Addendum 1 — Acquisition History

Alafia River State Park Acquisition History

LAND ACQUISITION HISTORY REPORT	
Park Name	Alafia River State Park
Date Updated	5/10/2016
County	Hilsborough County, Florida
Trustees Lease Number	Lease No. 4168
Current Park Size	7,717.81 acres
Purpose of Acquisition	The State of Florida acquired Alafia River State park to use it for public park and recreation.

Acquisition History

Parcel Name or Parcel DM-ID	Date Acquired	Initial Seller	Initial Purchaser	Size in acres	Instrument Type
MDID 301672	12/18/1996	Cytec Brewster Phosphates, Inc.	The Board of Trustees of the Internal Improvement Trust Fund of the State Florida (Trustees)	6,041.21	Trustee's Deed
MDID 10791	6/18/1996	Cytec Brewster Phosphates, Inc	Trustees	39.949	Special Warranty Deed
MDID 11245	6/18/1996	Cytec Brewster Phosphates, In	Trustees	19.559	Special Warranty Deed

Parcel Name or Lease Number	Date Leased	Initial Lessor	Initial Lessee	Current Term	Expiration Date
Leose No. 4168	1/23/1998	The Board of Trustees of the Internal Improment Trust Fund of the State of Florida	The State of Florida Deparmtnetnt of Environmental Protection, Division of Recreation and Parks	50 years	1/22/2048

Outstanding Issue	Type of Instrument	Brief Description of the Outstanding Issue	Term of the Outstanding Issue
Reverter	Trustee's Deed	*If said lands are not used for public and reational purposes, the tilte will revert back to Cytec Brewster Phosphates, Inc.*	Perpetuity

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Addendum 3 — Soil Descriptions

Adamsville fine sand. [**2, 1989]**

The Adamsville series consists of deep, somewhat poorly drained soils. Adamsville fine sand soil is nearly level and poorly drained. The slope is less than 2 percent. These soils formed in sandy marine sediment. They are on broad ridges on the flatwoods. A seasonal high water table is at a depth of 20 to 40 inches for 2 to 6 months, and recedes to a depth of 60 inches during prolonged dry periods. Permeability is rapid. The available water capacity is low. These soils are hyperthermic, uncoated, Aqui Quartzipsamments.

Typically, this soil has a surface layer of very dark gray sand about 6 inches thick. The underlying material, to a depth of about 30 inches, is brown fine sand. Reaction ranges from very strongly acid to mildly alkaline throughout. Silt and clay make up less than 5 percent of the 10- to 40-inch control section. The texture is fine sand or sand. In most areas, this soil is used for improved pasture, citrus crops, or homesite or urban development. In a few areas, this soil is used for cultivated crops, or it is left in natural vegetation, which consists of bluejack oak, turkey oak, longleaf pine, and slash pine (mostly sandhill associations). The understory includes broomsedge bluestem, lopsided indiangrass, saw palmetto, and pineland threeawn.

Adamsville soils are closely associated on the landscape with Lochloosa, Pomello, Tavares and Zolfo soils. Lochloosa soils have an argillic horizon; Pomello and Zolfo soils have a spodic horizon. Pomello and Tavares soils are moderately well drained.

Archbold fine sand. [**3, 1989]**

The Archbold series consists of deep, moderately well-drained soils. These soils formed in sandy marine sediment. They are on low ridges on the flatwoods. The slope is less than 2 percent. In most years a seasonal high water table is at a depth of 42 to 60 inches for about 6 months; this recedes to a depth of 60 to 80 inches during prolonged dry periods. Permeability is rapid. The available water capacity is very low. These soils are hyperthermic, uncoated, Typic Quartzipsamments.

Typically, this soil has a surface layer of light gray fine sand about 2 inches thick. The underlying material is white fine sand to a depth of about 80 inches. In places, similar soils included in this mapping have a black or very dark brown subsoil. Other similar soils, in higher parts, are well drained. Reaction ranges from extremely acid to strongly acid throughout. Silt and clay make up less than 2 percent of the 10- to 40-inch control section.

In most areas, this soil has been left idle in “scrub” forest. A few areas are used for pasture or for homesite or urban development. The fine sand texture of the surface layer limits the use of equipment. The natural vegetation consists of sand pines. The understory includes pineland threeawn, pricklypear cactus, and saw palmetto.
This Archbold soil is in capability subclass Vls, in woodland group3S, and in the Sand Pine-Scrub Oak range site.

Arents, nearly level. [**4, 1989]**

This consists of nearly level, heterogeneous soil material. This material has been excavated, reworked and reshaped by earthmoving equipment. Arents are near urban centers, phosphate-mining operations, major highways and sanitary landfills.

Arents does not have an orderly sequence of soil layers. This map unit is not associated with or confined to a particular kind of soil. It is variable and contains discontinuous lenses, pockets or streaks of black, gray, grayish brow, brown or yellowish brown sandy or loamy fill material. The thickness of the fill material ranges from 30 to 80 inches or more. Also included are small areas of soil that has slope that ranges from 0 to 5 percent. Most soil properties are variable. The depth to the seasonal high water table varies with the amount of fill material and artificial drainage. Permeability and the available water capacity vary widely from one area to another. In most areas, the soil in the map unit has been left idle or is used for home sites, recreation and urban development. In a few areas, the soil is used for pasture. Where reclamation has been attempted, the overburden soils tend to be compacted from the heavy machinery used. Surface layers tend to become encrusted upon drying, preventing root penetration by young trees in the spring and fall dray seasons. Compaction further hinders water and root penetration. An individual assessment of each site is necessary to determine its potential for different uses. The soils in this map unit have not been assigned to a capability subclass, a woodland group, or range site.

Arents, very steep. [**39, 1989]**

This map unit consists of mounds of very steep, heterogenous soil material. These arents are the accumulation of material from phosphate mining operations. It is not associated with or confined to a particular kind of soil. Arents do not have an orderly sequence of soil layers. They are variable and contain discontinuous lenses, pockets or streaks of black, gray, grayish brown, brown or yellowish brown sandy or loamy excavated material. The thickness of the excavated material ranges from 3 to 15 feet or more. Included in this map unit are small areas of water. Most soil properties of Arents are variable. The depth to the seasonal high water table will vary with the amount of excavated material and artificial drainage. The permeability and the available water capacity vary widely from one area to another. Phosphate mining operations are inactive in most areas. Present land use and slope precludes the use of this map unit for cultivated crops, pasture, commercial trees, or building site development. An individual assessment of each site is necessary to determine its potential for different uses. The soils in the map unit have not been assigned to a capability subclass, to a woodland group, or to a range site.

Basinger, Holopaw and Samsula, depressional. [5, 1989]

The Basinger series consists of deep, very poorly drained soils. These soils formed in sandy marine sediment. They are in swamps and depressions and along drainages in the flatwoods, along the exterior of swamps or in shallow

depressions. A seasonal high water table is within 10 inches of the surface. The slope is less than 2 percent. These soils are siliceous, hyperthermic Spodic Psammaquents. Basinger soils are closely associated on the landscape with Holopaw, Myakka, Ona and Samsula. Holopaw soils have an argilic horizon. Myakka and Ona soils have a spodic horizon and are poorly drained. Samsula soils are organic.Reaction ranges from extremely acid to neutral throughout. Typically, the texture of the A horizon is fine sand, but the range includes muck or mucky fine sand. In Hillsborough county, often associated with cutthroat grass communities.

Candler fine sand, 0 to 5 percent slopes. [**7, 1989]**

The Candler series consists of deep, excessively drained soils. These soils formed in sandy marine sediment. They are on the uplands. The slope ranges from 0 to 12 percent. A seasonal water table is at a depth of more than 80 inches. Permeability is rapid. The available water capacity is very low. These soils are hyperthermic, uncoated Typic Quartzipsamments.

Typically, this soil has a surface layer of dark gray fine sand about 6 inches thick. Light yellowish brown fine sand is in the subsurface layer, to a depth of about 35 inches. Generally, the solum goes to 80 inches, consisting of fine sand, single grained, and few fine and medium roots. Reaction ranges from very strongly acid to medium acid throughout.
In most areas, this Candler soil is used for citrus crops. In a few areas, it is used for pasture or for homesite or urban development, The natural vegetation consists of bluejack oak, Chapman oak, scrub live oak, and turkey oak. The understory includes indiangrass, hairy panicum, panicum, and running oak.

This soil is moderately suited to pasture. The very low available water capacity limits the production of plants during extended dry periods, Proper stocking, pasture rotation, and timely deferment of grazing help keep the pasture in good condition.

The main management concerns for producing and harvesting timber are seedling mortality and equipment use limitations. The fine sand texture of the surface layer limits the use of equipment.

Candler soil is in capability subclass Vls, in woodland group 8S, and in the Longleaf Pine-Turkey Oak Hills range (mostly sandhill associations). These soils are closely associated on the landscape with Kendrick, Millhopper and Tavares soils. (Kendrick and Millhopper soils have an argillic horizon. Tavares soils are moderately well-drained.)

Felda fine sand, 0 to 5 % slopes. [**16, 1989]**

This soil is nearly level and poorly drained. It is on low terraces of major rivers and streams. It is flooded for very long periods following prolonged intense rains. The slope is 0 to 2 percent.

Typically, this soil has a surface layer of dark gray fine sand about 6 inches thick. The upper part of the subsurface layer, to a depth of about 12 inches, is grayish brown fine sand. The lower part, to a depth of about 22 inches, is light gray, mottled fine sand. The subsoil, to a depth of about 38 inches, is gray, mottled sandy clay loam. The substratum to a depth of about 80 inches is light brownish gray, mottled loamy sand.

In most years, a seasonal high water table fluctuates from the soil surface to a depth of about 10 inches for 2 to 6 months. Permeability is rapid in the surface and subsurface layers and is moderate to moderately rapid in the subsoil. The available water capacity is moderate.

In most areas, this Felda soil has been left idle in natural vegetation. In a few areas, it is used for pasture. The natural vegetation consists of red maple, cabbage palm, slash pine, and sweetgum. The understory includes saw palmetto, pineland threeawn, and waxmyrtle.

This Felda soil is in capability subclass IVw, in woodland group 10W, and in the Freshwater Marshes and Ponds range site. Reaction ranges from strongly acid to mildly alkaline in the A horizon and from slightly acid to moderately alkaline in the E, Bt, and C horizons.

Fort Meade loamy fine sand, 0 to 5 percent slopes. [**18, 1989]**

The Fort Meade series consists of deep, well-drained to excessively drained soils. These soils formed in sandy marine sediment. They are in the uplands. A seasonal high water table is at a depth of more than 72 inches. Permeability is rapid. The available water capacity is very low. The slope is nearly level to gently sloping, ranging from 0 to 5 percent. These soils are sandy siliceous, hyperthermic Quartzipsammentic Haplumbrepts.

Reaction ranges from strongly acid to neutral in the A horizon, and from very strongly acid to medium acid in the C horizon. Typically, surface layer is about 26 inc thick. The upper 7 inc is very dark gray loamy fine sand. The lower 19 inc is very dark grayish brown loamy sand. Underlying material is yellowish brown loamy sand to a depth of about 58 inches, and light yellowish brown loamy sand to 80 inches.

In most areas, Fort Meade soil is used for citrus or cultivated crops, or pasture. This soil may be suited to pasture if proper stocking, pasture rotations, and timely deferment of grazing are applied. The potential of this soil for production of slash pines is moderately high; the low to moderate available water capacity generally influences seedling survival in areas where understory plants are numerous. The natural vegetation consists of bluejack oak, live oak, turkey oak and slash pine(usually sandhill associations). The understory includes lopsided indiangrass, panicum, and pineland threeawn.

This Fort Meade soil is in capability subclass Ills, in woodland group 10S, and in the Upland Hardwood Hammocks range site.

Immokalee fine sand. [**21, 1989]**

This soil is nearly level and poorly drained. It is on broad plains on the flatwoods. The slope is 0 to 2 percent. Typically, this soil has a surface layer of very dark gray fine sand about 8 inches thick. The subsurface layer, to a depth of 36 inches, is light gray fine sand. The upper part of the subsoil, to a depth of about 46 inches, is black fine sand. The middle part, to a depth of about 52 inches, is dark reddish brown fine sand. The lower part to a depth of about 80 inches is dark brown fine sand.

In most years, a seasonal high water table fluctuates from the soil surface to a depth of 10 inches for more than 2 months and recedes to a depth of 10 to 40 inches for 8 months or more. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil. The available water capacity is low.

In most areas, this Immokalee soil is used for native pasture. In a few areas, it is used for cultivated crops, improved pasture, or citrus crops or for homesite or urban development. The natural vegetation consists of longleaf pine and slash pine The understory includes creeping bluestem, lopsided indiangrass, saw palmetto, pineland threeawn, and wax myrtle (usually mesic flatwoods associations).

The potential of this soil for the production of slash pines moderate. Equipment use limitations and seedling mortality are the main limitations. Planting and harvesting operations should be scheduled during dry periods. Water-tolerant trees should be planted. Bedding of rows helps to minimize the excessive wetness limitations.

This Immokalee soil is in capability subclass IVw, in woodland group 8W, and in the South Florida Flatwoods range site. Reaction ranges from extremely acid to medium acid throughout.

Lake fine sand, 0 to 5% slopes. [**25, 1989]**

This soil is nearly level to gently sloping and excessively drained. Typically, this soil has a surface layer of dark grayish brown fine sand about 4 inches thick. The underlying material extends to a depth of about 80 inches. The upper 24 inches is strong brown find sand. The next 40 inches is reddish yellow fine sand. The lower 12 inches is strong brown fine sand.

A seasonal high water table is at a depth of more than 80 inches. Permeability is rapid. The available water capacity is very low or low.

In most areas, this Lake soil is used for citrus crops. The natural vegetation consists of bluejack oak, Chapman oak, scrub oak, live oak, and turkey oak. The understory includes lopsided indiangrass, running oak, and pineland threeawn.

This soil is moderately suited to pasture. The very low or low available water capacity of the soil limits production of plants during extended dry periods. Proper stocking, pasture rotation, and timely deferment of grazing help keep the pasture in good condition. The potential of this soil for the production of slash pines is moderately high. The main management concerns are the equipment use limitations and seedling mortality.
This Lake soil is in capability subclass IVs, in woodland group 10S, and in the Longleaf Pine-Turkey Oak Hills range site. Reaction is very strongly acid or strongly acid throughout.

Leon fine sand. [Ls, 1918]

Leon fine sand consists of a light-gray, fine-textured sand, grading within a few inches into a lighter colored fine sand. This type is characterized by a dark-brown layer, locally called a “hard-pan” consisting of organic matter mixed with fine sand and some iron compounds. This hardpan layer ranges from 6-15 inches in thickness and is encountered within the 3-ft section, usually at a depth of 15-20 inches. It is underlain by a yellowish fine sand, which becomes lighter in color with depth, grading finally into white, compact fine sand. The color of the surface soil is affected by even slight differences in elevation and drainage, and in some of the lower lying positions it is dark gray to almost black owing to the accumulation of organic matter. Leon fine sand is one of the most widely distributed and extensive soil types in the county and is the principal flatwoods type. It is most extensive in the low flatwoods surrounding the bay shores and extending several miles inland. Large areas also occur in the northern and southern parts of the county. The elevation of the type ranges from a few inches or a few feet above sea level near the by to considerably more in the interior of the county. The surface is generally flat, with numerous depressions of varying size. In the southern part of the county the depressions consist of shallow, grassy ponds, and in the northern part of cypress ponds. Except where the larger streams pass through the type, the surface drainage is carried by intermittent streams or slough-like depressions. The flat surface hinders the run-off and more or less impervious hardpan retards percolation, consequently during wet spells water stands on the surface for a time. In dry seasons, the soil becomes very dry as the hardpan prevents the upward movement of moisture from the substratum. As a rule, without artificial drainage and irrigation, crops are uncertain.

Most of the type support a typical flatwoods growth of longleaf pine, scrub saw palmetto, wiregrass and broomsedge. The undergrowth includes some huckleberry and gallberry bushes and shrubby oaks. The pine trees as a rule are rather sparse and of small size. The scrub saw palmetto is small. The main use of the type is for turpentine collection and as a range for live stock. It affords good grazing, especially in the spring.

Malabar fine sand [27, 1989]

This soil is nearly level and poorly drained. It is in low-lying sloughs and shallow depressions on the flatwoods. The slope is 0 to 2 percent.

Typically, this soil has a surface layer of dark gray fine sand about 4 inches thick. The subsurface layer, to a depth of about 12 inches, is light brownish gray fine sand. The upper part of the subsoil, to a depth of about 30 inches, is brownish yellow fine sand. The next layer, to a depth of about 50 inches, is pale brown fine sand. The lower part, to a depth of about 66 inches, is gray, mottled fine sandy loam. The substratum to a depth of about 80 inches is grayish brown fine sand.

In most years, a seasonal high water table fluctuates from the soil surface to a depth of about 10 inches for 2 to 6 months. Permeability is rapid in the surface and subsurface layers, slow in the subsoil, and moderately rapid or rapid in the substratum. The available water capacity is very low or low. The depressions are subject to shallow flooding during heavy rains.

In most areas, this Malabar soil has been left idle in native vegetation. In some areas, the soil has been drained and is used for cultivated crops or pasture or for homesite or urban development. The natural vegetation consists of cabbage palm, longleaf pine, and slash pine. The understory includes broomsedge, bluestem, inkberry, maidencane, saw palmetto, and waxmyrtle.

The potential of this soil for the production of slash pines is moderately high. Seedling mortality and the equipment use limitation are the main limitations. Water-tolerant trees should be planted. Planting and harvesting operations should be scheduled during dry periods. Bedding of rows helps to minimize the excessive wetness limitation. Wetness limits the use of equipment.

This Malabar soil is in capability subclass IVw, in woodland group 10W, and in the Slough range site. Reaction ranges from strongly acid to moderately alkaline throughout.

Myakka fine sand [29, 1989]

This soil is nearly level and poorly drained. It is on broad plains on the flatwoods. The slope is 0 to 2 percent. Typically, this soil has a surface layer of very dark gray fine sand about 5 inches thick. The subsurface layer, to a depth of about 20 inches, is gray fine sand. The upper part of the subsoil, to a depth of about 25 inches, is black fine sand. The middle part, to a depth of 30 inches, is dark reddish brown fine sand. The lower part, to a depth of about 38 inches, is brownish yellow fine sand. The upper part of the substratum, to a depth of about 55 inches, is very pale brown fine sand. The lower part to a depth of about 80 inches is dark grayish brown fine sand.

In most years, a seasonal high water table fluctuates from the soil surface to a depth of 10 inches for 1 to 4 months and recedes to a depth of 40 inches during prolonged dry periods. Permeability is rapid in the surface and subsurface layers, moderate or moderately rapid in the subsoil, and rapid in the substratum. The available water capacity is low.

In most areas, this Myakka soil is used for native pasture or cultivated crops. In a few areas, it is used for improved pasture or citrus crops, or it is used for homesite or urban development. The natural vegetation consists of longleaf pine and slash pine. The understory includes gallberry, running oak, saw palmetto, pineland threeawn and waxmyrtle (usually mesic flatwoods associations).

The potential of this soil for the production of slash pines is moderate. The management concerns for producing and harvesting timber are the equipment use limitations and seedling mortality.
This Myakka soil is in capability subclass IVw, in woodland group 8W, and in the South Florida Flatwoods range site. Reaction ranges from extremely acid to slightly acid.

Norfolk fine sand (with hammock and scrub phases)**. [Ns, 1918]**

Norfolk fine sand consists of light-gray to yellow-gray fine sand, about 6 inches deep, grading into a pale-yellow to bright-yellow fine sand, which extends to a depth of more than 3 feet. In some of the lower lying spots the surface soil is darker gray in color to a depth of about 12 inches and in some of the flatter areas both soil and subsoil are lighter colored than usual. The material is slightly coherent when moist, but is loose and incoherent when dry. The texture is uniform. Norfolk is one of the most extensive soils in Hillsborough county, and occupies the greater part of the uplands, main in an almost continuous belt several miles wide extending through the central part of the county in a NW – SE direction.

The topography is undulating, with ridges and hummcocks, and occasionally gently undulating to nearly flat areas. The surface is marked by numerous depressions or sink holes, some of which are occupied by ponds and lakes. The topography is generally favorable to cultivation. Drainage is excessive, the loose, porous structure of the type permitting rain water to percolate rapidly to lower levels. Seepage places or springs are numerous at the foot of the slopes to the flatwoods and along the banks of streams. Crops are apt to suffer from lack of moisture even in ordinary dry periods.

The forest growth consists mainly of longleaf pine and forked-leaf blackjack, turkey and water oak, with some live oak; scattering of saw palmetto. Parts of the type support an open forest of longleaf pine. The surface usually is covered with wiregrass and generally fits today's description of a sandhill mosaic; when the pine is removed, blackjack oak and turkey oak spread over the land.

Norfolk fine sand, scrub phase, supports a scrub growth similar to that of the St. Lucie fine sand, with scrub live oak, a shrub known as "rosemary' and some saw palmetto. Wiregrass is lacking. The surface soil to a depth of an inch or two is gray to brownish-gray fine sand, which extends to great depths with no essential difference between the lower stratum of the soil and the subsoil. The material is loose and incoherent. There are a few areas in the central part of the county and two along the Alafia River. The latter support a

mixed scrub and hammock vegetation. The phase is excessively drained and droughty, moisture passing through it rapidly to lower levels.

Norfolk fine sand, hammock phase, soil material consists of a slightly loamy fine sand, dark gray or brownish gray to light gray to a depth of 6-10 inches and pale yellow or amber yellow below. The surface soil in cultivated soils frequently has a brownish tinge, approaching the color of Gainesville fine sand. It is probably that a substratum of clay, limestone or hardpan occurs at no great depth. This phase occurs in scattered areas associated with the main type bordering lakes and streams through the uplands. It lies at elevations ranging from 1ft to 20 ft above water level. The natural drainage is good. Owing to the proximity of the phase to bodies of water and its slight elevation, the permanent water-table is not far below the 3-ft soil section. Uncleared areas support a heavy hammock growth consisting mainly of live oak, hickory and magnolia, with some Sabal, longleaf pine and other trees, and usually have a rather thick undergrowth of shrubs.

Orlando fine, 0 to 5% slopes. [35, 1989]

This soil is nearly level to gently sloping and well drained. It is on the uplands. Typically, this soil has a surface layer that is about 20 inches thick. The upper 8 inches is black fine sand. The lower 12 inches is very dark gray fine sand. The next layer, to a depth of about 22 inches, is dark grayish brown fine sand. The upper part of the underlying material, to a depth of about 60 inches, is yellowish brown fine sand. The lower part to a depth of about 80 inches is pale brown fine sand.

A seasonal high water table is below a depth of more than 72 inches. Permeability is rapid. The available water capacity is low.

In most areas, this Orlando soil is used for cultivated crops or citrus crops. In a few areas, it is used for pasture or for homesite or urban development. The natural vegetation consists of bluejack oak, live oak, turkey oak, and slash pine. The understory includes panicums, saw palmetto, and pineland threeawn.

The potential of this soil for the production of slash pine trees is moderately high. This soil has few limitations for woodland use and management. The low available water capacity adversely affects seedling survival in areas where understory plants are numerous. After harvesting, reforestation must be carefully managed to reduce competition from undesirable understory plants.

This Orlando soil is in capability subclass IIIs, in woodland group 10S, and in the Longleaf Pine-Turkey Oak Hills range site. Reaction ranges from very strongly acid to slightly acid in the A horizon and from very strongly acid to medium acid in the C horizon.

Orsino fine, 0 to 5% slopes. [36, 1989]

This soil is nearly level to gently sloping and moderately well drained. It is on the uplands and along slope breaks to stream channels.

Typically, this soil has a surface layer of gray fine sand about 2 inches thick. The upper part of the subsurface layer, to a depth of about 15 inches, is light gray fine sand. The lower part, to a depth of about 31 inches, is white fine sand. The upper part of the subsoil, to a depth of about 48 inches, is brownish yellow and very dark grayish brown fine sand. The lower part, to a depth of 72 inches, is yellow, mottled fine sand. The substratum to a depth of about 80 inches is pale brown fine sand.

In most years, a seasonal high water table is at a depth of 40 to 60 inches for more than 6 months and recedes to a depth of more than 60 inches during prolonged dry periods. Permeability is very rapid. The available water capacity is low or very low.

In most areas, this Orsino soil is used for pasture. In a few areas, it is used for homesite or urban development or is left in natural vegetation. The natural vegetation consists of turkey oak, sand pine, and slash pine. The understory includes sand heath, pineland threeawn, saw palmetto, and pricklypear cactus.

This Orsino soil is in capability subclass IVs, in woodland group 8S, and in the Sand Pine Scrub range site. Reaction ranges from extremely acid to medium acid throughout.

Pomello fine sand, 0 to 5% slopes. [41, 1989]

This soil is nearly level to gently sloping and moderately well drained. It is on low ridges on the flatwoods. Typically, this soil has a surface layer of very dark gray fine sand about 3 inches thick. The subsurface layer, to a depth of about 43 inches is light gray fine sand. The upper part of the subsoil, to a depth of about 46 inches, is dark brown fine sand. The lower part, to a depth of about 55 inches, is brown fine sand. The substratum to a depth of about 80 inches is grayish brown fine sand. Similar soils included in mapping, in some places, have a subsoil within 30 inches of the surface.

In most years, a seasonal high water table is at a depth of 24 to 40 inches for 1 to 4 months and recedes to a depth of 40 to 60 inches during dry periods. Permeability is very rapid in the surface and subsurface layers, moderately rapid in the subsoil, and rapid in the substratum. The available water capacity is very low.

In most areas, this Pomello soil is used for native pasture. The natural vegetation consists of longleaf pine, sand pine and slash pine. The understory includes creeping bluestem, lopsided indiangrass, running oak, saw palmetto and pineland threeawn. This soil is poorly suited to pasture.

The potential of this soil for the production of sand pines and slash pines is moderate. The main management concerns for producing and harvesting timber are the equipment use limitations and seedling mortality.

This Pomello soil is in capability subclass VIs, in woodland group 8S, and in the Sand Pine Scrub range site. Reaction ranges from very strongly acid to medium acid throughout.

Portsmouth fine sand (Hammock and prairie phase). **[Ps, 1918]**

The surface soil of the Portsmouth fine sand consists of a black fine sand 4-12 inches deep, containing a high percentage of organic matter – enough in places to give it a mucky texture. This is underlain, as a rule, by light-gray to nearly white fine sand. Within 3 ft of the surface, usually between 12 and 24 inches, there is a compact stratum of brown or black fine sand containing considerable organic matter and iron compounds and resembling a hardpan. Below this compact layer the material consists of a brownish-yellow or dark-gray to nearly white, compact, water-soaked in sand extending to considerable depth. The hardpan layer may occur at any depth within the 3-foot section. In places it directly underlies the dark surface soil and in others it lies below the 3-ft section. This soil occurs throughout the flatwoods section of the county, being most extensive in the southern and eastern parts. It is typically a flatwoods soil and is associated with the Leon fine sand, occupying the lower and more poorly drained positions. It is also associated with Scranton fine sand in the eastern part of the county, where it occupies lower slopes. The areas in the flatwoods have an almost perfectly flat and level surface. The type frequently occurs in strips around ponds and lakes and along streams or related stream depressions. Owing to the flat surface, the drainage is poor. Water stands on the surface after rains and is removed very slowly by lateral seepage and evaporation. The soil is dry during short periods, and as the hardpan substratum prevents the rise of capillary water, crops are likely to suffer for lack or moister at times. The larger part of this type is not cleared (in 1916) and supports a growth of longleaf pine, saw palmetto, gallberry, and broomsedge, with some wiregrass in the higher areas. Pine and saw palmetto attain a larger size than on the Leon fine sand. Gallberry is a characteristic growth and the type is locally referred to as “gallberry flatwoods.” It constitutes some of the best natural grazing land in the flatwoods.

Portsmouth fine sand, hammock phase, consists of a black, more or less mucky fine sand, 8-12 inches deep, underlain by a gray, compact fine sand which becomes lighter in color with depth. In places, a compact stratum resembling hardpan is encountered an inch or two below the surface. This phase is not extensive and is developed mainly in the eastern and central parts of the county. It occurs as narrow areas along stream depressions or along small streams. The drainage is naturally poor. It supports a hammock growth consisting mainly of oak, magnolia, bay and cabbage palm with some pine and an undergrowth of shrubs.

Seffner fine sand. [47, 1989]

This soil is nearly level and somewhat poorly drained. It is on the rims of depressions and on broad, low ridges on the flatwoods. The slope is 0 to 2 percent.

per 9 inches is very dark gray fine sand, and the lower 4 inches is very dark gray, mottled fine sand. A transitional layer, to a depth of about 21 inches, is dark gray, mottled fine sand. The upper part of the underlying material, to a depth of about 35 inches, is very pale brown, mottled fine sand. The middle part, to a depth of about 63 inches, is light gray, mottled fine sand. The lower part to a depth of 80 inches is white, mottled fine sand.

In most years, a seasonal high water table is at a depth of 20 to 40 inches for 2 to 6 months and recedes to a depth of less than 60 inches during prolonged dry periods. Permeability is rapid. The available water capacity is low or moderate.

In most areas, this Seffner soil is used for cultivated crops or pasture or for homesite and urban development. In a few areas, it is used for citrus crops or has been left idle in natural vegetation. The natural vegetation consists of longleaf pine, slash pine, and laurel oak. The understory includes creeping bluestem, grassleaf goldaster, lopsided indiangrass, saw palmetto, and pineland threeawn.
This Seffner soil is in capability subclass IIIw, in woodland group 10W, and in the Oak Hammocks range site. The texture is sand or fine sand to a depth of 80 inches or more. Reaction ranges from very strongly acid to neutral throughout.

Slickens. [50, 1989]

This miscellaneous area consists of level, very poorly drained accumulations of fine-textured material from phosphate mining operations. Slickens generally are confined in specially constructed basins or holding ponds. The basins are designed to allow water to flow through a series of holding ponds and allow the slickens to settle out. These areas are ponded for very long periods. The slope is less than 1 percent.

Slickens do not have an orderly sequence of soil layers. Typically, the slickens are gray or light gray and have mottles in various hues, values and chromas. Slickens are clayey and contain about 88 percent clay, 8 percent silt, and 4 percent sand. The clay mainly is montmorillonite but includes kaolinite, illite and attapulgite. The clayey material is fluid or very fluid throughout except, in some places, the upper few inches are firm.

In most years, undrained areas are ponded except during extended dry periods. A seasonal high water table fluctuates from the soil surface to a depth of about 10 inches. Permeability is very slow. The available water capacity is high.

Most areas in this map unit have been left idle. Slickens generally do not support vegetation. They also are too soft and boggy to support livestock. Slickens are not suited to cultivated crops, pasture or commercial trees. An individual assessment of each site is necessary to determine its potential for different uses.

The soils in this unit have not been assigned to a capability subclass, to a woodland group or to a range site.

Smyrna fine sand. [52, 1989]

This soil is nearly level and poorly drained. It is on broad, low-lying, convex swells on the flatwoods. The slope is 0 to 2 percent. Typically, the soil has a surface layer of very dark gray fine sand about 4 inches thick. The subsurface layer, to a depth of about 12 inches, is gray fine sand. The upper part of the subsoil, to a depth of about 15 inches, is dark brown fine sand. The lower part, to a depth of about 20 inches, is very dark grayish brown fine sand. The upper part of the substratum, to a depth of about 45 inches, is light brownish gray, mottled fine sand. The lower part to a depth of about 80 inches is brown fine sand. Similar soils included in mapping, in some areas, have a surface layer that is more than 8 inches thick.

In most years, a seasonal high water table fluctuates from the soil surface to a depth of 10 inches for more than 2 months and recedes to a depth of 10 to 40 inches for 6 months or more. Permeability is rapid in the surface and subsurface layers, moderate or moderately rapid in the subsoil, and rapid in the substratum. The available water capacity is low.

In most areas, this Smyrna soil is used for native pasture. The natural vegetation consists of longleaf pine and slash pine. The understory includes gallberry, running oak, saw palmetto, pineland threeawn and waxmyrtle.

The potential of this soil for the production of slash pines is moderately high. Equipment use limitations and seedling mortality are the main limitations. Water-tolerant trees should be planted. Planting and harvesting operations should be scheduled during dry periods. Bedding of rows helps to minimize the excessive wetness limitation.

This Smyrna soil is in capability subclass IVw, in woodland group 10W, and in the South Florida Flatwoods range site. The combined thickness of the A and E horizons is less than 20 inches. Reaction ranges from extremely acid to neutral in the A, E, and Bh horizons except where limed and is very strongly acid or strongly acid in the C horizon.

St. Johns fine sand. [46, 1989]

This soil is nearly level and poorly drained. It is on low-lying plains on the flatwoods. The slope is 0 to 2 percent. Typically, the upper part of the surface layer is black fine sand about 6 inches thick. The lower part, to a depth of about 12 inches, is very dark grayish brown fine sand. The subsurface layer,

to a depth of about 29 inches, is light brownish gray fine sand. The upper part of the subsoil, to a depth of about 36 inches, is black fine sand. The middle part, to a depth of about 46 inches, is dark reddish brown fine sand. The lower part, to a depth of about 50 inches, is dark yellowish brown fine sand. The substratum to a depth of about 80 inches is light brownish gray fine sand.

In most years, a seasonal high water table fluctuates from the soil surface to a depth of 15 inches for 2 to 6 months and recedes to a depth of 15 to 30 inches during prolonged dry periods. Permeability is rapid in the surface and subsurface layers, moderately slow or moderate in the subsoil, and rapid in the substratum. The available water capacity is moderate. In most areas, this St. Johns soil is used for native pasture.

The natural vegetation consists of longleaf pine and slash pine. The understory includes gallberry, running oak, saw palmetto, pineland threeawn and waxmyrtle.

The potential of this soil for the production of slash pines is moderately high. Equipment use limitations and seedling mortality are the main limitations.

This St. Johns soil is in capability subclass IIIw, in woodland group 10W, and in the South Florida Flatwoods range site. Reaction ranges from extremely acid to strongly acid throughout.

St. Lucie fine sand (including Flatwoods phase). **Ss, 1918]**

St. Lucie sand consists of a light-gray to nearly white fine sand of considerable depth. The immediate surface may be slightly grayish, owing to the presence of a small percentage of organic matter. Where the type merges into Leon fine sand and in flat areas, the hardpan typical of the Leon series may be encountered within or just below the 3-foot section, more often below. In places at relatively high elevations an orange-yellow sand underlies the type and occasionally it is encountered within 36 inches of the surface. A characteristic of the type is the glittering white appearance of the surface when dry and the soil is called locally “white sand.” It occurs in a number of areas ranging in size from a few acres to a square mile or more throughout the central and southern parts of the county. The topography prevails with ridges and hummocks; the ridges usually being smooth and rounded. The natural drainage is excessive, the loose sandy character of the material permitting the rapid percolation of water. The soil is droughty, as indicated by the vegetation it supports. It is of no importance agriculturally, though on the east side of Florida this soil is used for growing pineapples. The forest growth is in marked contrast to that of other soils of the county, consisting mainly of spruce pine [??], with an undergrowth of scrub evergreen oak, rosemary, and saw palmetto. There is a sparse growth of wiregrass. The type is sometimes referred to as “scrub.”

St. Lucie fine sand, flatwoods phase. This is identical with that of the main type except that a hardpan layer similar to that underlying the Leon fine sand is usually encountered at a depth of 40 to 60 inches, and occasionally with the

3-foot section. The phase represents a near approach to Leon fine sand. The phase is not extensive. It occurs in the southern and south-central parts of the county, closely associated with the St. Lucie and Leon fine sands. The surface is flat to slightly ridges, lying somewhat higher than the typical flatwoods. The phase has good to excessive drainage, but is not quite so droughty as the typical soil. The native vegetation is similar to that on the Leon fine sand, consisting mainly of longleaf pine with an undergrowth of dwarf saw palmetto and a cover of wiregrass and broomsedge. There are a few scattered clumps of scrub evergreen oak, which occasionally reach tree size. The longleaf pine growth is rather sparse but the trees are usually larger than on Leon fine sand.

Tavares-Millhopper fine sands, 0 to 5% slope. [53, 1989]

The soils in this map unit are nearly level to gently sloping and moderately well drained. They are in low-lying areas on the uplands and on low ridges on the flatwoods. Typically, the surface layer of the Tavares soil is dark grayish brown fine sand about 6 inches thick. The upper part of the underlying material, to a depth of about 32 inches, is pale brown fine sand. The middle part, to a depth of about 40 inches, is very pale brown fine sand. The lower part to a depth of about 80 inches is light gray fine sand.

Typically, the surface layer of the Millhopper soil is dark gray fine sand about 4 inches thick. The upper part of the subsurface layer, to a depth of about 9 inches, is brown fine sand. The next layer, to a depth of about 25 inches, is light yellowish brown fine sand. The next layer, to a depth of about 48 inches, is light gray, mottled fine sand. The lower part, to a depth of about 57 inches, is light gray fine sand. The upper part of the subsoil, to a depth of about 62 inches, is very pale brown, mottled sandy clay loam. The lower part to a depth of about 80 inches is gray, mottled sandy clay loam.

Tavares soil has a seasonal high water table at a depth of 40 to 80 inches for more than 6 months, and it recedes to a depth of more than 80 inches during prolonged dry periods. Millhopper soil has a seasonal high water table at a depth of 40 to 60 inches for 1 to 4 months, and it recedes to a depth of 60 to 72 inches for 2 to 4 months. Permeability of Tavares soil is rapid. Permeability of Millhopper soil is rapid in the surface and subsurface layers and moderate in the subsoil. The available water capacity is very low in Tavares soil and low in Millhopper soil.

In most areas, the soils in this map unity are used for pasture or homesite and urban development. In a few areas, they are used for cultivated crops or citrus crops or are left in natural vegetation. The natural vegetation consists of bluejack oak, turkey oak, live oak, and longleaf pine. The understory includes creeping bluestem, lopsided indiangrass, panicums and pineland threeawn.

The soils in this map unit are well suited to pasture. The very low or low available water capacity of the soils limits production of plants during extended dry periods. Proper stocking, pasture rotation and timely deferment of grazing help keep the pasture in good condition.

The potential of these soils for the production of slash pines is moderately high. The main management concerns for producing and harvesting timber are the equipment use limitations and seedling mortality. The find sand texture of the surface layer limits the use of equipment. The very low or low available water capacity adversely affects seedling survival in areas where understory plants are numerous.

The soils in this map unit are in capability subclass IIIs, in woodland group 10S, and in the Longleaf Pine-Turkey Oak Hills range site. Soil reaction ranges from extremely acid to medium acid throughout. Silt and clay totals 5 percent or less between depths of 10 and 40 inches.

Winder fine sand, frequently flooded. [60, 1989]

This soil is nearly level and poorly drained. It is on the flood plains. This soil is flooded for very long periods following prolonged intense rain. Many areas are isolated by stream channels and steep escarpments. The slope is 0 to 2 percent.

Typically, this soil has a surface layer of black fine sand about 5 inches thick. The subsurface layer, to a depth of about 14 inches, is grayish brown fine sand. The upper part of the subsoil, to a depth of about 18 inches, is gray sandy clay loam and white fine sand. The lower part of the subsoil, to a depth of about 34 inches, is grayish brown, mottled sandy clay loam. The substratum, to a depth of about 80 inches, is light brownish gray fine sand. In most years, a seasonal high water table fluctuates from the soil surface to a depth of about 10 inches for 2 to 6 months. Permeability is rapid in the surface and subsurface layers, slow or very slow in the subsoil, and rapid in the substratum. The available water capacity is moderate.

In most areas, this Winder soil has been left idle in natural vegetation. In a few areas, it is used as pasture. The natural vegetation consists of Coastal Plain willow, red maple, cabbage palm and sweetgum. The understory includes buttonbush, maidencane, sawgrass, smartweed and sedges. In its natural state, this soil is generally not suited to cultivated crops or pasture.

This soil is generally not suited to the production of pines because of flooding or extended wetness. It may be suited to the production of cypress and hardwoods through natural regeneration.

This Winder soil is in capability subclass Vw and in woodland group 11W. This soil has not been assigned to a range site.

In the A to B/E horizons, reaction ranges from medium acid to mildly alkaline. In the Btg horizon, reaction ranges from neutral to moderately alkaline. In the 2Cg horizon, reaction is mildly alkaline or moderately alkaline.

Zolfo fine sand. [61, 1989]

This soil is nearly level and somewhat poorly drained. It is on broad, low ridges on the flatwoods. The slope is 0 to 2 percent. Typically, this soil has a surface layer of very dark gray fine sand about 3 inches thick. The upper part of the subsurface layer, to a depth of about 15 inches, is grayish brown, mottled fine sand. The middle part, to a depth of about 51 inches, is light gray, mottled fine sand. The lower part, to a depth of about 60 inches, is grayish brown fine sand. The subsoil to a depth of about 80 inches is dark brown fine sand.

In most years, a seasonal high water table is at a depth of 24 to 40 inches for more than 2 to 6 months and recedes to a depth of 60 inches during prolonged dry periods. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil. The available water capacity is low.

In most areas, this Zolfo soil is used for citrus crops or pasture or for homesite or urban development. In a few areas, it is used for the cultivated crops or is left in natural vegetation. The natural vegetation consists of live oak, turkey oak, longleaf pine, and slash pine. The understory includes broomsedge, bluestem, lopsided indiangrass, saw palmetto and pineland threeawn.

This soil is moderately well suited to pasture. Proper stocking, pasture rotation, and timely deferment of grazing help keep the pasture in good condition.

The potential of this soil for the production of slash pines is moderately high. This soil has few limitations for woodland use and management.
This Zolfo soil is in capability subclass IIIw, in woodland group 10W, and in the Upland Hardwood Hammocks range site. Reaction ranges from very strongly acid to neutral in the A and E horizons and from extremely acid to slightly acid in the Bh horizon.

Addendum 4 — Plant and Animal List

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)

MYCOTES

Earth star ..... *Astraeus hygrometricus*

LICHENS

Evans' reindeer lichen ..... *Cladina evansii*
Reindeer lichen..... *Cladina subtenuis*
Cup lichen..... *Cladonia leporina*

PTERIDOPHYTES

Ebony spleenwort ..... *Asplenium platyneuron*
Carolina mosquito fern ..... *Azolla caroliniana*
Toothed midsorus fern..... *Blechnum serrulatum*
Southern grape-fern..... *Botrychium biternatum*
Florida shield fern ..... *Dryopteris ludoviciana*
Flakelet fern; Bramble fern ..... *Hypolepis repens*
Japanese climbing fern* ..... *Lygodium japonicum*
Old World climbing fern* ..... *Lygodium microphyllum*
Mariana maiden fern *..... *Macrothelypteris torresiana*
Asian sword fern* ..... *Nephrolepis brownii*
Wild Boston fern ..... *Nephrolepis exaltata*
Adder's tongue fern..... *Ophioglossum petiolatum*
Golden club..... *Orontium aquaticum*
Cinnamon fern..... *Osmunda cinnamomea*
Royal fern ..... *Osmunda regalis* var. *spectabilis*
Comb polypoidy ..... *Pecluma ptilodon* var. *caespitosa* BF, BG
Golden polypody..... *Phlebodium aureum*
Resurrection fern ..... *Pleopeltis polypodioides* var. *michauxianum*
Whisk-fern ..... *Psilotum nudum*
Bracken fern ..... *Pteridium aquilinum*
Tailed bracken..... *Pteridium aquilinum var. pseudocaudatum*
Meadow spike-moss ..... *Selaginella apoda*
Downy maiden fern ..... *Thelypteris dentata*
Hairy maiden fern ..... *Thelypteris hispidula* var. *versicolor*
Willdenow's maiden fern ..... *Thelypteris interrupta*
Widespread maiden fern ..... *Thelypteris kunthii*
Marsh fern ..... *Thelypteris palustris*
Marsh fern ..... *Thelypteris palustris* var. *pubescens*
Shoestring fern..... *Vittaria lineata*
Netted chain fern ..... *Woodwardia areolata*
Virginia chain fern..... *Woodwardia virginica*

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)

GYMNOSPERMS

Eastern redcedar	*Juniperus virginiana*
Sand pine	*Pinus clausa*
Slash pine	*Pinus elliottii*
Bald-cypress	*Taxodium distichum*

ANGIOSPERMS

Monocots

Purple bluestem	*Andropogon glomeratus* var. *glaucopsis*
Bushy bluestem	*Andropogon glomeratus* var. *hirsutior*
Broomsedge bluestem	*Andropogon virginicus*
Chalky bluestem	*Andropogon virginicus var. glaucus*
Green silkyscale	*Anthaenantia villosa*
Nodding nixie	*Aptera aphylla*
Jack-in-the-pulpit	*Arisaema triphyllum*
Corkscrew threeawn	*Aristida gyrans*
Bottlebrush threeawn	*Aristida spiciformis*
Common carpetgrass	*Axonopus affinis*
Common carpetgrass	*Axonopus fissifolius*
Watergrass	*Bulbostylis barbata*
Capillary hairsedge	*Bulbostylis ciliatifolia*
Sandyfield hairsedge	*Bulbostylis stenophylla*
Ware's hairsedge	*Bulbostylis warei*
Florida scrub roseling	*Callisia ornata*
Golden canna	*Canna flaccida*
Greenwhite sedge	*Carex albolutescens*
Mohr's sedge	*Carex atlantica* subsp. *capillacea*
Brome-like sedge	*Carex bromoides*
Godfrey's sedge	*Carex godfreyi*
False hop sedge	*Carex lupuliformis*
Hop sedge	*Carex lupulina*
Coastal sandspur	*Cenchrus spinifex*
Spadeleaf coinwort	*Centella asiatica*
Shiny wood oats	*Chasmanthium nitidum*
Wild taro*	*Colocasia esculenta*
Common dayflower	*Commelina diffusa*
Erect dayflower	*Commelina erecta*
Seven-sisters	*Crinium americanum*
Bermudagrass	*Cynodon dactylon*
Poorland flatsedge	*Cyperus compressus*
Baldwin's flatsedge	*Cyperus croceus*
Marshland flatsedge	*Cyperus distinctus*
Sheathed flatsedge	*Cyperus haspan*

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Epiphytic flatsedge	*Cyperus lanceolatus*	
Rusty flatsedge	*Cyperus odoratus*	
Manyspike flatsedge	*Cyperus polystachyos*	
Pinebarren flatsedge	*Cyperus retrorsus*	
Straw-color flatsedge	*Cyperus strigosus*	
Tropica flatsedge	*Cyperus surinamensis*	
Four-angle flatsedge	*Cyperus tetragonus*	
Needle-leaf witchgrass	*Dichanthelium aciculare*	
Variable witchgrass	*Dichanthelium commutatum*	
Cypress witchgrass	*Dichanthelium dichotomum*	
Dwarf cypress witchgrass	*Dichanthelium ensifolium var. breve*	
Lax-flower witchgrass	*Dichanthelium laxiflorum*	
Hemlock witchgrass	*Dichanthelium portoricense*	
Southern crabgrass	*Digitaria ciliaris*	
Reclining crabgrass	*Digitaria pentzii*	
Blanket crabgrass	*Digitaria serotina*	
Air potato*	*Dioscorea bulbifera*	
Florida yam	*Dioscorea floridana*	
Water hyacinth *	*Eichhornia crassipes*	
Road grass	*Eleocharis baldwinii*	
Yellow spikerush	*Eleocharis flavescens*	
Viviparous spikerush	*Eleocharis vivipara*	
Indian goosegrass*	*Eleusine indica*	
Butterfly orchid	*Encyclia tampensis*	
Greenfly orchid	*Epidendrum conopseum*	
Elliott lovegrass	*Eragrostis elliottii*	
Purple lovegrass	*Eragrostis spectabilis*	
Coastal lovegrass	*Eragrostis virginica*	
Centipedegrass*	*Eremochloa ophiuroides*	
Saltmarsh fingergrass	*Eustachys glauca*	
Pinewoods fingergrass	*Eustachys petraea*	
Slendy fimbry	*Fimbristylis autumnalis*	
Carolina fimbry	*Fimbristylis caroliniana*	
Forked fimbry	*Fimbristylis dichotoma*	
Hairy fimbry	*Fimbristylis puberula*	
Saltmarsh umbrellasedge	*Fuirena breviseta*	
Dwarf umbrellasedge	*Fuirena pumila*	
Green-cross orchid	*Habenaria floribunda*	
Waterspider false reinorchid	*Habenaria repens*	
Needleroot airplant orchid	*Harrisella porrecta*	
Hydrilla*	*Hydrilla verticillata*	
Georgia spider-lily	*Hymenocallis crassifolia*	
Alligator-lily	*Hymenocallis palmeri*	
Yellow stargrass	*Hypoxis curtissii*	
Cogongrass*	*Imperata cylindrica*	
Prairie iris	*Iris hexagona*	

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Leathery rush	*Juncus coriaceus*	
Forked rush	*Juncus dichotomus*	
Soft rush	*Juncus effusus* subsp. *solutus*	
Grassleaf rush	*Juncus marginatus*	
Many-head rush	*Juncus polycephalus*	
Needlepod rush	*Juncus scirpoides*	
Short-leaf flatsedge	*Kyllinga brevifolia*	
Slender-leaved flatsedge	*Kyllinga pumila*	
Bloodroot	*Lachnanthes caroliana*	
Whitehead bogbutton	*Lachnocaulon anceps*	
Southern cutgrass	*Leersia hexandra*	
Lesser duckweed	*Lemna aequinoctialis*	
Little duckweed	*Lemna obscura*	
Valdivia duckweed	*Lemna valdiviana*	
Southern Watergrass	*Luziola fluitans*	
Natalgrass*	*Melinis repens*	
Parrot's-feather *	*Myriophyllum aquaticum*	
Britton's beargrass	*Nolina brittoniana*	SC, RNC
Woodsgrass	*Oplismenus hirtellus*	
Beaked panicum	*Panicum anceps*	
Maidencane	*Panicum hemitomon*	
Torpedograss*	*Panicum repens*	
Redtop panicum	*Panicum rigidulum*	
Warty panicum	*Panicum verrucosum*	
Switchgrass	*Panicum virgatum*	
Sour paspalum	*Paspalum conjugatum*	
Seashore paspalum	*Paspalum distichum*	
Bahiagrass*	*Paspalum notatum*	
Thin paspalum	*Paspalum setaceum*	
Vasey grass*	*Paspalum urvillei*	
Spoonflower	*Peltandra sagittifolia*	
Green arrow arum	*Peltandra virginica*	
Savannah panicum	*Phanopyrum gymnocarpon*	
Water lettuce*	*Pistia stratiotes*	
Pickerelweed	*Pontederia cordata*	
Giant orchid	*Pteroglossaspis ecristata*	SIP
Needle palm	*Rhapidophyllum hystrix*	
Falling beak sedge	*Rhynchospora caduca*	
Bunched beak sedge	*Rhynchospora cephalantha*	
Beaksedge	*Rhynchospora chalarocephala*	
Fringed beaksedge	*Rhynchospora ciliaris*	
Shortbristle horned beaksedge	*Rhynchospora corniculata*	
Fascicled beaksedge	*Rhynchospora fascicularis*	
Sandyfield beaksedge	*Rhynchospora megalocarpa*	
Bunched beaksedge	*Rhynchospora microcephala*	
Millet beaksedge	*Rhynchospora miliacea*	

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Scrub palmetto	*Sabal etonia*	
Cabbage palm	*Sabal palmetto*	
Silver plumegrass	*Saccharum alopecuroides*	
India cupscale *	*Sacciolepis indica*	
American cupscale	*Sacciolepis striata*	
Little bluestem	*Schizachyrium scoparium*	
Giant bulrush	*Schoenoplectus californicus*	
Cuban bulrush	*Scirpus cubensis*	
Fringed nutrush	*Scleria ciliata*	
Netted nutrush	*Scleria reticularis*	
Tall nutgrass	*Scleria triglomerata*	
Saw palmetto	*Serenoa repens*	
Coastal bristlegrass	*Setaria corrugata*	
Yellow bristlegrass	*Setaria parviflora*	
Jeweled blue-eyed grass	*Sisyrinchium xerophyllum*	
Ear-leaf greenbrier	*Smilax auriculata*	
Saw greenbrier	*Smilax bona-nox*	
Saw-brier	*Smilax glauca*	
Laurel greenbrier	*Smilax laurifolia*	
Sarsaparilla vine	*Smilax pumila*	
Coral greenbrier	*Smilax walteri*	
Lopsided indiangrass	*Sorghastrum secundum*	
American burr-reed	*Sparganium americanum*	
Nodding ladies' tresses	*Spiranthes cernua*	
Smutgrass*	*Sporobolus indicus*	
Cowpea witchweed	*Striga gesnerioides*	
Bantam-buttons	*Syngonanthus flavidulus*	
Alligatorflag	*Thalia geniculata*	
Wild pine	*Tillandsia fasciculata*	HH, BF
Ballmoss	*Tillandsia recurvata*	
Southern needleleaf	*Tillandsia setacea*	
Florida airplant	*Tillandsia simulata*	
Spanish moss	*Tillandsia usneoides*	
Spreading airplant	*Tillandsia utriculata*	HH, BF
Purpletop tridens	*Tridens flavus* var. *flavus*	
Narrow-leaved cattail	*Typha latifolia*	
Tropical signalgrass	*Urochloa distachya*	
Paragrass *	*Urochloa mutica*	
Arrowleaf elephant ear*	*Xanthosoma sagittifolium*	
Short-leaf yellow-eyed grass	*Xyris brevifolia*	
Carolina yellow-eyed grass	*Xyris caroliniana*	
Elliott's yellow-eyed grass	*Xyris elliottii*	
Richard's yellow-eyed grass	*Xyris jupicai*	
Tall yellow-eyed grass	*Xyris platylepis*	
Spanish bayonet	*Yucca aloifolia*	
Adam's needle	*Yucca filamentosa*	

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)

Dicots

Rosary pea*	*Abrus precatorius*	
Three-seeded mercury	*Acalypha gracilens*	
Red maple	*Acer rubrum*	
Creeping spotflower	*Acmella oppositifolia* var. *repens*	
Shy-leaf	*Aeschynomene americana*	
Small-leaf thoroughwort	*Ageratina jucunda*	
Bluemink	*Ageratum houstonianum*	
False moneywort	*Alysicarpus ovalifolius*	
Alyce-clover	*Alysicarpus vaginalis*	
Common ragweed	*Ambrosia artemisiifolia*	
Bastard indigo	*Amorpha fruticosa*	
Pepper-vine	*Ampelopsis arborea*	
Groundnut	*Apios americana*	
Devil's walking stick	*Aralia spinosa*	
Japanese ardisia*	*Ardisia japonica*	
Snake root	*Aristolochia serpentaria*	
Scarlet milkweed*	*Asclepias curassavica*	
Aquatic milkweed	*Asclepias perennis*	
Flag pawpaw	*Asimina obovata*	
Smallflower pawpaw	*Asimina parviflora*	
Netted pawpaw	*Asimina reticulata*	
Silverling	*Baccharis glomeruliflora*	
Saltbush	*Baccharis halimifolia*	
Coastalplain honeycombhead	*Balduina angustifolia*	
Tarflower	*Bejaria racemosa*	
Rattan-vine; supplejack	*Berchemia scandens*	
Beggarticks	*Bidens alba*	
Spanish needles	*Bidens bipinnata*	
Begger-ticks	*Bidens mitis*	
False-nettle	*Boehmeria cylindrica*	
India mustard; leaf mustard	*Brassica juncea*	
American bluehearts	*Buchnera americana*	
Ashe's calamint	*Calamintha ashei*	SC, RNC
American beautyberry	*Callicarpa americana*	
Trumpet creeper	*Campsis radicans*	
Hairy bittergrass *	*Cardamine hirsuta*	
Florida paintbrush	*Carphephorus corymbosus*	
American hornbeam	*Carpinus caroliniana*	
Wild olive	*Cartrema americana*	
Water hickory	*Carya aquatica*	
Pignut hickory	*Carya glabra*	
Sugarberry	*Celtis laevigata*	
Butterfly pea	*Centrosema virginianum*	
Buttonbush	*Cephalanthus occidentalis*	
Partridge pea	*Chamaecrista fasiculata*	

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Sensitive pea	*Chamaecrista nictitans* var. *aspera*	
Florida alicia	*Chapmannia floridana*	
Mexican tea*	*Chenopodium ambrosiodes*	
Fringe tree	*Chionanthus virginicus*	
Florida goldenaster	*Chrysopsis floridana*	SC, RNC
Coastalplain goldenaster	*Chrysopsis scabrella*	
Water hemlock	*Cicuta maculata*	
Camphor tree *	*Cinnamonmum camphora*	
Purple thistle	*Cirsium horridulum*	
Nuttall's thistle	*Cirsium nuttallii*	
Tangerine *	*Citrus reticulata*	
Grapefruit, sweet orange *	*Citrus xaurantium*	
Swamp leatherflower	*Clematis crispa*	
Virgin's bower	*Clematis virginiana*	
Turk's turban*	*Clerodendrum indicum*	
Blue mistflower	*Conoclinium coelestinum*	
Short-leaved rosemary	*Conradina brevifolia*	
Dwarf Canadian horseweed	*Conyza canadensis var. pusilla*	
Florida coreopsis	*Coreopsis floridana*	
Dogwood	*Cornus florida*	
Swamp dogwood	*Cornus foemina*	
(Pale) smooth rattlebox	*Crotalaria pallida var. obovata*	
Rabbit-bells; Rattlebox	*Crotalaria purshii*	
Rabbitbells	*Crotalaria rotundifolia*	
Showy rattlebox	*Crotalaria spectabilis*	
Wooly croton	*Croton glandulosus*	
Titi	*Cyrilla racemiflora*	
Zarzabacoa comun	*Desmodium incanum*	
Panicled tick-trefoil	*Desmodium paniculatum*	
Threeflower ticktrefoil	*Desmodium triflorum*	
Carolina ponysfoot	*Dichondra caroliniensis*	
Poor Joe	*Diodia teres*	
Virginia buttonweed	*Diodia virginiana*	
Persimmon	*Diospyros virginiana*	
West Indian chickweed	*Drymaria cordata*	
Swamp twinflower	*Dyschoriste humistrata*	
Yerba de-tago	*Eclipta alba*	
Tall elephantsfoot	*Elephantopus elatus*	
Carolina scalystem	*Elytraria caroliniensis* var. *caroliniensis*	
Florida tasselflower	*Emilia fosbergii*	
Lilac tassel flower	*Emilia sonchifolia*	
Fireweed	*Erechtites hieraciifolius*	
Southern fleabane	*Erigeron quercifolius*	
Prairie fleabane	*Erigeron strigosus*	
Fragrant eryngo	*Eryngium aromaticum*	
Baldwin's eryngo	*Eryngium baldwinii*	

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Snakeroot	*Eryngium prostratum*	
Rattlesnake master	*Eryngium yuccifolium*	
Southeastern coralbean	*Erythrina herbacea*	
Hearts-a-busting	*Euonymus americana*	
Dogfennel	*Eupatorium capillifolium*	
Yankeeweed	*Eupatorium compositifolium*	
Mohr's thoroughwort	*Eupatorium mohrii*	
False hoarhound	*Eupatorium rotundifolium*	
Slender flattopped goldenrod	*Euthamia caroliniana*	
Pop ash; Carolina ash	*Fraxinus caroliniana*	
Pumpkin ash	*Fraxinus pensylvanica*	
Drug fumitory	*Fumaria officinalis*	
Elliott's milkpea	*Galactia elliottii*	
Soft milkpea	*Galactia mollis*	
Downy milkpea	*Galactia regularis*	
Eastern milkpea	*Galactia volubilis*	
Hairy bedstraw	*Galium pilosum*	
Stiff marsh bedstraw	*Galium tinctorium*	
Garberia	*Garberia heterophylla*	SC, RNC
Dwarf huckleberry	*Gaylussacia dumosa*	
Blue huckleberry	*Gaylussacia frondosa* var. *tomentosa*	
Yellow jessamine	*Gelsemium sempervirens*	
Wild geranium:Cranesbill	*Geranium carolinianum*	
Water locust	*Gleditsia aquatica*	
Angular fruit milkvine	*Gonolobus suberosus*	MH, HH
Loblolly-bay	*Gordonia lasianthus*	
Rough hedge-hyssop	*Gratiola hispida*	
Scrub hedge-hyssop	*Gratiola virginiana*	
Witch hazel	*Hamamelis virginiana*	
Innocence	*Hedyotis procumbens*	
Hedyotis	*Hedyotis uniflora*	
Pinebarren frostweed	*Helianthemum corymbosum*	
Florida scrub frostweed	*Helianthemum nashii*	
Camphorweed	*Heterotheca subaxillaris*	
Hawkweed	*Hieracium gronovil*	
Round-leaf bluet	*Houstonia procumbens*	
Manyflower Marshpennywort	*Hydrocotyle umbellata*	
Whorled marsh pennywort	*Hydrocotyle verticillata*	
Sky flower	*Hydrolea corymbosum*	
Indian swampweed	*Hygrophila polysperma*	
St. John's-wort	*Hypericum cistifolium*	
St. Andrew's-cross	*Hypericum hypericoides*	
Dwarf St. John's-wort	*Hypericum mutilum*	
St. John's-wort	*Hypericum myrtifolium*	
Atlantic St. John's-wort	*Hypericum reductum*	
Fourpetal St. John's-wort	*Hypericum tetrapetalum*	

* Non-native Species

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Musky mint; Cluster bushmint	*Hyptis alata*	
Tropical bittermint *	*Hyptis mutabilis*	
John Charles bittermint *	*Hyptis verticillata*	
Carolina holly	*Ilex ambigua*	
Dahoon holly	*Ilex cassine*	
Possum haw; Deciduous holly	*Ilex decidua*	
Inkberry; Gallberry	*Ilex glabra*	
American holly	*Ilex opaca*	
Hairy indigo*	*Indigofera hirsuta*	
Tievine	*Ipomoea cordatotriloba*	
Cypress vine*	*Ipomoea quamoclit*	
Little bell*	*Ipomoea triloba*	
Juba's bush	*Iresine diffusa*	
Virginia-willow	*Itea virginica*	
Looseflower waterwillow	*Justicia ovata*	
Japanese clover *	*Kummerowia striata*	
Wild lettuce	*Lactuca floridana*	
Grass-leaf lettuce	*Lactuca graminifolia*	
Spotted duckweed*	*Landoltia punctata*	
Shrub verbena*	*Lantana camara*	
Nodding pinweed	*Lechea cernua*	SC, RNC
Deckert's pinweed	*Lechea deckertii*	
Thymeleaf pinweed	*Lechea minor*	
Pineland pinweed	*Lechea sessiliflora*	
Piedmont pinweed	*Lechea torreyi*	
Virginia pepperweed	*Lepidium virginicum*	
Lead tree*	*Leucaena leucocephala*	
Chapman's blazing-star	*Liatris chapmanii*	
Slender blazing-star	*Liatris gracilis*	
Scrub blazing-star	*Liatris ohlingerae*	
Shortleaf blazing-star	*Liatris tenuifolia* var. *quadriflora*	
Gopher apple	*Licania michauxii*	
Canadian toadflax	*Linaria canadensis*	
Malaysian false pimpernel *	*Lindernia crustacea*	
Savannah false-pimpernel	*Lindernia grandiflora*	
Sweetgum	*Liquidambar styraciflua*	
Cardinal flower	*Lobelia cardinalis*	
Coral honeysuckle	*Lonicera sempervirens*	
Upright primrose-willow	*Ludwigia decurrens*	
River primrose-willow	*Ludwigia leptocarpa*	
Seaside primrosewillow	*Ludwigia maritima*	
Mexican primrosewillow	*Ludwigia octovalvis*	
Marsh primrose-willow	*Ludwigia palustris*	
Peruvian primrosewillow*	*Ludwigia peruviana*	
Hairy primrose-willow	*Ludwigia pilosa*	
Creeping primrose-willow	*Ludwigia repens*	

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Shrubby primrose-willow	*Ludwigia suffruticosa*	
Skyblue lupine	*Lupinus diffusus*	
Water hoarhound	*Lycopus rubellus*	
Rusty staggerbush	*Lyonia ferruginea*	
Coastalplain staggerbush	*Lyonia fruticosa*	
Maleberry	*Lyonia ligustrina* var. *foliosiflora*	
Fetterbush	*Lyonia lucida*	
Southern magnolia	*Magnolia grandiflora*	
Sweetbay	*Magnolia virginiana*	
Snow squarestem	*Melanthera nivea*	
Chinaberry*	*Melia azedarach*	
Indian sweetclover	*Melilotus indicus*	
Creeping cucumber	*Melothria pendula*	
Shade mulflower	*Micranthemum glomeratum*	
Florida Key hempvine	*Mikania cordifolia*	
Climbing hempvine	*Mikania scandens*	
American partridgeberry	*Mitchella repens*	
Miterwort	*Mitreola petiolata*	
Indian chickweed	*Mollugo verticillata*	
Balsam pear*	*Momordica charantia*	
Spotted beebalm	*Monarda punctata*	
Red mulberry	*Morus rubra*	
Naked-stem dewflower *	*Murdannia nudiflora*	
Wax myrtle	*Myrica cerifera*	
Spatterdock	*Nuphar advena*	
Lotus lily; American lotus	*Nuphar lutea* subsp. *advena*	
Swamp tupelo	*Nyssa sylvatica* var. *biflora*	
Pine-barren white-top aster	*Oclemena reticulata*	
Sea beach eveningprimrose	*Oenothera humifusa*	
Cut-leaf evening primrose	*Oenothera laciniata*	
Flat-top mille graines	*Oldenlandia corymbosa*	
Clustered mille graines	*Oldenlandia uniflora*	
Prickly pear	*Opuntia humifusa*	
Common yellow woodsorrel	*Oxalis corniculata*	
Butterweed	*Packera glabella*	
Skunk-vine*	*Paederia foetida*	
Feay's palafox	*Palafoxia feayi*	
Florida pellitory	*Parietaria floridana*	
Virginia creeper	*Parthenocissus quinquefolia*	
Purple passionflower	*Passiflora incarnata*	
Low peperomia	*Peperomia humilis*	
Redbay	*Persea borbonia*	
Silk bay	*Persea borbonia* var. *humilis*	
Swamp bay	*Persea palustris*	
Mistletoe	*Phoradendron serotinum*	
Red chokeberry	*Photinia pyrifolia*	

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Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Chamber-bitter *	*Phyllanthus urinaria*	
Cut-leaf ground cherry	*Physalis angulata*	
Slenderleaf false dragonhead	*Physostegia leptophylla*	
Pokeweed	*Phytolacca americana*	
Wild pennyroyal	*Piloblephis rigida*	
Narrowleaf goldenaster	*Pityopsis graminifolia*	
Virginia plantain	*Plantago virginica*	
Stinking camphorweed	*Pluchea foetida*	
Rosy camphorweed	*Pluchea longifolia*	
Scrubby camphorweed	*Pluchea odorata*	
Milkwort	*Polygala grandiflora*	
October flower	*Polygonella polygama*	
Large-flower jointweed	*Polygonella robusta*	
Swamp smartweed	*Polygonum hydropiperoides*	
Dotted smartweed	*Polygonum punctatum*	
Smartweed	*Polygonum setaceum*	
Rustweed	*Polypremum procumbens*	
Parguayan purslane*	*Portulaca amilis*	
Pink purslane	*Portulaca pilosa*	
Marsh mermaidweed	*Proserpinaca palustris*	
Carolina laurel-cherry	*Prunus caroliniana*	
Scrub plum	*Prunus geniculata*	RNC
Black cherry	*Prunus serotina*	
Flatwoods plum	*Prunus umbellata*	
Sweet everlasting	*Pseudognaphalium obtusifolium*	
Blackroot	*Pterocaulon pycnostachyum*	
Mock bishopsweed	*Ptilimnium capillaceum*	
Chapman's oak	*Quercus chapmanii*	
Sand live oak	*Quercus geminata*	
Bluejack oak	*Quercus incana*	
Laurel oak; diamond oak	*Quercus laurifolia*	
Myrtle oak	*Quercus myrtifolia*	
Water oak	*Quercus nigra*	
Live oak	*Quercus virginiana*	
Pale meadow beauty	*Rhexia mariana*	
Meadow beauty	*Rhexia petiolata*	
Swamp honeysuckle	*Rhododendron viscosum*	
Winged sumac	*Rhus copallinum*	
One-leaf rhynchosia	*Rhynchosia michauxii*	
Tropical Mexican-clover*	*Richardia brasiliensis*	
Rough Mexican-clover*	*Richardia scabra*	
Rouge plant	*Rivina humilis*	
Blackberry	*Rubus argutus*	
Sand blackberry	*Rubus cuneifolius*	
Southern dewberry	*Rubus trivialis*	
Carolina wild petunia	*Ruellia caroliniensis*	

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Heartwing dock	*Rumex hastatulus*	
Swamp dock	*Rumex verticillatus*	
Shortleaf rosegentian	*Sabatia brevifolia*	
Coastal rosegentian	*Sabatia calycina*	
Lanceleaf rosegentian	*Sabatia difformis*	
Carolina willow	*Salix caroliniana*	
Lyre-leaf sage	*Salvia lyrata*	
Florida key sedge	*Salvia riparia*	
Elderberry	*Sambucus nigra* subsp. *canadensis*	
Water pimpernel	*Samolus ebracteatus*	
Pineland pimpernel	*Samolus verlanderi* var. *parviflorus*	
Snakeroot	*Sanicula canadensis*	
Lizard's-tail	*Saururus cernuus*	
Brazilian pepper*	*Schinus terebinthifolius*	
Sweetbroom; licorice-weed	*Scoparia dulcis*	
Florid scrub skullcap	*Scutellaria arenicola*	
Rough skullcap	*Scutellaria integrifolia*	
Sicklepod *	*Senna obtusifolia*	
Coffee senna*	*Senna occidentalis*	
White-topped aster	*Seriocarpus tortifolius*	
Bladderpod	*Sesbania vesicaria*	
Indian hemp	*Sida rhombifolia*	
Common wireweed	*Sida ulmifolia*	
Florida bully	*Sideroxylon reclinatum*	
Scrub-buckthorn	*Sideroxylon tenax*	
Common nightshade	*Solanum americanum*	
Soda-apple; Cockroach-berry	*Solanum capsicoides*	
Tropical soda-apple*	*Solanum viarum*	
Hollow goldenrod	*Solidago fistulosa*	
Wand goldenrod	*Solidago stricta*	
Spiny-leaf sow-thistle*	*Sonchus asper*	
Florida hedgenettle	*Stachys floridana*	
Common chickweed	*Stellaria media*	
Queen's delight	*Stillingia sylvatica*	
Pineland scalypink	*Stipulicida setacea*	
American snowbell	*Styrax americana*	
Climbing aster	*Symphyotrichum carolinianum*	
Rice-button aster	*Symphyotrichum dumosum*	
Saltmarsh aster	*Symphyotrichum subulatum*	
Wavyleaf aster	*Symphyotrichum undulatum*	
Eastern poison ivy	*Toxicodendron radicans*	
Marsh St. John's wort	*Triadenum virginicum*	
Forked bluecurls	*Trichostema dichotomum*	
White clover	*Trifolium repens*	
Five-stamen burrbark*	*Triumfetta pentandra*	
American elm; Florida elm	*Ulmus americana*	

* Non-native Species

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Caesarweed*	*Urena lobata*	
Sparkleberry	*Vaccinium arboreum*	
Highbush blueberry	*Vaccinium corymbosum*	
Shiny blueberry	*Vaccinium myrsinites*	
Deerberry	*Vaccinium stamineum*	
Florida valerian	*Valeriana scandens*	
Brazilian vervain	*Verbena brasiliensis*	
Frostweed	*Verbesina virginica*	
Possum haw	*Viburnum nudum*	
Walter's viburnum	*Viburnum obovatum*	
Hairypod cowpea	*Vigna luteola*	
Long-leaf violet	*Viola lanceolata*	
Swamp white violet	*Viola primulifolia*	
Florida violet	*Viola sororia*	
Summer grape	*Vitis aestivalis*	
Muscadine; fox grape	*Vitis rotundifolia*	
Southern rockbell	*Wahlenbergia marginata*	
Tallowwood; hog-plum	*Ximenia americana*	
Oriental false hawksbeard*	*Youngia japonica*	
Hercules'-club	*Zanthoxylum clava-herculis*	

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)

FISH

Yellow bullhead	*Ameiurus natalis*	BST, IAP
Brown bullhead	*Ameiurus nebulosus*	BST, IAP
Walking catfish*	*Clarias batrachus*	BST, IAP
American gizzard shad	*Dorosoma cepedianum*	BST
Threadfin shad	*Dorosoma petenense*	BST
Everglades pygmy sunfish	*Elassoma evergladei*	BST, FS
Lake chubsucker	*Erimyzon sucetta*	IAP
Swamp darter	*Etheostoma fusiforme*	IAP
Golden topminnow	*Fundulus chrysotus*	BST
Seminole killifish	*Fundulus seminolis*	IAP
Eastern mosquitofish	*Gambusia holbrooki*	IAP, BST
Least killifish	*Heterandria formosa*	IAP
Brown hoplo*	*Hoplosternum littorale*	IAP
Suckermouth catfish*	*Hypostomus sp.*	IAP
Channel catfish	*Ictalurus punctatus*	BST, IAP
Flagfish	*Jordanella floridae*	IAP
Florida gar	*Lepisosteus platyrhincus*	BST
Warmouth	*Lepomis gulosus*	BST, IAP
Bluegill	*Lepomis macrochirus*	BST, IAP
Dollar sunfish	*Lepomis marginatus*	BST
Redear sunfish	*Lepomis microlophus*	BST, IAP
Spotted sunfish	*Lepomis punctatus*	BST, IAP
Bluefin killifish	*Lucania goodei*	IAP
Largemouth bass	*Micropterus salmoides*	BST
Pugnose minnow	*Notropis emiliae*	BST, IAP
Taillight shiner	*Notropis maculatus*	BST
Coastal shiner	*Notropis petersoni*	BST
Blue tilapia*	*Oreochromis aureus*	IAP
Sailfin molly	*Poecilia latipinna*	BST, IAP
Black crappie	*Pomoxis nigromaculatus*	BST, IAP

AMPHIBIANS

Florida cricket frog	*Acris gryllus dorsalis*	HH
Oak toad	*Anaxyrus quercicus*	SFW
Southern toad	*Anaxyrus terrestris*	IAP
Greenhouse frog*	*Eleutherodactylus planirostris*	MTC
Eastern narrowmouth toad	*Gastrophryne carolinensis*	HH, BF
Green treefrog	*Hyla cinerea*	MEH, HH, BF
Squirrel treefrog	*Hyla squirella*	MEH, HH, BF
Gopher frog	*Lithobates capito*	SFW, RNC, SIP
Bullfrog	*Lithobates catesbeianus*	IAP
Pig frog	*Lithobates grylio*	IAP
Southern leopard frog	*Lithobates sphenocephalus*	HH, BF
Eastern spadefoot	*Scaphiopus holbrookii*	HH, BF

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)

REPTILES

Florida cottonmouth	*Agkistrodon piscivorus conanti*	BF, FS
American alligator	*Alligator mississippiensis*	BST, IAP
Green anole	*Anolis carolinensis*	HH
Cuban brown anole*	*Anolis sagrei*	MTC
Florida softshell	*Apalone ferox*	BST, FS, IAP
Six-lined racerunner	*Aspidoscelis sexlineata*	SC, RNC, SFW
Florida snapping turtle	*Chelydra serpentina osceola*	BST
Southern black racer	*Coluber constrictor priapus*	MTC
Eastern diamondback rattlesnake	*Crotalus adamanteus*	SC, RNC, SFW
Southern ring-necked snake	*Diadophis punctatus punctatus*	MEH
Eastern indigo snake	*Drymarchon couperi*	SC
Gopher tortoise	*Gopherus polyphemus*	SFW, RNC, SIP
Striped mud turtle	*Kinosternon baurii*	HH
Eastern kingsnake	*Lampropeltis getula getula*	MEH
Eastern coral snake	*Micrurus fulvius*	MEH
Florida water snake	*Nerodia fasciata pictiventris*	BST, IAP
Florida green water snake	*Nerodia floridana*	BST, IAP
Eastern corn snake	*Pantherophis guttatus*	MEH,SFW
Common five-lined skink	*Plestiodon fasciatus*	SFW, RNC, MEH
Southeastern five-lined skink	*Plestiodon inexpectatus*	SFW, RNC
Peninsula cooter	*Pseudemys peninsularis*	BST
Argentine black and white tegu*	*Salvator merianae*	SIP, DV
Ground skink	*Scincella lateralis*	RNC, XH
Swamp snake	*Seminatrix pygaea*	BF, FS
Eastern garter snake	*Thamnophis sirtalis sirtalis*	MEH

BIRDS

Red-winged blackbird	*Agelaius phoeniceus*	IAP
Ruby-throated hummingbird	*Archilochus colubris*	MTC
Tufted titmouse	*Baeolophus bicolor*	MEH, HH
Cedar waxwing	*Bombycilla cedrorum*	OF
Northern cardinal	*Cardinalis cardinalis*	MTC
Northern flicker	*Colaptes auratus*	MTC
Gray catbird	*Dumetella carolinensis*	MEH
Florida sandhill crane	*Grus canadensis pratensis*	SIP
Loggerhead shrike	*Lanius ludovicianus*	SIP
Northern mockingbird	*Mimus polyglottos*	MTC
Wood stork	*Mycteria americana*	BF, FS, BST, IAP
Great crested flycatcher	*Myiarchus crinitus*	MTC
Indigo bunting	*Passerina cyanea*	MEH, HH, SHF
Eastern towhee	*Pipilo erythrophthalmus*	SFW

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Summer tanager	*Piranga rubra*	MEH, SHF
Purple martin	*Progne subis*	OF
Ruby-crowned kinglet	*Regulus calendula*	MEH, SHF
Eastern bluebird	*Sialia sia*	SIP
Brown-headed nuthatch	*Sitta pusilla*	SHF
Eastern meadowlark	*Sturnella magna*	SIP
European starling*	*Sturnus vulgaris*	SIP, DV
Brown thrasher	*Toxostoma rufum*	MEH, SHF, SFW
Eastern kingbird	*Tyrannus tyrannus*	MTC
White-eyed vireo	*Vireo griseus*	BG, BF
Red-eyed vireo	*Vireo olivaceus*	BG, BF
Blue-headed vireo	*Vireo solitarius*	BG, BF
American pipit	*Anthus rubescens*	SIP
Chimney swift	*Bombycilla cedrorum*	OF
American crow	*Corvus brachyrhynchos*	MTC
Fish crow	*Corvus ossifragus*	MTC
Blue jay	*Cyanocitta cristata*	MTC
Brown-headed cowbird	*Molothrus ater*	SIP
Boat-tailed grackle	*Quiscalus major*	MTC
Common grackle	*Quiscalus quiscula*	MTC
Wood duck	*Aix sponsa*	IAP, BST
Northern pintail	*Anas acuta*	IAP, BST
Blue-winged teal	*Anas discors*	IAP, BST
Mottled duck	*Anas fulvigula*	IAP, BST
Anhinga	*Anhinga anhinga*	IAP, BST
Muscovy duck	*Cairina moschata*	IAP, BST
Black-bellied whistling duck	*Dendrocygna autumnalis*	IAP, BST
Common moorhen	*Gallinula chloropus -ck*	IAP, BST
Double-crested cormorant	*Phalacrocorax auritus*	IAP, BST
Pied-billed grebe	*Podilymbus podiceps*	IAP, BST
Rock dove	*Columba livia*	SIP, DV
Common ground-dove	*Columbina passerina*	MTC
Eurasian collared dove	*Streptopelia decaocto*	MTC
White-winged dove	*Zenaida asiatica*	MTC
Mourning dove	*Zenaida macroura*	MTC
Blue-gray gnatcatcher	*Polioptila caerulea*	MTC
Cooper's hawk	*Accipiter cooperii*	SIP
Sharp-shinned hawk	*Accipiter striatus*	SIP
Red-tailed hawk	*Buteo jamaicensis*	OF
Red-shouldered hawk	*Buteo lineatus*	BG
Northern harrier	*Circus cyaneus*	IAP
Swallow-tailed kite	*Elanoides forficatus*	SIP
American kestrel	*Falco sparverius*	SIP
Southeasterm American kestrel	*Falco sparverius paulus*	SIP
Bald eagle	*Haliaeetus leucocephalus*	MTC
Osprey	*Pandion haliaetus*	SIP, UC

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Belted kingfisher	*Megaceryle alcyon*	IAP, BST
Great horned owl	*Bubo virginianus*	MEH, BG, BF, HH
Eastern screech-owl	*Megascops asio*	BF, SHF
Barred owl	*Strix varia*	HH, BF
Barn owl	*Tyto alba*	SHF
Great egret	*Ardea alba*	IAP, BST
Great blue heron	*Ardea herodias*	IAP, BST
American bittern	*Botaurus lentiginosus*	IAP, BST
Cattle egret	*Bubulcus ibis*	SIP
Green heron	*Butorides virescens*	IAP, BST
Little blue heron	*Egretta caerulea*	IAP, BST
Snowy egret	*Egretta thula*	IAP, BST
Tricolored heron	*Egretta tricolor*	IAP, BST
Black-crowned night-heron	*Nycticorax nycticorax*	IAP, BST
White ibis	*Eudocimus albus*	IAP, BST
Least bittern	*Ixobrychus exilis*	IAP, BST
American white pelican	*Pelecanus erythrorhynchos*	OF
Brown pelican	*Pelecanus occidentalis*	OF
Roseate spoonbill	*Platalea ajaja*	IAP, BST, BF
Glossy ibis	*Plegadis falcinellus*	IAP, BST, BF
Chuck-will's-widow	*Antrostomus carolinensis*	SIP, MEH
Common nighthawk	*Chordeiles minor*	MEH
Northern bobwhite	*Colinus virginianus*	SIP, PP, MEH
Bobolink	*Dolichonyx oryzivorus*	SIP
Wild turkey	*Meleagris gallopavo*	SIP, MEH
Limpkin	*Aramus guarauna*	IAP, BST
American coot	*Fulica americana*	IAP, BST
Common gallinule	*Gallinula galeata*	IAP, BST
Black rail	*Laterallus jamaicensis*	IAP, BST
Purple gallinule	*Porphyrio martinicus*	IAP, BST
King rail	*Rallus elegans*	IAP, BST
Least sandpiper	*Calidris minutilla*	IAP
Killdeer	*Charadrius vociferus*	SIP
Gull-billed tern	*Gelochelidon nilotica*	OF
Black-necked stilt	*Himantopus mexicanus*	IAP
Caspian tern	*Hydroprogne caspia*	OF
Ring-billed gull	*Larus delawarensis*	OF
Laughing gull	*Leucophaeus atricilla*	OF
Black-crowned night heron	*Nycticorax nycticorax*	IAP, BST
Black skimmer	*Rynchops niger*	OF
Common tern	*Sterna hirundo*	OF
Least tern	*Sternula antillarum*	OF
Royal tern	*Thalasseus maximus*	OF
Sandwich tern	*Thalasseus sandvicensis*	OF
Lesser yellowlegs	*Tringa flavipes*	IAP
Greater yellowlegs	*Tringa melanoleuca*	IAP

* Non-native Species

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Solitary sandpiper	*Tringa solitaria*	IAP
Bachman's sparrow	*Aimophila aestivalis*	SHF, MEH
Savannah sparrow	*Passerculus sandwichensis*	SHF, MEH
Barn swallow	*Hirundo rustica*	OF
Northern rough-winged swallow	*Stelgidopteryx serripennis*	OF
Tree swallow	*Tachycineta bicolor*	OF
Yellow-billed cuckoo	*Coccyzus americanus*	HH, BF
Turkey vulture	*Cathartes aura*	OF
Black vulture	*Coragyps atratus*	OF
Common yellowthroat	*Geothlypis trichas*	MEH, SHF, HH
Black and white warbler	*Mniotilta varia*	MEH, SHF, HH
Northern waterthrush	*Parkesia noveboracensis*	BST, IAP
Northern parula	*Setophaga americana*	MEH, SHF, HH
Prairie warbler	*Setophaga discolor*	MEH, SHF, HH
Yellow-throated warbler	*Setophaga dominica*	MEH, SHF, HH
Palm warbler	*Setophaga palmarum*	MEH, SHF, HH
Yellow warbler	*Setophaga petechia*	MEH, SHF, HH
Pine warbler	*Setophaga pinus*	MEH, SHF, HH
American redstart	*Setophaga ruticilla*	MEH, SHF, HH
Pileated woodpecker	*Dryocopus pileatus*	MEH, SHF, HH
Red-bellied woodpecker	*Melanerpes carolinus*	MEH, SHF, HH
Red-headed woodpecker	*Melanerpes erythrocephalus*	MEH, SHF, HH
Downy woodpecker	*Picoides pubescens*	MEH, SHF, HH
Carolina wren	*Thryothorus ludovicianus*	MTC
House wren	*Troglodytes aedon*	SHF

MAMMALS

Southern short-tailed shrew	*Blarina carolinensis*	MEH, SHF
Dog	*Canis familiaris*	DV, SIP
Coyote	*Canis latrans*	SIP
Least shrew	*Cryptotis parva*	MEH, SHF
Nine-banded armadillo	*Dasypus novemcinctus*	MTC
Virginia opossum	*Didelphis virginiana*	MTC
Domestic cat*	*Felis catus*	DV
Southeastern pocket gopher	*Geomys pinetis*	SIP
River otter	*Lontra canadensis*	BST
Bobcat	*Lynx rufus*	MEH
White-tailed deer	*Odocoileus virginianus*	MTC
Cotton mouse	*Peromyscus gossypinus*	MEH
Florida mouse	*Podomys floridanus*	SFW
Raccoon	*Procyon lotor*	MTC
Gray squirrel	*Sciurus carolinensis*	MTC
Sherman's fox squirrel	*Sciurus niger shermanii*	MH, SHF
Hispis cotton rat	*Sigmodon hispidus*	MTC

* Non-native Species

Alafia River State Park Animals

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Wild hog*	*Sus scrofa*	MTC
Eastern cottontail	*Sylvilagus floridanus*	SC, MEH, XH
Marsh rabbit	*Sylvilagus palustris*	HH
Gray fox	*Urocyon cinereoargenteus*	MTC
Red fox*	*Vulpes vulpes*	MTC

* Non-native Species

TERRESTRIAL

Beach Dune....BD
Coastal Berm....CB
Coastal Grassland....CG
Coastal Strand....CS
Dry Prairie....DP
Keys Cactus Barren....KCB
Limestone Outcrop....LO
Maritime Hammock....MAH
Mesic Flatwoods....MF
Mesic Hammock....MEH
Pine Rockland....PR
Rockland Hammock....RH
Sandhill....SH
Scrub....SC
Scrubby Flatwoods....SCF
Shell Mound....SHM
Sinkhole....SK
Slope Forest....SPF
Upland Glade....UG
Upland Hardwood Forest....UHF
Upland Mixed Woodland....UMW
Upland Pine....UP
Wet Flatwoods....WF
Xeric Hammock....XH

PALUSTRINE

Alluvial Forest....AF
Basin Marsh....BM
Basin Swamp....BS
Baygall....BG
Bottomland Forest....BF
Coastal Interdunal Swale....CIS
Depression Marsh....DM
Dome Swamp....DS
Floodplain Marsh....FM
Floodplain Swamp....FS
Glades Marsh....GM
Hydric Hammock....HH
Keys Tidal Rock Barren....KTRB
Mangrove Swamp....MS
Marl Prairie....MP
Salt Marsh....SAM
Seepage Slope....SSL
Shrub Bog....SHB
Slough....SLO
Slough Marsh....SLM
Strand Swamp....STS

Wet Prairie ..... WP

LACUSTRINE

Clastic Upland Lake ..... CULK
Coastal Dune Lake ..... CDLK
Coastal Rockland Lake ..... CRLK
Flatwoods/Prairie ..... FPLK
Marsh Lake ..... MLK
River Floodplain Lake..... RFLK
Sandhill Upland Lake ..... SULK
Sinkhole Lake ..... SKLK
Swamp Lake..... SWLK

RIVERINE

Alluvial Stream ..... AST
Blackwater Stream ..... BST
Seepage Stream ..... SST
Spring-run Stream ..... SRST

SUBTERRANEAN

Aquatic Cave ..... ACV
Terrestrial Cave ..... TCV

ESTUARINE

Algal Bed ..... EAB
Composite Substrate ..... ECPS
Consolidated Substrate ..... ECNS
Coral Reef ..... ECR
Mollusk Reef..... EMR
Octocoral Bed ..... EOB
Seagrass Bed ..... ESGB
Sponge Bed..... ESPB
Unconsolidated Substrate..... EUS
Worm Reef..... EWR

MARINE

Algal Bed ..... MAB
Composite Substrate ..... MCPS
Consolidated Substrate ..... MCNS
Coral Reef ..... MCR
Mollusk Reef ..... MMR
Octocoral Bed ..... MOB
Seagrass Bed ..... MSGB
Sponge Bed ..... MSPB
Unconsolidated Substrate ..... MUS
Worm Reef ..... MWR

ALTERED LANDCOVER TYPES

Abandoned field/ Abandoned pasture ..... AFP
Agriculture ..... AG
Artificial pond ..... AP
Borrow Area ..... BA
Canal/ditch ..... CD
Clearcut pine plantation ..... CPP
Clearing CL
Developed ..... DV
Impoundment ..... IM
Invasive exotic monoculture ..... IEM
Pasture - improved ..... PI
Pasture - semi-improved ..... PSI
Pine plantation ..... PP
Restoration natural community ..... RNC
Road ..... RD
Spoil area ..... SA
Successional hardwood forest ..... SHF
Utility corridor ..... UC

MISCELLANEOUS

Many Types of Communities ..... MTC
Overflying ..... OF

Addendum 5 — Imperiled Species Ranking Definitions

The Nature Conservancy and the Natural Heritage Program Network (of which FNAI is a part) define an element as any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave or other ecological feature. An element occurrence (EO) is a single extant habitat that sustains or otherwise contributes to the survival of a population or a distinct, self-sustaining example of a particular element.

Using a ranking system developed by The Nature Conservancy and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks to each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element occurrences, estimated abundance (number of individuals for species; area for natural communities), range, estimated adequately protected EOs, relative threat of destruction, and ecological fragility.

Federal and State status information is from the U.S. Fish and Wildlife Service; and the Florida Fish and Wildlife Conservation Commission (animals), and the Florida Department of Agriculture and Consumer Services (plants), respectively.

FNAI GLOBAL RANK DEFINITIONS

G1 ..... Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or fabricated factor.

G2 ..... Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.

G3 ..... Either very rare or local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.

G4 ..... apparently secure globally (may be rare in parts of range)

G5 ..... demonstrably secure globally

GH ..... of historical occurrence throughout its range may be rediscovered (e.g., ivory-billed woodpecker)

GX ..... believed to be extinct throughout range

GXC ..... extirpated from the wild but still known from captivity or cultivation

G#? ..... Tentative rank (e.g.,G2?)

G#G# ..... range of rank; insufficient data to assign specific global rank (e.g., G2G3)

G#T# ..... rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1)

G#Q..... rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q)

G#T#Q..... same as above, but validity as subspecies or variety is questioned.

GU .....due to lack of information, no rank or range can be assigned (e.g., GUT2).
G?.....Not yet ranked (temporary)
S1.....Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
S2.....Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
S3.....Either very rare or local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.
S4.....apparently secure in Florida (may be rare in parts of range)
S5.....demonstrably secure in Florida
SH .....of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
SX.....believed to be extinct throughout range
SA.....accidental in Florida, i.e., not part of the established biota
SE.....an exotic species established in Florida may be native elsewhere in North America
SN .....regularly occurring but widely and unreliably distributed; sites for conservation hard to determine
SU .....due to lack of information, no rank or range can be assigned (e.g., SUT2).
S?.....Not yet ranked (temporary)
N .....Not currently listed, nor currently being considered for listing, by state or federal agencies.

LEGAL STATUS

FEDERAL
(Listed by the U. S. Fish and Wildlife Service - USFWS)

LE .....Listed as Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species that is in danger of extinction throughout all or a significant portion of its range.
PE.....Proposed for addition to the List of Endangered and Threatened Wildlife and Plants as Endangered Species.
LT .....Listed as Threatened Species. Defined as any species that is likely to become an endangered species within the near future throughout all or a significant portion of its range.
PT.....Proposed for listing as Threatened Species.
C .....Candidate Species for addition to the list of Endangered and Threatened Wildlife and Plants. Defined as those species for which the USFWS currently has on file sufficient information on biological vulnerability and threats to support proposing to list the species as endangered or threatened.

E(S/A) ..... Endangered due to similarity of appearance.
T(S/A) ..... Threatened due to similarity of appearance.
EXPE, XE..... Experimental essential population. A species listed as experimental and essential.
EXPN, XN .... Experimental non-essential population. A species listed as experimental and non-essential. Experimental, nonessential populations of endangered species are treated as threatened species on public land, for consultation purposes.

STATE

ANIMALS .. (Listed by the Florida Fish and Wildlife Conservation Commission - FWC)

FE ..... Federally-designated Endangered
FT ..... Federally-designated Threatened
FXN..... Federally-designated Threatened Nonessential Experimental Population
FT(S/A) ..... Federally-designated Threatened species due to similarity of appearance
ST..... Listed as Threatened Species by the FWC. Defined as a species, subspecies, or isolated population, which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat, is decreasing in area at a rapid rate and therefore is destined or very likely to become an endangered species within the near future.
SSC..... Listed as Species of Special Concern by the FWC. Defined as a population which warrants special protection, recognition or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance or substantial human exploitation that, in the near future, may result in its becoming a threatened species.

PLANTS .... (Listed by the Florida Department of Agriculture and Consumer Services - FDACS)

LE ..... Listed as Endangered Plants in the Preservation of Native Flora of Florida Act. Defined as species of plants native to the state that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973,as amended.
LT ..... Listed as Threatened Plants in the Preservation of Native Flora of Florida Act. Defined as species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in such number as to cause them to be endangered.

Addendum 6 – Cultural Information

These procedures apply to state agencies, local governments, and non-profits that manage state-owned properties.

A. General Discussion

Historic resources are both archaeological sites and historic structures. Per Chapter 267, Florida Statutes, '*Historic property' or 'historic resource' means any prehistoric district, site, building, object, or other real or personal property of historical, architectural, or archaeological value, and folklife resources. These properties or resources may include, but are not limited to, monuments, memorials, Indian habitations, ceremonial sites, abandoned settlements, sunken or abandoned ships, engineering works, treasure trove, artifacts, or other objects with intrinsic historical or archaeological value, or any part thereof, relating to the history, government, and culture of the state."*

B. Agency Responsibilities

Per State Policy relative to historic properties, state agencies of the executive branch must allow the Division of Historical Resources (Division) the opportunity to comment on any undertakings, whether these undertakings directly involve the state agency, i.e., land management responsibilities, or the state agency has indirect jurisdiction, i.e. permitting authority, grants, etc. No state funds should be expended on the undertaking until the Division has the opportunity to review and comment on the project, permit, grant, etc.

State agencies shall preserve the historic resources which are owned or controlled by the agency.

Regarding proposed demolition or substantial alterations of historic properties, consultation with the Division must occur, and alternatives to demolition must be considered.

State agencies must consult with Division to establish a program to location, inventory and evaluate all historic properties under ownership or controlled by the agency.

C. Statutory Authority

Statutory Authority and more in depth information can be found at:
http://www.flheritage.com/preservation/compliance/guidelines.cfm

D. Management Implementation

Even though the Division sits on the Acquisition and Restoration Council and approves land management plans, these plans are conceptual. Specific information regarding individual projects must be submitted to the Division for review and recommendations.

Managers of state lands must coordinate any land clearing or ground disturbing activities with the Division to allow for review and comment on the proposed project. Recommendations may include but are not limited to: approval of the project as submitted, cultural resource assessment survey by a qualified professional archaeologist, modifications to the proposed project to avoid or mitigate potential adverse effects.

Projects such as additions, exterior alteration, or related new construction regarding historic structures must also be submitted to the Division of Historical Resources for review and comment by the Division's architects. Projects involving structures fifty years of age or older, must be submitted to this agency for a significance determination. In rare cases, structures under fifty years of age may be deemed historically significant. These must be evaluated on a case by case basis.

Adverse impacts to significant sites, either archaeological sites or historic buildings, must be avoided. Furthermore, managers of state property should make preparations for locating and evaluating historic resources, both archaeological sites and historic structures.

E. Minimum Review Documentation Requirements

In order to have a proposed project reviewed by the Division, certain information must be submitted for comments and recommendations. The minimum review documentation requirements can be found at: http://www.flheritage.com/preservation/compliance/docs/minimum_review_documentation_requirements.pdf .

* * *

Questions relating to the treatment of archaeological and historic resources on state lands should be directed to:

Deena S. Woodward
Division of Historical Resources
Bureau of Historic Preservation
Compliance and Review Section
R. A. Gray Building
500 South Bronough Street
Tallahassee, FL 32399-0250

Phone: (850) 245-6425
Toll Free: (800) 847-7278
Fax: (850) 245-6435

The criteria to be used for evaluating eligibility for listing in the National Register of Historic Places are as follows:

1) Districts, sites, buildings, structures, and objects may be considered to have significance in American history, architecture, archaeology, engineering, and/or culture if they possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- **a)** are associated with events that have made a significant contribution to the broad patterns of our history; and/or
- **b)** are associated with the lives of persons significant in our past; and/or
- **c)** embody the distinctive characteristics of type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; and/or
- **d)** have yielded, or may be likely to yield, information important in prehistory or history.

2) Ordinarily cemeteries, birthplaces, or graves of historical figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; properties primarily commemorative in nature; and properties that have achieved significance within the past 50 years shall not be considered eligible for the *National Register*. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

- **a)** a religious property deriving its primary significance from architectural or artistic distinction or historical importance; or
- **b)** a building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or
- **c)** a birthplace or grave of an historical figure of outstanding importance if there is no appropriate site or building directly associated with his productive life; or
- **d)** a cemetery which derives its primary significance from graves of persons of transcendent importance, from age, distinctive design features, or association with historic events; or a reconstructed building, when it is accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and no other building or structure with the same association has survived; or a property primarily commemorative in intent, if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or
- **e)** a property achieving significance within the past 50 years, if it is of exceptional importance.

Restoration is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations and additions while preserving those portions or features that convey its historical, cultural or architectural values.

Stabilization is defined as the act or process of applying measures designed to reestablish a weather resistant enclosure and the structural stability of an unsafe or deteriorated property while maintaining the essential form as it exists at present.

Preservation is defined as the act or process of applying measures necessary to sustain the existing form, integrity and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

Addendum 7 — Timber Management Analysis

1. *Management Context and Best Management Practices*

Timber management at Alafia River State Park (Alafia River) is based on the desired future condition (DFC) of a management zone or natural community (NatCom) as determined by the DRP Unit Management Plans, along with guidelines developed by the FNAI. In most cases, the DFC will be closely related to the historic NatCom. However, it is important to note, that in areas where the historic community has been severely altered by past land use practices, the DFC may not always be the same as the historic NatCom. All timber management activities undertaken will adhere to or exceed the current Florida Silvicultural Best Management Practices (BMPs) and Florida Forestry Wildlife BMPs for State Imperiled Species. DRP shall take all measures necessary to protect water quality and wildlife species of concern while conducting timber management activities. DRP has contracted with a private sector, professional forest management firm to complete this timber assessment: F4 Tech.

2. *Purpose of Timber Management Activities*

Timber management activities may be conducted to help improve or maintain current conditions to achieve the associated DFC. Timber management will primarily be conducted in upland NatComs. Candidate upland NatCom types may include mesic flatwoods, wet flatwoods, sandhill, upland pine, and upland mixed woodland along with scrubby flatwoods, scrub, and altered landcover types where DFC has been established, i.e. pine plantations. There will likely be no scheduled timber management activities in historically hardwood-dominated or wetland NatCom types, e.g., upland hardwood forest, hydric hammock, and slope forest. In some circumstances, timber management may include the harvesting and removal of overstory invasive/exotic trees. Descriptions of community types are detailed in the in the Resource Management Component.

3. *Potential Silvicultural Treatments*

Several silvicultural treatments may be considered and utilized over the next ten years. The various types of timber harvests may include pine thinning, targeted hardwood overstory removal, and clearcutting. Silvicultural treatments will be selectively implemented to minimize potential impacts to water and soil resources, non-target vegetation, and wildlife (see BMPs). Depending upon the condition and marketability of the timber being manipulated, it is possible to generate revenue from the harvest. It is also possible the timber removal could be a cost to DRP. In all decisions, the mission of preserving and restoring natural communities will be the guiding factor.

Thinning is conducted to reduce the basal area (BA) or density of trees/stems in a stand to improve forest health and growth conditions for residual trees. Allowing trees more room to grow has the potential to increase tree and forest vigor, which helps mitigate the potential for damaging insect and disease outbreaks. Most tree harvesting/removals also increase sunlight reaching the forest floor and fine fuels that facilitate consistent fire return intervals and responses, which can benefit

groundcover vegetation abundance, species richness, and overall ecological diversity. The disruption of natural fire regimes and fire return intervals can often result in the need to remove undesirable or overstocked hardwood stems that currently occupy growing space in the canopy and sub-canopy. Clearcutting may be used to support restoration goals by removing off-site pine or hardwood species and is a precursor to establishing site-appropriate species. It can also be used to control insect infestations that are damaging or threatening to forest resources and ecosystem conditions.

On occasion, salvage cuts may need to be conducted to remove small volumes of wood damaged by fire, wind storm, insect or other natural causes. The decision to harvest the affected timber will depend on the threat to the surrounding stands, risk of collateral ecological damage, and the volume/value of the trees involved. For example, small, isolated lightning-strike and beetle kills are a natural part of a healthy ecosystem and normally would not be cut. However, if a drought caused the insect infestation to spread, the affected trees and buffer zone might have to be removed to prevent significant damage.

4. *Inventory Data and Potential Actions per Management Zone*

A total of 4,109 acres associated with three (3) upland NatCom types that are potential candidates for timber management were assessed. From June to July 2018, an inventory based on field plots was conducted across and within these areas to quantify overstory, midstory and understory conditions. Various park-level and NatCom-level summary statistics can be found in the following tables.

This timber assessment was based on management zone and NatCom boundary GIS data provided by DRP in September 2018. It is not intended to be prescriptive. Stakeholders and DRP staff are encouraged to view this timber assessment and inventory data as supplemental information for future consideration. Given the dynamic nature of property ownership and land management activities at Alafia River, together with the timeframe required to create or update a UMP, it is possible that some tabular data may be dated. Therefore, NatCom acreages and recent treatments that occurred after the September 2018 period may not be reflected in the following tables.

Table 1. General Summary Statistics	
Number of management zones	57
Upland natural community acres	4,109

Mesic Flatwoods (2,675.1 acres)

Longleaf pine (*Pinus palustris*) is the preferred overstory pine species in the region. The FNAI reference site in this region for mesic flatwoods contains longleaf pine at a basal area (BA) of 10 to 50 square feet per acre with non-pine at a density of 0 trees per acre (TPA). The following table shows the overstory condition for this natural community at Alafia River and target overstory condition for mesic flatwoods in this region

MZ ID	Mesic Flatwoods (Acres)	Current Average Overstory Conditions							Target Overstory Conditions	
		Pine BA (ft2/ac)	Pine TPA	Pine Volume (tons/ac)	Non-Pine BA (ft2/ac)	Non-Pine TPA	Non-Pine Volume (tons/ac)	Total Pine and Non-Pine Volume (tons/ac)	FNAI Reference Condition Pine BA Range (ft2/ac)	FNAI Reference Condition Non-Pine TPA Range
AR-02A	12.1	--	--	--	--	--	--	--	--	--
AR-02B	12.1	--	--	--	--	--	--	--	--	--
AR-03	0.3	--	--	--	--	--	--	--	--	--
AR-04A	0.3	--	--	--	--	--	--	--	--	--
AR-04C	12.3	--	--	--	--	--	--	--	--	--
AR-04D	21.0	0.0	0.0	0.0	65.0	112.0	24.3	24.3	10 - 50	0 - 0
AR-05A	18.0	--	--	--	--	--	--	--	--	--
AR-05B	25.7	15.0	21.5	10.8	25.0	33.1	0.0	10.8	10 - 50	0 - 0
AR-05C	7.5	--	--	--	--	--	--	--	--	--
AR-07	39.5	140.0	354.3	74.9	4.0	13.5	2.9	77.8	10 - 50	0 - 0
AR-08	6.5	--	--	--	--	--	--	--	--	--
AR-10	46.3	0.0	0.0	0.0	90.0	84.7	72.9	72.9	10 - 50	0 - 0
AR-11	6.7	5.0	2.3	4.6	40.0	114.1	20.2	24.8	10 - 50	0 - 0
AR-12	134.5	32.5	46.2	20.4	38.8	31.7	4.3	24.7	10 - 50	0 - 0
AR-13	144.1	87.5	125.6	63.3	0.0	0.0	0.0	63.3	10 - 50	0 - 0
AR-14	33.5	42.5	49.0	29.8	40.0	205.2	5.5	35.3	10 - 50	0 - 0
AR-15	168.8	6.7	34.4	3.8	30.0	68.7	15.9	19.8	10 - 50	0 - 0
AR-16	83.3	23.8	35.6	16.5	6.3	34.4	0.0	16.5	10 - 50	0 - 0
AR-17	199.0	26.0	44.7	17.0	20.0	91.2	7.8	24.8	10 - 50	0 - 0
AR-18	48.0	0.0	0.0	0.0	85.0	337.9	18.3	18.3	10 - 50	0 - 0
AR-19A	49.9	0.0	0.0	0.0	30.0	67.8	24.3	24.3	10 - 50	0 - 0
AR-19B	153.9	23.8	26.8	16.8	41.3	74.2	14.4	31.2	10 - 50	0 - 0
AR-19C	42.0	--	--	--	--	--	--	--	--	--

MZ ID	Mesic Flatwoods (Acres)	Current Average Overstory Conditions							Target Overstory Conditions	
		Pine BA (ft2/ac)	Pine TPA	Pine Volume (tons/ac)	Non-Pine BA (ft2/ac)	Non-Pine TPA	Non-Pine Volume (tons/ac)	Total Pine and Non-Pine Volume (tons/ac)	FNAI Reference Condition Pine BA Range (ft2/ac)	FNAI Reference Condition Non-Pine TPA Range
AR-20A	21.6	0.0	0.0	0.0	30.0	32.5	27.5	27.5	10 - 50	0 - 0
AR-20B	6.3	--	--	--	--	--	--	--	--	--
AR-22B	10.0	--	--	--	--	--	--	--	--	--
AR-23	7.2	--	--	--	--	--	--	--	--	--
AR-24B	16.6	--	--	--	--	--	--	--	--	--
AR-25	0.9	--	--	--	--	--	--	--	--	--
AR-29	22.3	0.0	0.0	0.0	15.0	20.4	12.4	12.4	10 - 50	0 - 0
AR-30	14.6	0.0	0.0	0.0	105.0	229.4	63.6	63.6	10 - 50	0 - 0
AR-31A	23.5	0.0	0.0	0.0	80.0	188.2	54.3	54.3	10 - 50	0 - 0
AR-31B	6.9	--	--	--	--	--	--	--	--	--
AR-32	2.6	--	--	--	--	--	--	--	--	--
AR-33A	1.7	--	--	--	--	--	--	--	--	--
AR-33B	3.6	--	--	--	--	--	--	--	--	--
AR-35	21.4	--	--	--	--	--	--	--	--	--
AR-36A	109.1	36.7	41.6	26.9	45.6	88.8	3.4	30.2	10 - 50	0 - 0
AR-36B	5.0	--	--	--	--	--	--	--	--	--
AR-37	51.1	60.0	70.2	37.9	25.0	107.5	7.9	45.8	10 - 50	0 - 0
AR-38A	37.6	17.5	36.5	11.4	50.0	105.0	13.0	24.5	10 - 50	0 - 0
AR-38B	95.4	32.5	32.8	19.7	40.0	168.5	14.6	34.3	10 - 50	0 - 0
AR-39	52.2	45.0	60.5	27.3	35.0	83.9	6.3	33.6	10 - 50	0 - 0
AR-40	49.6	0.0	0.0	0.0	77.5	135.4	15.7	15.7	10 - 50	0 - 0
Not Identified*	850.5	--	--	--	--	--	--	--	--	--
Total	**2,675.1**									

*Management Zone boundaries are mapped but alpha-numeric identifiers are missing.

Sandhill (1,002.4 acres)

Longleaf pine (*Pinus palustris*) is the preferred overstory pine species in the region. The FNAI reference site in this region for sandhill contains longleaf pine at a basal area (BA) of 20 to 60 square feet per acre with non-pine species at between 0 and 79 trees per acre (TPA). The following table shows the overstory condition for this natural community at Alafia River and target overstory condition for sandhill in this region.

MZ ID	Sandhill (Acres)	Current Average Overstory Conditions							Target Overstory Conditions	
		Pine BA (ft2/ac)	Pine TPA	Pine Volume (tons/ac)	Non-Pine BA (ft2/ac)	Non-Pine TPA	Non-Pine Volume (tons/ac)	Total Pine and Non-Pine Volume (tons/ac)	FNAI Reference Condition Pine BA Range (ft2/ac)	FNAI Reference Condition Non-Pine TPA Range
AR-01	22.6	--	--	--	--	--	--	--	--	--
AR-06	22.5	--	--	--	--	--	--	--	--	--
AR-10	66.4	--	--	--	--	--	--	--	--	--
AR-14	161.9	0.0	0.0	0.0	70.0	106.0	14.3	14.3	20 - 60	0 - 79
AR-15	54.7	--	--	--	--	--	--	--	--	--
AR-16	1.2	--	--	--	--	--	--	--	--	--
AR-17	48.6	60.0	116.7	37.4	30.0	148.2	7.0	44.5	20 - 60	0 - 79
AR-18	160.3	35.0	43.9	24.7	32.5	74.9	1.0	25.7	20 - 60	0 - 79
AR-19B	47.7	35.0	28.9	24.3	25.0	26.8	1.7	26.0	20 - 60	0 - 79
AR-19C	61.3	--	--	--	--	--	--	--	--	--
AR-23	30.0	--	--	--	--	--	--	--	--	--
AR-24A	3.3	--	--	--	--	--	--	--	--	--
AR-24B	0.2	--	--	--	--	--	--	--	--	--
AR-25	84.5	14.0	13.6	9.9	66.0	83.5	12.9	22.8	20 - 60	0 - 79
AR-28	66.1	6.0	6.4	4.0	68.0	140.4	4.0	8.0	20 - 60	0 - 79
AR-32	4.1	--	--	--	--	--	--	--	--	--
AR-36A	3.5	--	--	--	--	--	--	--	--	--
AR-39	83.6	42.0	96.0	23.1	36.0	89.8	5.1	28.2	20 - 60	0 - 79

MZ ID	Sandhill (Acres)	Current Average Overstory Conditions							Target Overstory Conditions	
		Pine BA (ft2/ac)	Pine TPA	Pine Volume (tons/ac)	Non-Pine BA (ft2/ac)	Non-Pine TPA	Non-Pine Volume (tons/ac)	Total Pine and Non-Pine Volume (tons/ac)	FNAI Reference Condition Pine BA Range (ft2/ac)	FNAI Reference Condition Non-Pine TPA Range
Not Identified*	80.1	--	--	--	--	--	--	--	--	--
Total	**1,002.4**									
*Management Zone boundaries are mapped but alpha-numeric identifiers are missing.										

Scrubby Flatwoods (398.9 acres)

Longleaf pine (*Pinus palustris*) is the preferred overstory pine species in the region. The FNAI reference site in this region for scrubby flatwoods contains longleaf pine at a basal area (BA) of 10 to 60 square feet per acre with non-pine at a density of between 0 and 26 trees per acre (TPA). The following table shows the overstory condition for this natural community at Alafia River and target overstory condition for scrubby flatwoods in this region.

MZ ID	Scrubby Flatwoods (Acres)	Current Average Overstory Conditions							Target Overstory Conditions	
		Pine BA (ft2/ac)	Pine TPA	Pine Volume (tons/ac)	Non-Pine BA (ft2/ac)	Non-Pine TPA	Non-Pine Volume (tons/ac)	Total Pine and Non-Pine Volume (tons/ac)	FNAI Reference Condition Pine BA Range (ft2/ac)	FNAI Reference Condition Non-Pine TPA Range
AR-01	120.3	0.0	0.0	0.0	14.3	68.9	3.4	3.4	20 - 60	0 - 26
AR-03	9.8	0.0	0.0	0.0	50.0	146.9	4.4	4.4	20 - 60	0 - 26
AR-04A	33.7	3.3	22.0	0.7	11.7	12.6	0.0	0.7	20 - 60	0 - 26
AR-04B	0.3	--	--	--	--	--	--	--	--	--
AR-04C	0.2	--	--	--	--	--	--	--	--	--
AR-04D	5.7	0.0	0.0	0.0	160.0	520.0	0.0	0.0	20 - 60	0 - 26
AR-06	3.0	--	--	--	--	--	--	--	--	--
AR-08	1.8	--	--	--	--	--	--	--	--	--
AR-09	6.6	0.0	0.0	0.0	40.0	199.9	0.0	0.0	20 - 60	0 - 26
AR-14	70.0	13.3	11.9	11.1	103.3	128.1	3.2	14.3	20 - 60	0 - 26

MZ ID	Scrubby Flatwoods (Acres)	Current Average Overstory Conditions							Target Overstory Conditions	
		Pine BA (ft2/ac)	Pine TPA	Pine Volume (tons/ac)	Non-Pine BA (ft2/ac)	Non-Pine TPA	Non-Pine Volume (tons/ac)	Total Pine and Non-Pine Volume (tons/ac)	FNAI Reference Condition Pine BA Range (ft2/ac)	FNAI Reference Condition Non-Pine TPA Range
AR-15	2.6	--	--	--	--	--	--	--	--	--
AR-16	82.2	0.0	0.0	0.0	10.0	58.5	0.0	0.0	20 - 60	0 - 26
AR-21	51.4	13.3	11.5	10.9	83.3	113.9	18.5	29.3	20 - 60	0 - 26
AR-35	11.4	--	--	--	--	--	--	--	--	--
Total	**398.9**									

Addendum 8 — Land Management Review

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

MEMORANDUM

TO: Aric Larson, Governmental Operations Consultant III
Division of State Lands

FROM: Parks Small, Chief, Bureau of Natural and Cultural Resources
Division of Recreation and Parks

Wes Howell Digitally signed by Howell_C
Date: 2015.11.17 14:35:38
-05'00'

Sine Murray, Chief, Office of Park Planning
Division of Recreation and Parks

Digitally signed by Murray_SM
Date: 2015.11.20 16:57:27
-05'00'

SUBJECT: Response to Draft Land Management Review (LMR)
Alafia River State Park

The Land Management Review draft report provided to Division of Recreation and Parks (DRP) determined that management of Alafia River State Park by the DRP met the two tests prescribed by law. Namely, the review team concluded that the land is being managed for the purposes for which it was acquired and in accordance with the land management plan.

Attached is DRP's Managing Agency Response to the draft LMR report. The responses were prepared via a coordinated effort of the park, district office, and our offices.

Thank you for your attention.

2015 Land Management Review Team Report for Alafia River State Park

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1. Introduction

Section 259.036, F.S. requires a periodic on-site review of conservation and recreation lands titled in the name of the Board of Trustees to determine (1) whether the lands are being managed for the purposes for which they were acquired and (2) whether they are being managed in accordance with their land management plan adopted pursuant to s. 259.032, F.S. In case where the managed areas exceed 1,000 acres in size, such a review must be scheduled at least every five years. In conducting this review, a statutorily constructed review team "shall evaluate the extent to which the existing management plan provides sufficient protection to threatened or endangered species, unique or important natural or physical features, geological or hydrological functions or archaeological features. The review shall also evaluate the extent to which the land is being managed for the purposes for which it was acquired and the degree to which actual management practices, including public access, are in compliance with the adopted management plan."

The land management review teams are coordinated by the Division of State Lands and consist of representatives from the Division of Recreation and Parks (DEP), the Florida Forest Service (DACS), the Fish and Wildlife Conservation Commission, the local government in which the property is located, the DEP District in which the parcel is located, the local soil and water conservation district, a conservation organization member, and a local private land manager.

Each Land Management Review Report is divided into three sections. Section 1 provides the details of the property being reviewed as well as the overall results of the report. Section 2 provides details of the Field Review, in which the Review Team inspects the results of management actions on the site. Section 3 provides details of the Land Management Plan Review, in which the team determines the extent to which the Management Plan provides for and documents adequate natural and recreational resource protection.

Finally, each report may also contain an Appendix that lists individual team member comments. This is a compilation of feedback, concerns or other thoughts raised by individual team members, but not necessarily indicative of the final consensus reached by the Land Management Review Team.

1.1. Property Reviewed in this Report

Name of Site: Alafia River State Park
Managed by: DRP
Acres: 6,314.90 **County:** Hillsborough County
Purpose(s) for Acquisition: To be managed for the protection and preservation of natural and cultural resources, and to provide compatible outdoor natural resource based recreational opportunities.
Acquisition Program(s): Donation **Original Acquisition Date:** 12/19/96
Area Reviewed: Entire Property **Last Management Plan Approval Date:** 10/15/04
Review Date: 8/10/15

Agency Manager and Key Staff Present:

- Coy Helms, Park Manager

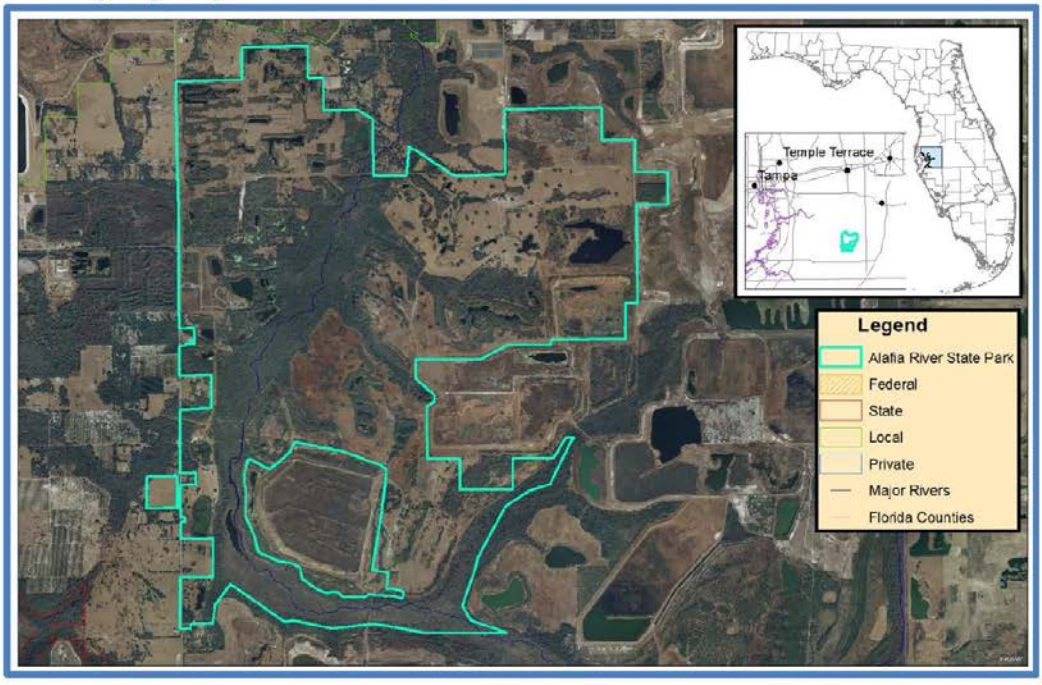
Review Team Members Present (voting)

- DRP: Rosalind Rowe
- FWC: Victor Echaves
- FFS: Walter Mallett
- DEP: Kevin MacLachlan (not present)
- SWCD:
- Local gov't: Ken Bradshaw
- Conservation organization: Michael Bubb
- Private land manager:

Other Non-Team Members Present (attending)

- Aric Larson, DEP/DSL

1.2 Property Map



1.3. Overview of Land Management Review Results

Is the property managed in accordance with the purposes for which it was acquired?

Yes = 5, No = 0

Are the management practices, including public access, in compliance with the management plan?

Yes = 5, No = 0

Table 1 shows the average scores received for each applicable category of review. *Field Review* scores refer to the adequacy of management actions in the field, while *Management Plan Review* scores refer to adequacy of discussion of these topics in the management plan. Scores range from 1 to 5 with 5 signifying excellence. For a more detailed key to the scores, please see *Appendix A*.

Table 1: Results at a glance.

Major Land Management Categories	Field Review	Management Plan Review
Natural Communities / Forest Management	2.65	2.08
Prescribed Fire / Habitat Restoration	3.53	1.93
Hydrology	3.09	1.97
Imperiled Species	2.40	1.80
Exotic / Invasive Species	3.23	2.33
Cultural Resources	3.30	2.65
Public Access / Education / Law Enforcement	3.37	2.36
Infrastructure / Equipment / Staffing	2.17	N/A

Color Code (See Appendix A for detail)

Excellent	Above Average	Below Average	Poor

1.3.1 Consensus Commendations for the Managing Agency

The following commendations resulted from discussion and vote of the review team members:

1. The team commends DRP for diligence with exotic plant control on the western portion of the park. (5+, 0-)

2. The team commends DRP for utilization of wetland damage mitigation as a means for restoring the littoral shelf on impoundment banks. (5+, 0-)

1.3.2. Consensus Recommendations to the Managing Agency

The following recommendations resulted from a discussion and vote of review team members. The next management plan update should include information about how these recommendations have been addressed:

1. The team recommends that DRP seek improvements in the ability to distribute exotic plant locations/coverages and treatment status to field staff (e.g. GIS, hardcopy maps, etc.). (5+, 0-)

   Managing Agency Response: *Agree. A new database (Natural Resource Tracking System) was developed for DRP, and is now being implemented for tracking exotic plant locations, coverages, and treatment status. Field staff training is currently underway so they can access the*

information they need on exotics in the park. The database is linked to a mapping tool. District Biologist will continue to assist with surveys, mapping, and provide hardcopy maps to staff.

2. The team recommends that DRP coordinate with FFS to obtain a comprehensive timber assessment with appropriate recommendations. (5+, 0-)

   Managing Agency Response: *Agree. Park management will work to obtain and implement a comprehensive timber assessment with appropriate recommendations.*

3. The team recommends that DRP explore funding opportunities for the expansion of the bathhouse facility in the campground area to meet current and future demand. (5+, 0-)

   Managing Agency Response: *Agree. An expansion to the campground bathhouse has been funded and has gone out to bid.*

4. The team recommends that DRP explore alternate strategies for the proper disposal of recreational vehicle (RV) waste. (5+, 0-)

   Managing Agency Response: *Agree. Options are being explored to separate the RV dump station from the bathhouse septic system.*

5. The team recommends that DRP develop a short-term goal to address immediate concerns associated with the culvert failure in AR31B. (5+, 0-)

   Managing Agency Response: *Agree. The culvert is being re-engineered and designed to prevent a similar failure in the future. Contractors are being sought for installation.*

6. The team recommends that DRP develop a long-term goal to complete a comprehensive park-wide hydrologic assessment, and explore cooperative opportunities to obtain funding. (5+, 0-)

   Managing Agency Response: *Agree. This goal has been explicitly stated in the draft management plan update, and a proposed project for its implementation has been identified and included for future funding. However, Division funding is appropriated annually by the Florida Legislature. This funding is allocated at the Division and District levels in order to best meet annual operational and resource management needs.*

2. Field Review Details

2.1 Field Review Checklist Findings

The following items received high scores on the review team checklist, which indicates that management actions exceeded expectations.

1. **Natural Communities; specifically baygall, bottomland forest, floodplain swamp, and blackwater stream:**

2. **Environmental Education & Outreach, specifically recreational opportunities:**

2.2. Items Requiring Improvement Actions in the Field

The following items received low scores on the review team checklist, which indicates that management actions noted during the Field Review were not considered sufficient (less than 3.0 score on average). Please note that overall good scores do not preclude specific recommendations by the review team requiring remediation. **The management plan update should include information on how these items have been addressed:**

1. **Listed species, specifically listed animal and plant species in general, received below average scores. The review team is asked to evaluate, based on their perspective, whether management actions are sufficient for protection and preservation of the species.**

   Managing Agency Response: *Agree. Additional listed species monitoring will be pursued by park staff and District Biologists. Priorities will include species of the undisturbed floodplain, scrub species, and those who would benefit from habitat enhancement activities through exotic plant treatment, prescribed fire, and wetland restoration.*

2. **Natural Resources Survey; specifically sport fish or their habitat monitoring, listed species or their habitat monitoring, other non-game species or their habitat monitoring, fire effects monitoring, and other habitat management effects monitoring, received below average scores. The review team is asked to evaluate, based on information provided by the managing agency, whether survey and monitoring of the resources or their habitats are sufficient.**

   Managing Agency Response: *Agree. Primary inventory and monitoring focus must be on species that require special management attention. An all-species inventory generally must be a lower priority than actually conducting actions to manage habitats. As needed, costs for an inventory will be included in the Unit Management Plan, but can only be allocated as funds become available on a statewide priority needs basis.*

3. **Forest Management; specifically timber inventory, timber harvesting, reforestation/afforestation, and site preparation, received below average scores. The review team is asked to evaluate, based on information provided by the managing agency, whether forest management is sufficient.**

   Managing Agency Response: *Agree. The park has scattered patches of old pine plantation and experimental tree plantings, and large areas of successional hardwood forest that should all be evaluated for their timber potential. Park management will work with foresters to implement a full assessment and will incorporate subsequent recommendations in the next park plan.*

4. **Hydrologic/Geologic function (Hydro-Alteration); specifically roads/culverts, ditches, hydro-period alteration, and dams, reservoirs or other impoundments, received below average**

scores. The review team is asked to evaluate, based on information provided by the managing agency, whether consideration of past and present hydrologic and geologic functions are sufficient.

Managing Agency Response: *Agree. Resources are required to provide a full-park hydrology assessment and set of recommendations for proper reclamation and management of the disturbances at the park. Hundreds of acres are in Impoundment/Artificial Pond water areas, most of which lack the normal topography and benefits of natural wetlands, and further are not safe to access. However, Division funding is appropriated annually by the Florida Legislature. This funding is allocated at the Division and District levels in order to best meet annual operational and resource management needs. Any deemed increase in Division Budget/staffing will follow the established legislative budget request process.*

5. **Public Access, specifically parking, received a below average score. The review team is asked to evaluate, based on information provided by the managing agency, whether public access is sufficient.**

   Managing Agency Response: *Agree. The parking area at the picnic area could benefit from a redesigned layout that would increase parking and provide improved access to park visitors.*

6. **Management Resources, specifically waste disposal, sanitary facilities, buildings, equipment, staff and funding, received below average scores. The review team is asked to evaluate, based on information provided by the managing agency, whether management resources are sufficient.**

   Managing Agency Response: *Agree. Work to improve the waste disposal for RVs at the campground is being investigated.*

2.3. Field Review Checklist and Scores

Field Review Item	Reference #	Anonymous Team Members								Average
		1	2	3	4	5	6	7	8	
Natural Communities (I.A)										
Mesic Hammock	I.A.2	4	4	4	4	3				3.80
Xeric Hammock	I.A.3	3	4	4	4	3				3.60
Baygall	I.A.4	4	X	X	X	4				4.00
Bottomland Forest	I.A.5	4	4	4	3	5				4.00
Floodplain Swamp	I.A.6	4	4	4	3	5				4.00
Hydric Hammock	I.A.7	4	4	3	3	4				3.60
Blackwater Stream	I.A.8	4	4	4	4	5				4.20
									Natural Communities Average Score	3.89
Listed Species: Protection & Preservation (I.B)										
Animals (in general)	I.B.1	3	3	3	1	3				2.60

Plants (in general)	I.B.2	3	3	3	2	3				2.80
									Listed Species Average Score	2.70
Natural Resources Survey/Monitoring Resources (I.C)										
Sport fish or their habitat monitoring	I.C.1	2	2	2	1	4				2.20
Listed species or their habitat monitoring	I.C.2	3	2	2	1	4				2.40
Other non-game species or their habitat monitoring	I.C.3	2	2	2	1	4				2.20
Fire effects monitoring	I.C.4	2	2	3	1	3				2.20
Other habitat management effects monitoring	I.C.5	3	2	2	1	4				2.40
Invasive species survey / monitoring	I.C.6	4	3		1	5				3.25
Cultural Resources (Archeological & Historic sites) (II.A, II.B)										
Cultural Res. Survey	II.A	4	3	4	3	4				3.60
Protection and preservation	II.B	4		3	1	4				3.00
									Cultural Resources Average Score	3.30
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A1	3	4	4	2	2				3.00
Frequency	III.A.2	4	4	4	2	4				3.60
Quality	III.A.3	4	4	5	X	2				3.75
									Resource Management, Prescribed Fire Average Score	3.45
Restoration (III.B)										
Tampa Bay Site	III.B.1	4	4	4	2	4				3.60
									Restoration Average Score	3.60
Forest Management (III.C)										
Timber Inventory	III.C.1	1	1	1	1	3				1.40
Timber Harvesting	III.C.2	X	1	1	1	3				1.50
Reforestation/Afforestation	III.C.3	X	1	1	1	2				1.25
Site Preparation	III.C.4	X	1	1	1	3				1.50
									Forest Management Average Score	1.41
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.D.1.a	4	4	3	1	4				3.20
prevention - animals	III.D.1.b	3	3	4	2	4				3.20
prevention - pests/pathogens	III.D.1.c	3	1	4	X	5				3.25
Control										
control - plants	III.D.2.a	4	3	2		4				3.25
control - animals	III.D.2.b	3	4	3		4				3.50
control - pest/pathogens	III.D.2.c	3	1	4		4				3.00
									Non-Native, Invasive & Problem Species Average Score	3.23
Hydrologic/Geologic function Hydro-Alteration (III.E.1)										
Roads/culverts	III.E.1.a	4	3	3	2	2				2.80
Ditches	III.E.1.b	3	3	4	2	2				2.80
Hydro-period Alteration	III.E.1.c	3	2	3	2	2				2.40
Dams, Reservoirs or other impoundments	III.E.1.e	2	1	3	X	3				2.25
									Hydrologic/Geologic function, Hydro-Alteration Average Score	2.56

Ground Water Monitoring (III.E.2)										
Ground water quality	III.E.2.a	3	3	4	3	3				3.20
Ground water quantity	III.E.2.b	3	3	4	3	2				3.00
									Ground Water Monitoring Average Score	3.10
Surface Water Monitoring (III.E.3)										
Surface water quality	III.E.3.a	4	4	5	3	2				3.60
Surface water quantity	III.F.3.b	4	4	5	3	2				3.60
									Surface Water Monitoring Average Score	3.60
Resource Protection (III.F)										
Boundary survey	III.F.1	3	3	3	3	3				3.00
Gates & fencing	III.F.2	3	2	3	3	5				3.20
Signage	III.F.3	3	3	4	3	3				3.20
Law enforcement presence	III.F.4	3	3	4	X	5				3.75
									Resource Protection Average Score	3.29
Adjacent Property Concerns (III.G)										
Land Use										
Expanding development	III.G.1.a	3	3	4	X	3				3.25
Inholdings/additions	III.G.2		3	4	3	4				3.50
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	3	3	3	4	4				3.40
Parking	IV.1.b	2	2	2	1	4				2.20
Environmental Education & Outreach										
Wildlife	IV.2.a	4	4	4	3	4				3.80
Invasive Species	IV.2.b	4	3	4	3	4				3.60
Habitat Management Activities	IV.2.c	4	3	4	3	3				3.40
Interpretive facilities and signs	IV.3	3	3	4	4	5				3.80
Recreational Opportunities	IV.4	4	4	4	4	5				4.20
Management of Visitor Impacts	IV.5	3	3	3	3	4				3.20
									Public Access & Education Average Score	3.45
Management Resources (V.1, V.2, V.3. V.4)										
Maintenance										
Waste disposal	V.1.a	2	3	2	1	3				2.20
Sanitary facilities	V.1.b	2	2	3	2	3				2.40
Infrastructure										
Buildings	V.2.a	3	2	4	2	3				2.80
Equipment	V.2.b	1	2	3	1	3				2.00
Staff	V.3	1	2	3	1	4				2.20
Funding	V.4	1	2	1	1	2				1.40
									Management Resources Average Score	2.17

Color Code:	Excellent	Above Average	Below Average	Poor	See Appendix A for detail
		Missing Vote	Insufficient Information		

3. Land Management Plan Review Details

3.1 Items Requiring Improvements in the Management Plan

The following items received low scores on the review team checklist, which indicates that the text noted in the Management Plan Review does not sufficiently address this issue (less than 3.0 score on average.). Please note that overall good scores do not preclude specific recommendations by the review team requiring remediation. The next management plan update should address the checklist items identified below:

1. **Natural Communities; specifically mesic hammock, baygall, bottomland forest, floodplain swamp, hydric hammock and blackwater stream, received below average scores. This is an indication that the management plan does not sufficiently address current or desired condition and/or future management actions to protect or restore.**

   Managing Agency Response: *Agree. The Unit Management Plan is currently being revised. The draft Plan addresses natural communities more completely.*

2. **Listed species Protection & Preservation, specifically for animal and plant species in general, received a below average score. This is an indication that the management plan does not sufficiently address protection and preservation of species.**

   Managing Agency Response: *Agree. The next Plan draft addresses listed species more completely.*

3. **Natural Resources Survey and Monitoring Resources, specifically sport fish or their habitat monitoring, listed species or their habitat monitoring, other non-game species or their habitat monitoring, fire effects monitoring, other habitat management effects monitoring, and invasive species survey/monitoring, received below average scores. This is an indication that the management plan does not sufficiently address survey or monitoring.**

   Managing Agency Response: *Agree. The next Plan draft addresses natural resource survey and monitoring more completely.*

4. **Cultural Resources, specifically cultural resource survey, and protection and preservation, received below average scores. This is an indication that the management plan does not sufficiently address survey or protection and preservation of cultural resources.**

   Managing Agency Response: *Agree. The next Plan draft addresses cultural resources more completely.*

5. **Resource Management, Prescribed Fire; specifically area being burned, frequency, and quality, received below average scores. This is an indication that the management plan does not sufficiently address current or desired condition and/or future management actions to protect or restore.**

Managing Agency Response: *Agree. The next Plan draft addresses prescribed fire more completely.*

6. **Restoration, specifically of the Tampa Bay site, received a below average score. This is an indication that the management plan does not sufficiently address restoration.**

   Managing Agency Response: *Agree. The next Plan draft addresses restoration including the Tampa Bay site more completely.*

7. **Forest Management; specifically timber inventory, timber harvesting, reforestation/afforestation, and site preparation, received below average scores. This is an indication that the management plan does not sufficiently address forest management.**

   Managing Agency Response: *Agree. The next Plan draft addresses forest management more completely.*

8. **Non-native, Invasive & Problem Species; specifically prevention of plants, animals, pests/pathogens and control of pests/pathogens, received below average scores. This is an indication that the management plan does not sufficiently address prevention and control of non-native, invasive and problem species.**

   Managing Agency Response: *Agree. The next Plan draft addresses non-native, invasive and problem species more completely.*

9. **Hydrologic/Geologic function, Hydro-Alteration; specifically roads/culverts, ditches, hydro-period alteration, and dams, reservoirs or other impoundments, received below average scores. This is an indication that the management plan does not sufficiently address hydrologic and geologic function.**

   Managing Agency Response: *Agree. The next Plan draft addresses hydrology more completely.*

10. **Ground Water Monitoring, specifically ground water quality and quantity, received a below average score. This is an indication that the management plan does not sufficiently address ground water quality and quantity.**

    Managing Agency Response: *Agree. The next Plan draft addresses ground water monitoring more completely.*

11. **Surface Water Monitoring, specifically quality and quantity, received a below average score. This is an indication that the management plan does not sufficiently address surface water quality monitoring.**

    Managing Agency Response: *Agree. The next Plan draft addresses surface water monitoring more completely.*

12. **Resource Protection, specifically boundary survey, gates & fencing, signage, and law enforcement presence, received below average scores. This is an indication that the management plan does not sufficiently address resource protection.**

    Managing Agency Response: *Agree. The next Plan draft addresses resource protection more completely.*

13. **Adjacent Property Concerns; specifically expanding development, inholdings/additions, discussion of potential surplus land determination and surplus lands identified, received below average scores. This is an indication that the management plan does not sufficiently address adjacent property concerns.**

    Managing Agency Response: *Agree. The next Plan draft addresses adjacent property concerns more completely.*

14. **Public Access, specifically roads and parking, received below average scores. This is an indication that the management plan does not sufficiently address public access.**

    Managing Agency Response: *Disagree. Public access improvements are adequately addressed in the current plan and will be addressed in the Unit Management Plan currently being revised. Division funding for facility development is appropriated annually by the Florida Legislature. This funding is allocated at the Division and District levels in order to best meet annual operational and resource management needs.*

15. **Environmental Education & Outreach; specifically pertaining to wildlife, invasive species, habitat management activities, interpretive facilities and signs, and management of visitor impacts, received below average scores. This is an indication that the management plan does not sufficiently address environmental education and outreach.**

    Managing Agency Response: *Agree. The next Plan draft will address environmental education and outreach more completely.*

3.2 Management Plan Review Checklist and Scores

Plan Review Item	Reference #	Anonymous Team Members								Average
		1	2	3	4	5	6	7	8	
Natural Communities (I.A)										
Mesic Hammock	I.A.2	2	4	2	3	2				2.60
Xeric Hammock	I.A.3	2	4	2	3	4				3.00
Baygall	I.A.4	2	3	2	2	4				2.60
Bottomland Forest	I.A.5	2	3	2	2	4				2.60
Floodplain Swamp	I.A.6	2	3	2	3	4				2.80
Hydric Hammock	I.A.7	2	3	2	2	4				2.60
Blackwater Stream	I.A.8	2	3	2	2	5				2.80

									Natural Communities Average Score	2.71
Listed Species: Protection & Preservation (I.B)										
Animals (in general)	I.B.1	1	3	2	2	1				1.80
Plants (in general)	I.B.2	1	3	2	2	1				1.80
									Listed Species Average Score	1.80
Natural Resources Survey/Monitoring Resources (I.C)										
Sport fish or their habitat monitoring	I.C.1	1	2	1	1	1				1.20
Listed species or their habitat monitoring	I.C.2	1	2	1	1	1				1.20
Other non-game species or their habitat monitoring	I.C.3	1	2	1	1	1				1.20
Fire effects monitoring	I.C.4	1	2	1	1	1				1.20
Other habitat management effects monitoring	I.C.5	1	2	1	1	3				1.60
Invasive species survey / monitoring	I.C.6	1	3	1	1	3				1.80
Cultural Resources (Archeological & Historic sites) (II.A,II.B)										
Cultural Resource Survey	II.A	1	4	3	2	4				2.80
Protection and preservation	II.B	1		3	2	4				2.50
									Cultural Resources Average Score	2.65
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	1	2	1	2	2				1.60
Frequency	III.A.2	1	2	1	2	2				1.60
Quality	III.A.3	1	2	1	2	2				1.60
									Resource Management, Prescribed Fire Average Score	1.60
Restoration (III.B)										
Tampa Bay Site	III.B.1	1	3		1	4				2.25
									Restoration Average Score	2.25
Forest Management (III.C)										
Timber Inventory	III.C.1	1	1	1	1	2				1.20
Timber Harvesting	III.C.2	1	1	1	1	2				1.20
Reforestation/Afforestation	III.C.3	1	1	1	1	4				1.60
Site Preparation	III.C.4	1	1	1		4				1.75
									Forest Management Average Score	1.44
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.E.1.a	1	3	1	2	4				2.20
prevention - animals	III.E.1.b	1	3	1	2	3				2.00
prevention - pests/pathogens	III.E.1.c	1	2	1	1	4				1.80
Control										
control - plants	III.E.2.a		3	2		4				3.00
control - animals	III.E.2.b		3	2		4				3.00
control - pest/pathogens	III.E.2.c		1	1		4				2.00
									Non-Native, Invasive & Problem Species Average Score	2.33
Hydrologic/Geologic function, Hydro-Alteration (III.E.1)										
Roads/culverts	III.F.1.a	1	3	1	3	4				2.40

Ditches	III.F.1.b	1	3	1	3	4				2.40
Hydro-period Alteration	III.F.1.c	1	2	1	2	3				1.80
Dams, Reservoirs or other impoundments	III.F.1.e	1	1	1	1	1				1.00
									Hydrologic/Geologic function, Hydro-Alteration Average Score	1.90
Ground Water Monitoring (III.E.2)										
Ground water quality	III.F.2.a	1	3	1	4	2				2.20
Ground water quantity	III.F.2.b	1	3	1	4	1				2.00
									Ground Water Monitoring Average Score	2.10
Surface Water Monitoring (III.E.3)										
Surface water quality	III.F.3.a	1	3	1	3	2				2.00
Surface water quantity	III.F.3.b	1	3	1	3	1				1.80
									Surface Water Monitoring Average Score	1.90
Resource Protection (III.F)										
Boundary survey	III.G.1	1	3	1	2	4				2.20
Gates & fencing	III.G.2	1	3	1	2	4				2.20
Signage	III.G.3	1	3	1	2	4				2.20
Law enforcement presence	III.G.4	1	3	1	1	4				2.00
									Resource Protection Average Score	2.15
Adjacent Property Concerns (III.G)										
Land Use										
Expanding development	III.H.1.a	1	3	2	2	4				2.40
Inholdings/additions	III.H.2	1	3	1	2					1.75
Discussion of Potential Surplus Land Determination	III.H.3	1	3	1		2				1.75
Surplus Lands Identified?	III.H.4	1	1	5		2				2.25
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	1	3	3	2	4				2.60
Parking	IV.1.b	1	3	3	2	3				2.40
Environmental Education & Outreach										
Wildlife	IV.2.a	1	3	2	2	4				2.40
Invasive Species	IV.2.b	1	3	2	2	3				2.20
Habitat Management Activities	IV.2.c	1	3	2	2	4				2.40
Interpretive facilities and signs	IV.3	1	3	3	3	4				2.80
Recreational Opportunities	IV.4	1	3	4	3	5				3.20
Management of Visitor Impacts	IV.5	1	2	2	3	5				2.60
									Public Access & Education Average Score	2.58
Managed Area Uses (VI.A, VI.B)										
Existing Uses										
Camping	VI.A.1	5	5	5	5	5				5.00
Fishing	VI.A.2	5	5	5	5	5				5.00
Wildlife Viewing	VI.A.3	5	5	5	5	5				5.00
Environmental Education	VI.A.4	5	5	4	5	5				4.80
Picnicking	VI.A.5	5	5	5	5	5				5.00

Boating	VI.A.6	4	5	5	5	5				4.80
Hiking	VI.A.7	5	5	5	5	5				5.00
Bicycling	VI.A.8	4	4	5	5	5				4.60
Horseback Riding	VI.A.9	4	5	5	5	5				4.80
Cattle Grazing	VI.A.10	3	4	5	4	5				4.20
Proposed Uses										
Concessions	VI.B.1	3	4	5	4	5				4.20

Color Code:	Excellent	Above Average	Below Average	Poor	See Appendix A for detail
		Missing Vote	Insufficient Information		

Appendix A: Scoring System Detail

Explanation of Consensus Commendations:

Often, the exceptional condition of some of the property's attributes impress review team members. In those instances, team members are encouraged to offer positive feedback to the managing agency in the form of a commendation. The teams develop commendations generally by standard consensus processes or by majority vote if they cannot obtain a true consensus.

Explanation of Consensus Recommendations:

Subsection 259.036(2), F.S., specifically states that the managing entity shall consider the findings and recommendations of the land management review. We ask team members to provide general recommendations for improving the management or public access and use of the property. The teams discuss these recommendations and develop consensus recommendations as described above. We provide these recommendations to the managing agency to consider when finalizing the required ten-year management plan update. We encourage the manager to respond directly to these recommendations and include their responses in the final report when received in a timely manner.

Explanation of Field Review Checklist and Scores, and Management Plan Review Checklist and Scores:

We provide team members with a checklist to fill out during the evaluation workshop phase of the Land Management Review. The checklist is the uniform tool used to evaluate both the management actions and condition of the managed area, and the sufficiency of the management plan elements. During the evaluation workshop, team members individually provide scores on each issue on the checklist, from their individual perspective. Team members also base their evaluations on information provided by the managing agency staff as well as other team member discussions. Staff averages these scores to evaluate the overall conditions on the ground, and how the management plan addresses the issues. Team members must score each management issue 1 to 5: 1 being the management practices are clearly insufficient, and 5 being that the management practices are excellent. Members may choose to abstain if they have inadequate expertise or information to make a cardinal numeric choice, as indicated by an "X" on the checklist scores, or they may not provide a vote for other unknown reasons, as indicated by a blank. If a majority of members failed to vote on any issue, that issue is determined to be irrelevant to management of that property or it was inadequately reviewed by the team to make an intelligent choice. In either case staff eliminated the issue from the report to the manager.

Average scores are interpreted as follows:

Scores 4.0 to 5.0 are *Excellent*

Scores 3.0 to 3.99 are *Above Average*

Scores 2.0 to 2.99 are *Below Average*

Scores 1.0 to 1.99 are considered *Poor*