

# **FOREST MANAGEMENT PLAN**

**Walker Springs Property**

**Prepared for the Layman Law Firm PL**

**169 +/- ACRES**

**Parcel #'s 20-2S-5E-0000-0011-0000,  
29-2S-5E-0000-0026-0000 and 29-2S-5E-0000-0024-0000**

**Jefferson County Florida**

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## **Introduction**

The Walker Springs property is located in Jefferson, Florida, approximately 8 miles south of the town of Lamont. The property is located adjacent to, and east, of County Road 257 (S Salt Road). The property consists of approximately 169 acres located in Sections 20 & 29, Township 2 South, Range 5 East (See location map). It is recorded in the Jefferson County Property Appraiser's Office as Parcel numbers; 20-2S-5E-0000-0011-0000, 29-2S-5E-0000-0026-0000 and 29-2S-5E-0000-0024-0000.

The property is bordered by Foley Land & Timber land holdings to the west, private landowners to the north and south, and the Suwannee River Management District lands to the east. The main run of the Aucilla River forms the southern boundary for a distance of about ½ mile. The property lies approximately 39 feet above sea level and is predominantly forest land which consists of; planted and natural pine flatwoods, pine-hardwood hammock, cypress-blackgum swamp and mixed hardwood/cypress/pine river swamp.

## **Management Objectives**

The Walker Springs property will be managed under a multiple use concept that will incorporate several management objectives, including timber, wildlife habitat, soil and water conservation, recreation, and aesthetics. The primary objective will be timber management. The other four stated objectives will be secondary, with wildlife habitat as the most important of these secondary objectives.

The timber management will focus on sustained financial yields from the sale of forest products that will be optimized by sound forest management practices and planning. The wildlife management on the property will mainly focus on game animal management – specifically white-tail deer and turkey. Many non-game animals will also benefit from these wildlife and timber management activities.

## **Timber**

Timber is an important agricultural crop. As a renewable natural resource, it is valuable in many ways, both to the economy and to the environment. This value extends from local benefits to the state and national levels. But, as with any crop, it needs to be managed from its establishment to its harvest time.

The timber management on the Walker Springs property will focus on periodic commercial harvests to provide income. The commercial harvests that will be conducted on the property will produce a variety of forest products including hardwood and pine pulpwood, pine chip and saw and pine and hardwood logs. This management plan will prescribe timber harvesting and the use of prescribed fire. The implementation of these practices will not only result in a high quality forest, but will also serve to enhance wildlife habitat and promote forest health.

The primary focus of the timber management will be on managing the planted pine stands by harvesting diseased, defective and suppressed trees for spacing purposes, and leaving the healthy

dominant and co-dominant trees in the stands. Mowing and prescribed burning will be conducted to reconfigure and reduce hazardous ground fuel levels, which will reduce the threat of wildfires; prevent hardwood encroachment; improve regenerative forest health, wildlife habitat and aesthetics.

Over the long term, timber harvesting and periodic prescribed burning will also reduce potential attacks by pine beetles, which are serious and very destructive forest pests. In some cases, herbicides and/or mechanical means may be implemented to control competing vegetation.

### **Wildlife**

Wildlife management on the Walker Springs property will focus on habitat protection and improvement. Some supplemental feeding (food plots, feeders, etc.) is recommended, but is not essential due to the abundance of suitable habitat in the area. White-tailed deer and wild turkey will be the featured species; however, the implementation of this plan's practices will improve the habitat for other game and non-game species as well.

The use of prescribed fire in the upland pine stands will control ground fuel levels and also promote better wildlife habitat by encouraging fresh browse for deer and the open forest settings that turkeys prefer. Longleaf and slash pine are the predominant pine species on the property. They are both tolerant of fire; however, longleaf is more tolerant at an earlier age. Longleaf is tolerant in its early "grass stage" years; however, it can be susceptible to mortality from fire in the "sapling" stage. Once trees get over 6-8 feet in height, their susceptibility to fire begins to decline again. Slash is inherently less tolerant to fire than longleaf, but becomes more so as the trees mature. All burning should be conducted by a Florida Certified Burner in compliance with Florida's burning liability law.

As for supplemental feeding, the established food plots, in conjunction with the maintenance (fertilization) of existing planted soft mast trees should suffice for this property. Warm season plantings of aeschynomne for deer and chufas for turkeys will work well, and cool season plantings of wheat, oats, and Osceola clover will encourage both wildlife species. The soils on this property are sandy and acidic, so heavy liming should greatly increase food plot productivity.

### **Soil and Water Conservation**

Due to the property's location adjacent to the Aucilla River, as well as the presence of Walker Spring, soil and water conservation are critical elements of this management plan. All silvicultural activities must be conducted in strict compliance with Florida's Silvicultural Best Management Practices (BMP's). Because it is a perennial stream and is also an Outstanding Florida Water (OFW), only limited selective harvesting is allowed within 200 feet of the bank of the river. In addition, the area around Walker Spring should be protected, and the outflow creek from the stream will have a Special Management Zone to restrict timber harvesting. When conducting timber sales, the landowner should review the Florida BMP Handbook and review the requirements and benefits of BMP's and/or rely on professional assistance when conducting timber sales. A copy of the BMP handbook can be obtained from the Florida Division of Forestry: it is also available at: [http://www.fl-dof.com/forest\\_management/bmp/index.html](http://www.fl-dof.com/forest_management/bmp/index.html) or

contact BMP Forester Cathy Hardin at (850) 547-7008 for more information. Filing a notice of intent to implement BMP's and documenting those activities entitles the landowner to a presumption of compliance with state water quality regulations.

The soils on the property fall primarily into four types: Chaires fine sand on the uplands and Nutall-Tooles, Surrency fine sand and Tooles-Tooles Depressional in the swamp and low hammock areas. Although Chaires fine sand is listed as poorly drained, on this property they should be suitable for the establishment and growth of either longleaf or slash pine species. The soils on this property are not considered highly erodible.

Soil #	Soil Type	Woodland Unit	Slope	Drainage Class	Productivity
8	Chaires Fine Sand	longleaf, slash pines, water oak, palmetto, gallberry, wax myrtle, bluestems, greenbrier	0-2	Poorly to very poorly drained	Moderately high
62	Nutall-Tooles Fine Sand	Sweetbay magnolia, sweet gum, red maple, laurel, live oaks, sable palm, wax myrtle, scattered saw palmetto	0-1	Poorly to very poorly drained	Moderately high
61	Tooles-Tooles depressional-Chaires depressional	Sweetbay magnolia, sweet gum, red maple, laurel, live oaks, sable palm, wax myrtle, scattered saw palmetto	0-1	Poorly to very poorly drained	Moderately high
4	Surrency Fine Sand	Loblolly, slash, bald cypress, sweet gum, black gum, red maple, water oak	0-1	Very poorly drained	High

### **Recreation**

The Walker Springs property is unique and well suited to a wide variety of recreational activities. These include hunting, fishing, swimming, wildlife viewing, hiking, private access for paddling, horseback riding and others. One would be hard pressed to find a more varied and beautiful tract of land for its size in North Florida. In addition, the property already has the basic framework to capitalize on these recreational activities-it has a good road system, a boat landing, a lake, wild life food plots, hunting stands, and a small camp house. The promotion and maintenance of tract diversity will integrate well with the other management objectives.

### **Aesthetics**

Maintaining and enhancing the aesthetics of this tract will be important to the landowner in enjoying the property and preserving its value. All Silvicultural and management activities should take place with aesthetics in mind. This is a beautiful piece of property that can be managed more intensively for timber production without sacrificing the aesthetic qualities that it now possesses. Silvicultural activities such as thinning and prescribed fire will actually enhance

the aesthetics. When timber harvesting is conducted in the bottomland areas, aesthetics will be impacted but can be mitigated somewhat by conducting the harvests in the proper way at the proper times.

### **Stand Specific Recommendations**

Please refer to the Stand Map in the Appendix.

#### **Stand #1 (6 acres) Planted Longleaf Pine**

This area contains “sapling” and “grass stage” size planted longleaf pine about 3 years old. The understory is dominated by palmetto, gallberry and other shrubs. Stocking is estimated to be approximately 600 trees per/acre+. The dominant saplings are approximately 3 feet in height.

Mowing between some, or all, the rows, if feasible, would serve to lower the competing shrub layer, improve access, and facilitate future burning once the seedlings reach the size/height to tolerate prescribed fire. No mowing should take place during the nesting months for quail and wild turkeys (April-July).

Prescribed fire should be introduced to the stand when conditions permit. The timing for an initial burn will be subject to future evaluation of stand conditions (tree sizes relative to fuel loading and configuration, weather conditions). “Cool season” prescribed burning, at not greater than three year intervals following the initial burn, is recommended.

A selective harvest thinning should be conducted when the stand reaches 16-20 years of age, the timing dependent on future stand conditions, to an average residual basal area (BA) of 60 square feet per acre (approximately 225 trees/acre). The initial thinning should target diseased and suppressed trees. Evaluations for future harvests should be made at four to five year intervals following the previous harvest, by a professional forester, until the stand reaches the desired rotation age. Future thinning activities will likely need to be combined with other timber harvest on the property or a nearby property for adequate economies of scale.

#### **Stand#2 (23 acres) Cypress-Blackgum**

These areas are occupied by pond cypress and hardwoods, primarily blackgum. Stocking is estimated to average approximately 150 square feet square feet of basal area per acre. In these stands, tree sizes/diameters are below those required for sawtimber and the market for hardwood pulpwood is low. Currently the recommended management is limited to the implementation of prescribed fire on adjacent uplands to protect these areas, utilized by many game and non-game wildlife species, from catastrophic fire. This recommendation can be reevaluated at a future time when the trees sizes increase and market conditions for these forest products improve.

#### **Stand#3 (35 acres) Planted Slash Pine**

These areas contain planted slash pine approximately 22 years old. The understory is dominated by palmetto, gallberry and other shrubs. The stand has received an initial third row thinning within the past five years. The area has been burned at least once within the past four to five

years. Stocking is adequate, and the basal area predominantly averages 50 square feet per acre, with lower stocking in narrow stringers adjacent to roads and wetland areas.

The initial management recommendation for this stand is to treat the understory ground cover. The stand should be prescribed burned as soon as feasible; however, avoiding damage to the overstory pines should be a priority. Prior to the next prescribed burn, this plan recommends pre-treating the palmetto-gallberry shrub layer to lower the risk of damage. Below are two pre-treatment options to be considered.

Option 1 is to mechanically treat the understory by mowing as many strips as feasible parallel to the planted rows. The objective is to lower the shrub fuel layer, allow for partial decomposition of the mowed vegetation, and apply fire before the vegetation has opportunity to fully recover. It is recommended that mowing take place for at least six months prior to burning, and that conditions be evaluated carefully by a certified burner with knowledge of the region's vegetation characteristics. No mowing should take place during the nesting months for quail and wild turkeys (April-July).

Option 2 is to treat the understory with a one-time application of herbicide to control the shrub layer (primarily palmetto, gallberry). A good treatment for this site would be 4 quarts of Garlon, applied with 2 quarts of crop oil surfactant, with at least 30 gallons of water per treated acre. The objective is to reduce the density of shrub layer, and release the underlying grasses and other native groundcover species. Consult with a knowledgeable herbicide applicator before implementation as generic equivalents for many herbicides often become available at lower prices.

If Option 2 is selected, it is recommended to wait one and one half years before the initial reintroduction of prescribed fire to allow for the decomposition of the targeted shrubs. The stand will actually be more vulnerable during this period, so protection from wildfire is especially important. Firebreaks, 15-25 feet wide where feasible, should be maintained around the stand.

Burning should be conducted by a certified burner with knowledge of the region's vegetation characteristics. Once the initial "cool season" burn has been accomplished, apply prescribed fire to this area at not greater than three year intervals. This will enhance conditions for wildlife, improve access, and provide protection to these and adjacent areas from the risks associated with catastrophic wildfires.

Evaluate stands for a second thinning in approximately five years. Immediately prior to thinning, the marking of trees targeted for cutting is recommended. Marking should be conducted by a qualified forester. This will help to insure that trees with the best future growth potential are retained and the desired residual stocking is achieved. The residual basal area following future thinning should be targeted to average 50-60 square feet per acre. These stands should be reevaluated for future timber harvesting by a forester every four-six years following each previous harvest until rotation age is reached.

#### Stand #4 (11 acres) Agricultural Area

These areas have been cleared and can be farmed for agricultural crops. Areas not utilized for wildlife food plots can be converted to longleaf pine production.

The area can be planted in longleaf pine by scalping the rows in advance of the planting. Rows should be ten feet apart and the scalping should be done at least 30 days prior to planting. Once the rows are scalped, containerized longleaf pine seedlings should be planted 6 to 7 feet apart. Care should be taken to plant the seedlings at the proper depth (bud at ground level). Planting can be done by hand or with a conventional farm type tractor. Planting can be done any time of the year when moisture and rainfall are present, but the late fall/early winter is preferable.

In the early spring (March or April) following planting, the rows should be sprayed with a 5 foot wide herbicide band to control herbaceous plants for the first few months of the growing season. A good treatment for the site would be 10-12 ounces of Oustar (or 2 ounces of Oust plus 1 quart of Velpar L) with about 15 gallons of water per sprayed acre. No surfactant should be used with this treatment. The pines should be monitored for the need of a possible follow up treatment the next spring.

Once the longleaf pines have been established, the middles of the rows should be mowed out in the winter after the third growing season, or when the pines are clearly visible from the tractor. No mowing should take place during the nesting months for quail and wild turkeys (April-July). The pine middles can be mowed each subsequent year to prevent hardwood and briar encroachment. This will keep the understory clean and will allow for pine straw raking beginning in about the ninth year. Raking should be done by hand to prevent damage to the longleaf trees and should only be done once a year to avoid site quality degradation. Limbs picked up during raking should be piled away from the boles of trees.

The longleaf pines can be raked for pine straw up until the first thinning which should be able to take place at the age of 15 to 20 years. This first thinning should focus on removing primarily any diseased, defective or suppressed trees. The thinning will likely need to be combined with other timber harvest on the property or a nearby property for adequate economies of scale. Subsequent thinning harvests can take place every five to ten years until rotation age.

Following the initial thinning, the stand should be evaluated for prescribed fire at three year intervals or when sufficient fuels accumulate to carry the fire.

#### Stand#5 (40 acres) Bottomland Hardwood Low Hammock

This stand contains a wide variety of hardwoods, cypress, scattered pine and palms. The predominant species present are sweetgum, blackgum, red maple, magnolia, baldcypress, America beech and water oak. This is a fairly mature hardwood forest that is seasonably inundated because it lies in the floodplain of the Aucilla River.

Although the landowner does not plan any timber harvests in this stand at this time, much of the hardwood in this stand could be cut within the guidelines of Florida's BMP's. Areas away from the river could be clearcut, but in the primary Special Management Zone (SMZ) the timber must be selectively cut. If timber harvest occurs, it should be done in the "dry" season so that rutting

and sediment runoff is minimized. Areas along the river that will not be subject to cutting and SMZ's should be well marked with flagging to prevent accidental harvest. In areas that are to be selectively cut, the trees to be harvested should be marked ahead of time by a professional forester.

In the near future, no timber harvesting is planned for this stand. It contributes heavily to the aesthetic and recreational values of the property, and allows the landowner to meet the objectives of soil and water conservation. In addition, much of the hardwood timber present is of low value pulpwood or oriental strand board (OSB) material and would not contribute much in the way of timber revenues. If harvest cutting does occur, replanting will not be necessary, as the species present will regenerate themselves through natural seeding and coppice (stump) sprouting.

#### Stand#6 (12 acres) High Hardwood Hammock

This area consists of various oaks (sand live oak, laurel oak, water oak), American holly and sable palms. Due to the stand's location, lying between the river swamp and agricultural area, it has been protected from fire which has resulted in a well developed shrub mid-story, making access difficult. Commercial timber values for this stand are negligible.

Managing this stand for wildlife is recommended due to its location adjacent to the river swamp, low timber value and high costs for clearing and planting. The recreation and arguably aesthetic and wildlife objectives would be served by mowing selected areas. The careful reintroduction of prescribed fire, implemented by an experienced certified burner, is also recommended.

In the future, in the openings resulting from the above recommendations, planting longleaf pine seedlings is recommended to enhance the areas future timber values. Seedlings should be planted at approximately 6-7x10 ft spacing, or 8-9 ft, apart. The use of future herbicide release treatments, applied by either backpack or tractor methods, should be explored if release of pines from competition becomes necessary and economically practical.

#### Stand #7 (12 acres) Longleaf-Mixed Pine

This area contains planted longleaf pine seedlings about 3-5 years old. The dominant trees are approximately 2 ft. high. Estimated stocking is 300 saplings and seedlings per acre. The overstory consists of scattered (approximately 10 sq. ft. BA) loblolly pine approximately 30 feet in height. The understory is dominated by palmetto 2-3 ft. in height.

The longleaf seedlings are the management focus. The palmetto understory should be selectively mowed to control height and facilitate future burning. Delay mowing until the emerging longleaf saplings are clearly visible from a tractor. No mowing should take place during the nesting months for quail and wild turkeys (April-July).

Prescribed fire should be introduced to the stand when conditions permit. The timing for an initial burn will be subject to future evaluation of stand conditions (tree sizes relative to fuel loading and configuration, weather conditions). "Cool season" prescribed fire, at not greater than three year intervals following the initial burn, is recommended.

The stand should be evaluated for possible selective harvest once the stand reaches 14-18 years of age (the timing dependent on future stand conditions) to an average residual basal area of 60 square feet per acre (approximately 225 trees/acre). The initial thinning should target diseased and suppressed trees. Evaluations for future harvests should be made at four-five year intervals following the previous harvest by a professional forester until the stand reaches the desired rotation age. Future thinning activities will likely need to be combined with other timber harvest on the property or a nearby property for adequate economies of scale.

#### Stand#8 (7 acres) Pine-Hardwood

This area contains a loblolly pine, live and laurel oak overstory and a dense palmetto-gallberry understory. Two management options are recommended.

Option 1 is to selectively thin pine and hardwood (excluding live oak) to a basal area of approximately 50 square feet per acre. The stand can be evaluated for a future saw timber harvest in 5-7 years

Option 2 is to harvest all standing pine and hardwood in this area and replant with either loblolly or longleaf pine seedlings. Retention of live oak and other selected hardwoods should be incorporated to address wildlife, aesthetic and recreational objectives. Some mechanical and herbicide site preparation is desirable prior to replanting. Seedlings should be planted at 7x10 spacing approximately. Specific treatment options can be fine-tuned by a professional forester at time of harvest.

Given either option, harvesting in this area will likely need to be combined with other timber harvest on the property or a nearby property for adequate economies of scale.

#### Stand#9 (1 acres) Planted Longleaf Pine

This area contains planted longleaf pine saplings about 5 years old. Dominant trees are approximately 9 ft. in height. The understory consists of palmetto, gallberry and various species of low value hardwoods.

Timber management and harvest activities in this small stand should follow, and be carried out in conjunction with activities in those outlined for stand #'s 1 and 7 given their similar characteristics and ages.

Mowing between rows would improve access and lower fuel heights. No mowing should take place during the nesting months for quail and wild turkeys (April-July). Prescribed fire should be re-introduced in the stand when feasible. Burning should be conducted by a certified burner with knowledge of the region's vegetation characteristics.

#### Stand#10 (20 acres) Blackgum-Cypress swamp (harvested)

This area contains regenerating cypress and hardwood resulting from a harvest in the recent past. A large area of the stand is not merchantable. There are scattered stringers of mature hardwood (primarily blackgum) and cypress in the deeper areas of the swamp, likely left unharvested due to logging limitations. Basal area per acre varies from 0 to 100 square feet per acre.

Timber management in this stand is limited to prescribed burning on the perimeter with adjacent uplands. Replanting is not necessary as the species present will regenerate themselves through natural seeding and coppice (stump) sprouting. The stand can be evaluated for future management in about fifteen to twenty years.

Stand#11 (2 acres) Pond

This area increases tract diversity and contributes to the wildlife, aesthetics, and recreational objectives of the plan. A management suggestion is to plant the perimeter with cypress and soft mast producing hardwoods.

**Schedule of Management Activities**

<b>Year</b>	<b>Stand#</b>	<b>Season</b>	<b>Practice</b>
2010	All uplands	Summer	Mow trails, Roads
	3	Winter, Fall Spring	Opt. 1: Mow between rows Opt. 2: Herbicide treatment
	4	Summer-Fall	Schedule & implement treatment and planting activities
	6	Winter, Fall	Mow trails to open stand
	8		Determine harvest/management options to proceed forward
	9	Winter, Fall	Mow between rows
2011	All uplands	Summer	Mow trails/Roads
	1	Winter, Fall	Mow between rows
	6	Winter, Fall	Mow trails to open stand
	3, 6, 9	Winter, Fall	Evaluate for prescribed fire
	4	Spring	Evaluate for herbaceous release
	8	Summer-Fall	Follow-up based on prior management
2012	All uplands	Summer	Mow trails/Roads
	3, 6	Winter, Fall	Evaluate for prescribed fire
	6	Winter, Fall	Mow trails to open stand
	7	Winter, Fall	Mow between rows
2013	All uplands	Summer	Mow trails/Roads
	6	Winter, Fall	Mow trails to open stand
	1,6,7	Winter, Fall	Evaluate for prescribed fire
	4	Winter	Mow between rows
2015	All uplands	Summer	Mow trails/Roads
	3	Winter	Evaluate for 2 <sup>nd</sup> thinning
	3,6, 9	Winter, Fall	Evaluate for prescribed fire
	6	Winter	Evaluate potential openings for longleaf establishment

# **Appendix**