustris*), sweet-bay (*Magnolia virginiana*), sweet gum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), loblolly-bay (*Gordonia lasianthus*), loblolly pine, and pond pine (*Pinus serotina*). The midstory is a mix of shade tolerant species, primarily sapling stage bays and other hardwoods. Vegetative groundcover is virtually non-existent due to shading. Baygalls are often surrounded by transition zones such as wet flatwoods and seeps. These ecotones contain a higher biological diversity, primarily controlled by fire.

Existing Condition

Most of the baygall on ILSF is interspersed in a matrix of fire suppressed flatwoods. Both natural communities have very heavy fuel loading in the form of duff and peat and also a thick mid-story. Some areas have a dense overstory consists primarily of loblolly-bay, yellow poplar (*Liriodendron tulipifera*), swamp tupelo (*Nyssa biflora*), and bays. The understory is often a dense combination of fetterbush (*Lyonia lucida*) and young bays. Other sites don't have an overstory, but are dominated by fetterbush. Fuel loads are very high, consisting of leaf litter, peat, and thick duff. Firelines are common around and in some cases through these systems.

Restoration

The primary restoration goal is to reduce these communities to their historical acreage and to reduce the fuel buildup in surrounding transition zones. This can be done through first dormant and then growing season fire regimes in the surrounding matrix. Groundcover is minimal within closed-canopy baygall. Where seeps and flatwoods have been overgrown, a variety of grasses and herbaceous plants will reappear once competition from woody plants is

eliminated. The hydrologic restoration of these systems can be accomplished by rehabilitating firelines that run through and around them. Harvesting operations can be used to reduce fuel loads in these systems. Reduction of basal area should help promote understory development. Hydrologic alteration from timber harvest is a concern. To prevent adverse effects BMPs must be followed. Harvesting will often coincide with operations in adjacent flatwoods systems. Growing season fire is vital to reducing the encroachment of these communities into surrounding transition zones and communities. These communities are not isolated by firelines, so when conducting prescribed burning in the surrounding uplands, the fire will be allowed to creep into the edges of the baygall before going out naturally. Generally, there is a one to five year return interval around the perimeter with a longer return interval (25 to 75 years) on the interior. Care must be taken when reducing fuel loads to avoid killing pines in adjacent flatwoods due to the amount of feeder roots that often grow in the duff layer.

Red bay mortality from exotic red bay ambrosia beetles and the associated laurel wilt is inevitable and will be monitored.

7. Depression Marsh

Desired Future Condition

Depression Marshes are shallow, herbaceous wetlands found in the low-lying flatwoods or sandhill transition to flatwoods. They are formed in the more vertically drained dissolution breaks of the underlying karst formations. The soil is usually acidic sand with deepening peat towards the center. ILSF's depression marshes are dominated by maidencane (*Panicum hemitomon*), cordgrasses (*Spartina bakeri* and *Spartina patens*), purple bluestem (*Andropogon glomeratus* var. *glaucopsis*), cinnamon fern (*Osmunda cinnamomea*), and Virginia chain fern (*Woodwardia virginica*). Other common herbaceous plants found here include pipeworts (*Eriocaulon* spp.), yellow-eyed grasses (*Xyris* spp.), sundews (*Drosera* spp.), beaksedges (commonly *Rhynchospora fascicularis* and *Rhynchospora miliacea*), and a diversity of milkworts (*Polygala* spp.). Because of their ephemeral nature, depression marshes are breeding habitat for gopher frogs (*Lithobates capito*), striped newts (*Notophthalmus perstriatus*), and southern chorus frogs (*Pseudacris nigrita nigrita*).

Existing Conditions

Depression marshes at ILSF are being encroached by woody species such as black gum (*Nyssa sylvatica* var. *biflora*), dahoon holly, wax myrtle, slash pine, loblolly pine, and gallberry (*Ilex glabra*) due to lack of fire. In general there are minimal firelines and roads disrupting their hydrology.

Restoration

Because the hydrology has not been greatly altered, returning fire to shrub-encroached transition zones is the most important restoration activity. The ratio of shrubby to herbaceous cover in these transition zones should show improvement over the planning period because of prescribed fire. Existing fire breaks should be rehabilitated wherever possible and new lines will be established in compliance with the BMP manual. Hydrologic restoration projects, such as low water crossings and culvert installation and maintenance may occur on parts of this vegetation type. Some of these areas will become wetter as natural hydrology is restored.

After field surveys, one marsh stands out the best potential habitat for ephemeral pond breeders because of its existing grassy vegetation, intact hydrology, adequately long hydroperiod, ephemeral nature, and closeness to good, restorable sandhill. Returning fire to this depression marsh at 29° 16' 4.84" North; 82° 2' 35.50' West is a particular priority.

8. Basin Marsh

Desired Future Conditions

The southern extent of Indian Lake Prairie drains through ILSF through a cypress basin swamp and into Indian Lake. This basin marsh is an herbaceous or shrubby wetland situated in a relatively large and irregular shaped basin. Typical plants include common reed (*Phragmites australis*), southern cutgrass (*Leersia hexandra*), southern water grass (*Luziola fluitans*), pennywort (*Hydrocotyle* spp.), Carolina redroot (*Lachnanthes caroliana*), soft rush (*Juncus effuses*), American lotus (*Nelumbo lutea*), arrowhead (*Sagittaria* spp.), water primrose (*Ludwigia* spp.), coastalplain willow (*Salix caroliniana*), elderberry (*Sambucus nigra*), spikerush (*Eleocharis* spp.), denseflower knotweed (*Polygonum glabrum*), and common buttonbush (*Cephalanthus occidentalis*). Typical animals include Two-toed amphiuma (*Amphiuma means*), Eastern Lesser Siren (*Siren intermedia*), greater siren (*Siren lacertian*), cricket frog (*Acris crepitans*), green treefrog (*Hyla cinerea*), alligator (*Alligator mississippiensis*), mud snake (*Farancia abacura*), and swamp snake (*Seminatrix pygaea*). Basin Marshes usually develop in large solution depressions that were formerly shallow lakes. The lake bottom has slowly filled with sediments from the surrounding uplands and with peat derived from plants. Thus, the soils are usually acidic peats. The hydroperiod is generally around 200 days per year. Fire maintains the open herbaceous community by restricting shrub invasion along the edges.

Existing Conditions

There is some woody encroachment into Indian Lake Prairie due to fire suppression, and the surrounding upland fringe consists of oak dominated communities that will not easily carry a fire.

Restoration

The portion of Indian Lake Prairie on ILSF is prescribed in this plan to have long intervals of fire return, ranging from 25-75 years. During this planning period, the possibility that the prairie could have more frequent prescribed fires will be reviewed. Fires during drought periods will often burn the mucky peat and may convert the marsh into a marsh lake. Fire is also necessary to control hardwood encroachment. However, prescribed burning during droughts should be avoided to reduce the possibility of a muck fire. Muck fires create difficulties because of smoke management.

Long ago, an earthen dam was constructed across Indian Lake Prairie on the state forest, but the center was washed out in the past due to flooding. Cogongrass grows on the remaining earthen dam. The cogongrass has been treated with herbicides and will be re-treated as needed. This dam should be evaluated by the Forest Hydrology section to see if further restoration is needed. Normal hydroperiods must be maintained, or basin marsh vegetation may change.

9. Basin Swamp

Desired Future Conditions

Basin swamp is a basin wetland vegetated with hydrophytic trees and shrubs that can withstand an extended hydroperiod. On ILSF, basin swamp is the forested wetland community that intergrades the southern end of Indian Lake Prairie where it approaches Indian Lake. The canopy dominant trees are pond cypress (*Taxodium ascendens*) and a mix of other swamp hardwoods. Shrubs are concentrated around the perimeter, such as Virginia willow (*Itea virginica*), myrtle dahoon (*Ilex cassine* var. *myrtifolia*), fetterbush (*Lyonia lucida*), wax myrtle (*Myrica cerifera*), and common buttonbush (*Cephalanthus occidentalis*). The herbaceous layer includes a variety of species including maidencane (*Panicum hemitomon*), Virginia chain fern (*Woodwardia virginica*), arrowheads (*Sagittaria* spp.), lizard's tail (*Saururus cernuus*), bog hemp (*Boehmeria cylindrica*), beaksedges (*Rhynchospora* spp.), bladderworts (*Utricularia* spp.), and royal fern (*Osmunda regalis*). Sphagnum moss (*Sphagnum* spp.) occurs in patches where the soil is saturated but not flooded. Vines are present, such as various greenbriers (*Smilax* spp), and eastern poison ivy (*Toxicodendron radicans*). Epiphytic species such as resurrection fern (*Pleopeltis polypodioides*), Spanish moss (*Tillandsia usneoides*), and Bartram's air-plant (*Tillandsia bartramii*) are plentiful.

Existing Condition

The cypress forest between Indian Lake Prairie and Indian Lake is dry more often than other typical basin swamps. It is unclear why this area did not succeed to more of a baygall community rather than a basin swamp. Its hydroperiod may be more similar to a dome swamp. Because of the concentration of old sinks in the area, there is quite an elevation drop-off from nearby uplands to the basin swamp floor. Basin swamps that occur in and around hardwood hammocks have a low exposure to fire while basin swamps associated with basin marsh likely burn much more frequently. This swamp is presumed to be the first case; not pyrogenic. The cypress trees facing Indian Lake are potentially a bird rookery, so wading bird use will be observed carefully on this site. Currently there are no major hydrological alterations or exotic plant problems in this area. The existing condition is pretty much the desired future condition. No major restoration is needed; exotic plants are not present. Exotic plants should continue to be monitored.

10. Dome Swamp

Desired Future Condition

Dome swamps are also known as cypress domes. On ILSF, they are shallow depressional wetlands surrounded by flatwoods which are intermittently wet. The primary water supply for these wetlands is runoff from the surrounding uplands. The soil is usually covered by a layer of decomposing organic matter. ILSF's dome swamps are dominated by pond cypress (*Taxodium ascendens*), although myrtle-leaved holly (*Ilex myrtifolia*), tupelo, and slash pine may also be present. Fetterbush and other woody shrubs dominate the midstory which varies in density from open to dense. Grassy depressional marshes exist in the center of some domes while others have a marshy fringe around the outside, others may have a sward of both. These marshy areas are dominated by a variety of sedges and often have a more open or nonexistent overstory. These open areas also provide habitat for a variety of orchids, and other herbaceous plants. The size, position, fire regime, and hydroperiod determine the habitat quality for amphibians such as the striped newt. Newts, as well as gopher frogs and a variety of other reptiles and amphibians, use the ecotonal edges of dome swamps for breeding.

A regular fire interval maintains the grassy fringes by deterring hardwood encroachment and peat accumulation. An annual hydroperiod where these sites dry down completely provides habitat for species such as striped newts and gopher frogs to breed in without predation from fish.

Existing Conditions

Overall, the handful of existing dome swamps is in good hydrological condition with minimal soil disturbance. The overstory is primarily pond cypress with some pines interspersed. Open areas exist in some of the swamps that are considered depressional marshes. In some areas, fetterbush is the dominant understory, growing on old stumps and other higher ground. These domes are very fire suppressed and so have a stout, shrubby midstory and extreme duff buildup. Fuel loads are high.

Restoration

Restoration activities should focus on reintroducing prescribed fire, and groundcover especially around transition zones. The average fire return interval ranges from two to five years. Maintaining the grasses/sedges and other groundcover plants in and around the perimeter through fire is important both for maintaining species diversity and for providing habitat for the ephemeral pond breeding amphibians. By burning, the duff layer is reduced, plant growth is promoted, and woody encroachment is controlled. Striped newts need tussocks of grasses and sedges around the perimeter of these areas for part of their life cycle which is promoted through growing season fire.

Current firelines and roads that are adjacent to or through these communities should be rehabilitated or eliminated. Pre-suppression firelines should not be plowed unless there is a major need or if no other lines are suitable. All fireline construction activities should follow the recommendations in the DOF Silviculture BMP Manual.

C. Impact of Planned Uses on Property Resources

The renewable resources will be protected as follows:

1. Silviculture

Guidelines outlined in previous sections of this plan will ensure a sustainable timber resource and diverse ecological resources for perpetuity.

2. Wildlife

Wildlife resources will be protected through various management techniques coordinated between DOF and FWC. The DOF and FWC manage these resources through law enforcement, silviculture, restoration techniques, and prescribed burning. Wildlife will be managed and protected through the maintenance of native ecosystems.

3. Water

Water resources will be protected through the use of Silviculture BMPs and/or other appropriate measures as deemed necessary by the DOF's Forest Hydrologist and/or Watershed

Specialist. Guidelines and activities as outlined in previous sections of this plan (III.B.3, III.B.7, IV.A.18.c, and IV.B) will protect water resources on ILSF.

4. Historical/Archaeological

In the event of any significant ground disturbing activity, the DHR and FNAI will be contacted for review and comment. The DOF will follow the management procedures outlined in “Management Procedures of Archaeological and Historical Sites and Properties on State-Owned or Controlled Lands” (Exhibit H) and will comply with all appropriate provisions of Section 267.061(2), Florida Statutes.

5. Recreation

Recreational uses will be monitored to evaluate impacts on the natural systems. Modifications to recreational uses will be implemented should significant negative impacts be identified.

V. MANAGEMENT SUMMARY

A. Operations Infrastructure

The equipment from Ocala Forestry Station is available to carry out resource management activities on the state forest as well as to maintain forest improvements such as trails, roads, and facilities. Limited equipment purchased for Ross Prairie State Forest (RPSF) or other State Forests is available for use on ILSF.

For some time, DOF has been evaluating the need to relocate the Ocala Forestry Station on SR 40 due to its urban location and aging facilities. If funding becomes available, the Ocala Forestry Station, Shop, and equipment shed may be relocated to ILSF (Exhibit L). Relocating to one of the abandoned croplands near CR 326 would allow the forestry station to serve as the state forest office. Not only would this central location enhance fire suppression activities throughout Marion County, it would also facilitate resource management, provide security, and serve as point of information for forest visitors.

So far, no recreational infrastructure has been built on ILSF. Since-ILSF has limited staffing, the Recreation Specialist, Forester, or Forest Area Supervisor may recruit volunteers or appropriate partners for assistance in furthering the DOF’s mission. An ILSF Liaison Committee, composed of co-managing agencies (Marion County), private citizens (Silver Springs Working Group), representatives of forest user groups, SJRWMD and other governmental bodies will be formed and meet regularly. The purpose of having a liaison committee at ILSF is to facilitate communication and dialogue between the community in which the state forest exists and the DOF.

Implementation of any of the activities within this management plan is contingent on availability of funding, other resources, and statewide priorities.

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

Representatives of DHR and FNAI will be consulted prior to the initiation of any proposed significant 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” (Exhibit H). The DOF will utilize the services of DHR archaeologists, when available, to locate and evaluate unknown resources, and to make recommendations in the management of known resources. As information becomes available, and as staffing allows, any known archaeological and historical sites will be identified on maps to aid state forest and law enforcement personnel in patrolling and protecting sites.

Applicable surveys will be conducted by DOF staff or others during the process of planning and implementing multiple-use management activities. DOF personnel will remain alert for any environmentally significant resources (Exhibit H) 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 DOF’s management of public lands is derived from Chapters 253 and 589, Florida Statutes.

D. Multiple-Use Potential – Income Producing Activities

Recreation – Sites for collection of recreation user fees will be addressed as road work, trails, campsites, and improved public access is completed. Until honor pay stations are established, special use permits will be issued from the Waccasassa Forestry Center Office, and from the Ocala Forestry Station.

Rentals - There are no buildings or sites currently available for rental income. If the pavilion near Indian Lake is renovated, it may be rented to outside groups for meetings or events.

Timber Sales - Amounts received from timber sales will vary due to product class, stand size, and market conditions. A few stands may need thinning within the ten years covered by this plan. This could result in a few timber sales being conducted on ILSF during the next ten years.

Sod Harvest - The previous owner leased several of the improved pastures for sod production, which usually involves the use of significant amounts of fertilizer and pesticides. In light of the spring protection mandate, this practice has been discontinued. However, if a buyer were interested in cutting the already established sod on some of the old pastures, DOF might be willing to sell the sod either in strips or larger areas to remove the exotic pasture grasses and thus assist with restoration and reforestation.

Pine Straw - Currently there are no pine stands suitable for pine straw harvests on ILSF. In the future, DOF will assess the potential of selling pine straw in appropriate stands. Pine straw harvest operations will be avoided in areas with significant gopher tortoise populations.

Hay sales - The previous owner also leased some of the improved pastures on ILSF for hay production. As with sod farming, hay production usually involves the generous use of fertilizers and pesticides. DOF was approached by someone interested in purchasing the some of the existing hay and in 2008 DOF conducted a successful sealed bid hay sale for 75 acres of existing

Bermuda grass pasture. In 2009, in hopes of getting better hay prices, DOF decided to bid out a three year contract on 115 acres of existing Bermuda hay fields. The successful bidder will not be allowed to use fertilizers or herbicides, but can maintain the fields as needed and harvest the hay once per year. Future hay sales may occur on ILSF. These sites will eventually be reforested with longleaf pine as funding and resources allow.

E. Potential Use of Private Land Managers

The forest manager makes ongoing evaluations of use of private land managers, consultants, and/or contractors to facilitate the restoration or management of the forest. The opportunities for outsourcing land management work include or are anticipated to include:

Reforestation – As the improved pastures and abandoned croplands are planted back to longleaf pine, contractual site preparation and planting will be considered.

Biological Assessments - FNAI (non-profit) will be hired for the initial comprehensive community mapping and biological survey.

Other Contractual Services – Site preparation, timber stand improvement, and tree planting applications use private contractors.

Road Repair – Road stabilization materials delivery may be contracted as needed for upgrade and repair projects.

New Office Construction – If the Ocala Forestry Station is relocated to the forest, the construction will be contracted to a commercial builder.

Recreation Infrastructure – There is potential for contracting construction of boardwalks, kiosks, etc. Also the pavilion at Indian Lake could be renovated by a private firm.

VI. REFERENCES

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