TEN YEAR RESOURCE MANAGEMENT PLAN

FOR THE

BLUE SPRINGS LONGLEAF TRACT

HAMILTON COUNTY

PREPARED BY

DIVISION OF FORESTRY

FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

APPROVED ON

OCTOBER 15, 2004

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HAMILTON COUNTY

Approved by:

Michael C. Long, Director
Division of Forestry

7/15/04
Date

J. David Core, Chief
Forest Management Bureau

7.16.04
Date

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EXHIBITS

LAND MANAGEMENT PLAN EXECUTIVE SUMMARY

Lead Agency: Florida Department of Agriculture and Consumer Services (DOACS), Division of Forestry (DOF)
Common Name: Blue Spring Longleaf Tract, Twin Rivers State Forest
Location: Hamilton County
Acreage Total: 2,080.88

Acreage Breakdown:

Natural Communities	Acreage
Upland Pine Forest*	2,078.88
Upland Hardwood Forest	1.00
Sinkhole	1.00

* This includes approximately 500 acres of disturbed areas that are in various stages of restoration.

Lease/Management Agreement No.: 4047 Use: Single___ Multiple _X

Management Agency	Responsibility
Florida DOACS, Division of Forestry	General Management of Forest Resources, Recreation & Wildlife
Florida Fish and Wildlife Conservation Commission	Wildlife Resources & Laws
Division of Historical Resources	Historical and Archaeological Resource Management

Designated Land Use: Multiple-use State Forest
Sublease(s): None
Encumbrances: None
Type Acquisition: CARL (P2000) & DOF Inholdings and Additions (Florida Forever)
Unique Features: Upland pine forest and old growth longleaf pine.
Archaeological/Historical: None
Management Needs: Maintenance of native ecosystems and disturbed site restoration.
Acquisition Needs: None
Surplus Lands/Acreage: None
Public Involvement: Board of County Commissioners of Hamilton County, Liaison Committee, Management Plan Advisory Group and Public Hearings.

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ARC Approval Date:______________________ BTIITF Approval Date:____________________

Comments:____

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I. INTRODUCTION

The Blue Springs Longleaf Tract (BSLT) encompasses approximately 2,081 acres which are owned by the Board of Trustees of the Internal Improvement Trust Fund (Trustees). The property is located in western Hamilton County and contains one of the finest examples of a longleaf pine/wiregrass community (upland pine forest) with old-growth characteristics in the State of Florida.

The property was managed as a quail hunting preserve by Champion International Corporation prior to its purchase by the State of Florida. The forest was acquired with the primary goal of perpetuating the old growth characteristics of the forest. Management focuses on prescribed burning with particular emphasis on growing season burning to more accurately reflect natural burning regimes. Primary recreational activities include horseback riding, hiking, bird watching, bicycling, picnicking and environmental education. The existing road plan for the property emphasizes maintaining a minimum amount of roads.

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

The Division of Forestry's mission is to protect and manage Florida's forest resources through a stewardship ethic to assure these resources will be available for future generations. Ecosystem management is the overall concept used to perpetuate the sustainability of the forest's native ecosystems and biodiversity.

The goals of the Division of Forestry (DOF) in managing Florida's state forests are:

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

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

This management plan provides general direction for management of the BSLT of Twin Rivers State Forest. It is intended to meet the planning requirements of Florida Statutes 253.034 and was prepared using guidelines outlined in Chapter 18-2.021 of the Florida Administrative Code. It is not an annual work plan or detailed operational plan, but provides general guidance for management of BSLT for the next ten years and outlines the major strategies that will guide management activities on the forest.

B. Overview of State Forest Management Program

The Twin Rivers State Forest consists of approximately 14,882 acres in Hamilton, Suwannee and Madison Counties, Florida. A total of 2,081 acres are owned by the

Trustees while the remaining 12,801 acres are owned by the Suwannee River Water Management District (SRWMD). The SRWMD has entered into a special lease agreement with the DOF to manage these lands as a state forest for a period of up to 20 years with a provision for continuation.

This plan covers the BSLT (Trustees owned) portion of Twin Rivers State Forest. A total of 1,974 acres of the BSLT was purchased as a Conservation and Recreation Lands (CARL) project on May 22, 1994. At that time, the DOF was assigned management responsibility for the property. In 2002, an additional 107 acre parcel was purchased through the DOF's Inholding and Additions program.

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

A compilation of management activities and public use on the BSLT is completed quarterly and an annual report completed at the end of each fiscal year. These reports are summarized below.

BLUE SPRINGS LONGLEAF TRACT ACCOMPLISHMENTS

PROGRAM	ACTIVITY	FY 1997/98	FY 1998/99	FY 1999/00	FY 2000/01	FY 2001/02	TOTAL 5YRS
Site Preparation Acres	Site Prep Burning			48			**48**
	Velpar ULW Application		48				**48**
Reforestation	Longleaf (Bareroot)			48			**48**
Timber Sale(s) Revenue	Offsite Pine Final Harvest	Planted Slash Pine 47 acre $140,675					**$140,675**
Fire	Prescribed Fire Acres	481	451	572	1,102	341	**2,947**
	Firebreak Maintenance Miles	5	5	4	19	4	**37**
Boundary Maintenance	Fence Built/Miles			2.5			**2.5**
Recreation	Day Use	200	300	390	850	630	**2,370**
Wildlife	Quail Count	1	1	1	1	1	**5**

The resource management plan written and approved on June 11,1998 by the Land Management Advisory Council included several major Goals and Objectives. The following is an attempt to capture those goals as proposed in the plan, and to provide a brief statement as to the status of completing these management objectives.

D. Goals/Objectives for the Past Five Year Period

Goal 1: *Protect, restore and maintain native ecosystems*.

Objective 1: *Develop a fire management plan to address prescribed burning plans and guidelines.*

Status: **100% complete**. A fire management plan was completed and approved in May 1999. Continued revisions and refinements will be made related to burn unit boundaries.

Objective 2: *Develop a carefully planned system for public access***.**

Status: **100% complete.** A five-year road plan was developed and approved in August 2002. This plan overviews the public use and service roads that are featured on BSLT and describes the manner in which these may be utilized. In addition, unnecessary roads and firebreaks have been abandoned and road development kept to a minimum.

Objective 3: *Perimeter lines will be maintained in order to clearly define property boundaries and to help protect the forest from wildfires.*

Status: **90% complete**. Along the portion of the property that adjoins State Road (SR) 6, approximately 2.5 miles in length, a boundary fence was installed. This entire section has also been posted with boundary signs. Boundary signs have also been placed along all state and county roads which border the forest. A boundary survey of the 107 acre new acquisition parcel was completed at the time of state purchase. This area has also been posted with boundary signs. Plans are to install a boundary fence along the portions of this parcel which adjoin a county grade and SR 6.

Objective 4: *High visibility by all cooperating law enforcement agencies will be needed to reduce hunting, arson, off-road, and litter violations.*

Status: **100% complete**. Adequate law enforcement is received from Florida Fish and Wildlife Conservation Commission (FWC) officers along with Hamilton County Sheriff and Department of Agriculture and Consumer Services, Office of Agricultural Law Enforcement.

Objective 5: *Eradicate small areas of cogongrass and control scattered hardwoods in the offsite slash pine plantations as part of an ongoing site restoration project.*

Status: **75% complete.** The areas of cogongrass were eradicated with an initial treatment of herbicide along with several follow-up treatments. The hardwoods in the offsite slash pine plantations are being controlled by the ongoing use of prescribed fire and by whole tree chipping.

E. Goals/Objectives for the Next Ten Year Period

The present plan has been prepared largely as a continuation of the above goals, with some revision of incomplete objectives and with the addition of several new objectives. The following is a list of these new and revised goals and objectives for the next ten-year period.

Goal 1: Restore, maintain and protect all native ecosystems; including, the health and diversity of native biological communities (flora & fauna) associated with these natural areas.

Objective 1: *Improve the health of native ecosystems through an aggressive program of prescribed fire in all fire-dependent natural communities.*

Performance Measures: Fire Management Plan updated annually
Acres treated with fire in each natural community
Fire return interval for each fire-maintained community

Objective 2: *Remove merchantable off-site pine and restore upland pine forest communities* using *approved forestry-use herbicide(s), growing season fire and longleaf pine reforestation.*

Performance Measures: Acres of off-site pine removed and reforested
Acres treated with herbicide
Acres treated with growing season fires

Objective 3: *Protect sensitive habitat from illegal encroachment through installation and maintenance of boundary fence.*

Performance Measures: Miles of boundary fence installed

Objective 4: *Convene a meeting with ecological research entities to discuss the potential for use of the site for research purposes.*

Performance Measure: Meeting held

Goal 2: Ensure long-term viability of populations and native species considered rare, endangered, threatened or of special concern.

Objective 1: *Complete a survey of native species considered rare, endangered, threatened or of special concern.*

Performance Measure: Survey completed

Goal 3: Provide for compatible public access, integrating human use through a program of resource-based forest recreation.

Objective 1: *Construct a sheltered pavilion with concrete slab and picnic tables adjacent to parking area.*

Performance Measures: Sheltered pavilion constructed

Objective 2: *Manage portions of area to assist in the restoration of huntable populations of Northern Bob White Quail.*

Performance Measures: Surveys showing required population levels
Hunts conducted

II. ADMINISTRATION SECTION

A. DESCRIPTIVE INFORMATION

1. Common Name of the Property

The common name of the property is the Blue Spring Longleaf Tract (BSLT). The BSLT is part of the Twin Rivers State Forest. See Exhibit A for a map indicating the location and boundaries of BSLT.

2. Location, Boundaries and Improvements

The property is located in western Hamilton County, Florida at the intersection of County Road 143 and State Road 6, approximately 11 miles east of Madison and 1.5 miles east of the Withlacoochee River. The property is also identified in Exhibit A. In addition to a deep well hand pump and a wooden shelter, that were in place at the time of acquisition, a parking area, picnic table and sheltered kiosk comprise the existing improvements on the forest.

3. Legal Description and Acreage

The BSLT is located in all or portions of Sections 2, 10-16, Township 1 North, Range 11 East and totals 2,080.88 acres. A complete legal description is on file at the State Forest Headquarters, at the Forest Management Bureau of the DOF and at the Department of Environmental Protection (DEP).

4. Degree of Title Interest Held By the Board, Including Reservations & Encumbrances

The Board of Trustees of the Internal Improvement Trust Fund holds fee simple title to the property. Lease Agreement Number 4047 assigns management authority for the property to the Department of Agriculture and Consumer Services, DOF. Copies of the management lease are on file at the State Forest Headquarters, at the Forest Management Bureau of the DOF and at the DEP.

5. Proximity to Other Public Resources

Lands managed by the state, federal or local government, water management districts, or by private organizations for conservation of natural or cultural resources that are located within 10 miles of the BSLT (Exhibit B) include:

PROPERTY	OWNERSHIP	LOCATION
Champion Realty Tract	SRWMD	1 Mile Northwest
Champion Realty Tracts	SRWMD	3 Miles South
Hamilton Turpentine Tracts	SRWMD	10 Miles Northeast
Holton Creek WMA	SRWMD	5 Miles Southeast
O'Steen Tract	SRWMD	6 Miles East
Suwannee River State Park	TRUSTEES	5 Miles South
Twin Rivers State Forest:		
Neekoosa Tract	SRWMD	4 Miles South
Chotiner Tract	SRWMD	8 Miles South
Twin Rivers WMA	SRWMD	Adjacent
Division of Recreation & Parks Property	TRUSTEES	2 Miles West

6. Aquatic Preserves and Areas of Critical State Concern

N/A

B. ACQUISITION INFORMATION

1. Land Acquisition Program

Most of the BSLT, (approximately 1,974 acres), was purchased by the State of Florida from The Nature Conservancy on March 23,1994 through the Conservation and Recreation Lands (CARL) Program. Additionally, approximately 107 acres were purchased through the DOF's Inholding and Additions Program and appended to the tract in 2002.

2. Legislative or Executive Constraints on Use of the Property

There are no known legislative or executive constraints specifically directed toward BSLT; however, there are numerous statutes, rules and ordinances that have the potential to impact the DOF's ability to manage the property. The DOF makes every effort to comply with applicable statutes, rules and ordinances when managing the forest. For example, when public facilities are developed on state forests, every effort is made to comply with Public Law 101-336, the Americans with Disabilities Act. As new facilities are developed, the universal access requirements of this law are followed in all cases except where the law allows reasonable exceptions (e.g., where handicap access is structurally impractical, or where providing such access would change the fundamental character of the facility being provided).

3. Purpose for Acquisition

The main objectives for the acquisition of the property and the primary goals of the Department in managing the tract are:

- To conserve and protect environmentally unique and irreplaceable lands that contains native, relatively unaltered flora and fauna representing a natural area unique to, or scarce within, a region of the state or a larger geographic area;

- To conserve and protect 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 archeological or historic sites.

4. Designated Single or Multiple-Use Including Managing Agencies

The BSLT will be managed under the multiple-use concept by the DOF. Only uses compatible with the above-mentioned goals and objectives and with ecosystem management of the forest will be implemented. Authority for multiple-use management is given under Chapters 589 and 253 of Florida Statutes.

Uses and management activities consistent with the purposes for acquisition include timber management, ecosystem restoration, natural resource-based recreation, wildlife management, hunting, bird dog training, watershed management, and environmental education. There is no small game hunting at this time, as the resident quail population is below the level considered necessary to provide a quality hunt. Ecosystem management will provide for the greatest public benefit, while at the same time protecting all of the values and resources of the land. Public demands and geographic factors will influence the array of uses applied to each area of the forest.

The DOF is the lead managing agency as stated in Lease Agreement Number 4047. Various other state agencies provide technical assistance.

Resources on the BSLT are managed by the DOF with input and assistance from the FWC. The FWC is responsible for providing management of wildlife populations and enforcement of rules and regulations related to management of the wildlife. Water resource protection will be coordinated with the Suwannee River Water Management District. The DOF will cooperate with the Division of Historical Resources (DHR) regarding appropriate management practices on historical and archaeological sites on the forest as stated in Section 267.061(2)(d), Florida Statutes.

5. Alternate Uses Considered

The uses listed under Section 4, above, are the only uses considered compatible with the management goals and objectives for this tract. The following potential uses have been reviewed and are considered incompatible: water resource development projects, storm-water management projects, linear facilities, off highway and all terrain vehicle use, and communication towers and antennas, except as otherwise outlined in this plan.

6. Additional Land Needs

There are no immediate land acquisition needs for the forest. The lands surrounding the BSLT are either disturbed former forest products company land that are cutover or planted to sand pines, agricultural land that is presently farmed, or small tracts with home sites. The property is bounded by county grades and/or paved highways.

7. Adjacent Conflicting Land Uses

None

8. Surplus Lands

This state forest has been reviewed and evaluated to determine if there are any lands that are surplus from a management standpoint. All of the land within the tract is suitable and necessary for state forest management and none is considered or will be declared as surplus.

C. AGENCY & PUBLIC INVOLVEMENT

1. Responsibilities of Managing Agencies

The DOF is responsible for the overall management of the tract. The DOF will consult with the FWC concerning the management of the wildlife resources and will rely upon their technical expertise in this field. The DHR will be consulted concerning the archaeological and historical resources of the tract. They will be notified prior to the initiation of any extensive ground disturbing activity by the DOF or any other agency involved with this tract.

The DOF will utilize the services of the DHR CARL 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, known archaeological and historical sites will be identified on maps to aid state forest and law enforcement personnel in patrolling and protecting sites.

Representatives of the DHR, Division of State Lands and the Florida Natural Areas Inventory (FNAI) will be consulted prior to the initiation of any significant ground disturbing activity by the DOF or any other state agency. The DOF will make every effort to protect important 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".

2. Public Involvement in Preparation of the Plan

The Florida Department of Agriculture and Consumer Services, DOF is responsible for the development of this management plan and its implementation. Input was solicited from the FWC, the Department of State, DHR, the U.S. Department of Agriculture Natural Resources Conservation Service, The Nature Conservancy and the Trust for Public Land.

The plan was developed with input from the BSLT Management Plan Advisory Group (MPAG). The Advisory Group also conducted a public hearing on March 31, 2004 to receive public input. A summary of the MPAG meetings and public hearing is found in Exhibit C. The plan also incorporates applicable comments from the Department of Environmental Protection's Land Management Review Team.

3. Compliance With Comprehensive Plan

This plan was submitted to Hamilton County officials for their review and to insure compliance with their local comprehensive plan. Their comments are found in Exhibit D.

III. RESOURCE SECTION

A. Past Uses

Prior to its purchase from The Nature Conservancy in 1994, this tract was owned and managed by Champion International Corporation. While under such ownership, the property was primarily managed for the production of bobwhite quail and used as a hunting preserve. A network of firebreaks throughout was regularly maintained by annual discing. These were used to facilitate prescribed burning smaller blocks (20 to 40 acres) in a checkerboard fashion, interspersing burned blocks with unburned ones. Several rows of wild olives were planted along some firebreaks which formed hedgerows and provided escape cover for quail. To further promote quail, supplemental food plots were established in several locations and annually maintained by discing, fertilizing and/or reseeding as needed. Prescribed fires were implemented with a 2 to 3 year return interval, but, were only conducted in the winter and early spring.

The BSLT property was owned for many years by the St. Regis Company prior to its purchase by Champion International Corporation. During this time, prescribed fires were conducted primarily during the winter months on a 2 to 3 year rotational basis.

At the time of State acquisition, the absence of any cut stumps throughout the property suggested that very little if any, timber harvesting activities had taken place in the recent past. Since 1994, upon the DOF assuming management responsibility, the property has been managed under the multiple-use concept. Repeat growing season prescribed fires are serving to eradicate much of the wild olive. The former food plot areas and many of the preexisting firebreaks were abandoned and allowed to revegetate. A minimum system of firebreaks is presently maintained by periodic discing within and around the boundaries of BSLT for the purposes of fire management and for use as recreational trails. As such, the average burn block size is larger than in the past (150 to 250 acres).

B. Renewable and Non-Renewable Resources

1. Soil Types

There is no published soil survey of Hamilton County at this time, however, all the work has been finished and the information is available from the USDA. See Exhibit E for the soils map. The following descriptions of soil types found on this forest are based upon unpublished soil survey information:

The Alpin series consists of nearly level to moderately sloping, excessively drained soils that formed in thick beds of sandy marine deposits. These soils are in broad areas and on side slopes, on the uplands and on river and creek terraces. They have a sandy texture to a depth of more than 80 inches. Some landscapes on which these soils occur are quite variable. Within short distances, they change from nearly smooth or slightly convex areas to highly convex and concave areas. The slope ranges from 0 to 8 percent. These soils are thermic, coated Argic Quartzipsamments. The surface layer is dark grayish brown sand about 4 inches thick, the subsurface layer is between depths of 4 to 80 inches and is subdivided into layers of yellowish-brown, yellow and pinkish white sand.

Soil pH ranges from 4.5 to 6.5. Site index ranges from 70-85 for the trees associated with this soil type which include slash pine, longleaf pine, blackjack oak, turkey oak, and post oak. Understory species consist of bluestem, low panicums, fringeleaf paspalum and native annual forbs.

The Blanton series consists of moderately well drained nearly level to strongly sloping soils in the coastal plain in a representative profile. The surface layer is gray fine sand about 9 inches thick, the subsurface layer is between depths of 9 to 58 inches and is subdivided into layers of light yellowish-brown, very pale brown and white sand. The subsoil is between depths of 58 to 85 inches or more. It is pale brown sandy loam in the upper 4 inches. Below this it is pale brown and light brownish gray sand clay loam. Slopes are 0 to 5 percent.

Soil pH ranges from 4.5 to 6.0. Site index ranges from 70-90 for the trees associated with this soil type which include slash pine, longleaf pine, loblolly pine, bluejack oak, turkey oak, southern red oak and live oak. Understory species consist of pineland threeawn, chalky bluestem, creeping bluestem, panicum, little bluestem, broomsedge bluestem and tickclover.

The Otela series consists of moderately well drained, nearly level to gently sloping soils that formed in sandy and loamy marine sediments over limestone. These soils are in broad, low areas on the low uplands. The slope ranges from 0 to 5 percent. These soils

are loamy, siliceous, thermic Grossarenic Paleudalfs. The surface layer is gray sand about 2 inches thick, the subsurface layer is between depths of 2 to 52 inches and is subdivided into layers of light yellowish brown, very pale brown and white sand. The subsoil is between depths of 52 to 80 inches or more. It is reddish yellow sandy clay loam in the upper 8 inches. Below this it is gray clay. Soil reaction ranges from strongly acid to slightly acid in the A and E horizons, and mildly alkaline to moderately alkaline in the B horizon.

The Wadley series consists of well drained, nearly level to gently sloping soils that are on the uplands. The slope ranges from 0 to 5 percent. Typically, this soil has a surface layer of dark grayish brown grading to dark brown sand about 6 inches thick. The subsurface layer, to a depth of 50 inches, is light yellowish brown grading to very pale brown sand. The next layer, to a depth of 62 inches, is very pale brown sand with yellowish brown loamy sand lamella. The subsoil layer to a depth of 80 inches or more is yellowish brown grading to strong brown sandy clay loam. Trees associated with this soil are longleaf pine, slash pine, loblolly pine, turkey oak, bluejack oak and live oak. Understory species consist of aster, blazing star, bracken fern partridge pea and wild indigo.

2. Archaeological and Historical Resources

A review of the information contained in the Florida Site File has determined that there are no archaeological or historical sites recorded within the BSLT. This lack of sites is not considered significant because the area has never been subjected to a systematic, professional survey to locate such sites. However, data from environmentally similar areas in Hamilton County indicate that there is some potential for archaeological sites to be located in the subject area.

As mentioned previously, in the event of any significant ground disturbing activity not covered in this plan, DHR will be contacted for review and comment. The DOF will follow recommendations outlined in the "Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Lands" (Exhibit F) and will comply with all appropriate provisions of Section 267.061(2) Florida Statutes.

3. Water Resources

The BSLT does not have any significant water resources. However, it is located approximately 1.2 miles east of the Withlacoochee River, a major tributary to the Suwannee River. The BSLT is within a reported high recharge area to the Floridan Aquifer.

4. Fish and Wildlife Resources

There are no aquatic species on BSLT. However, the forest supports a diversity of wildlife species. Exhibit G provides a list of various wildlife species that have been found on or in the vicinity of the BSLT.

5. Endangered and/or Threatened Species

The Florida Natural Areas Inventory (Exhibit H) lists several "Element Occurrence Records" for the BSLT. They include:

Common Name	Scientific Name	Federal * Status	State * Status	FNAI Global * Rank	FNAI State * Rank
American kestrel	*Falco sparverius paulus*		LT	G5T3T4	S3
Bachman's sparrow	*Aimopohila aestivalis*			G3	S3
Gopher tortoise	*Gopherus polyphemus*		LS	G3	S3
Sherman's fox squirrel	*Sciurus niger shermani*		LS	G5T2	S2

***STATUS/RANK KEY**
Federal Status (USFWS): LE= Listed Endangered, LT= Listed Threatened, LT(S/A)= Listed Threatened due to similarity of appearance.
State Status (FWC): LE= Listed Endangered, LT=Listed Threatened, LS= Listed Species of Special Concern, CE = Commercially Exploited.

Although gopher tortoises are present within the tract, the size of the population is unknown. Several abandoned cavity trees of the red-cockaded woodpecker occur on the forest but no live birds or active cavities have been observed. State forest personnel have observed a small population of Sherman's fox squirrel scattered over the forest but have not observed representatives of the other listed species.

There are moderately high to high probabilities that several other rare to endangered vertebrate species occur on the forest.

No listed plant species are known to occur at BSLT. However, exhaustive surveys have not been conducted for vascular plant species.

6. Beaches and Dunes
This is an inland forest which contains no coastal resources.

7. Swamps, Marshes, and Other Wetlands
There are no wetlands present on this tract.

8. Mineral Resources
There are no known commercially exploitable mineral resources present.

9. Unique Natural Features
This tract contains one of the oldest natural stands of longleaf pine/wiregrass in north-central Florida. Many of the trees on the forest are more than 90 years old. The tract also contains six small, dry sinkholes of less that 1/10th of an acre each and less than 25 feet deep. One sinkhole is located in an existing powerline right-of-way and is vegetated with native grasses and woody shrubs. The others are located in the southern portions of the tract and are forested with a variety of upland hardwood species around the edge and along the banks. The FNAI report (Exhibit H) provides a more detailed description of these features.

10. Outstanding Native Landscapes
The BSLT encompasses one of the largest tracts of intact fire-maintained Upland Pine Forest natural communities in Florida's Suwannee River Basin. Minor occurrences of upland hardwood forest and sinkhole are also present.

11. Timber Resources

11A. Management Objectives

The 1993 Project Assessment Update approved by the Land Acquisition Advisory Council, states "Because Blue Spring Longleaf is a regionally unique natural area, to the greatest extent possible, it should be managed to perpetuate the natural communities on site, including the restoration of natural species composition and relative abundances, natural age structure of longleaf pine stands, and all natural processes. Accordingly, stands of mature forest will be managed to retain mature to old growth characteristics and timber harvest will not be a primary focus on the management of the tract." The assessment also states, "This project has the potential to provide an important reference stand for the upland longleaf forest ecosystem. Management plans should be carefully designed to perpetuate the natural conditions of this unique ecosystem. Any management activities should emphasize uneven-aged management and should be carefully conducted using appropriate silvicultural techniques as recommended by the Division of Forestry."

This forest is well stocked with merchantable timber, however; it was acquired because of its old growth characteristics and the primary objective will be to perpetuate these conditions. Silvicultural activities will be conducted to maintain the current stocking level and to perpetuate the old-growth characteristics of the forest but commercial production of timber will not be a management goal for this forest.

11B. Existing Conditions and Management Prescriptions

The BSLT is one of the finest examples of old-growth longleaf pine/wiregrass natural community in the State of Florida. The forest is comprised of a fairly uniform stand of 65 to 90+ year old longleaf pine in excess of ten inches diameter at breast height (dbh/4.5 feet above the ground). Also present are scattered clumps of longleaf pine ranging in size from five to nine inches dbh. There is only a small amount of longleaf pine regeneration in the seedling or sapling stage and ground floor vegetation is primarily wiregrass. There are a few scattered large hardwood trees, such as southern red oak, but hardwood encroachment has not been a serious problem over most of the forest because of a regular prescribed burning program.

Most of the longleaf pine forest on the tract exhibits uneven-aged characteristics. The DOF will continue to manage most of these areas using uneven-aged methodologies. The average merchantable basal area for the longleaf pine is estimated to be between 40 and 50 square feet per acre. There are no plans to conduct timber harvesting operations in the longleaf pine during the ten year period of this plan. However, as these stands continue to grow, there may be the need to conduct uneven-aged harvests by removing various size classes of trees. Plans call for this to take place when merchantable basal areas reach a minimum of 65 to 75 square feet per acre. In order to prevent total crown closure, stands of this density would be thinned back to a basal area of between 45 and 55 square feet per acre, and the growth cycle before another harvest would begin anew.

These harvests will be conducted for a number of reasons, some of which are to always have some younger, vigorous trees to insure sustainability, to improve wildlife habitat, and to maintain ecosystem health. However, leaving a primary

component of old growth trees throughout the forest will continue to be important and in the areas that currently have the largest and oldest trees, this will be emphasized.

A large open field of approximately 220 acres that was present at the time of purchase was reforested with longleaf pine seedlings during January of 1996. The seed used to grow the seedlings were extracted from cones collected on the BSLT. Also, a 46 acre stand of slash pine was final harvested in 1999 and was reforested with longleaf pine seedlings during January of 2000.

A five-mile strip nearly 200 feet in width and encompassing 126 acres, along the perimeter edge of the property, had a heavy stand of hardwoods along with numerous, residual sand pines. The hardwoods were removed via site prep chipping in the spring of 2002. The established longleaf pines already existing in this area were left undisturbed during this operation. Approximately 40 acres of this area was hand planted to containerized longleaf during the winter of 2003 and the remainder is scheduled to be planted to longleaf during the winter of 2004.

11C. Timber Sales

There are two planted slash pine stands presently growing on the tract. One of these is 33 acres in size and comprised primarily of saw timber size trees. The second is about 20 acres in total and consists of mostly pulpwood size trees. Both stands are established on sites that would normally be considered longleaf pine sites. Both of these areas are scheduled for removal by fiscal year 2006-2007. The entire 53 acres will be reforested with longleaf pine seedlings.

There are no immediate plans to harvest longleaf pine on the BSLT. However, any timber harvesting necessary in longleaf pine stands will be conducted using sound scientific methods following the uneven-aged management strategy. As a general rule, sales will be conducted when a stand of trees becomes overstocked and a harvest is needed to properly maintain the ecosystem. Timber sales on this tract will follow standard DOF procedures

IV. MANAGEMENT CONCEPTS BY NATURAL COMMUNITIES AND PROPOSED MANAGEMENT ACTIVITIES

A. Existing and Planned Uses

The BSLT continues to be managed under the multiple-use concept. Multiple-use activities increase in accordance with public usage and as a result of Florida's steadily increasing population.

A breakdown of existing and planned uses and key management activities is as follows:

1. Property Boundaries, Establishment and Preservation

State forest boundary lines are maintained by state forest personnel. Boundaries are identified by bands of white paint on border trees. Perimeter lines will be maintained on an annual basis.

2. Soil, Water and Watershed Management

As previously stated, there are no hydrological resources present on the BSLT. Consequently, our primary concern regarding watershed management will be to insure

that the Floridan Aquifer is protected from contamination by pollutants. This tract is primarily comprised of intact, undisturbed natural communities and there are no soil or erosion problems present.

Management activities will be executed in a manner that minimizes the potential for soil erosion. All activities will be conducted under the review of the DOF's Forest Hydrologist and Watershed Specialist and in accordance with the publication, Silviculture Best Management Practices. Specific guidelines vary from site to site and are dependent on soil texture and slope. Copies of this publication are available from DOF offices upon request.

If future soil and water resource problems should arise, they will be immediately assessed and the appropriate action will be proposed and implemented under the direction of the DOF's Forest Hydrologist and/or Watershed Specialist. The DOF, through its Forest Hydrology Section, will work with the SRWMD to monitor levels and quality of ground and surface water resources.

3. Roads and Firebreaks

State Road 6 forms the southern boundary while County Road 143 adjoins a portion of the western boundary and a County Grade forms a portion of the eastern boundary of the forest. Currently, forest roads are closed to public vehicular traffic but are open for management purposes and to serve as public recreation trails.

A carefully planned system for public access is an important goal. Roads and firebreaks that are necessary for fire management or for use as recreation trails will be maintained as harrowed lines. Unnecessary roads and firebreaks will continue to be abandoned and/or restored to the greatest extent possible. Some of these firebreaks have already been abandoned following recommendations of the DEP's Land Management Review Team. These firebreaks are being allowed to revegetate naturally. No new road needs are anticipated, however, plans for the establishment of any new roads will be reviewed by the State Office of the DOF, DSL, DHR, and FNAI.

4. Recreation Management

DOF plans to provide resource-based outdoor recreational opportunities that are compatible with the management philosophies and practices of the DOF and that are compatible with the conservation goals of this plan. This parcel has some of the best potential for passive outdoor recreation and environmental education (outdoor interpretation) in Twin Rivers State Forest. The large undisturbed stand of old growth pine provides an excellent recreational resource for hiking, horseback riding, hunting, picnicking, nature study and wildlife viewing.

A centralized parking area has been established near the entrance to the forest off of State Road 6 (Exhibit I). It features a trail head for an established multiple use trail for hiking and horseback riding. This day use area also has a kiosk with interpretive exhibits and a picnic table. A picnic shelter is planned for this area along with a short, looped nature trail to interpret the pine forest ecosystem. The forest is also ideally suited for environmental education and research.

There are currently no plans to develop a full facility camping area in the forest. At least one state park, Suwannee River State Park, as well as other private campgrounds in the area, are currently providing for this recreational activity.

5. Fire Management

All guidelines as outlined in the DOF Fire Management Policy are, and will continue to be, used on this state forest. The DOF utilizes a total fire management program on state forests that includes prevention, detection, suppression and prescribed burning. Primary detection and suppression of all forest fires will be the responsibility of the DOF under the direction of the Suwannee District Manager. Personnel and equipment will be utilized for pre-suppression practices, including rehabilitation of existing firebreaks, construction of new firebreaks only when absolutely necessary, maintenance of perimeter firebreaks, and prescribed burning. All permanent firebreaks will be disked lines. The smoke screening system will be utilized as a smoke management tool and to minimize the impacts of smoke.

As per DOF Policy 525.108 (2), during wildfire suppression, emphasis will be placed on the use of water and foam, permanent firebreaks, natural barriers and existing roads and trails for firebreaks when weather, fire behavior, total fire load and threats to resources, life, property, and firefighter safety allow. Plowed and/or bulldozed lines will be used only when they prevent the most damage to resources and minimize threats to firefighters. The placement of such lines should routinely be avoided in known environmentally sensitive areas, as well as cultural and archeological sites. Plowed and bulldozed lines will be rehabilitated and BMP's implemented as soon as practical after the fire is suppressed.

Use of prescribed fire is a major component of management on the forest. A prescribed fire regime is presently established for the forest, which incorporates the following to the greatest extent practical:

- Average prescribed fire frequencies are appropriate to each community type and within the parameters of a written prescription.

- Prescribed fires are introduced on a random basis (*i.e.*, at random, non-regular, intervals) with the preponderance of fires being introduced during the growing or lighting season (mid-April to the end of August). Prime time being April and May.

- Native groundcover is not disturbed by the construction of additional plowed firebreaks. Instead, existing lines, natural firebreaks, roads, and black lines are utilized to contain prescribed fires. Many old plowed firebreaks have been reworked and allowed to revegetate naturally.

6. Silvicultural Guidelines & Forest Resource Management Objectives

6A. Objectives

The 1993 Project Assessment Update approved by the Land Acquisition Advisory Council, states "Because Blue Spring Longleaf is a regionally unique natural area, to the greatest extent possible, it should be managed to perpetuate the natural communities on site, including the restoration of natural species composition and relative abundances, natural age structure of longleaf pine stands, and all natural processes. Accordingly, stands of mature forest will be managed to retain mature to old growth characteristics and timber harvest will not be a primary focus on the management of the tract." The assessment also states, "This project has the potential to provide an important reference stand for the upland longleaf forest ecosystem. Management plans should be carefully designed to perpetuate the natural conditions of this unique ecosystem. Any

management activities should emphasize uneven-aged management and should be carefully conducted using appropriate silvicultural techniques as recommended by the Division of Forestry."

This forest was acquired because of its old growth characteristics and the primary objective will be to perpetuate these conditions. Silvicultural activities will be conducted to maintain the current stocking level and to perpetuate the old-growth characteristics of the forest.

6B. Existing Conditions and Management Prescriptions

The BSLT is one of the finest examples of old-growth longleaf pine/wiregrass natural community in the State of Florida. The forest is comprised of a fairly uniform stand of 65 to 90+ year old longleaf pine in excess of ten inches diameter at breast height (dbh/4.5 feet above the ground). Also present are scattered clumps of longleaf pine ranging in size from five to nine inches dbh. There is only a small amount of longleaf pine regeneration in the seedling or sapling stage and ground floor vegetation is primarily wiregrass. There are a few scattered large hardwood trees, such as southern red oak, but hardwood encroachment has not been a serious problem over most of the forest because of a regular prescribed burning program.

Most of the longleaf pine forest on the tract exhibits uneven-aged characteristics. The DOF will continue to manage most of these areas using uneven-aged methodologies. The average merchantable basal area for the longleaf pine is estimated to be between 40 and 50 square feet per acre. There are no plans to conduct timber harvesting operations in the longleaf pine during the ten year period of this plan. However, as these stands continue to grow, there may be the need to conduct uneven-aged harvests by removing various size classes of trees. Plans call for this to take place when merchantable basal areas reach a minimum of 65 to 75 square feet per acre. In order to prevent total crown closure, stands of this density would be thinned back to a basal area of between 45 and 55 square feet per acre, and the growth cycle before another harvest would begin anew. These harvests will be conducted for a number of reasons, some of which are to always have some younger, vigorous trees to insure sustainability, to improve wildlife habitat, and to maintain ecosystem health. However, leaving a primary component of old growth trees throughout the forest will continue to be important and in the areas that currently have the largest and oldest trees, this will be emphasized.

A large open field of approximately 220 acres that was present at the time of purchase was reforested with longleaf pine seedlings during January of 1996. The seed used to grow the seedlings were extracted from cones collected on the BSLT. Also, a 46 acre stand of slash pine was final harvested in 1999 and was reforested with longleaf pine seedlings during January of 2000.

A five-mile strip, 200 feet in width, along the perimeter edge of the property had a heavy stand of hardwoods, along with numerous, residual sand pines. The hardwoods were removed via site prep chipping in the spring of 2002. The established longleaf throughout this area were left undisturbed during this operation. Natural regeneration will be the method for reforesting most of this area, although a 25 acre portion was hand planted to containerized longleaf during the 2003 winter.

6C. Timber Sales

There are two planted slash pine stands presently growing on the tract. One of these is 33 acres in size and comprised primarily of sawtimber size trees. The second is about 20 acres in total and consists of mostly pulpwood size trees. Both stands are established on sites that would normally be considered longleaf pine sites. Also, both are scheduled for removal by fiscal year 2006-2007. The entire 53 acres will be reforested with longleaf pine seedlings.

There are no immediate plans to harvest longleaf pine on the BSLT. However, any timber harvesting necessary in longleaf pine stands will be conducted using sound scientific methods following the uneven-aged management strategy. As a general rule, sales will be conducted when a stand of trees becomes overstocked and a harvest is needed to properly maintain the ecosystem. Timber sales on this tract will follow standard DOF procedures.

7. Research Projects/Specimen Collection

Research projects may be performed on certain areas of the forest on a temporary or permanent basis for the purpose of obtaining information which expands the knowledge of forestry and ecosystem management. The DOF cooperates with the U. S. Forest Service, the University of Florida, non-profit organizations and other educational institutions and governmental agencies whenever feasible on research of this nature. The abandoned firebreaks and food plots provide an opportunity to document the recruitment of native species into disturbed areas. The DOF will monitor and document changes to these sites as staffing permits.

The DOF's Forest Ecologist must approve all research projects and specimen collections before they are initiated. Requests for research projects should be submitted in writing to the Forestry Supervisor II in charge of the state forest for transmittal through the Suwannee District Manager 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 Foresters, Biologists, Forest Ecologists, Forest Entomologists or Forest Pathologists as appropriate. Permission to conduct research will require that the investigator provide copies of any reports or results generated from research projects to the state forest staff, as well as copies of all raw data collected. The status of existing projects will be subject to periodic review by state forest staff.

A proposal for the U.S. Geological Survey (USGS), Water Resources Division to establish an unmanned Evapotranspiration (ET) data collection site on the property was appropriately reviewed and approved in May of 2002. The USGS has an ongoing agreement with the SRWMD to evaluate daily values of ET from sites within the District's spring watershed that are representative of primary land use within the area. The duration of this study is to be for a 2 to 3 year period.

8. Law Enforcement

Due to the increasing use of state forest property by most segments of the population, the enforcement of laws, rules, and regulations is becoming more complex and of greater importance. The major portion of the law enforcement activities on the BSLT are conducted by the investigators of the Florida Department of Agriculture and Consumer Services (DOACS) Office of Agricultural Law Enforcement.

Special rules of the DOACS were promulgated in 1972 for better control of state forest traffic and camping. These rules which have been revised two times are under Chapter 5 I-4 of the Florida Administrative Code. Copies of 5I-4 are on file at the state forest headquarters and at the DOF's Forest Management Bureau. Additional law enforcement support is available from the Hamilton County Sheriff's Department and the FWC.

9. Wildlife and Fish Management

Wildlife is an important component of the BSLT ecosystem. The forest is open to the public year round for those who enjoy such activities as bird watching and general wildlife viewing. In cooperation with FWC, all special hunts were suspended at the conclusion of the 1999 fall season, as it was determined that the quail population at that time was insufficient to provide a quality hunt. If determined appropriate by the FWC and the DOF, hunting for bobwhite quail may be re-introduced on the forest on a limited quota basis. Bird dog training continues to be allowed. The DOF provides land management and general supervision following the multiple-use management concept, and the FWC is responsible for the biological aspects of managing the wildlife populations, and overall wildlife law enforcement.

In order to assist the FWC, the following guidelines will be used:

9A. Timber Harvesting

All Timber harvesting will be conducted in the manner as specified in Sections III.B.11 and IV.A.6. of this plan. 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 harvested as directed by the severity of the situation.

9B. Prescribed Burning

The long-term goal of prescribed burning is to simulate, as closely as possible, a natural fire regime in which the majority of acres are burned during the lightning season. Such fires are needed to reduce the height and cover of woody shrubs, stimulate the recovery of the native herbaceous and grassy ground cover, and promote the regeneration of native pines. A Fire Management Plan was prepared and approved for the BSLT in May of 1999. This plan details the manner in which wildfire suppression, prescribed fire, smoke management and firebreak maintenance is to be conducted on the property. All burning will be the responsibility of the DOF personnel from the Suwannee District and will be planned and carried out in accordance with the BSLT Fire Management Plan. This plan will be in compliance with the DOF Fire Management Policy.

Prescribed burning to reduce fuel loading and promote natural plant and animal responses continues to be a primary land management goal. Presently, most stands on the BSLT have sustained an initial growing season prescribed fire. Some areas have experienced consecutive growing season burns on a 2 to 3 year rotation interval. The prescribed burning program will continue to emphasize growing season burns in designated areas.

9C. Managing Non-Game Species

Non-game species will be managed and protected through the restoration and maintenance of native ecosystems found on the forest. Any cooperative research

conducted on this tract will provide valuable information in determining future management objectives of non-game species.

9D. Sensitive Species

Specialized forest management techniques will be used as necessary to protect or increase endangered, threatened, special concern and sensitive plant and animal species. Species specific management plans will be developed when necessary.

Threatened or endangered species that are known to be present on the forest are listed in Section III.B.5 of the plan. The following management practices are recommended to protect and preserve all such species:

1. Locate cover, food, and breeding areas used by rare and endangered species and include locations on a vegetation map.

2. Protect cover, food, and breeding places for rare and endangered species.

3. Other specialized management practices for rare and endangered species may be implemented if deemed necessary.

4. Utilize prescribed burning to improve habitat conditions for rare and endangered species.

10. Non-native Invasive Species

The policy of the DOF is to locate, identify and control non-native invasive species. State Forest employees continually monitor the forest for non-native invasive species while conducting management activities. When non-native invasive plants are discovered, a control plan will be developed and implemented based on the severity of the infestation and the availability of manpower and funding. A former cogongrass infestation on the BSLT was successfully treated and eradicated. At this time, there is no major problem with non-native invasive species on this tract. The DOF will cooperate with the FWC in its efforts to control non-native invasive animals.

11. Insects and Disease

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 management staff will consult with the Forest Health Section to develop scientifically sound responses and/or management prescriptions.

In compliance with Florida Statutes 388.4111 and the lease agreements, all lands contained within this lease 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. After approval of this plan, the local arthropod control agency will be contacted and will be provided a description of the management objectives for BSLT. The local arthropod control agency must then

prepare a public lands control plan that is subsequently approved by the DOF, prior to conducting any arthropod control activities on BSLT.

12. Utility Corridors and Easements

A power line which was established prior to State's purchase of the property crosses the southwest corner of the tract. Also, a power line easement bisects the 107 acres, on the southeast corner of the property, which was recently purchased by the state and appended to the BSLT. This easement was also established prior to the State's purchase of the property.

The placement of linear facilities in a forest fragments the natural communities; consequently, the DOF does not consider BSLT suitable for any new linear facilities, utility lines or pipelines. Requests for new linear facility uses will be handled in accordance with the Governor and Cabinet's Linear Facilities Policy. Easements for such utilities are subject to the review and approval of the Board of Trustees of the Internal Improvement Trust Fund and will follow the procedures outlined in Chapter 18-2.010, Florida Administrative Code, covering easements.

13. 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. Other ground disturbing activities such as construction of buildings, parking lots and new roads will be coordinated with the Florida Natural Areas Inventory and the Division of Historical Resources.

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 during the growing season will be used to restore and maintain native ground cover to the greatest extent possible.

B. Description of Natural Communities/Cover Types and Proposed Management

The major natural community and cover type found on the forest is upland pine forest (Exhibit J). The community is in exceptional condition and features characteristics of old growth longleaf pine with a heavy ground cover of wiregrass and other native grasses.

1. Upland Pine Forest - (2,078 acres)

Desired Future Condition

The desired future condition of the upland pine forest community will be a widely spaced forest of old growth longleaf pine with a sparse understory, and a fairly dense ground cover of grasses and herbaceous vegetation, mainly wiregrass. Longleaf

pines will be the major overstory species and will consist of a variety of age classes ranging from grass stage seedlings to mature trees over 200 years of age.

Current Condition

The upland pine forest is currently in good condition and is one of the finest examples of this community in the State of Florida. The forest is comprised of a fairly uniform stand of 65 to 90+ year old longleaf pine. There is a small amount of longleaf pine regeneration in the seedling or sapling stage. Although there is not much pine in the younger age classes, most of the forest exhibits uneven-aged characteristics. There are a few scattered large hardwood trees, such as southern red oak, but hardwood encroachment has not been a serious problem over most of the forest because of a regular prescribed burning program.

The ground floor or herb layer is primarily dominated by bracken fern, pineywoods dropseed, pinweed, silk grass, and wiregrass. A 1992 field survey by FNAI staff identified more than sixty species of ground cover plants. Portions of the forest contain fleabane, buttonwood, blackberry and bahia grass. A few linear food plots remain from the previous owners management actions. These areas contain remnant Russian olive.

Approximately 500 acres of the upland pine forest community is in a disturbed condition as a result of management activities prior to state purchase. A brief description of the current condition of these areas follows.

1. Cutover Planted Slash Pine (107 acres)

This is the most recent addition to the BSLT. It was formerly planted slash pines that were clearcut prior to the state's acquisition of this property. This stand was been mechanically site prepared in the past and as such the ground cover conditions are not in as good a shape as other areas on BSLT. Fire exclusion for many years has resulted in the development of numerous hardwood sprouts. The soils and existing ground cover plants are representative of an upland pine forest community.

2. Planted Slash Pines (50 acres)

This site features mature, planted slash pines occurring on upland pine forest sites. These areas were mechanically site prepared in the past but have received several prescribed fires during the last 10 years. As such, the ground cover conditions are improving.

3. Planted Slash Pine/Upland Hardwoods (3 acres)

This degraded site was likely mechanically site prepared in the past, and subsequently, planted to slash pines. The pines had a poor survival due to a heavy hardwood encroachment problem. Presently, the area features widely scattered, sapling and small pulpwood sized slash pines along with a heavy stand of hardwoods, mostly laurel and water oaks. The sparse ground cover has made this area difficult to successfully prescribed burn.

4. Planted Longleaf Pine (220 acres)

This area currently features sapling stage, longleaf pines established on a former old field site. Prior to the State's acquisition of the BSLT, this site was an agricultural field that was routinely cultivated and planted to corn or other crop. The soils are representative of upland pine forest, but, the ground cover plants are mostly a result

of whatever seed bank was present once agricultural activities ceased. An initial prescribed fire was successfully conducted throughout the longleaf in December of 2001.

5. Perimeter Buffer Strip (124 acres)
This area is an old sand pine plantation with scattered longleaf, located in a five-mile strip, approximately 200 feet in width, around the perimeter of the property. It had a heavy stand of hardwoods, along with numerous, residual sand pines. The hardwoods were controlled with the use of herbicide in the spring of 2002 and removed via site prep chipping during the ensuing fall. The residual longleaf throughout this area were left undisturbed during this operation. Natural regeneration will be the method for reforesting most of this area, although a portion, 30 acres, was hand planted with containerized longleaf during the 2003 winter.

Management Actions Necessary to Attain Desired Condition
The primary management goals for upland pine forest and disturbed areas are:

1) Final harvest off-site slash pine plantations;

2) Control hardwood sprouting in recently acquired cutover planted pine stand with the use of herbicide;

3) Re-establish longleaf pine throughout the cutover areas;

4) Reintroduce or continue growing season prescribed fire on a two to five year fire return interval.

The off-site slash pine plantations will be final harvested and reforested to longleaf pine. Cutover areas will be site prepared and replanted to longleaf pine. Once established, the longleaf pine on these sites will be managed to attain old-growth characteristics. Restoration and maintenance management will require growing season prescribed fire every two to five years. Fire will serve to suppress oak sprouting mostly by top killing, but, occasional, widely scattered individual hardwoods may survive and mature. A regime of prescribed fire will be initiated in reforested areas as soon as practical in a manner that simulates a natural fire condition. In other areas, an ongoing regime of prescribed fire will serve to keep the upland pine forest in a maintenance condition.

2. Upland Hardwood Forest (1 acre)

Desired Future Condition
The desired future condition of the upland hardwood forest on the BSLT is a well-developed, closed-canopy forest of upland hardwoods. The closed canopy will restrict air movement and light penetration. This will result in a forest that rarely burns because of a relatively constant, high humidity.

Typical overstory vegetation will include southern magnolia, hickory, sweetgum, Florida maple, devil's walking stick, American hornbeam, redbud, dogwood, hackberry, Carolina holly, American holly, loblolly pine and live oak. The midstory and ground floor will be relatively open but may include wild olive, laurel cherry, black

cherry, sparkleberry, beautyberry, fringe tree, partridgeberry, sarsaparilla vine, greenbriar and trilliums.

Current Condition
The upland hardwood forest is found on the slopes of two small sinkholes in the southern portion of the BSLT. This community is dominated by hickory, live oak, laurel oak, and hackberry. American holly, black cherry and dogwood are found in the midstory. The ground floor or herb layer is primarily comprised of Virginia creeper, spleenwort, and partridgeberry.

Management Actions Necessary to Attain Desired Condition
The only management needs for this community will be to protect the area from disturbance and to allow fire to naturally extinguish on the sinkhole slopes.

3. Sinkhole (1 acre)

Desired Future Condition
Sinkholes are cylindrical or conical depressions with steep limestone walls. They rarely hold standing water; however, the steep walls protect the sinkholes from drying winds so they have a moist microclimate. The walls are generally vegetated with a variety of mosses, liverworts and ferns. Larger sinkholes will contain a variety of hardwoods around the rim and along the upper walls.

Current Condition
There are six small sinkholes located in the southern portion of the BSLT. Two of these are associated with upland hardwood forest as described above. The other four are interspersed within the upland pine forest or in disturbed areas that are scheduled for restoration to upland pine forest. These four sinkholes are very small and are apparently relatively young from a geological perspective.

Management Actions Necessary to Attain Desired Condition
The only management needs for this community will be to protect the area from disturbance and to allow fire to naturally extinguish around the sinkhole rims and along the slopes.

C. Impact of Planned Uses on Property Resources

The renewable resources will be protected as follows:

1. Timber - Guidelines outlined in Section IV.A.6. of this plan will provide for a continuing renewable timber resource and will maintain the diversity of ecological resources for an indefinite time period.

2. Wildlife - The DOF and the FWC protect this resource through ecosystem management techniques, enforcement of hunting and fishing laws, timber harvesting and regeneration techniques, and prescribed burning. Non-game species will be managed and protected through management of native ecosystems on the property. Guidelines are outlined in Section IV.A.9. of this plan.

3. Water - Guidelines outlined in Section IV.A.2. of this plan will insure and protect a continuing renewable water resource.

4. Historical/Archaeological - In the event of any significant ground disturbing activity, not covered in this plan, the DHR will be contacted for review and comment. The DOF will then follow the appropriate management procedures and comply with all appropriate provisions of Section 267.061(2) Florida Statutes.

V. MANAGEMENT SUMMARY

A. Operations Infrastructure

BSLT is managed under a combined budget with Big Shoals State Forest (BSSF)/Public Lands. Although budgets change with annual appropriations, the current annual budget for BSLT and BSSF amounts to $241,600; roughly 50% of this budget is used on BSLT. This includes the expense budget, salary and benefits of the employees, and operating capital outlay for new/replacement vehicles. Personnel assigned to manage BSLT include two Senior Forest Rangers, one Forester and a Forestry Supervisor II. These positions spend approximately 50% of their time on the BSLT. Additional support is provided by the DOF's Hamilton County Rangers and other Suwannee District personnel. Following is a breakdown for the portion of the current budget assigned to BSLT.

Salary (approximately ½ the cost for 4 positions)	$88,200
Expense (General costs for fuel, supplies, parts etc.).....	15,000
Operating Capital Outlay (Equipment)	17,600
	$120,800

In addition to DOF Suwannee District equipment available for use, the following equipment is currently shared between BSLT and BSSF:

(1) Hydraulic Grader Blade
(1) Box Blade
(1) PTO Driven Brush Cutting Mower
(2) Double Gang Harrows
(1) 250 G Water Tank w/ Pump Assembly
(1) All-Terrain Vehicle
(1) Utility Vehicle
(2) 4WD Pickups
(1) 4WD Crew Cab Pickup w/ utility cap (Inmate Supervisor and crew)
(1) 5' x 12' Utility Trailer
(1) Farm Tractor w/ FEL
(1) Crawler Tractor w/ flat blade and disc plow attachments
(1) Road Tractor w/ equipment trailer
(2) Belt Driven Push Mowers

B. Management Needs, Priority Schedule and Cost Estimates

A priority schedule for conducting management activities, the timeframe for these activities, and the average or estimated cost is listed below. The projects are listed in priority order. These management operations will be conducted and/or overseen by the DOF, with some activities being contracted to private sector vendors. All activities will enhance the property's natural resources or public recreational values.

1. Site prepare, via the use of herbicide and prescription fire, the 107 acre, cutover, slash pine plantation that was recently purchased and appended to the BSLT with

DOF Florida Forever Inholding and Addition funds. The combined cost of herbicidal application, prescribed burning, V-Blade planting and seedling purchase is $24,000.

2. Conduct a timber sale and final harvest the two remaining off-site slash pine plantations and reforest to longleaf pine. The estimated cost for reforestation of these areas is $6,000.

3. Ongoing prescribed burning to maintain and enhance existing upland pine forest areas at an estimated cost of $1,200 annually.

4. Construct a sheltered pavilion with picnic tables adjacent to the existing parking area at an estimated cost of $10,000.

5. Investigate the potential of using this forest for research purposes and as a reference/example of a longleaf pine forest functioning under natural processes. Meet with ecological research entities to discuss the potential for use of the site for research purposes.

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

1. Archaeological and Historical Resources

Representatives of the DHR and the FNAI will be consulted prior to the initiation of any ground disturbing activity, not covered in this plan, by the DOF or other state agency. The DOF will make every effort to protect known archaeological and historical resources. Recommendations outlined in the "Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Lands" (Exhibit F) will be followed whenever and wherever appropriate. The DOF has state forest personnel trained as Archaeological Monitors. Trained monitors will oversee ground-disturbing activities in which the DHR recommends monitoring. The DOF will utilize the services of the DHR CARL archaeologists, when available, to locate and evaluate unknown resources and to make recommendations in the management of known resources. As information becomes available, known archaeological and historical sites will be identified on maps to aid state forest and law enforcement personnel in patrolling and protecting sites.

2. Soil and Water Resources

Most of the natural communities on BSLT are intact. Planned projects will restore ecological integrity to the disturbed areas while allowing for controlled recreational access. Management activities will be executed in a manner to minimize the potential for soil erosion. All activities planned for the forest will be conducted in accordance with Florida's Silviculture Best Management Practices.

3. Other Resources

Applicable surveys will be conducted by DOF staff or others during the process of planning and implementing ecosystem management activities. DOF personnel will remain alert for any environmentally significant resources and protective actions will be taken as necessary.

D. 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 land is derived from Chapters 589 and 253, Florida Statutes.

E. Multiple-Use Potential - Income Producing Activities

The BSLT features one of the finest examples of a longleaf pine/wiregrass community type with old-growth characteristics in the State of Florida. It has a great potential to provide opportunities for environmental education and outdoor interpretation.
The BSLT is presently being managed under the multiple-use concept. A regime of prescribed fire has been initiated with fire frequencies appropriate to each community type and emphasis on growing season burning. The present emphasis on the timber resource is restoring the remaining offsite slash and sand pine stands and reforesting the cutover areas to longleaf pine. A variety of resource-based outdoor recreational opportunities are available including hiking, horseback riding, picnicking, nature study and wildlife viewing. BSLT is in the WMA program and as such, both consumptive and non-consumptive uses of the wildlife resource are available.

Although the primary goals of the various management activities are aimed at maintaining desirable ecosystem conditions and providing for appropriate public recreation, some of these management techniques and activities may continue to serve to generate revenue if properly conducted. Past timber sales conducted as part of the restoration of offsite slash pine plantations have already generated revenues for the DOF. Timber sales conducted for future restoration purposes may be expected to generate future revenues. In addition, hunting related activities have generated revenues for the FWC. These activities have the potential to generate additional revenues in the future.

F. Potential Use of Private Land Managers

Routine management operations such as trail and road maintenance and prescribed fire are conducted by DOF employees; however; depending upon the scale and nature of the operation, some activities are conducted via contracts with private vendors. Activities typically contracted to outside vendors might include site preparation, reforestation, herbicide application, and biological assessments.