

Forest Stewardship



Management Plan

**Leon County Parks & Recreation
Miccosukee Canopy Road Greenway
Leon County, Florida
05/14/25**

**Florida Forest Service
Florida Fish and Wildlife Conservation Commission
University of Florida – Institute of Food and Agricultural Sciences
Private Natural Resource Consultants and Land Managers**

4.1.1.4 SIGNATURE PAGE

FOREST STEWARDSHIP PROGRAM**New Plan** **X** **Revision**

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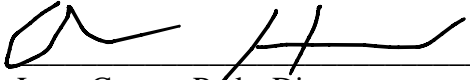
Leon County

(Landowner Name)

Leon


(County)

was prepared, reviewed, and approved by the following:


 Leon County Parks Director

6/11/2025

Date


 Conservation Programs Manager, Florida Forest Service

6/30/2025

Date

Date

Stan RosenthalSenior Forester – Natural Resources Planning Services &
UF/IFAS Extension Forestry Agent Emeritus

5/14/2025

Date

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LOCATION

The Miccosukee Canopy Road Greenway Park is a 497.73-acre linear park located along Miccosukee Road. The park runs for 6.4 miles along this scenic route.

DESCRIPTION

Indians used the area for hunting and gathering and agriculture for the last ten thousand years. Following European settlement but prior to the civil war the land was used for production of cotton and tobacco. The property has in recent times been managed as a plantation with timber harvesting, livestock grazing and hunting being the main uses. Prescribed fire along with some farming operations in the fields have also been major influences on the flora.

As a park open to the public, “preservation” of and education about the existing flora and fauna as well as enhancing aesthetic quality will be a goal. Safety considerations will also be a priority.

The flora and fauna of the site is a result of previous management. To “preserve” the current state, the management techniques that the plantation used will need to be mimicked. An additional threat to native species is the recent arrival of many invasive exotic plants. These will need to be controlled to maintain optimum native flora fauna. Management for all of these resources will involve practices which promote good soil and water conservation.

Currently this property holds the honor/achievement of being a Certified Forest Stewardship property.

MANAGEMENT OBJECTIVES

SUMMARY OF MANAGEMENT RECOMMENDATIONS

Timber

Silvicultural activities will involve maintaining a natural diversity of plant communities. Longleaf pine, which historically occurred in greater numbers will continue to be reestablished and managed on some of the uplands. Invasive exotics will be controlled throughout. Safety will also be a concern along Miccosukee road and in parking and other areas frequented by people. Prescribed fire and selection cutting will be the main management tools in upland stands. Herbicide treatments and hand planting will also be utilized where other methods are inadequate.

Wildlife

Wildlife management will involve maintaining many of the naturally occurring plant and animal communities by utilizing prescribed fire where safe on upland sites. Featured species being managed for include both game and non-game native wildlife. Upland stands will be maintained with fire including early growing season (February-June) prescribed fires on a two-to-three-year frequency. Permanent openings will be maintained in specified upland areas. Portions of these openings can be planted to various wildflowers, small grains, and legumes to provide a supplemental food sources for resident wildlife species while enhancing aesthetics and wildlife viewing opportunities. Maintenance of the unplanted portions of the openings will be accomplished by mowing and seasonal soil disturbance (successional mowing). Mowing should be conducted September through February to avoid disruption of ground nesting species, such as turkey and quail. Additional mowing recommendations for bluebirds and eastern meadowlarks will be described later in the plan.

Fireline maintenance should be conducted during the winter months when soil disturbance encourages the production of beneficial native food plants such as partridge pea, milk pea, and beggerweed.

Under-stocked upland sites will be reestablished to longleaf pine by natural regeneration with reinforcement plantings. This species of pine will be most conducive to ensuring adequate forage production through the use of prescribed fire.

Snags, where low risk, shall be left standing for the benefit of cavity nesting species.

Pets shall be on a leash to avoid killing and harassing wildlife. Stray cats and dogs will be reported to the proper authorities for removal.

Management recommendations contained in this Forest Stewardship Management Plan should be conducive to the conservation of threatened and endangered species that may be found on the property. The U.S. Fish and Wildlife Service compiled a [list](#) of rare, threatened, and endangered species documented in Leon County, FL.

Aesthetics

Natural forests and pastoral agricultural areas, including wildflower meadows, will be promoted for a high visual quality. Special attention will be paid to preserving already existing viewsapes for both motorists and park users.

Smoke-sensitive areas include: I-10, Miccosukee road, Crump Road and neighborhoods in close proximity to the park. In cases where prescribed fire is recommended it should be determined by the prescribed fire boss (manager) if it can be done safely. This will become increasingly crucial as adjacent areas become more populated and conflict with smoke and escaped fire becomes more possible (likely). If this is the case mechanical substitutions (bushhogging) or grazing by sheep should be used in place of fire to control fuel buildup. Firelines should be established and maintained around the perimeter of the property. Use natural breaks, roads and trails where possible. Avoid cutting firelines in wet areas as this could be damaging to wetlands. Fireline establishment and maintenance can be obtained from the Florida Division of Forestry. They charge a minimal fee for this service. Their phone number is [\(850\) 681-5950](tel:8506815950). You may wish to hire a forestry consultant to assist you with prescribed burning. A burn plan should always be completed prior to prescribed burning (*enclosed*). The burning must be done carefully, or you could destroy many years of growth. Remember, before burning you must have authorization from the Florida Forestry Service. Their contact is [\(850\) 681-5951](tel:8506815951) or email FFSupport@FDACS.gov

Education, Study and Recreation

There are abundant opportunities for hiking, birdwatching, wildlife viewing, bicycling, and horseback riding. Establishment of trails, having utilized existing logging roads and the construction of boardwalks across wetland sites has facilitated access to the property as a whole, without inhibiting natural water fluctuation. Along trails, interpretive signs will allow users to identify flora and other points of interest. Management of openings by planting to wildflowers and wildlife forages as well as mowing recommendations will also increase viewing opportunities. Classes and hikes on nature and passive health/exercise, that are not in conflict with environmental protection, will be encouraged.

Agriculture

Various types of agriculture have had impacts on the land, some of these are considered desirable. Sometimes other management techniques can achieve the same results. These may include successional mowing and discing.

Soil and Water

Soil types occurring on the property include Lucy, Norfolk, Orangeburg, Plummer, Ocilla, Albany, Wagram, Lynchburg, Blanton and Pelham. Lucy fine sand is a well-drained soil on upland ridges and hillsides. Slopes vary from 0-5%. Natural fertility is low. Norfolk loamy fine sand has a 2-5% and 5-8% slope and is well drained. It is a gently sloping soil to strongly sloping on uplands. Natural fertility is moderate to moderately low on steeper slopes. Orangeburg fine sandy loam is a well drained, gently to strongly sloping soil on uplands. The slopes of Orangeburg fine sandy loam vary between 2-5%, 5-8% and 8-12%. Natural fertility is moderate. The Plummer fine sand is a poorly drained nearly level soil that is in low areas and poorly defined drainage ways. The water table is within 15 inches of the soil surface for 3-6 months in most years. Natural fertility is low. Ocilla fine sand is a somewhat poorly drained, nearly level soil on moderately low uplands. Ocilla soil has a water table within a depth of 15 to 30 inches for 2 to 6 months. Slopes range from 0-2% and are slightly convex. Natural fertility is low. Albany loamy fine sand is a somewhat poorly drained, nearly level soil (0-2% slopes) on lower elevations of uplands. The water table reaches 12 to 30 inches below the soil surface for 1 to 2 months of the year, but the upper soil layers usually have very low available water capacity. Albany soil's natural fertility is low. Wagram loamy fine sand is a well drained nearly level to gently sloping soil on broad upland ridges. Slopes are from 0-5%. Natural fertility is moderately low. Pelham fine sand is a poorly drained nearly level soil on broad flatwoods, in depressional areas and in some drainage ways on uplands. Slopes range from 0-2%. The water table is within 15 inches of the soil surface for 3-6 months in most years. Natural fertility is low. Lynchburg fine sandy loam is a somewhat poorly drained, nearly level soil that is found in shallow depressional areas and on broad interstream divides. Slopes range from 0-2%. Lynchburg soil has a water table that is 6-20 inches below the surface for 1 to 3 months during spring and winter months in most years. Natural fertility is low. The Blanton fine sand soil is near level to gently sloping soil on moderately well drained uplands. Slopes are 0-5%. It has

low natural fertility. See the table on the next page describing soil types. Also see appendix for map of soil types on the property.

Soil Type	Vegetative Community	Slope	Drainage	Site Index
Lucy	pine/hardwood	0-5%	well-drained	80
Norfolk	pine/hardwood	2-5% and 5-8%	well-drained	90
Orangeburg	pine/hardwood	2-5%, 5-8% and 8-12%	well-drained	90
Plummer	wetland forest	level	poorly drained	90
Ocilla	pine/hardwood	0-2%	somewhat poorly drained	80
Albany	pine/hardwood	0-2%	somewhat poorly drained	80
Wagram	pine/hardwood	0-5%	well-drained	80
Lynchburg	pine/hardwood	0-2%	somewhat poorly drained	90
Blanton	pine/hardwood	0-5%	moderately well drained	80
Pelham	wetland forest	0-2%	poorly drained	90

* Site Index is defined as the average height of the dominant and co-dominant trees within an even-aged stand of the selected species at age 50 years.

SPECIFIC STAND RECOMMENDATIONS

Stand 1

This stand is 156.41 acres and is generally in some stage of succession from old field to currently a mixture of pine forest and hardwood forests. The dominant soil type for this stand is Orangeburg 2-5, 5-8% and 8-12% slopes. Other soil types include Blanton 0-2% slopes and Ocilla 0-5% slopes. There is also a small area of Norfolk loamy fine sand with a clayey substratum 5-8% slopes in the west corner of the property. Hickory Hill Cemetery of Welaunee Plantation is located in this stand.

Dominant trees being shortleaf and loblolly pines, live, water and laurel oaks. Other trees found in this stand include sweetgum, dogwood, southern red oak, mockernut hickory, pecan (non-native), southern magnolia, sugarberry, American elm, cabbage palm, wax myrtle, yaupon holly, southern crab apple, red cedar, spruce pine, eastern dogwood, Chickasaw plum, elderberry, black cherry, cherry laurel, winged sumac, wax myrtle, yaupon holly, elderberry, hawthorn, sugarberry, sassafras, persimmon, saltbush, crepe myrtle (non-native) and on the far west end some post oaks. Understory plants include American beautyberry, bahiagrass, blackberry, blue mist, broomsedge, dogfennel, partridgeberry, ebony spleenwort, goldenrod, aster, greenbrier, coral bean, jasmine, lovegrass, partridgeberry, passion vine, poison ivy, ragweed, St. John's wort, tickseed, wild grape vine, broomsedge, dogfennel, yellow jasmine and coastal Bermuda (non-native).

Invasive exotic plants that have been found in this stand include mimosa, Chinaberry, silverthorn, Camphor tree, Chinese privet, Chinese tallow, ligustrum, English ivy (see picture to right), Japanese honeysuckle, nandina, coral ardisia, Japanese climbing fern, tropical soda apple, inch plant, and chamber bitters.



This stand most closely resembles an upland pine forest described in Florida Natural Areas Inventory's (FNAI) "Guide to The Natural Communities of Florida"
<https://www.fnai.org/species-communities/natcom-guide>

Fire is a necessary management tool to maintain this forest type. Unfortunately, urban development will preclude the use of fire in this stand because of the risk of smoke and escape of fire. This stand will be allowed to succeed eventually into a beech-magnolia forest as described in "Guide to The Natural Communities of Florida" (appendix).

The Hickory Hill Cemetery of Welaunee Plantation is currently being managed by Mount Olive Church. Leon County responsibility for exterior trees outside of the cemetery will be done on an ongoing basis.



Just east of Stand 3 is an area where the understory is dominated by grape vine and greenbrier. The overstory is made of mostly mature laurel oaks (see picture above). The density of these oaks is low so that much light reaches the vine understory. The vines are prohibiting

tree reproduction. As these older trees die, this area will convert to an open vine field. Fire exclusion has allowed this to happen. I recommend that a combination of mechanical and/or chemical methods be considered to control these vines and then replant to pines and/or hardwoods. The hardwoods should be selected from the tree pallet as described in Stand 3. Dominant trees in this planting should be post oak, southern red oak, shortleaf pine, mockernut hickory and rusty black haw.

Continued control of the vines will be needed until the newly planted trees can shade out the understory.

Note that this same condition is starting to develop in other areas of this stand. Managers should be aware of the condition and take appropriate actions to avoid situations as described above.

Preserve all snags where they are not at risk of falling on trails or other areas where people regularly walk or congregate. This includes the parking lot area.

Continue to control the invasive exotics plants. To do this, annual surveys of the entire Greenway will need to be done to avoid large invasive exotic plant outbreaks that require much effort to get them under control. See picture below of large infestation of inch plant that took many years to get to this size. See the UF/IFAS publication Controlling Invasive Plants in North Florida Forests at: <https://edis.ifas.ufl.edu/publication/FR133>



Continue to maintain all roads and trail using Silviculture Best Management Practices for Florida (BMP's) techniques. The BMP Manual can be found at: [chrome-extension://efaidnbmnnnibpcajpcgiclfndmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf](https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf)

STAND 2

This 10.14-acre stand is four areas that are parts of larger fields. Their acreages are 1.93, 2.21, 3.17 and 2.83. The soil type in this stand is Orangeburg with 2-5% and 5-8% slopes.

Species found in the fields vary between areas dominated by bahiagrass (nonnative) and areas that are more diverse in species. Plants found include goldenrod, paspalum, blackberry, sorrel, pokeweed, vetch, ragweed, thistle, galium, greenbrier, Spanish needles, American beautyberry, dogfennel and aster. A few trees are found in these fields including a live oak and some young laurel oak, elderberry, Chickasaw plum, black cherry, wax myrtle, winged sumac and cherry laurel. Also, the invasive exotic plants Chinese privet, Chinese tallow, tropical soda apple and ligustrum were found.

To maintain these as open fields, continue to mow them as described in Stand 3 and have a vegetative buffer planted on the north border of the park property also as described in Stand 3. You may want to also establish and maintain parts of these fields as wildflower meadows. See the stand map and map of this stand in the wildflower appendix to determine location of wildflower meadow types. Use the same methods for establishment and maintenance of wildflower meadows as described in the appendix and Stand 3.

Control invasive exotics. See the UF/IFAS publication Controlling Invasive Plants in North Florida Forests at: <https://edis.ifas.ufl.edu/publication/FR133>

For access roads on all fields, it is recommended that they be kept to the perimeter of the field. This will help with the aesthetic quality of the viewshed. Care should always be taken to keep the roads from creating erosion problems. For erosion control techniques, see the BMP Manual at: [chrome extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf](https://efaidnbmnnnibpcajpcglclefindmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf)

STAND 3

This 42.87-acre pasture had historically been used for grazing and hay production. It was adjacent to a temporary lake and has a sometimes connecting 2.5-acre temporary pond within its boundaries. There is a small 0.7-acre isolated stand of trees within the field. Trees in this stand include live and water oaks, sweetgum, sugarberry and the invasive exotic camphor tree. Recently this wet area has expanded into parts of the 0.7-acre isolated stand of tree and southwardly to Miccosukee Road. There are also a few scattered planted trees and edges of forest along the north perimeter of this stand. A future road is planned through this stand and trees were planted some years ago to enhance aesthetics and provide a canopy for this road. Natural stands in this greenway were used as a species palate. It also borders the forested canopy road zone on the south side.

Soil types in this stand include Albany, Lucy, Lynchburg, Orangeburg 2-5% and 5-8% slope. The Lynchburg soil historically floods during extended wet periods.

The dominant grass is Bahia. Some coastal Bermuda, yellow wood sorrel, Venus looking glass, black medic, wild geranium, mouse eared chickweed and thistle was also found. Trees in the island hardwood stand are live and water oaks, sweetgum, sugarberry and the invasive exotic camphor tree.

This open space has many recreational uses including those that require large open spaces such as ballooning and kit flying.

Since purchase of the property grazing and harvesting of hay has no longer occurred. Currently this field is managed as a large lawn with the exception of the edges which had once been maintained as wildflower meadows.

High traffic/use areas should be maintained as follows. Mow at least once a week during the growing season. Mow at a height of 3 to 4 inches. Never mow more than 1/3 of the height of the grass off at one time. Using proper mowing height and frequency will help keep the grass healthy and as a dominant plant in these fields. Fertilizer will only be advised in high traffic areas. Fertilize according to results provided by using a soil test kit that can be obtained at the University of Florida/Leon County Cooperative Extension Office. For more information on bahia grass lawn maintenance see the appendix. All turf management must follow Green Industries-Best Management Practices. See manual at: [chrome extension://efaidnbmnnnibpcajpcgiclfendmkaj/https://ffl.ifas.ufl.edu/media/ffl.ifas.ufl.edu/docs/GIBMP_Manual_Web_English.pdf](https://ffl.ifas.ufl.edu/media/ffl.ifas.ufl.edu/docs/GIBMP_Manual_Web_English.pdf).

Continue mowing as described for High traffic/use areas at a short height around all the eastern bluebird boxes for ease of monitoring.

For low traffic/use areas, a less frequent mowing cycle will be used, Grass quality and density should be checked from time to time.

Mow low traffic/use areas around May first and again around August first. This should keep the grass at a height that eastern bluebirds can feed themselves and their young. Optimum feeding areas for bluebirds are short grass areas. Also, eastern meadowlarks prefer tall grass areas. In some areas, it would be good to not mow after August first to allow grass to increase in height for wintering eastern meadowlarks. Meadowlarks prefer areas of 10 to 16 inches grass height.



Historically, Florida's landscape was awash with color from spring through fall. Fire-maintained pinelands, fallow agricultural fields, and marshy areas around lakes and rivers produced an abundance of bunch grasses and flowering forbs. Even though we've lost much of the legacy due to the rapid urbanization of the state, it is possible to reclaim some of Florida's colorful past in and around the places where we live, work, and play. Some of the benefits of growing wildflowers and native grasses include: enhanced recreational and educational experiences for our children, more songbirds, butterflies and other wildlife, and the restoration of a special sense of natural history close to home.

To successfully establish and manage wildflowers and native grasses in meadow-like groupings, it's helpful to consider how they grow in their natural habitats. Although wildflowers bloom just about all year long in the Red Hills Region, there are two major blooming periods, spring and fall, each characterized by a particular pattern of growth.

To achieve the benefits listed above, it is recommended that wildflower meadows be established and managed along the edges and fringes of this pasture (see attached map). Contact the Extension office for help with laying out the exact location of these meadows. For directions on how to establish and manage wildflower meadows see appendix.

For the areas on the north side of this pasture that connect to more pasture area off the property plant loblolly pine, wax myrtle, yaupon holly, Chickasaw plum, southern crab apple and other native plants that will provide wildlife habitat and a vegetative screen to protect the view from future land use changes such as residential development. Vegetative screens should not be more than a few rows of trees wide.

To establish the pine seedlings in these fields you will need to control grass and herbaceous weed competition by either mechanical or chemical control methods.

The mechanical method involves using a scalper prior to planting. Scalping should go along contours to prevent erosion. Scalping should have a width of 2½ feet and be 3 to 4 inches deep.

The chemical method involves planting the pines first and then spraying over the tops of the pines. Spray Arsenal herbicide at a rate of 7 oz/A plus 4 oz surfactant or Oust herbicide at a rate of 4 oz/A in 15 gallons of water. Apply the herbicide in four-foot-wide bands in the spring over the tops of the seedlings.

In January or February plant two to three rows of loblolly pine bareroot seedlings on a 10X15 foot spacing. Proper handling and planting is important for success. See the UF/IFAS Forest Stewardship page for information and additional links on planting pine seedlings: <https://programs.ifas.ufl.edu/florida-land-steward/forest-management/timber-management/planting/>

Order the seedlings many months ahead of the planting dates as nurseries often run out of trees in advance of tree planting season. Mulch placed under the trees will help control reinvasion of grass.

The broadleaf plants can be planted after about five years under the loblolly pine. This will give you a dense two stage wall of vegetation.

Control all other invasive exotics. See the UF/IFAS publication Controlling Invasive Plants in North Florida Forests at: <https://edis.ifas.ufl.edu/publication/FR133>

The island hardwood stand, parts of the open grass field and parts of the canopy road zone has been abnormally flooded in 2024 (see picture below showing flooded island hardwood stand and parts of the open grass field flooded in November 2024).



Much of this flooded area has a soil type of Lynchburg fine sandy loam. As previously stated, the Lynchburg soil is somewhat poorly drained. While this area is a natural flow-way and flooding has been observed in the past in parts of this area, the duration of flooding that has occurred in 2024 has not occurred over the last few decades.

It is important to understand what happens during root zone inundation. Roots carry on the process of respiration. This is necessary for trees to carry on their physiological processes in order for them to live. When inundation occurs, anaerobic conditions occur, and the oxygen-carbon dioxide cycle gets reduced/interrupted so that the tree roots are unable to breathe. When this happens, the roots stop providing nutrients and water to the rest of the tree.

While wetland trees such as baldcypress have evolved to tolerate long periods of flooding, the trees in this area do not tolerate anaerobic conditions as well as wetland trees. Thus, the longer or more frequently the flooding goes on, the worse it gets for the tree(s).

It is very important to note that reduced health or death of the trees in the flooded areas is not the only concern here. This type of flooding can increase the risk of structural failure so that targets of value may be struck when these trees fall. Given the proximity of these trees to people using the park and Miccosukee Road and its traffic I consider these activities **to put people and their vehicles at increased risk** from these trees.

Additionally, these root damages to these trees may invite decay, making them at risk of structural failure in the future. Therefore, I recommend the trees be monitored for the foreseeable future if they are not removed.

Finally, while you can't undo the damage already done, I recommend that you do whatever is necessary so that these trees no longer have their root zones flooded.

This new pond may go dry from time to time. If this occurs it has great ecological significance. Many wildlife species depend on temporary/ephemeral ponds as they are important breeding and foraging habitat for a variety of amphibians, birds, reptiles, and small mammals. If the water in this pond were to become permanent, predators such as largemouth bass could successfully survive. Currently only migratory animals such as great blue herons, wood storks or animals that require pond conditions for only part of their life cycle such as frogs and dragonflies can survive. Many of these amphibians cannot take the predation of largemouth bass. They are also good feeding areas for many wading birds. Thus, ephemeral ponds are unique and a haven for frogs and certain birds. Therefore, it is preferable if this area should be kept as an ephemeral pond. See the publication for Management Strategies for Florida's Ephemeral Ponds and Pond-Breeding Amphibians at: [chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.coastalplains.org/wp-content/uploads/2018/09/Management-Strategies-for-Floridas-Ephemeral-Ponds-and-Pond-Breeding-Amphibians.pdf](https://www.coastalplains.org/wp-content/uploads/2018/09/Management-Strategies-for-Floridas-Ephemeral-Ponds-and-Pond-Breeding-Amphibians.pdf)

Additionally, it would be good to provide some cover and roosting habitat for wildlife. This can be done by planting some wetland trees such as baldcypress/pond cypress and button bush towards the edges of the pond.

The addition of wood duck boxes could also attract wood ducks to this pond. Wood duck boxes should be placed at least 6 feet above the high-water level. This will ensure that the eggs are not drowned during spring flooding. Boxes should face an area free of limbs and visible from open water if possible. Consideration should also be given to installing predator guards around the post or tree to which the nest box is attached. Predator guards, which exclude raccoons and rat snakes, are essential to providing a secure nesting place. All limbs or vines should be trimmed for several feet around the box. A final point to remember when placing nest boxes is to locate them at least 100 yards apart with entrances facing away from each other. This separation, for reasons unknown, aids in reducing the practice of "dump nesting". Dump nesting occurs when 2 or more hen wood ducks lay eggs in the same nest box. The result of this practice is usually a reduction in net production. With up to 40 eggs in the same nest box, only the top 10

to 15 eggs are maintained at warm enough incubation temperatures. Also, many dump nests are never incubated. The Florida Wildlife Commission has more information and construction instructions for wood duck nest boxes that can be found at <chrome-extension://efaidnbmnnnibpcajpcgiclfndmkaj/https://myfwc.com/media/3187/wood-duck-box.pdf>

To the north of the entrance are trees were planted though this stand along the area that is planned for an Edenfield road extension.

The tree palette used for this planting were taken from the list of trees in the natural upland hardwood forest in Stand 17. Trees in this list included mockernut hickory, post oak, southern red oak, black oak, and shortleaf pine. Other trees found in the stand include loblolly pine, Chickasaw plum, black gum, eastern dogwood, water oak, laurel oak, white oak, bluff oak, wild olive, basswood, rusty black-haw, sweetgum, sassafras, sugarberry, red buckeye, Florida chinquapin, fringe tree, hawthorn, southern crabapple, tree sparkleberry, persimmons, red mulberry, wax myrtle, black cherry and winged sumac. Future plantings on the greenway should use this tree palette unless otherwise noted, such as areas where you want to increase longleaf pine in the stand.

Bluebird and purple martin boxes are being maintained in this stand. They should continue to be maintained as volunteers are available.

Bluebird boxes should be placed 4 to 6 feet above the ground on trees or posts equipped with predator guards. Predator guards, although they do not guarantee safety, can provide a degree of protection from raccoons, house cats, and rat snakes. If placed along the edge of an opening, the entrance of each box should face an open area. It is important to place boxes at least 100 yards apart. This will reduce territorial conflicts between neighboring nesting pairs and make the boxes most effective in raising young bluebirds to fledging. The American Bluebird Society maintains an excellent web site with more information at <https://www.nbluebirdsociety.org/fact-sheets-plans/>

Martins prefer nesting in open areas. They are also colonial birds that nest together in groups. Colonies should be established/maintained in open fields, as far from houses and other buildings as practically possible (a 40 ft minimum buffer is generally recommended). Because Martins feed almost exclusively on flying insects, open fields which may contain only scattered trees are highly favored (Martins find “swooping” for insects easier in a field than among trees). Establishing colonies near open water is also desirable due to the abundance of insects around that habitat.

Control invasive exotics. See the UF/IFAS publication Controlling Invasive Plants in North Florida Forests at: <https://edis.ifas.ufl.edu/publication/FR133>

When driving in all fields, it is recommended that driving be kept to the perimeter of the field or designated roadways. Note that driving in this field or any other areas of the Greenway

will result in compacted soil. This loss of soil porosity will reduce health and vigor of all plants (grass and trees included) and also decrease the soil's ability to absorb water. Care should always be taken to keep the roads from creating erosion problems. For erosion control techniques, see the BMP Manual at: [chrome extension://efaidnbmnnnibpcajpcgiclfndmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf](https://efaidnbmnnnibpcajpcgiclfndmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf)

STAND 4

This 10.96-acre stand is an oak savanna. The soil type in this stand is Orangeburg 5-8% and 5-8% slopes slope. Well spaced live oaks dominate the overstory. Other trees present are post, water, and southern red oaks, sugarberry, sweetgum, pecan, black cherry and cherry laurel. Herbaceous plants found include American beautyberry, blackberry, dog fennel, goldenrod, greenbrier, poison ivy, ragweed, strawberry, thistle, tickseed vetch and woods violet.

Invasive exotic plants currently found or having been found in the past include bahiagrass, Chinaberry, mimosa, Chinese privet, Chinese tallow, Japanese ligustrum, Chinese privet, coral ardisia and Japanese climbing fern, tropical soda apple and Japanese honeysuckle.

To keep the open nature of this stand, mow this stand to keep it as an open meadow as described in parts of Stand 3. Replant live oaks where needed and to replace others when they die. Do not prescribe burn this stand.

Consider establishing wildflower meadows as shown on the stand map and as described in the appendix and Stand 3.

Bluebird boxes are in this field. These should be maintained as described in Stand 3.

Control invasive exotics. See the UF/IFAS publication Controlling Invasive Plants in North Florida Forests at: <https://edis.ifas.ufl.edu/publication/FR133>

Driving in this field should be restricted as described in Stand 3.

Care should always be taken to keep the roads from creating erosion problems. For erosion control techniques, see the BMP Manual at: [chrome extension://efaidnbmnnnibpcajpcgiclfndmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf](https://efaidnbmnnnibpcajpcgiclfndmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf)

STAND 5

This 47.63-acre pasture has historically been used for grazing and hay production. Soil types in this stand include Orangeburg 2-5% and 5-8% slope. The field is dominated by old field vegetation such as golden rod and bahiagrass. Also found in the field were Spanish needles,

blackberry, costal broom sedge and ragweed. There is a sporadic perimeter in some places of trees and shrubs. There are also planted loblolly and longleaf pines, yellow poplar, and live oaks, as well as naturally regenerated hardwoods around some of the parking lot area and edge of the field.

Understory plant and vines in these forested areas include grape vine, greenbrier, yellow Jasmine, beautyberry, salt bush, St. John's wort, coral bean and ebony spleenwort.

The invasive exotics found include mimosa, Japanese ligustrum, Chinese privet, coral ardisia and Japanese climbing fern.

In 2024 shortleaf pine were planted on approximately 1/3 of the field. Survival has been mixed. To keep a buffer but to also keep good habitat for songbirds that like open areas such as purple martins it is recommended that all but six complete rows that are closer to the interstate be mowed down. Also, an area six rows wide on the north side should be left to create more edge effect. The area under the pines should be mowed for at least five years on an annual basis to keep hardwood competition and invasive exotic plants under control.

The open space has many recreational uses as described in Stand 3. This field also provides an excellent view for passing motorists on both I-10 and Miccosukee road.

This field can be kept open by use of successional mowing and/or disking. This method is a very cost-effective way to keep the field open and will benefit wildlife. Especially early successional birds such as meadow larks, blue birds and purple martins.

The first concept of successional mowing and/or disking is that you change the structure of the field. You do this by mowing or disking a strip every third year. So, each year you mow or disk the area that has not been disturbed for the longest time. The next year you move over a row and then the next year you move over a row, etc. What this does, is keeps the whole field from growing back into a forest.

This benefits wildlife because the freshly mowed/disked areas allow them an easy travel corridor with protective cover close by. Also, especially in the summer, wildlife like to eat insects which are a good source of protein. Thus, you will see baby birds like turkey and quail going down the most recently disturbed row which they can access and eating insects out of the adjacent taller vegetation.

Besides providing insects to eat, there is year-round production of vegetative food. The many different plants that come up include blackberries, ragweed and others that provide good food and nectar for wildlife and bees.

Consider establishing wildflower meadows as shown on the stand map and as described in the appendix and Stand 3.

Bluebird boxes and grass immediately around them should be maintained as described in Stand 3.

Purple Martin Boxes are in this field. These should be maintained as described in Stand 3.

In the future, consider planting a vegetative screen on the east side of the pasture if land use changes make this desirable. Follow instructions on planting a vegetative screen as described in the previous Stand 3.

This stand is too close to I-10 to prescribe burn.

Control invasive exotics. See the UF/IFAS publication Controlling Invasive Plants in North Florida Forests at: <https://edis.ifas.ufl.edu/publication/FR133>

For driving in this field should be restricted as described in Stand 3.

Care should always be taken to keep the roads from creating erosion problems. See Best Management Practices (BMP's) in the appendix for erosion control techniques.

STAND 6

This stand is a floodplain forest that is 2.59 acres and occurs on the Pelham soil type. An intermittent stream flows through the property. The dominant trees are red maple and laurel oak. Live oak, sweetgum, loblolly pine, water oak, persimmons, black gum, American holly, titi and the invasive exotic Chinese tallow have also been found in this stand. Other plants found were wild grape vine, greenbrier, trumpet creeper and woods fern.

This stand most closely resembles a bottomland forest as described in Florida Natural Areas Inventory's (FNAI) "Guide to The Natural Communities of Florida"
<https://www.fnai.org/species-communities/natcom-guide>

This stand has high esthetic value with its colorful red maple trees. Floodplain hardwoods associated with the intermittent stream will be maintained as natural communities to ensure their aesthetic and water quality and quantity control values. These communities will be maintained by natural water fluctuation.

Flooding is the natural disturbance for this stand. Do not prescribe burn this stand.

Preserve all snags where they are not at risk of falling on trail areas where people regularly walk.

Control invasive exotic plants were found. See the UF/IFAS publication Controlling

Invasive Plants in North Florida Forests at: <https://edis.ifas.ufl.edu/publication/FR133>

Continue to maintain all roads, boardwalk and trail using BMP techniques. For erosion control techniques, see the BMP Manual at: [chrome extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf](https://efaidnbmnnnibpcajpcglclefindmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf)

STAND 7

This 1.18-acre stand is planted loblolly pine. The soil type is Orangeburg 2-5% slope. Loblolly pine is obviously the dominant plant. Their sizes are generally in the chip-n-saw to sawtimber size class. A hardwood understory is developing. Dominant trees are water and laurel oaks and sweetgums. Other trees present were black cherry, cherry laurel, eastern red cedar, southern magnolia and elderberry. Other plants included greenbrier, poison ivy, yellow jasmine and American beautyberry. Invasive exotics included are camphor tree, coral ardisia, nandina and Japanese climbing fern.

These pine stands were planted in areas that were originally pasture. These trees were planted at densities that reflected the intention of thinning them for pulpwood when 15 years old. This was done after Leon County took control of the property by using the hack-n-squirt method of herbicide application to thin the stand. As natural thinning continues in this stand, this area will eventually be incorporated into Stand One as its species and structure convert into a similar plant community.

This stand is too small to prescribe burn and should be allowed to succeed eventually into a beech-magnolia forest as described in Florida Natural Areas Inventory's (FNAI) "Guide to The Natural Communities of Florida" <https://www.fnai.org/species-communities/natcom-guide>

Control invasive exotics. See the UF/IFAS publication Controlling Invasive Plants in North Florida Forests at: <https://edis.ifas.ufl.edu/publication/FR133>

Continue to maintain all roads and trail using BMP techniques. For erosion control techniques, see the BMP Manual at: [chrome extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf](https://efaidnbmnnnibpcajpcglclefindmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf)

STAND 8

These 17-acre stand is two fields that are 10.9 and 7.04 acres in size. The soil type is mostly Orangeburg with 2-5 and 5-8% slopes. A smaller area of Lynchburg fine sandy loam is on the western edge.

Plants include sand spurs, bahiagrass, goldenrod, love grass, broomsedge, shortleaf pine, sumac, laurel oak, dotted horse mint, golden aster, blue mist, blazing star, saltbush, oxalis, pokeweed, blackberry, vetch, dogfennel and Bermudagrass. Also found, were the invasive exotic plant Japanese climbing fern.



These fields can be kept open by use of successional mowing and/or disking.

In areas that are most recently mowed/disked you may wish to establish wildlife food plots. While food plots do not create a significant increase in carrying capacity of wildlife (amount and health), they can attract wildlife for better viewing opportunities.

Food plots should be placed in areas optimal for the observer to view wildlife and near wildlife corridors that encourage travel to plots. To establish plants, sow seeds following a light diking of the area in the winter for best results. Periodically, take soil samples according to the directions of UF IFAS Extension, and have the samples analyzed. If the results indicate liming is needed, apply and lightly harrow the lime as early in the year as possible. Let the plot sit for several months and deeply harrow again. In early fall, apply fertilizer according to the soil sample results, and plant a mixture of small grains (oats, wheat, rye or clovers) on 50% of the plot, for winter wildlife feed. In April through May of the following year, plant the remaining part of the plot with chufas for turkey feed or iron-clay peas for deer feed. The UF IFAS publication, [“A Walk on the Wild Side”](#), provides recommendations for wildlife food plots in north Florida.

In some areas hardwoods and pines are/have been invading the fields. To counter this forest conversion, when found, trees should be eliminated by use of mowing or hand cutting. Herbicide applied to the stumps of hardwoods may be useful in discouraging resprouting.

Finally, the edge of these fields should have a vegetative buffer planted on the south border of the park property. These borders will also provide more edge and travel corridors for wildlife.

For access roads on all fields, it is recommended that they be kept to the perimeter of the fields. Driving in the fields with vehicles should be kept to a minimum to avoid soil compaction. If regular driving is needed it should occur in one spot and not randomly over the fields. This will help with the aesthetic quality of the viewshed.

Care should always be taken to keep the roads from creating erosion problems. For erosion control techniques, see the BMP Manual at: [chrome extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf](https://efaidnbmnnnibpcajpcglclefindmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf)

Bluebird boxes can also be added to this stand. These should be maintained as described in Stand 3.

Control invasive exotics. See the UF/IFAS publication Controlling Invasive Plants in North Florida Forests at: <https://edis.ifas.ufl.edu/publication/FR133>

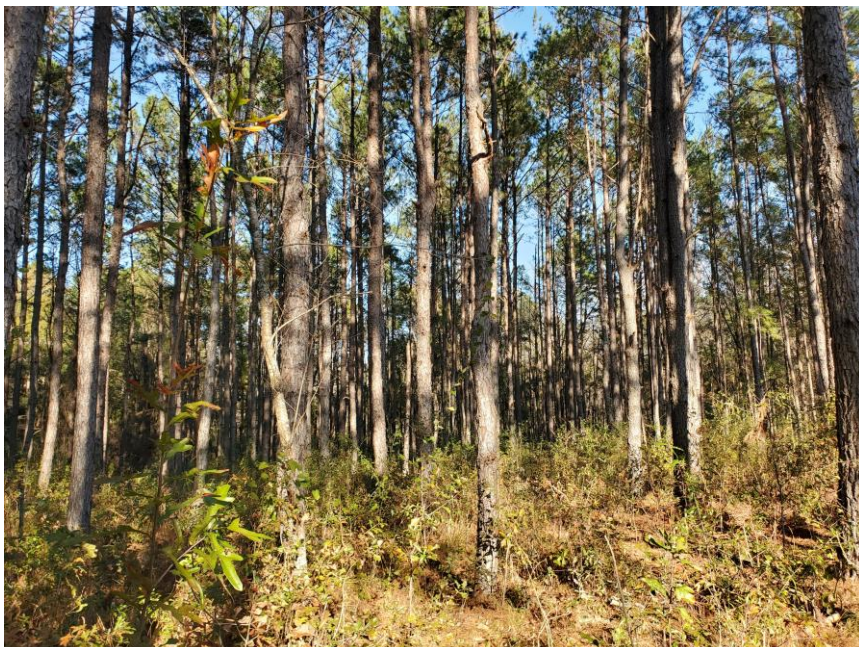
STAND 9

This stand is an 8.55-acre pine stand. It occurs in 5 distinct areas. The soil type is Orangeburg 2-5 slope and Wagram 0-5% slope. Loblolly and shortleaf pine are the dominate overstory trees. The understory is hardwood dominated and generally “head high.” Water and laurel oaks are most common, also found are black cherry, sweetgum, sumac, southern red oak and mockernut hickory. Blackberry, greenbrier, ebony spleenwort and St. John’s wort are in the understory.

This stand most closely resembles an upland pine forest as described in Florida Natural Areas Inventory's (FNAI) "Guide to The Natural Communities of Florida" <https://www.fnai.org/species-communities/natcom-guide>

Continue to burn this stand along with Stands 8, 10 and 11 on a 2–3-year rotation. Burns should occur in winter, spring or early summer. Firelines should continue to be maintained along the southern perimeter of the property.

Prior to prescribed burning, a burn plan should be completed by a certified burner. A good burn plan can be found at <http://www.freshfromflorida.com/Divisions-Offices/Florida-Forest-Service/Wildland-Fire/Prescribed-Fire>



Before burning, you must have authorization from the Florida Forest Service. Phone: (850) 681-5951.

You may wish to hire a forestry consultant who is a certified burner with the Florida Forest Service.

Preserve all snags where they are not at risk of falling on trail areas where people regularly walk.

Control invasive exotics. See the UF/IFAS publication Controlling Invasive Plants in North Florida Forests at: <https://edis.ifas.ufl.edu/publication/FR133>

Continue to maintain all roads and trails using BMP techniques. For erosion control techniques, see the BMP Manual at: [chrome extension://efaidnbmnnnibpcajpcgiclfndmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf](https://efaidnbmnnnibpcajpcgiclfndmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf)

STAND 10

This stand is a 12.9-acre upland pine- hardwood stand. Soil types include Wagram and Orangeburg 2-5 and 5-8% slopes. Common trees include loblolly and shortleaf pines, live, southern red, water and laurel oaks, mockernut hickory, black cherry, cherry laurel, and eastern

dogwood. Understory species include greenbrier, Carolina Jessamine, bracken fern, ebony spleenwort and grapevine. Also found, was the invasive exotic plant Japanese climbing fern.

This stand most closely resembles a mixture of the upland pine and upland hardwood forests as described in Florida Natural Areas Inventory's (FNAI) "Guide to The Natural Communities of Florida" <https://www.fnai.org/species-communities/natcom-guide>

Also, this stand closely resembles stand one except it is being regularly prescribed burned.

Continue to burn this stand with stands 9, 10 and 11. Burns should occur in winter, spring or early summer. Roads and trails help serve as firelines for this stand.

Prior to prescribed burning, a burn plan should be completed by a certified burner. A good burn plan can be found at <http://www.freshfromflorida.com/Divisions-Offices/Florida-Forest-Service/Wildland-Fire/Prescribed-Fire>

Before burning, you must have authorization from the Florida Forest Service. Phone: (850) 681-5951.

You may wish to hire a forestry consultant who is a certified burner with the Florida Forest Service.

Control invasive exotics. See the UF/IFAS publication Controlling Invasive Plants in North Florida Forests at: <https://edis.ifas.ufl.edu/publication/FR133>

Preserve all snags where they are not at risk of falling on trail areas where people regularly walk.

Care should always be taken to keep the roads from creating erosion problems. For erosion control techniques, see the BMP Manual at: [chrome extension://efaidnbmnnnibpcajpcgicfindmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf](https://efaidnbmnnnibpcajpcgicfindmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf)

STAND 11

This stand is a 48.47-acre upland hickory-oak-pine forest stand. Soil types include Wagram and Orangeburg 2-5 and 5-8% slopes. Dominant trees are mockernut hickory, post oak, southern red oak, black oak, and shortleaf pine. Rusty black-haw is common in the



understory. Other trees found in the stand include loblolly and longleaf pines, black gum, eastern dogwood, water and laurel oaks, basswood, sweetgum, sassafras, white oak, sugarberry, red buckeye, Florida chinquapin, fringe tree, hawthorn, southern crabapple, Chickasaw plum, red mulberry, wax myrtle, black cherry and winged sumac. Understory plants include sensitive vine, wild grape vine, Virginia creeper, greenbrier, morning glory, blue eyed grass, purple phlox, lyre-leaved sage, woods violet, milkweed, poison ivy, *Panicum* spp., stinging nettle, blackberry, runner oak, goldenrod, American beautyberry, bracken fern, blue mist, snake root, butterfly pea, *Coreopsis* spp., *Helianthus* spp., *Eutrochium* spp., golden aster, bahaigrass, coral bean, ebony spleenwort, squaw root and scull cap.

Kudzu (invasive exotic plant) has been found in this stand in the past.

This stand most closely resembles an upland hardwood forest as described in Florida Natural Areas Inventory's (FNAI) "Guide to The Natural Communities of Florida"
<https://www.fnai.org/species-communities/natcom-guide>

Detailed examination of the text shows that this upland hardwood forest has a different species composition than the one described. This community appears to be unusual in its composition. Also in the appendix is an excerpt titled "Notes on the History of the North Florida Red Oak Woods." This excerpt describes an upland forest that was found in North Florida that is considered to be a "high hammock zone between upslope sand/clayhills and midslope hammock . . . in which low intensity fires occur every one to two decade" (Platt and Schwartz, 1990). The excerpt also references accounts by observers in the early 1900s who listed typical high hammock species in the Tallahassee Red Hills as shortleaf pine, southern red oak, post oak, black oak, eastern dogwood and mockernut hickory. Further reference is made in this excerpt to the fact that this type of forest has suffered a fate similar to the longleaf wiregrass plant community, which is now well recognized as having been reduced to an estimated 3 percent of its former distribution. The fact that high hammock forest community grows on fertile upland soil explains the motivation for native Americans and European settlers alike to convert such forests to cultivated fields. The Miccosukee Greenway thus has an enviable opportunity to conserve and showcase this now-rare community.

It appears this stand has been burned and logged prior to being purchased by the state. It is questionable if this site had been farmed in a long time if ever. From an ecological perspective it is believed that fire has played a role in establishing and maintaining this upland species association that is referenced in early descriptions of the North Florida landscape. Observations made by botanist of this high hammock community during the fire suppression decades of the early 1900s chronicle bottomland hardwood invasion of the pine-oak-hickory woods, particularly by loblolly pine, water oak and diamond leaf (laurel) oak.

Prescribe burn this stand on something varying around a 2- 3-year burn interval. Time of year for prescribed burning should vary as when managing other pine/hardwood stands. This stand should be closely studied as to changes in species composition, abundance and size. This prescribed fire recommendation is based on information provided by Kevin Robertson, Ph.D. Fire Ecology Research Scientist at Tall Timbers Research Station. References supporting his



position is included in the appendix. See picture from prescribe burn on March 12, 2018.

Prior to prescribed burning, a burn plan should be completed by a certified burner. A good burn plan can be found at <http://www.freshfromflorida.com/Divisions-Offices/Florida-Forest-Service/Wildland-Fire/Prescribed-Fire>

Before burning, you must have authorization from the Florida Forest Service. Phone: (850) 681-5951.

You may wish to hire a forestry consultant who is a certified burner with the Florida Forest Service.

Control invasive exotics. See the UF/IFAS publication Controlling Invasive Plants in North Florida Forests at: <https://edis.ifas.ufl.edu/publication/FR133>

Continue to maintain all roads and trail using BMP techniques. For erosion control techniques, see the BMP Manual at: [chrome extension://efaidnbmninnbpcajpcgicfindmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf](chrome-extension://efaidnbmninnbpcajpcgicfindmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf)

Stand 12

This upland pine-hardwood forest stand is 78.62 acres. Soil types include Albany, Lucy, Norfolk, and Orangeburg 2-5 and 5-8% slopes. Species of trees found include loblolly and shortleaf pines, water, southern red and live oaks, sweetgum, American beech, sugarberry, red maple, cherry laurel, American holly dogwood, elderberry, Devils walking stick, wax myrtle, sumac and tree sparkleberry. Understory plants include American beautyberry, blackberry, butterfly pea, coral bean, dogfennel, evening primrose, golden aster, greenbrier, horse mint, Indian pipe, partridgeberry, pawpaw, poison ivy, pokeweed, trumpet creeper, white aster, ebony spleen wort, resurrection fern and deer moss. The invasive exotics tung oil, Chinaberry, mimosa, silverthorn, crotalaria, Japanese climbing fern, Japanese honeysuckle and silverthorn have also been found in this stand.

This stand most closely resembles an upland hardwood forest as described in Florida Natural Areas Inventory's (FNAI) "Guide to The Natural Communities of Florida"
<https://www.fnai.org/species-communities/natcom-guide>

Within this stand there is an old house site. At this site the plant community has been greatly altered by human activity. Species of trees found on this site are dogwood, red cedar, sugarberry, black cherry, sweetgum, laurel oak, black walnut and the invasive exotics Chinaberry and tung-tree. Other plants included grapevine, greenbrier, ebony spleenwort and the invasive exotic plant Japanese honeysuckle.

Continue to prescribe burn this stand on a 2–3-year rotation. Burns should occur in winter, spring or early summer. Roads and trails also help serve as firelines for this stand.

Prior to prescribed burning, a burn plan should be completed by a certified burner. A good burn plan can be found at <http://www.freshfromflorida.com/Divisions-Offices/Florida-Forest-Service/Wildland-Fire/Prescribed-Fire>

You may wish to hire a forestry consultant who is a certified burner with the Florida Forest Service.

Before burning, you must have authorization from the Florida Forest Service. Phone: (850) 681-5951.

Control invasive exotics. See the UF/IFAS publication Controlling Invasive Plants in North Florida Forests at: <https://edis.ifas.ufl.edu/publication/FR133>

Continue to maintain all roads and trail using BMP techniques. For erosion control techniques, see the BMP Manual at: [chrome extension://efaidnbnmnnibpcajpcglclefindmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf](https://efaidnbnmnnibpcajpcglclefindmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf)

STAND 13

This 46.47-acre stand is an upland pine-oak-hickory forest. It occurs on the Orangeburg and Norfolk soil types. Shortleaf and loblolly pine are the dominate overstory trees. There are a few slash and longleaf pines mixed in. Hardwoods present include water oak, live oak, laurel oak, southern red oak, post oak, mockernut hickory, black cherry, sweetgum, mimosa, Southern magnolia, sassafras, American holly, tree sparkleberry, winged sumac, waxy myrtle, persimmon, red maple and Chickasaw plum.

Understory plants included broomsedge, greenbrier, St. John's wort, chalky bluestem, partridgeberry, pokeweed, ragweed, crotalaria, blackberry, spleenwort, goldenrod, coral bean, blue mist, American beautyberry, butterfly-weed, milkweed, phlox, trumpet creeper, bahiagrass, wiregrass, dotted horse mint and the herbaceous, parasitic, non-photosynthesizing, perennial flowering plant Indian pipe (see picture). Also found presently or in the past were the invasive exotics Chinaberry, Chinese wisteria and Japanese climbing fern.



This stand most closely resembles an upland pine forest as described in Florida Natural Areas Inventory's (FNAI) "Guide to The Natural Communities of Florida"

<https://www.fnai.org/species-communities/natcom-guide>

Prior to the property being purchased by the state of Florida this stand had been managed for quail and timber production. The area was logged to what is known as a seed tree cut. This had resulted in a very low density of mature trees. The low density of mature trees has resulted in much sunlight reaching the vegetation at the ground level. Natural regeneration of pines is ok in some areas but is inadequate in many areas. Hardwoods have also sprouted up and are very dense in some areas. Finally, there is a well-developed herbaceous layer. This area was most likely a mixed pine-hardwood stand prior to human cultivation. Both longleaf pine (a few trees still exist) and wiregrass were probably previously abundant in this stand prior to cultivation and fire suppression. To maintain and return this stand to a more "natural state" four things should occur.

1. Fire should continue to occur on a 2–3-year rotation. This will create frequent low intensity fires that will favor an open pine-oak-hickory forest that will be dominated by pines. Traditionally the plantations burned in the late winter. Fires have been expanded to include spring summer growing season burns (April, May and June) with a majority still being done in the dormant season January – March. This variation should be good for the foreseeable future.
2. Young pine tree densities should be increased to approximately 300 trees per acre in open areas where regeneration is lacking. The density of young trees should be variable to simulate a “natural look.” This could be accomplished by using the natural regeneration process already in process and by planting longleaf pines.
3. Longleaf pine and wiregrass should be reestablished. Planting longleaf in open areas in concert with some type of herbaceous competition control could be used to increase the densities.
4. Basal area (BA) for established mature pine stands should fall in the range of 40-70.
5. Continue to control invasive exotics plants.

Continue to reduce the risk of wildfire and assist in control burning by maintaining firelines around the perimeter of the property. These firelines should tie off with wet areas and roadways and trails. Avoid cutting firelines in wet areas as this could be damaging to wetlands and streams. Help with firelines can be obtained from the Florida Division of Forestry. They charge a minimal fee for this service. Their phone number is [\(850\) 627-4991](tel:8506274991).

Fireline maintenance should be conducted during the winter months when soil disturbance encourages the production of beneficial native food plants such as partridge pea, milk pea, and beggerweed. In areas where you have steep slopes you may wish to seed firelines and temporary roads with a cover crop. This will help control erosion and can be used as feeding areas to attract wildlife. In a few areas, water management structures such as water bars as described in the BMPs Manual should be used.

Continue to carefully prescribe burn on a one-to-three-year rotation. The objective of these burns will be to control hardwoods. Prescribed fire also increases forage for wildlife and reduces wildfire hazards. Prescribed burns can be done in January-March or April, May and if weather conditions are right. You may wish to hire a forestry consultant who is a certified burner with the Florida Forest Service. A burn plan completed by a certified burner should always be completed prior to prescribed burning. A good burn plan can be found at <http://www.freshfromflorida.com/Divisions-Offices/Florida-Forest-Service/Wildland-Fire/Prescribed-Fire>. Take care not to put too much smoke on Miccosukee road or adjacent residential area. Before burning, you must have authorization from the Florida Forest Service. Phone: (850) 681-5951.

Fire alone has shown not be enough to keep hardwoods in check. Supplement burning by applying herbicide to individual sweetgums, laurel and water oaks. The method of herbicide treatment should be hack and squirt for trees to be left standing as wildlife benefiting snags.

Where trees pose an unacceptable risk to targets of value (vehicles and pedestrians), individual trees should be cut down and then have herbicide applied to the stump to prevent resprouting. Where sweetgums, laurel and water oaks are dominant, continue to let fire move through these stands, but generally these small oak islands can be left for mast production.

To replant areas where pine seedling densities are low, longleaf pine tublings can be used. To get them to survive you will need to control adjacent herbaceous and hardwood vegetation. This can best be accomplished by burning the site, planting the seedlings and then spot spraying with a herbicide over the tops of newly planted seedlings in the spring. *Spray 7 oz./acre of Arsenal herbicide in the spring over the tops of the seedlings.* Failure to do this will result in high mortality rates and for those trees that survive, an extended period in the grass stage (up to 20 years as opposed to 2-3 years). Plant the longleaf pine on the upland areas in early December at a rate of 450 trees per acre. This will be approximately a 9X10 foot spacing. Research has shown that longleaf pine does most of its root growth in November and December. We have gotten the best survival rates and growth when trees were planted in early December after our winter rains begin.

Gopher tortoises are active in this stand. At a minimum, the Florida Forest Service (FFS) and the Florida Fish and Wildlife Conservation Commission (FWC) [Forestry Wildlife Best Management Practices for State Imperiled Species](https://ccmedia.fdacs.gov/content/download/40469/file/Florida_Forestry_Wildlife_Best_Management_Practices_For_State_Imperiled_Species_Manual.pdf) should be followed for all stands providing imperiled species habitat. It can be found at: [chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ccmedia.fdacs.gov/content/download/40469/file/Florida_Forestry_Wildlife_Best_Management_Practices_For_State_Imperiled_Species_Manual.pdf](https://ccmedia.fdacs.gov/content/download/40469/file/Florida_Forestry_Wildlife_Best_Management_Practices_For_State_Imperiled_Species_Manual.pdf)

Preserve all snags where they are not at risk of falling on trail areas where people regularly walk.

Continue to maintain all roads and trail using BMP techniques. For erosion control techniques, see the BMP Manual at: [chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf](https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf)

Control invasive exotics. See the UF/IFAS publication Controlling Invasive Plants in North Florida Forests at: <https://edis.ifas.ufl.edu/publication/FR133>

STAND 14

This is a drainage way that is 8.02 acres and occurs in the Plummer soil type. Trees found in this stand include black gum, sweetgum, loblolly bay, mockernut hickory, loblolly pine, titi, red maple, laurel oak, American holly, live oak, black cherry, tree sparkleberry, wax myrtle, white oak, eastern dogwood and water oak. Understory plants included grasses, greenbrier, trumpet creeper, wild grapevine, poison ivy, blackberry, partridgeberry, St. John's wort and the invasive exotics Japanese climbing fern and silver buckthorn. The mockernut hickories, white oaks and dogwoods generally occurred on drier areas on the very edge of this stand. Grasses were very common in the understory. Titi was often found in scattered dense thickets.

This stand most closely resembles a bottomland forest as described in Florida Natural Areas Inventory's (FNAI) "Guide to The Natural Communities of Florida"
<https://www.fnai.org/species-communities/natcom-guide>

The two old roads that passed through this area have been greatly improved using good BMP techniques. Despite this, these parts of the trail are highly vulnerable to erosion. These areas should be regularly monitored so as to keep erosion from happening and quickly repair the roads/trails when needed. For erosion control techniques, see the BMP Manual at: [chrome extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf](https://efaidnbmnnnibpcajpcglclefindmkaj/https://ccmedia.fdacs.gov/content/download/25527/file/silvicultural_bmp_manual.pdf)

While prescribed fire should be allowed to creep downslope into this stand. Conditions for prescribe burning should not be so that fire burns through the stand.

Preserve all snags where they are not at risk of falling on trail areas where people regularly walk.

Control any invasive exotics. See the UF/IFAS publication Controlling Invasive Plants in North Florida Forests at: <https://edis.ifas.ufl.edu/publication/FR133>

Stand 15

This 4.98-acre stand is essentially the same as Stand 13. It is used as a parking area. Plans are to improve the parking area. This is needed as vehicle parking is not well designated which creates unnecessary soil compaction from vehicles. The proximity of trees in the parking area to targets of value (people and their vehicles) and the damage done to them from driving in their root zones makes concern for damage or injuries. Given the proximity of these trees to people and the vehicles using the park, I consider these activities **to put people and their vehicles at increased risk** from these trees.

Therefore, I recommend the trees be monitored for the foreseeable future if they are not removed.

If new plants are planted, they should be selected from the palette is described in Stand 3 with the addition of shortleaf and longleaf pines. For the areas in this stand that are not for parking or trails, manage as described for Stand 13.

Parts of this stand are prescribed burned along with Stand 14.

Canopy Road Zone

The Canopy Road Protection Zone is a regulated zone 100 feet from the centerline to either side of the road that was designated to protect the historical significance of the road and the canopy trees and understory native vegetation. Current management includes tree trimming, and removal for safety and some tree planting to maintain the tree canopy.

Trees planted along the road should be natives that are part of the plant community which they are planted in.

Where prescribed fire is allowed to burn to the roadside. Regular inspections for damage to trees created by prescribed fire should be done to reduce risk to targets of value, people, vehicles, etc. using Miccosukee road.

General Information

Further information on forestry and wildlife publications can be obtained at the University of Florida Forest Stewardship web page at:

http://www.sfrc.ufl.edu/Extension/florida_forestry_information/additional_pages/forest_stewardship_program.html

A useful description about Basal area (BA) and how to use the BA angle gauge (prism) is the Mississippi State Extension publication: Using the MSU Basal Area Angle Gauge

<http://extension.msstate.edu/publications/using-the-msu-basal-area-angle-gauge>

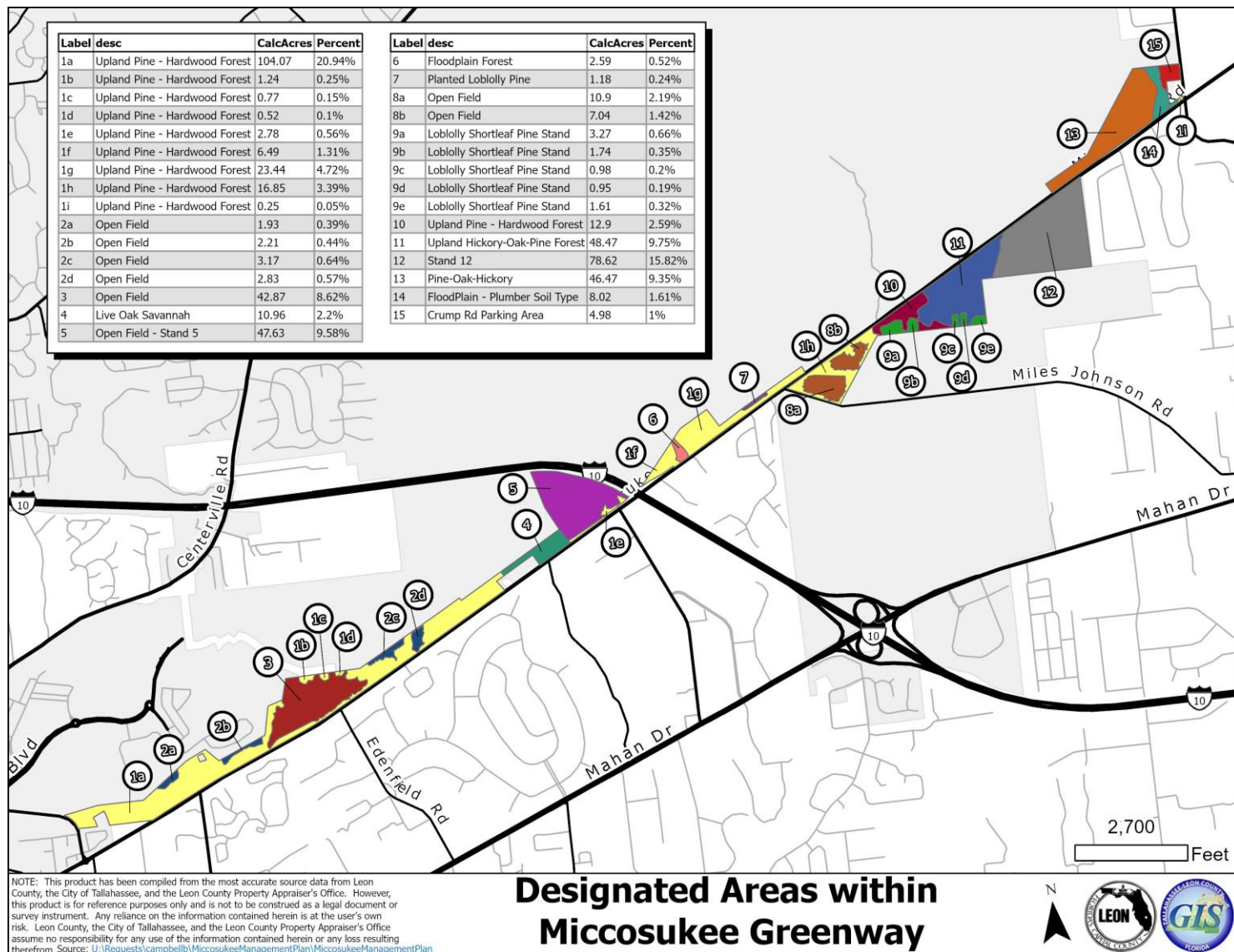
Definitions:

BA, Basal area is the cross-sectional area of a tree 4.5 feet above ground. The basal area of all trees in a given land area describes the degree to which an area is occupied by trees and is generally expressed in square feet per acre (ft²/acre).

Old-Field is a term used in ecology to describe lands formerly cultivated or grazed but later abandoned. The dominant flora includes perennial grasses and herbaceous plants. Common understory plants include: seedlings (laurel and live oaks, sweet gum and southern Magnolia), plus sumac, persimmons, sassafras, American beautyberry, wax myrtle, blackberry, golden rod,

St. John's-wort, dog fennel, stinging nettle, coral bean, coffee weed, blue mist, pawpaw, coastal broomsedge, chalky blue stem, coastal broomsedge, chalky bluestem, Johnson grass, and the vines Virginia creeper, grape, green bier, and yellow jasmine.

Stand Map



STAND MAP SUMMARY

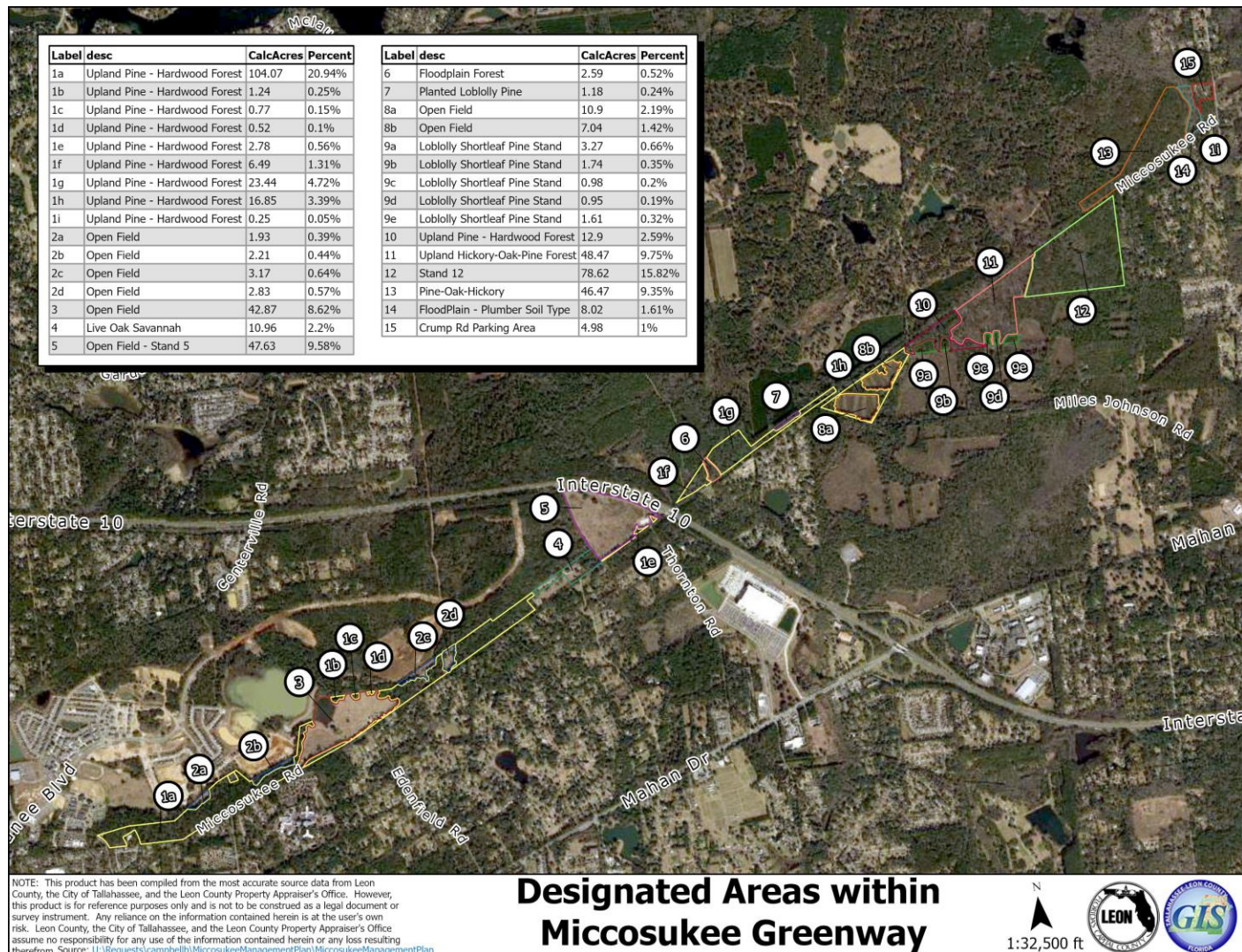
Stands	Description	Acres	Total Each Stand	Percent of Tract
1a	Upland Pine - Hardwood Forest	104.07		20.94
1b	Upland Pine - Hardwood Forest	1.24		0.25
1c	Upland Pine - Hardwood Forest	0.77		0.15
1d	Upland Pine - Hardwood Forest	0.52		0.1
1e	Upland Pine - Hardwood Forest	2.78		0.56
1f	Upland Pine - Hardwood Forest	6.49		1.31
1g	Upland Pine - Hardwood Forest	23.44		4.72
1h	Upland Pine - Hardwood Forest	16.85		3.39
1i	Upland Pine - Hardwood Forest	0.25	156.41	0.05
2a	Open Field	1.93		0.39
2b	Open Field	2.21		0.44
2c	Open Field	3.17		0.64
2d	Open Field	2.83	10.14	0.57
3	Pasture	42.87	42.87	8.62
4	Live Oak Savannah	10.96	10.96	2.20
5	Open Field - Stand 5	47.63	47.63	9.58
6	Floodplain Forest	2.59	2.59	0.52
7	Planted Loblolly Pine	1.18	1.18	0.24
8a	Open Field	10.9		2.19
8b	Open Field	7.04	17.94	1.42
9a	Loblolly Shortleaf Pine Stand	3.27		0.66
9b	Loblolly Shortleaf Pine Stand	1.74		0.35
9c	Loblolly Shortleaf Pine Stand	0.98		0.20
9d	Loblolly Shortleaf Pine Stand	0.95		0.19
9e	Loblolly Shortleaf Pine Stand	1.61	8.55	0.32
10	Upland Pine - Hardwood Forest	12.90	12.90	2.59
11	Upland Hickory-Oak-Pine Forest	48.47	48.47	9.75
12	Upland Pine - Hardwood Forest	78.62	78.62	15.82
13	Pine-Oak-Hickory	46.47	46.47	9.35
14	Floodplain – Plumber Soil Type	8.02	8.02	1.61
15	Crump Rd Parking Area	4.98	4.98	1.00
	Total	497.11	497.73	100.12

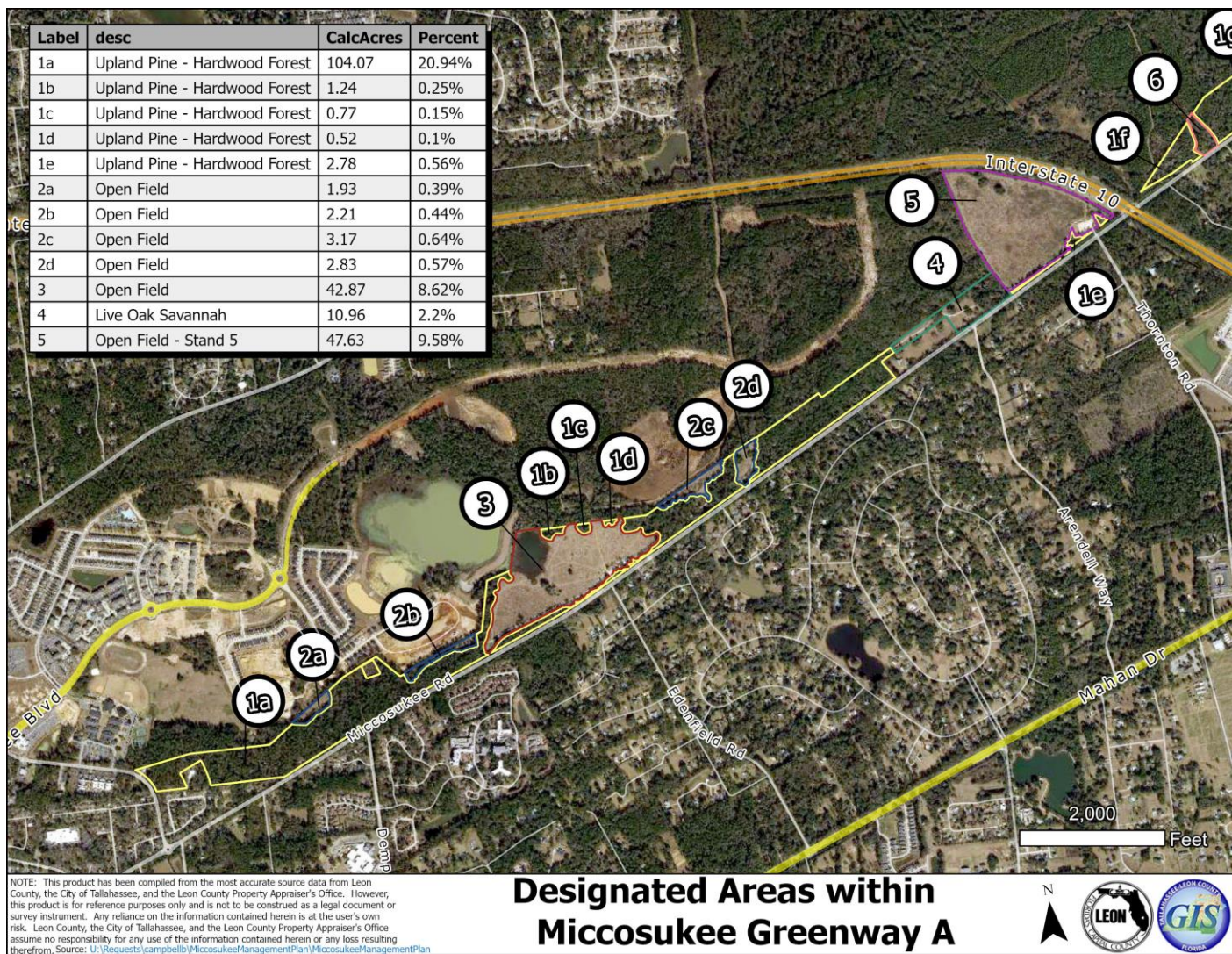
TIMETABLE OF MANAGEMENT RECOMMENDATIONS

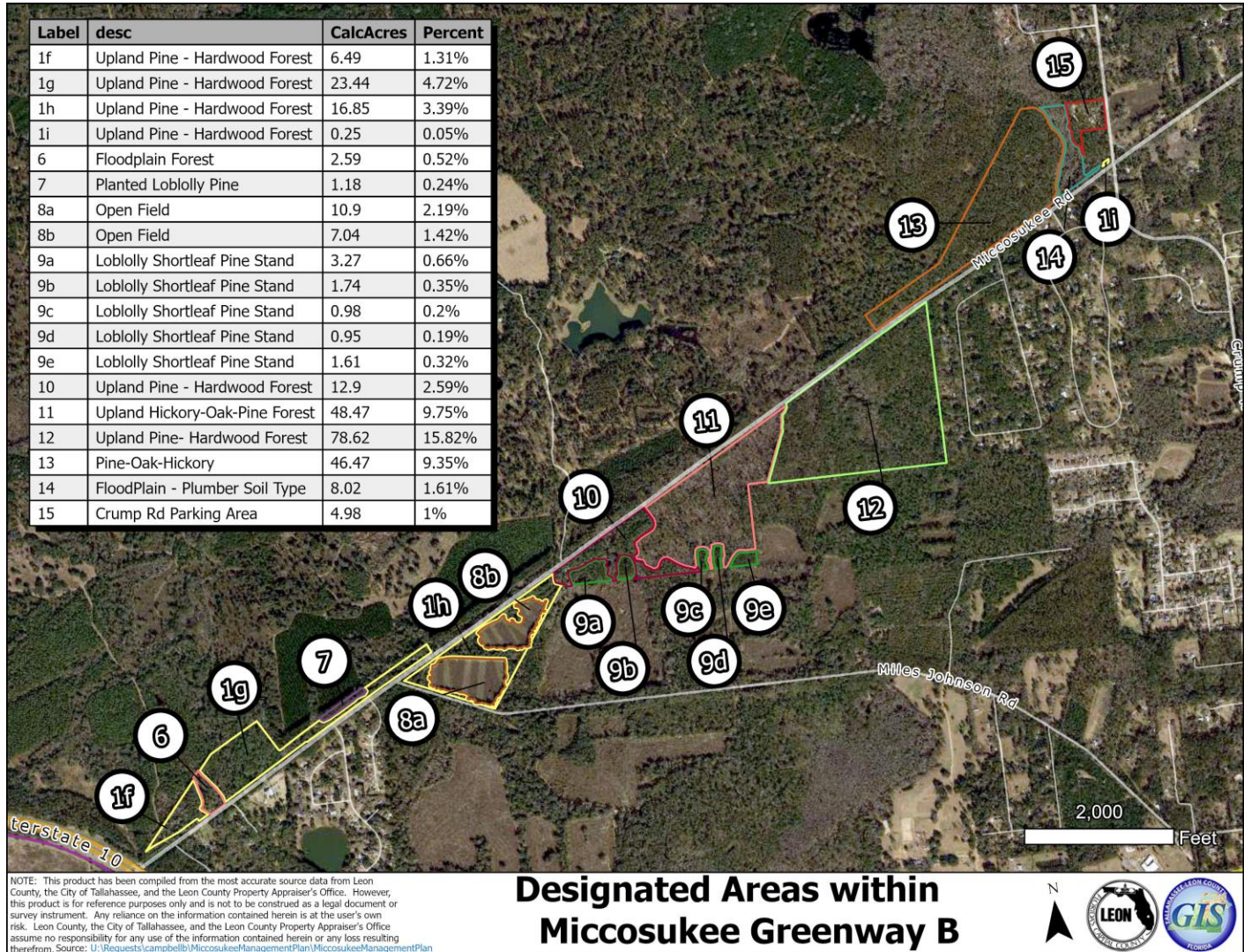
Stands	Time	Management Recommendations
All Stands	Always	Continue controlling invasive exotic plants.
All Stands	Annually	Survey the Greenway for location of invasive exotic plants.
All Stands	Always	Continue to maintain all roads and trails.
All Stands	Bi-annually	Inspect trees for risk to targets of value in high traffic areas (parking lots, trails, etc.) Reduce risk as needed.
Stand 1	2025	Begin control of understory in grape vine and greenbrier dominated areas.
	2026-2027	Replant when vines are under control.
Stand 2	Seasonally	Mow as described as options in Stand 3.
	2025-2026	Site prepare, plant and maintain vegetative buffer (loblolly pines) on the north border of the park property.
	2030	Plant broadleaf seedlings for vegetative screen.
	2026 & then bi-tri-annually.	Plant wildflowers to benefit aesthetics and pollinator species.
Stand 3	ASAP & monitor annually afterwards.	Remove high risk trees in flooded hardwood island and canopy road areas.
(High traffic/use areas)	Regularly during the growing season.	Mow at a height of 3 to 4 inches. Never mow more than 1/3 of the height of the grass off at one time.
(Bluebird box areas)	Regularly during the growing season.	Mow at a height of 3 to 4 inches. Never mow more than 1/3 of the height of the grass off at one time.
(High traffic/use areas)	Monitor	Soil test and fertilize if needed
(Low use areas)	Bi-annually	Mow these areas around May first and again around August first.
	Seasonally	Clean/maintain and purple martin and bluebird nest boxes each winter.
	2025-2026	Site prepare, plant and maintain vegetative buffer (loblolly pines) on the north border of the park property.
	2030	Plant broadleaf seedlings for vegetative screen.

	2026 & then bi-tri-annually.	Plant wildflowers to benefit aesthetics and pollinator species.
	Immediately and regularly.	Evaluate for risk to targets of value trees that have root zones flood in island forest area and along the canopy road.
	2027	Plant wetland trees towards the edges of the pond.
	2027	Establish wood duck boxes
	Seasonally	Clean/maintain wood duck boxes
Stand 4	Bi-annually	Mow these areas around May first and again around August first.
	2027 & then bi-tri-annually.	Plant wildflowers to benefit aesthetics and pollinator species.
	Seasonally	Clean/maintain bluebird nest boxes each winter.
Stand 5	Annually	Mow/bushog/disc. successional strips in fall.
	2025 Winter	Mow down shortleaf pine as described in the plan.
	Seasonally	Clean/maintain and purple martin and bluebird nest boxes each winter.
	2027-2028	Establish and maintain vegetative buffer (loblolly pines) planted on the north border of the park property.
	2032	Plant broadleaf seedlings for vegetative screen.
Stand 6	2027 & then bi-tri-annually.	Plant wildflowers to benefit aesthetics and pollinator species.
Stand 8	Annually	Mow/bushog/disc. successional strips in fall.
	Annually	Maintain food plots with seasonal soil disturbance. Disc September through February Periodically take soil samples
Stand 9	Bi-tri-annually.	Continue burning every 1-3 years.
Stand 10	Bi-tri-annually.	Continue burning every 1-3 years.
Stand 11	Bi-tri-annually.	Continue burning every 1-3 years.
Stand 12	Bi-tri-annually.	Continue burning every 1-3 years.
Stand 13	Bi-tri-annually.	Continue burning every 1-3 years.
	2028	Reestablish longleaf pine and wiregrass in areas.
Stand 14	Bi-tri-annually.	Allow fire to creep into edges
Stand 15	Bi-tri-annually.	Continue burning every 1-3 years.
Canopy Road Zone	After prescribed burns.	Inspect trees after prescribed burns for increased risk to targets of value from fire damage. Reduce risk as needed.

Stand Maps - Aerial Photos







WILDFLOWER MEADOWS

Spring/Early Summer

In the spring and early summer the showy, sun-loving annuals and perennials such as blanket flower, lance-leaf coreopsis and black-eyed Susan, are common in the Red Hills, especially along state roads where they have been planted by FDOT. Showy evening primrose, drummond phlox lyre-leaf sage, spiderwort and butterfly weed are also commonly observed. The height of this plant community varies from one to three feet.

Late Summer/Fall

During the late summer and fall, the dominant wildflowers of the upland pine and oldfield communities are tall perennials (three to four feet) such as blazingstar, goldenrod, aster, Eupatoriums, and agalinis. These are tough plants which intermingle with native bunch grasses such as Indian grass, lop-sided Indian grass, broomsedge, split-beard bluestem, little bluestem, switch grass, and plume grass. The grasses support the tall, lanky wildflowers and provide interesting textures and beautiful russet, tan and golden hues.

ESTABLISHMENT METHODS

Of the three common meadow establishment methods -- planting seedlings, direct seeding, and natural regeneration -- the latter two are recommended for meadow areas in the Greenway. The planting of seedlings is cost prohibitive in all but the smallest areas.

NATURAL REGENERATION FOR FALL BLOOMING MEADOWS

Natural regeneration relies on existing native grasses and wildflowers in the area as seed sources. This method would be most appropriate for establishing old field and fall blooming communities. Broomsedge, little bluestem, Indian grass, goldenrod, blazing star, and asters are common in greenway fields and should increase in numbers under a favorable management regime. Existing pasture areas are simply released from mowing and grazing. Mowing and/or burning can then be timed to favor the reproduction of desired vegetation. Because intensive site preparation is not required for this method, the initial establishment costs are lower than the other methods. If, after a few years, natural regeneration doesn't produce the diversity of desired species, direct seeding and planting of seedlings can be implemented in selected areas to create reliable seed sources.

Procedure

First year

1. Mow existing pasture grasses in September. Scalp the area using the lowest possible cutting height.
2. Remove cuttings to reduce the fertility of the site.
3. Lightly harrow (to expose mineral soil) when surrounding native grasses and wildflowers begin to go to seed. This usually occurs during the month of October and into early November.
4. Mow the area again in June. Mow no lower than 8 to 10 inches so as not to disturb the crowns of new forb and grass seedlings. A flail mower is very effective for controlling the height of the cut.
5. Remove the cuttings.

Second Year

6. Mow the area in June. Mow no lower than 8 to 10 inches.
7. Remove the cuttings.

Third Year - repeat Second Year Steps.

Long term management for fall blooming meadows

During the fourth year, assess the species diversity of meadow areas and revise the management plan, if necessary, to include direct seeding and seedling planting of desirable species that have not become established from surrounding seed sources (contact the Leon County Extension Service for more information about these methods). Continue to implement the Second Year Steps as listed above, if effective, or revise the mowing schedule to address the particular conditions and circumstances of each site. For instance, some meadow units may benefit from two cuttings per year rather than one, while other units might benefit by cutting once every second or third year. This is also a good time to consider the use of other management techniques such as controlled burning and selective herbiciding. Factors to consider include: effects on species diversity, environmental impacts, and costs.

DIRECT SEEDING FOR SPRING BLOOMING MEADOWS

Because naturally occurring stands of spring blooming wildflowers are uncommon in the greenway it is recommended that these communities be established by direct seeding. Currently, there are no suppliers of Florida grown wildflower seed so suppliers will have to be found in other states (see list of suppliers in the “Wildflowers in Florida” booklet in the appendix). Recommended species for Greenway planting include: blanket flower (*Gaillardia pulchella*), black-eyed Susan (*Rudbeckia hirta*), lance-leaved coreopsis (*Coreopsis lanceolata*), tickseed (*Coreopsis tinctoria*), drummond phlox (*Phlox drummondii*), and showy evening primrose

(*Oenothera speciosa*). Given the soil type and square footage of the planting areas, the seed supplier will formulate the above species mix and provide seeding rates.

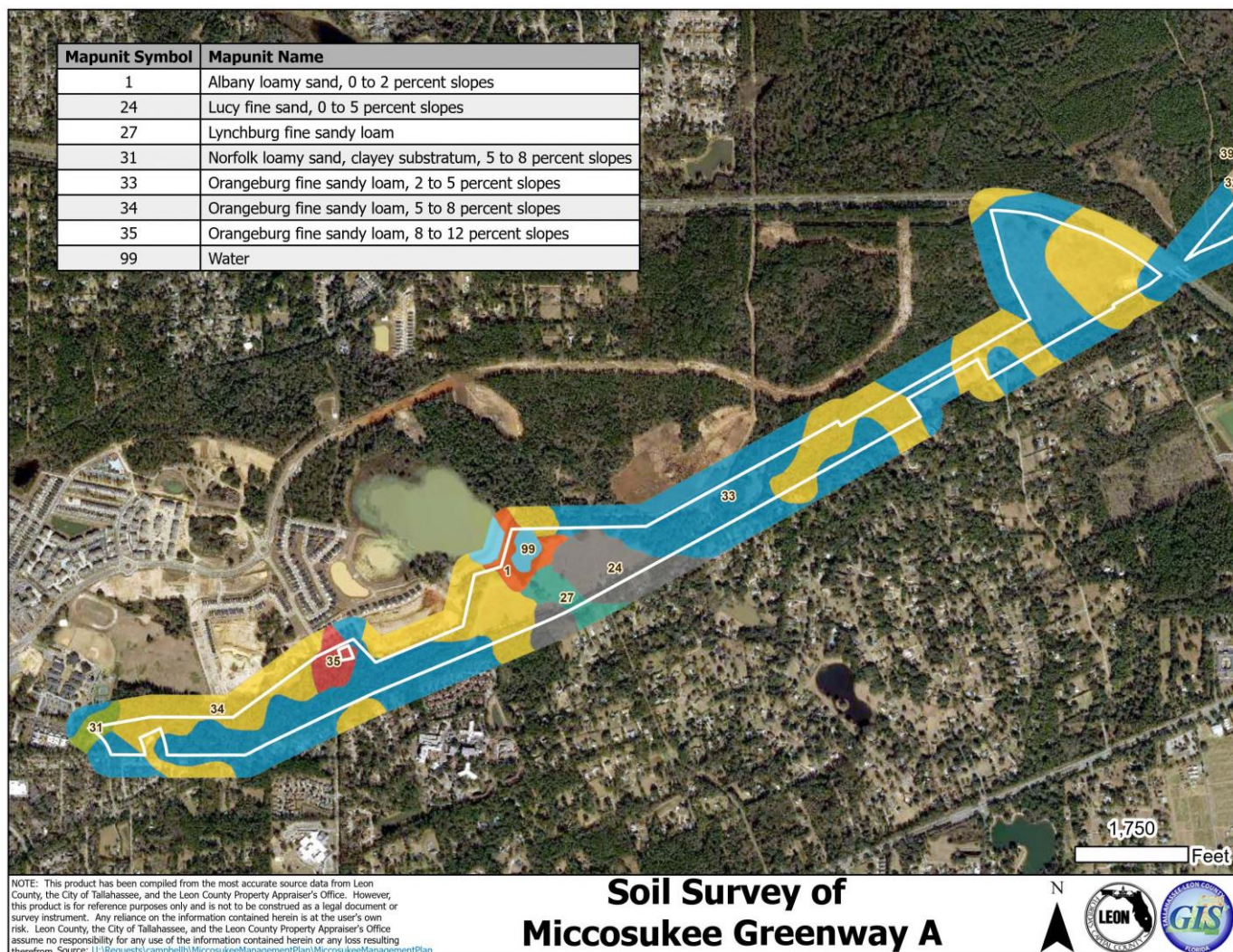
Procedure

1. Site preparation:
 - a. Herbicide the area in early August with glyphosate and let sit for one month.
 - b. Scalp the area with a mower to one inch and remove the cuttings.
 - c. Let the area sit for one month, allowing weed seeds to germinate.
 - d. Apply herbicide again.
 - e. Allow the area to sit until ready to plant.
2. Planting: (recommended planting period for North Florida is late November through December).
 - a. Lightly scarify the area by scalping with a mower to 1 inch or by dragging a section of chain-link fence.
 - b. Broadcast seed (at the rate recommended by the seed supplier) evenly over the area.
 - c. Obtain good seed soil contact by lightly raking or by dragging with a section of chain link fence. Rolling the area with a sod roller is highly recommended for maximum seed soil contact. With adequate rainfall, seeds will begin to germinate within 30 to 60 days. Most wildflowers will bloom the first spring after planting. The annuals will be the first to bloom with the perennial coming on shortly after. The peak blooming season is in April and May with secondary blooming continuing throughout the summer months.
3. Follow up maintenance:
 - a. Spring blooming meadows can be mowed after peak bloom when seeds have matured. This will disperse seeds throughout the area. Mow no lower than 8 to 10 inches so as not to disturb the crowns of established plants.
 - b. Mow the area again in late winter (late February or early March).
 - c. Remove the cuttings.

Long term management of spring blooming meadows

Due to the unreliable seed production and seed viability of non-Florida ecotypes, spring blooming meadows planted with wildflower seed from out of state suppliers tend to be ephemeral in nature and may have to be replanted every third or fourth year. Follow the instructions for steps 1 through 4 as necessary. Replant with native Florida ecotypes if possible.

Soils Map 1



Soils Map 2

