

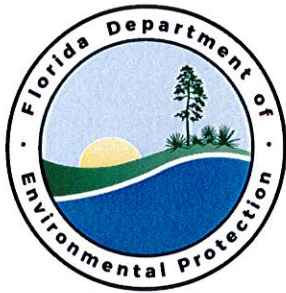
Withlacoochee State Trail

APPROVED Unit Management Plan

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**Division of Recreation and Parks
December 23, 2015**





Florida Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Jonathan P. Steverson
Secretary

December 23, 2015

Ms. Jennifer Carver
Division of Recreation and Parks
Department of Environmental Protection
3900 Commonwealth Boulevard, MS 525
Tallahassee, Florida 32399-3000

RE: Withlacoochee State Trail - Lease #3876

Dear Ms. Carver:

On **December 18, 2015**, the Acquisition and Restoration Council recommended approval of the **Withlacoochee State Trail** management plan. Therefore, the Division of State Lands, Office of Environmental Services, acting as agent for the Board of Trustees of the Internal Improvement Trust Fund, hereby approves the Withlacoochee State Trail management plan. The next management plan update is due December 18, 2025.

Approval of this land management plan does not waive the authority or jurisdiction of any governmental entity that may have an interest in this project. Implementation of any upland activities proposed by this management plan may require a permit or other authorization from federal and state agencies having regulatory jurisdiction over those particular activities. Pursuant to the conditions of your lease, please forward copies of all permits to this office upon issuance.

Sincerely,

A handwritten signature in cursive script that reads "Paula L. Allen".

Paula L. Allen
Office of Environmental Services
Division of State Lands

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INTRODUCTION

The Withlacoochee State Trail (WST) is located in Citrus, Hernando and Pasco counties, spanning a distance of approximately 46 miles from southwest of U.S. Highway 41 in north Citrus County to U.S. Highway 301 in Pasco County. The following trailheads provide trail access and parking.

Gulf Junction Trailhead: N 29.0274 W -82.4714
2233 W Magenta Drive, Citrus Springs, FL 34434

South Citrus Springs Trailhead: N 28.9754 W -82.4300
64 Citrus Springs Blvd., Citrus Springs, FL 34434

Inverness Trailhead: N 28.8406 W -82.3308
315 North Apopka Avenue, Inverness, FL 34450

Ridge Manor Trailhead: N 28.5268 W -82.2189
6410 Croom Rital Road, Ridge Manor, FL 33523

Owensboro Junction Trailhead/US 301: N 28.4459 W -82.1891
19755 US Highway 301, Dade City, FL 33523

Portions of the WST border Fort Cooper State Park, several local parks, and the Withlacoochee State Forest. The vicinity map reflects significant land and water resources existing near the park.

On September 26, 1989, the Board of Trustees of the Internal Improvement Trust Fund (Trustees) approved the purchase of 739.30 acres of rail corridor comprised of two abandoned CSX Transportation, Inc. segments known as the Gulf Junction-Inverness and the Inverness-Owensboro abandonments. Purchased through the Rails to Trails Program utilizing State Infrastructure funds, the Trustees acquired fee simple title on December 21, 1989. Subsequent to the initial purchase, there was additional land added as follows: 12 acres donated by Citrus County, 9.21 acres purchased for the Kabrich Trailhead, 0.41 acres of Murphy Act lands and a 0.67-acre donation from William and Janet Weber. A 0.08-acre parcel was sold to Bob Watson Enterprises. Currently, the total acreage is 761.51 acres.

On June 20, 1990, the Trustees conveyed management authority to the Florida Department of Environmental Protection, Division of Recreation and Parks, via lease agreement 3876. The terms of the lease expire on June 28, 2040.

The WST is designated single-use to provide public outdoor recreation and multi-modal transportation opportunities. There are no legislative or executive directives that constrain the use of this property (see Addendum 1).

Purpose and Significance of the Trail

The purpose of the Withlacoochee State Trail is to provide Florida's residents and visitors with a high quality multi-use trail experience and regional multi-modal transportation opportunities.

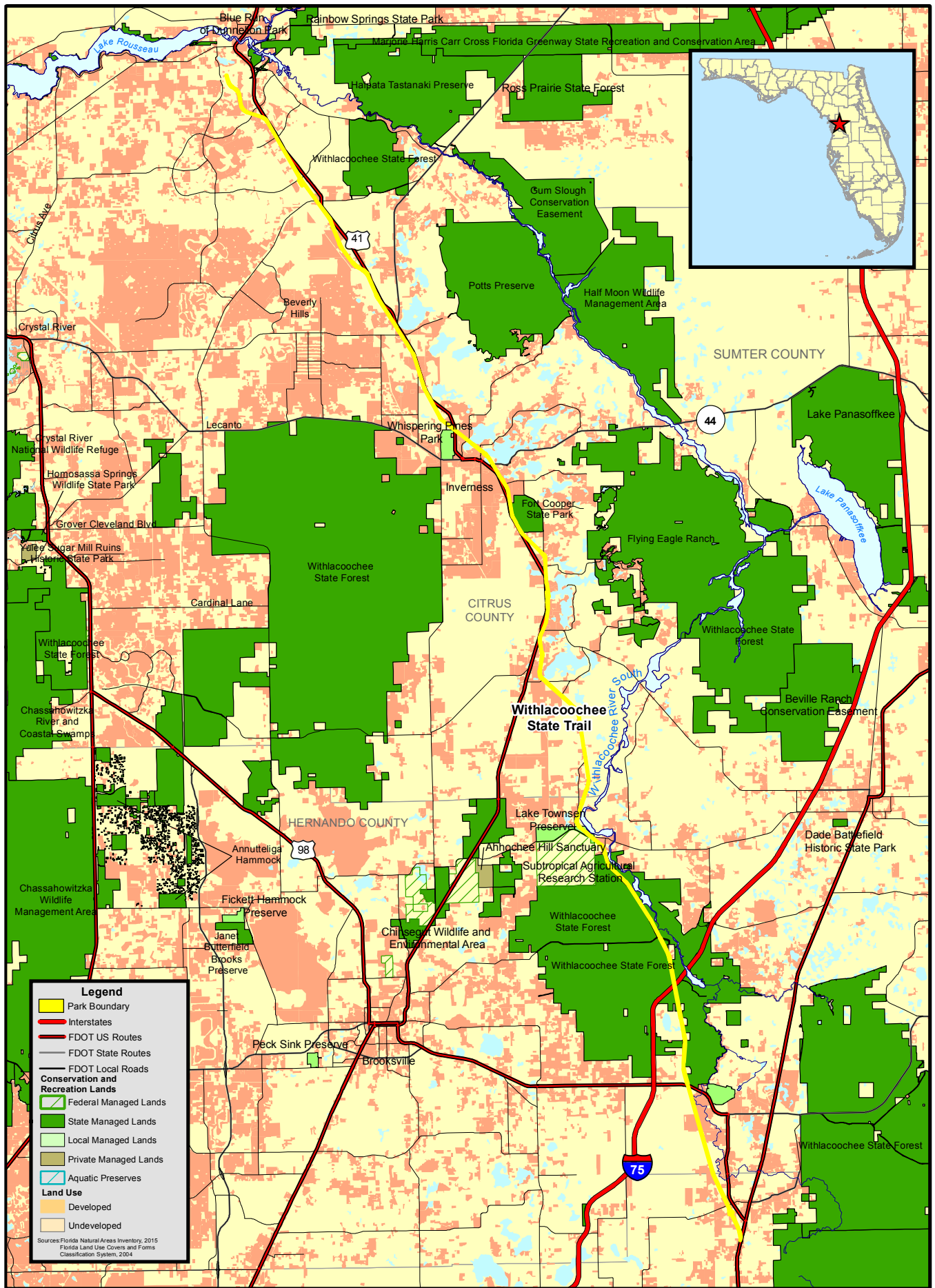
Trail Significance

- The WST has designation as a National Recreation Trail and is a key component in the Florida Greenways and Trails System (FGTS), which plays an important role in advancing Florida's economy, tourism, health, transportation, recreation, conservation, and quality of life.
- The WST preserves the route where rail passengers once traveled, and provides reminders of the historic railroad with its blockhouses, cement mile and whistle markers, the Lake Henderson Trestle, a restored 1925 caboose, and the adjacent Inverness Depot built in 1982.
- The WST provides important recreational opportunities including hiking, biking, skating, horseback riding, geocaching, picnicking, and wildlife viewing, as well as environmental and cultural education.

The Withlacoochee State Trail is classified as a State Trail in the DRP's unit classification system. In the management of state trails, primary consideration is given to providing opportunities for active recreational pursuits. Thus, user considerations are generally given priority over resource considerations. In areas where exceptional natural or cultural resources are included, however, resource considerations may become paramount even at the loss of some recreational use. Emphasis is placed on active recreational pursuits, although passive uses may be provided if suitable resources exist. Program activity is concerned with promoting use of the site for public recreation and with interpreting the trail and its surrounding area for public enjoyment. Development is aimed at enhancing the recreational appeal of the trail by providing basic facilities for access, user convenience and safety, and interpretation.

Purpose and Scope of the Plan

This plan serves as the basic statement of policy and direction for the management of the Withlacoochee State Trail as a unit of Florida's state park system. It identifies the goals, objectives, actions and criteria or standards that guide each aspect of park administration, and sets forth the specific measures that will be implemented to meet management objectives and provide balanced public utilization. The plan is intended to meet the requirements of Sections 253.034 and 259.032, Florida Statutes, Chapter 18-2, Florida Administrative Code, and is intended to be consistent with the State Lands Management Plan. With approval, this management plan will replace the 2003 approved plan.

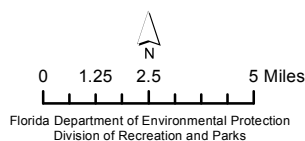


Legend

- Park Boundary
- Interstates
- FDOT US Routes
- FDOT State Routes
- FDOT Local Roads
- Conservation and Recreation Lands**
- Federal Managed Lands
- State Managed Lands
- Local Managed Lands
- Private Managed Lands
- Aquatic Preserves
- Land Use**
- Developed
- Undeveloped

Sources: Florida Natural Areas Inventory, 2015
Florida Land Use Covers and Forms Classification System, 2004

**WITHLACOOCHEE
STATE TRAIL**



**VICINITY
MAP**

The plan consists of three interrelated components: the Resource Management Component, the Land Use Component and the Implementation Component. The Resource Management Component provides a detailed inventory and assessment of the natural and cultural resources of the park. Resource management needs and issues are identified, and measurable management objectives are established for each of the park's management goals and resource types. This component provides guidance on the application of such measures as prescribed burning, exotic species removal, imperiled species management, cultural resource management and restoration of natural conditions.

The Land Use Component is the recreational resource allocation plan for the park unit. Based on considerations such as access, population, adjacent land uses, the natural and cultural resources of the park, current public uses and existing development, measurable objectives are set to achieve the desired allocation of the physical space of the trail corridor. These objectives locate use areas and propose the types of facilities and programs and the volume of public use to be provided.

The Implementation Component consolidates the measurable objectives and actions for each of the park unit's management goals. An implementation schedule and cost estimates are included for each objective and action. Included in this table are (1) measures that is used to evaluate the DRP's implementation progress, (2) timeframes for completing actions and objectives, and (3) estimated costs to complete each action and objective.

All development and resource alteration proposed in this plan is subject to the granting of appropriate permits, easements, licenses, and other required legal instruments. Approval of the management plan does not constitute an exemption from complying with the appropriate local, state or federal agencies.

The potential of the trail corridor to accommodate secondary management purposes was analyzed in the development of this plan. These secondary purposes were considered within the context of DRP's statutory responsibilities and the resource needs and values of the WST corridor. This analysis considered the park unit's natural and cultural resources, management needs, aesthetic values, visitation, and visitor experiences. For this park unit, it was determined that no secondary purposes could be accommodated in a manner that would not interfere with the primary purpose of resource-based outdoor recreation and conservation. Uses such as water resource development projects, water supply projects, stormwater management projects, linear facilities and sustainable agriculture and forestry are not consistent with this plan.

The potential for generating revenue to enhance management was analyzed. It was determined that multiple-use management activities would not be appropriate as a means of generating revenues for land management. Instead, techniques such as sponsorships, concessions and similar measures may be employed on a case-by-case basis as a means of supplementing management funding.

The use of private land managers to facilitate restoration and management of the trail was analyzed. Decisions regarding this type of management (such as outsourcing, contracting with the private sector, use of volunteers, etc.) are made on a case-by-case basis as necessity dictates.

Management Program Overview

Management Authority and Responsibility

In accordance with Chapter 258, Florida Statutes and Chapter 62D-2, Florida Administrative Code, the Division of Recreation and Parks (DRP) is charged with the responsibility of developing and operating Florida's recreation and parks system. These are administered in accordance with the following policy:

It shall be the policy of the Division of Recreation and Parks to promote the state park system for the use, enjoyment, and benefit of the people of Florida and visitors; to acquire typical portions of the original domain of the state which will be accessible to all of the people, and of such character as to emblemize the state's natural values; conserve these natural values for all time; administer the development, use and maintenance of these lands and render such public service in so doing, in such a manner as to enable the people of Florida and visitors to enjoy these values without depleting them; to contribute materially to the development of a strong mental, moral, and physical fiber in the people; to provide for perpetual preservation of historic sites and memorials of statewide significance and interpretation of their history to the people; to contribute to the tourist appeal of Florida.

Many operating procedures are standardized system-wide and are set by internal direction. These procedures are outlined in the DRP's Operations Manual (OM) that covers such areas as personnel management, uniforms and personal appearance, training, signs, communications, fiscal procedures, interpretation, concessions, public use regulations, resource management, law enforcement, protection, safety and maintenance.

State Trail Management Goals

The following goals express the DRP's long-term intent in managing the state trail.

- Provide administrative support for all trail functions.
- Protect water quality and quantity along the trail, restore hydrology to the extent feasible and maintain the restored condition.
- Restore and maintain the natural communities/habitats along the trail corridor, where appropriate.
- Maintain, improve or restore imperiled species populations and habitats in the trail corridor.
- Remove exotic and invasive plants and animals from the trail corridor and conduct needed maintenance-control.

- Protect, preserve and maintain the cultural resources of the trail corridor.
- Provide public access and recreational opportunities.
- Develop and maintain the capital facilities and infrastructure necessary to meet the goals and objectives of this management plan.

Management Coordination

The trail is managed in accordance with all applicable laws and administrative rules. Agencies having a major or direct role in the management of the park unit are discussed in this plan.

The Florida Department of Agriculture and Consumer Services (FDACS), Florida Forest Service (FFS), assists DRP staff in the development of wildfire emergency plans and provides the authorization required for prescribed burning. The Florida Fish and Wildlife Conservation Commission (FWC), assists staff in the enforcement of state laws pertaining to wildlife, freshwater fish and other aquatic life existing within the park. In addition, the FWC aids the DRP with wildlife management programs, including imperiled species management and Watchable Wildlife programs. The Florida Department of State (FDOS), Division of Historical Resources (DHR) assists staff to ensure protection of archaeological and historical sites.

Public Participation

The DRP provided an opportunity for public input by conducting a public workshop and an Advisory Group Meeting to present the draft management plan to the public. Wednesday, July 22 and Thursday, July 23, 2015, respectively. Meeting notices were published in the Florida Administrative Register on Wednesday, July 15, 2015, Volume 41, Issue 136, included on the Department Internet Calendar, posted in clear view at the park, and promoted locally. The purpose of the Advisory Group meeting is to provide the Advisory Group members an opportunity to discuss the draft management plan (see Addendum 2).

Other Designations

The WST was designated as a component of the Florida Greenways and Trails System in 2002, and as a National Recreational Trail in 2011.

The WST crosses or lies in close proximity to several water bodies that have been designated as Outstanding Florida Waters, pursuant to Chapter 62-302, Florida Administrative Code. These include the Withlacoochee River, the Chassahowitzka National Wildlife Refuge and Fort Cooper State Park. The Department classifies surface waters that the trail crosses as Class III waters. This trail corridor is not within or adjacent to an aquatic preserve as designated under the Florida Aquatic Preserve Act of 1975 (Section 258.35, Florida Statutes).

The Withlacoochee State Trail is not within an Area of Critical State Concern as defined in Section 380.05, Florida Statutes, and is not presently under study for such designation.

RESOURCE MANAGEMENT COMPONENT

INTRODUCTION

The Florida Department of Environmental Protection (DEP), Division of Recreation and Parks (DRP), in accordance with Chapter 258, Florida Statutes, has implemented resource management programs for preserving for all time the representative examples of natural and cultural resources of statewide significance under its administration. This component of the unit plan describes the natural and cultural resources of the park unit and identifies the methods that will be used to manage them. Management measures expressed in this plan are consistent with the DEP's overall mission in ecosystem management. Cited references are contained in Addendum 3.

The DRP's philosophy of resource management is natural systems management. Primary emphasis is placed on restoring and maintaining, to the degree possible, the natural processes that shaped the structure, function and species composition of Florida's diverse natural communities as they occurred in the original domain. Single species management for imperiled species is appropriate in state parks when the maintenance, recovery or restoration of a species or population is complicated due to constraints associated with long-term restoration efforts, unnaturally high mortality or insufficient habitat. Single species management should be compatible with the maintenance and restoration of natural processes, and should not imperil other native species or seriously compromise park values.

The DRP's management goal for cultural resources is to preserve sites and objects that represent Florida's cultural periods, significant historic events or persons. This goal often entails active measures to stabilize, reconstruct or restore resources, or to rehabilitate them for appropriate public use.

Because park and trail units are often components of larger ecosystems, their proper management can be affected by conditions and events that occur beyond park boundaries. Ecosystem management is implemented through a resource management evaluation program that assesses resource conditions, evaluates management activities and refines management actions, and reviews local comprehensive plans and development permit applications for trail/ecosystem impacts.

Each trail unit is divided into management zones that delineate areas on the ground that are used to reference management activities (see Management Zones Map). The shape and size of each zone may be based on natural community type, burn zone, and the location of existing roads and natural fire breaks. It is important to note that all burn zones are management zones; however, not all management zones include fire-dependent natural communities. Table 1 reflects the management zones with the acres of each zone.

Management Zone	Acreage	Managed with Prescribed Fire	Contains Known Cultural Resources
WT-1	56.16	No	Yes
WT-2	35.3	No	Yes
WT-3	114.08	No	Yes
WT-4	63.41	No	Yes
WT-5	63.04	No	Yes
WT-6	34.99	No	Yes
WT-7	123.66	No	Yes
WT-8	94.5	No	Yes
WT-9	76.02	No	Yes
WT-10	98.84	No	Yes

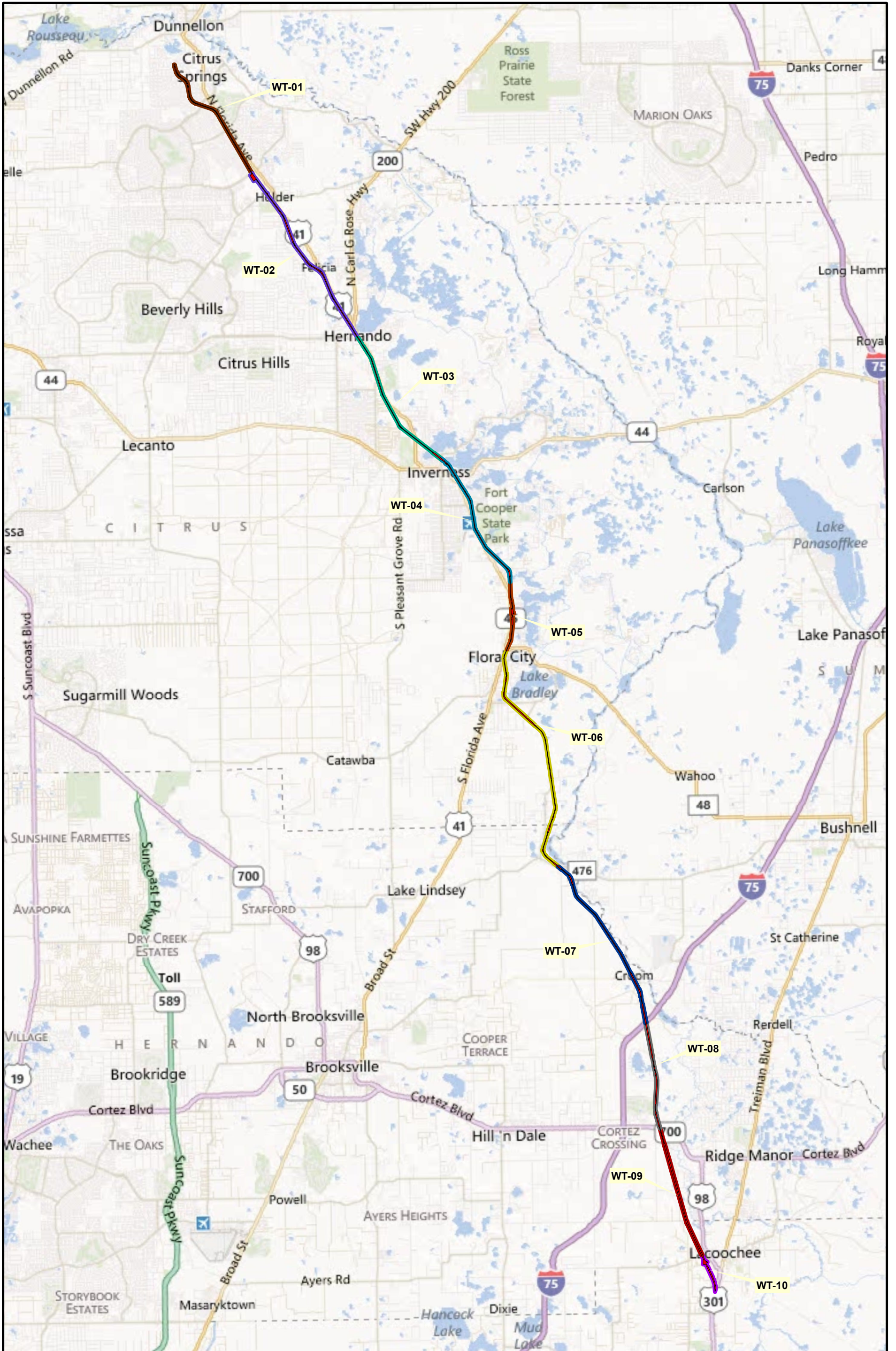
RESOURCE DESCRIPTION AND ASSESSMENT

Natural Resources

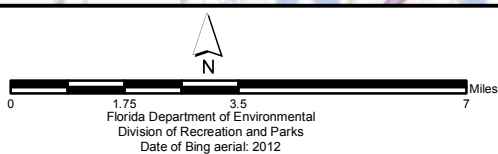
Topography

Withlacoochee State Trail is located within the Brooksville Ridge and the Tsala-Apopka Plain subdivisions of the Central Highlands physiographic province (North 2000). Natural elevations vary greatly in this region, ranging between 70 and 200 feet above mean sea level (msl) along the Brooksville Ridge and between 60 and 80 feet above msl within the Tsala-Apopka Plain (Hyde et al. 1977, Pilny et al. 1988). Most of the trail follows the Brooksville Ridge, where the rolling topography has been heavily influenced by karst activity. Sinks, depressions and sharp changes in elevation within short distances are common in this terrain. In contrast, portions of the trail occurring within the Tsala-Apopka Plain pass through flatter, lower landscapes produced by solution of the underlying limestone substrate. Broad grassy sloughs, ponds and depressions characterize the topography of this plain.

The natural topography has been altered along much of the trail corridor, largely due to construction of the rail bed, adjacent roadways, power lines and access points. Construction activities along the historic railway corridor were designed to provide consistent elevation grade and drainage, thereby creating an artificially flat topography for the length of the actual rail bed. Achievement of the desired grade necessitated the excavation of cuts through the low ridges that intersected the rail corridor and the filling of depressions and other low areas along the route. Many of the topographic disturbances on adjacent properties are attributable to the construction and maintenance of U. S. Highway 41, which closely parallels the trail for over half its length. In addition, abandoned phosphate mine sites are scattered about on private lands along the old railroad route, creating unnaturally deep scars and pits. The original topography and natural communities along the trail are probably most closely represented where the trail passes Fort Cooper State Park or through the Withlacoochee State Forest Croom Tract.



WITHLACOOCHEE
STATE TRAIL



MANAGEMENT ZONES MAP

Geology

The majority of the Withlacoochee State Trail corridor is located along the high sandy Brooksville Ridge; the remainder lies within the Tsala-Apopka Plain, which is part of the Withlacoochee River Valley. These landforms occur on the Wicomico marine terrace, where elevations range from 70 to 100 feet above msl (Randazzo and Jones 1997). Uppermost (exposed) stratigraphic units identified within the trail corridor include undifferentiated Tertiary/Quaternary sediments, the Hawthorn Group, Ocala Limestone, and beach ridge and dune from the Pliocene to Holocene (Hough 1998). For a short distance along the Brooksville Ridge, the trail passes above the Cypresshead Formation, which is an orange clay-sand that is approximately two million years old.

A generalized, geologic north-to-south cross section of this region of Florida indicates five major stratigraphic units occurring at varying elevations and having different thicknesses. These units are, in ascending order: the Avon Park Formation, Ocala Limestone, Suwannee Limestone, Hawthorn Group, and Surficial Sediments (Fernald and Purdum 1998). The Middle Eocene Avon Park Formation is composed of tan to brown silt-sized dolostone with occasional organic-rich laminations. Fossils in this formation include foraminifera such as *Dictyoconus* species. The Ocala Limestone unit, from the Upper Eocene, consists of a white to very pale orange limestone ranging in texture from chalky to somewhat grainy. Fossils found in this group commonly include foraminifera such as miliolids and *Lepidocyclina* species (J. Arthur 1992). Miocene-age Hawthorn Group sediments consist of variable mixtures of clay, quartz, sand, dolomite and phosphate (Scott 1983). When present, fossils in this formation include oysters, scallops, corals, foraminifera and various diatoms (Hoenstine 1984).

Near the northern end of the trail corridor, the top of the Avon Park Formation varies from approximately 200 to 100 feet below msl. It is overlain by Ocala Limestone, which ranges from sea level to 50 feet above msl. Surficial sediments from the Plio-Pleistocene overlay the Ocala Limestone from sea level to 100 feet above msl. At the southern end of the trail corridor, the top of the Avon Park Formation lies deeper beneath the surface, ranging from 500 to 400 feet below msl. It is overlain by Ocala Limestone, which ranges from 100 feet below msl to sea level. Unlike the northern portion of the trail, Ocala Limestone at the southern end is overlain by Suwannee Limestone of the Oligocene, which varies in elevation from sea level to 80 feet above msl. The Miocene-age Hawthorn Group sediments overlay the Suwannee Limestone in some parts of this region, with elevations ranging from sea level to 20 feet above msl. Plio-Pleistocene surficial sediments overlay the Suwannee Limestone unit, and if present, the Hawthorn Group as well. The top of this formation ranges from 40 to 100 feet above msl.

Soils

Thirty specific soil types occur within the Withlacoochee State Trail corridor (Hyde et al. 1977, Pilny et al. 1988). See Addendum 4 for a complete list and descriptions of these soils. The majority of these soils are typical of sand ridges, although soils that are characteristic of poorly drained areas also occur within the trail corridor in Hernando and Pasco Counties. The artificial berm that supports the trail is

composed of soils from adjacent ditches and borrow pits. Excavation and fill activities associated with the construction of this berm have permanently altered or destroyed the natural soil profile in and near the trail.

Erosion control is the primary management concern for soils along the Withlacoochee Trail. The steep slopes associated with the elevated rail bed are subject to occasional erosion, especially where vegetative cover is lacking. Management activities will follow generally accepted best management practices to minimize or prevent soil erosion and conserve soil and water resources on site.

Minerals

Because of the unit's configuration, no commercially valuable minerals are present.

Hydrology

Withlacoochee State Trail lies entirely within the Withlacoochee River drainage basin. The Withlacoochee River, which generally parallels the trail, originates in the Green Swamp and flows north-northwest for over 100 miles, receiving flows from the Little Withlacoochee River and Rainbow River before discharging into the Gulf of Mexico near Yankeetown. Several other large water bodies exist near or partially within the trail corridor, including the Tsala-Apopka chain of lakes, Connell Lake, and Bradley Lake. There are also numerous small ponds, swamps and sinkholes adjacent to the trail. Rainfall runoff and groundwater inflow contribute to surface water inputs in the region (Jones 1985).

A distinct surficial aquifer system does not exist as a continuous unit in this area of the Withlacoochee drainage basin. Where present, the surficial aquifer consists of sands, clayey sands, shell and limestone, and is recharged by rainfall (Jones 1985). The Floridan Aquifer is the primary aquifer system for the region surrounding the Withlacoochee Trail. Throughout most of this region, the Floridan Aquifer is unconfined, or thinly confined by isolated layers of clay or fine limestone (Fernald and Purdum 1998). Rainfall and percolation from the surficial aquifer provide direct recharge to the Floridan Aquifer in such unconfined areas (Jones 1985). The porous, sandy soils and active sinkholes in and around Withlacoochee State Trail contribute to the high recharge rates common in this region of Florida (Jones 1985, Fernald and Purdum 1998). Groundwater within the Floridan moves coastward from the area of potentiometric high, which occurs within the Green Swamp. The potentiometric surface of the Floridan Aquifer ranges between 20 and 140 feet above msl in the area of the trail (Fernald and Purdum 1998).

The elevated berm of the rail bed and the parallel ditches associated with it may have altered the natural surface hydrology at some locations within and immediately adjacent to the Withlacoochee Trail. The berm impedes the natural overland flow of surface water, and may actually impound water during times of heavy rainfall. The rail bed passes through several low-lying and wetland areas, and there is a bridged crossing at Lake Henderson. Other wetland crossings are provided with assorted culverts designed to facilitate flow from one side of the berm to the other. The effectiveness of these structures in maintaining the natural hydroperiod of adjacent wetlands and freshwater systems has not yet been

determined, however. The parallel ditches constructed adjacent to the berm provide drainage for the railway infrastructure; however, they may also channelize water in times of high flow, further altering natural drainage patterns.

Natural Communities

This section of the management plan describes and assesses each of the natural communities found in the state park. It also describes of the desired future condition (DFC) of each natural community and identifies the actions that will be required to bring the community to its desired future condition. Specific management objectives and actions for natural community management, exotic species management, imperiled species management are discussed in the Resource Management Program section of this component.

The system of classifying natural communities employed in this plan was developed by the Florida Natural Areas Inventory (FNAI). The premise of this system is that physical factors such as climate, geology, soil, hydrology and fire frequency generally determine the species composition of an area, and that areas that are similar with respect to those factors will tend to have natural communities with similar species compositions. Obvious differences in species composition can occur, however, despite similar physical conditions. In other instances, physical factors are substantially different, yet the species compositions are quite similar. For example, coastal strand and scrub--two communities with similar species compositions--generally have quite different climatic environments, and these necessitate different management programs. Some physical influences, such as fire frequency, may vary from FNAI's descriptions for certain natural communities in this plan.

When a natural community within a park reaches the desired future condition, it is considered to be in a "maintenance condition." Required actions for sustaining a community's maintenance condition may include, maintaining optimal fire return intervals for fire dependent communities, ongoing control of non-native plant and animal species, maintaining natural hydrological functions (including historic water flows and water quality), preserving a community's biodiversity and vegetative structure, protecting viable populations of plant and animal species (including those that are imperiled or endemic), and preserving intact ecotones linking natural communities across the landscape.

Construction of the rail bed and continual maintenance of the railroad right-of-way over the years have permanently altered the natural communities that once existed within the Withlacoochee State Trail corridor. Today, except for a small amount of remnant mesic hammock, almost all lands within the trail corridor are classified as either developed or altered landcover type. Consequently, this plan does not include a map of natural communities. However, the trail corridor does pass through some natural landscapes that have managed to persist outside of trail corridor boundaries. These landscapes contain six distinct natural communities, all of which have experienced varying degrees of disturbance from both public and private use.

Rather than the standard desired future condition descriptions, a brief characterization of each of the six natural communities intersected by the trail corridor is provided below. Assessments of community condition are not provided, however. In general, management measures applicable to the communities are not discussed since the trail corridor does not actually contain viable representative examples of them. A list of plants and animals occurring along the trail is contained in Addendum 5.

MESIC HAMMOCK

Description: Some mesic hammock is still intact within the Withlacoochee State Trail corridor on the former Kabrich property, a nine-acre parcel south of Inverness. This rectangular fragment extends westward from the trail corridor to Highway U. S. 41. The trail intersects other patches of mesic hammock along its route, where it typically constitutes a transition zone between upland and floodplain areas. Live oak (*Quercus virginiana*) is usually the dominant tree, with cabbage palm (*Sabal palmetto*) interspersed through the understory. Other common trees may include southern magnolia (*Magnolia grandiflora*), pignut hickory (*Carya glabra*), laurel oak (*Quercus laurifolia*), and water oak (*Quercus nigra*). Some areas within this community may contain relatively few live oaks and have an open understory of sparkleberry (*Vaccinium arboreum*) and other small trees or shrubs, with saw palmetto (*Serenoa repens*) scattered about. In other areas, a live oak canopy may extend over a dense shrub layer of yaupon (*Ilex vomitoria*) and saw palmetto. Groundcover in mesic hammock is sparse and patchy, but generally consists of panicgrasses (*Panicum* spp.), switchgrass (*Panicum virgatum*), sedges, and various ferns and forbs. Numerous vines and epiphytes typically occur on the live oaks, cabbage palms and sub-canopy trees.

General management measures: No management measures are needed for the mesic hammock on the former Kabrich property other than protection from inappropriate uses and regular treatment of the invasive exotic plants that are abundant there, particularly skunkvine (*Paederia foetida*).

SANDHILL

Description: Prior to development of the rail bed and surrounding areas, sandhill was probably the dominant natural community along the Withlacoochee Trail corridor. Portions of the trail corridor still contain narrow slivers of remnant sandhill, but those fragments are much too small to allow active management. Today, several scattered sandhill remnants persist on private properties along the northern half of the trail. However, the largest remaining tracts of sandhill adjoining the trail are contained within Fort Cooper State Park and the Withlacoochee State Forest/Croom Tract. The dominant tree in sandhill that is in good condition is the longleaf pine (*Pinus palustris*). There may also be scattered individual trees or clumps of onsite oak species such as turkey oak (*Quercus laevis*), sand post oak (*Quercus margaretta*), and bluejack oak (*Quercus incana*). Among the understory species may be saw palmetto, sparkleberry, deerberry (*Vaccinium stamineum*), gopher apple (*Licania michauxii*), and pricklypear (*Opuntia humifusa*). Wiregrass (*Aristida stricta* var. *beyrichiana*) is the dominant herbaceous groundcover species, but pineywoods dropseed (*Sporobolus junceus*), lopsided indiagrass (*Sorghastrum*

secundum), narrowleaf silkgrass (*Pityopsis graminifolia*), and other grasses and forbs may be common as well.

General management measures: While the DRP does not plan to conduct prescribed burns independently within the Withlacoochee Trail corridor, portions of the trail adjacent to public lands such as Fort Cooper State Park and the Withlacoochee State Forest/Croom Tract may occasionally receive fire when burns take place on those properties. The trail may be used as a firebreak during such burns, and vegetated areas between the trail and the public properties may be incorporated into the burns if feasible. Managers of these lands (DRP, FFS, and FFWCC) will coordinate with staff of Withlacoochee State Trail when conducting burns on their respective properties in zones adjacent to the trail. Some of the prescribed burns on adjacent properties may necessitate temporary closure of portions of the trail.

XERIC HAMMOCK

Description: Scattered small patches of xeric hammock, dominated primarily by sand live oak (*Quercus geminata*), appear on some of the private lands adjacent to the trail. The occurrence of this community in those locations is likely the result of fire exclusion in what was formerly sandhill. Other species that may be common in the xeric hammock include laurel oak, sand post oak, sparkleberry, wild olive (*Osmanthus americanus*), deerberry, yaupon, and saw palmetto. Herbaceous groundcover is generally absent or very sparse.

ALLUVIAL FOREST

Description: This hardwood community occurs adjacent to the trail in the Withlacoochee River floodplain on ridges or slight elevations above the floodplain swamp, primarily within the Withlacoochee State Forest/Croom Tract. It is generally flooded for one to four months of the year during the growing season. Typical overstory trees may include overcup oak (*Quercus lyrata*), laurel oak, water hickory (*Carya aquatica*), American elm (*Ulmus americana*), and red maple (*Acer rubrum*). Some bald cypress (*Taxodium distichum*) may occur as well. Understory species may include swamp dogwood (*Cornus foemina*), American hornbeam (*Carpinus caroliniana*), and willow species (*Salix* spp.). The presence of groundcover plants such as netted chain fern (*Woodwardia areolata*) and other shade-tolerant herbaceous species is variable.

FLOODPLAIN SWAMP

Description: The trail passes through or near floodplain swamp associated with the Withlacoochee River drainage. Floodplain swamp along the Withlacoochee River is a frequently or permanently flooded community within very low areas of the floodplain, roughly parallel to alluvial forest that occupies slightly higher elevations. More frequent flooding and the dominance of cypress and gum trees are features that distinguish floodplain swamp from the similar appearing alluvial forest. The canopy is typically closed, with bald cypress the dominant tree, but it often includes tupelo species (*Nyssa* spp.) as well as water hickory, red maple and overcup oak. Trees bases are typically buttressed. The understory and groundcover are generally sparse.

RIVER FLOODPLAIN LAKE

Description: The trail directly intersects and may hydrologically impact several relatively small lakes that are hydraulically connected to the Tsala-Apopka chain of lakes in Citrus County. These lakes, which are best classified as river floodplain lakes, characteristically have a shallow open water zone, with or without floating or submerged aquatic plants, surrounded by basin swamp or floodplain swamp. Although water levels may fluctuate substantially, the river floodplain lakes will generally be permanent water bodies, but they may dry up during extreme droughts. Water flow is generally non-existent to very slow. Existing vegetation may include American white waterlily (*Nymphaea odorata*), American lotus (*Nelumbo lutea*), spatterdock (*Nuphar advena*), duckweed (*Lemna* sp.), coontail (*Ceratophyllum demersum*), watermilfoil (*Heterophyllum* sp.), and bladderwort (*Utricularia* sp.). Emergent plants may also occur.

ALTERED LANDCOVER TYPES

Routine herbicide treatment of woody vegetation along the railroad corridor was an integral part of the maintenance regime conducted by CSX Transportation Inc. when it owned the right-of-way. That practice, in combination with land excavation and filling associated with railway berm construction, has converted virtually all of what is now the Withlacoochee State Trail corridor into such a dramatically altered landscape that, for the purposes of this management plan, the entire corridor except for the Kabrich parcel is classified as developed or altered landcover type. Exotic weeds, vines, shrubs, and grasses now dominate the altered areas. Although the trail passes by many private lands containing developments and altered landscapes, including abandoned fields and pastures, improved pastures, pine plantations, borrow areas and spoil areas, no description of these landcover types is provided in this management plan.

DEVELOPED

The entire trail corridor except for limited areas of mesic hammock and successional hardwood forest is classified as developed. Included in the designation are the paved trail, its associated berm and swale system, trailhead parking areas, maintenance structures, and recreational facilities such as picnic areas. A complete list of the developed areas may be found in the Land Use Component.

DRP staff will regularly check developed areas for the presence of priority invasive exotic plants and will routinely treat any exotics discovered. Other management measures will include the proper management of storm water and the use of development guidelines that are compatible with resource management activities on adjacent public natural areas.

SUCCESSIONAL HARDWOOD FOREST

FNAI describes successional hardwood forest as a closed-canopy woodland dominated by fast growing hardwoods such as laurel oak, water oak, and sweetgum (*Liquidambar styraciflua*), often with a scattering of loblolly pines (*Pinus taeda*). Forests such as this become established either in pyrogenic natural communities that have experienced extended periods of fire suppression or in old fields that have long been abandoned.

The most significant area of successional hardwood forest along the trail corridor is a narrow strip of land between the trail and Highway U. S. 41 just south of the Kabrich parcel. The strip likely once contained a fire-adapted natural community, but clearing for agricultural purposes radically changed the area to an old field type of landcover, which in turn eventually succeeded to hardwood forest. Laurel oaks and other invasive offsite hardwoods now form a dense canopy within the strip. There are no plans to attempt restoration of this area.

Imperiled Species

Imperiled species are those that are (1) tracked by FNAI as critically imperiled (G1, S1) or imperiled (G2, S2); or (2) listed by the U.S. Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FFWCC) or the Florida Department of Agriculture and Consumer Services (FDACS) as endangered, threatened or of special concern.

One imperiled plant species and one imperiled animal species have been recorded as residing within the Withlacoochee State Trail corridor. An additional 13 imperiled animal species have been identified as transients that occasionally travel along or across the trail corridor.

Sand butterfly pea (*Centrosema arenicola*) was recorded along the railroad right-of-way in 1962 and 1976 (Brockwell and Hough 1999), long before conversion of the rail corridor to a state trail. It has not been observed in recent years, and may in fact be extirpated locally. No other imperiled plant species have been identified along the trail. District 2 biologists need to survey the trail route for possible remnant individuals of sand butterfly pea. Park staff should familiarize themselves with the species and watch for possible occurrences along the trail.

The gopher tortoise (*Gopherus polyphemus*) is the lone imperiled animal species actually resident within the trail corridor. Edges of the old railway berm and its associated swale provide suitable open habitat for tortoises to excavate burrows and forage for food. The 13 other imperiled species recorded within the park (see Table 2 below) are either birds that happened to fly over the trail or individual animals that utilized the corridor only for foraging or as a passageway between various natural communities adjoining the trail. Since these species are merely transients through the park, there is no management action that applies to them other than recording their occurrence in the park whenever they are observed. Nevertheless, the DRP will strive to protect any imperiled species that happen to reside in or regularly travel along the trail corridor. Appropriate management of natural communities in public lands adjacent to the trail will benefit most of the imperiled species that use the trail for foraging or passage.

Table 2 contains a list of known imperiled species within the park and identifies their status as defined by various entities. It also identifies the types of management actions that are currently being taken by DRP staff or others, and identifies the current level of monitoring effort. The codes used under the column

headings for management actions and monitoring level are defined following the table. Explanations for federal and state status as well as FNAI global and state rank are provided in Addendum 6.

Table 2. Imperiled Species Inventory						
Common and Scientific Name	Imperiled Species Status				Management Actions	Monitoring Level
	FWC	USFWS	FDACS	FNAI		
PLANTS						
Sand butterfly-pea <i>Centrosema arenicola</i>			LE	G2, S2	2, 10	Tier 1
AMPHIBIANS						
REPTILES						
American alligator <i>Alligator mississippiensis</i>	FT(S/A)	T(S/A)		G5, S4	14	Tier 1
Eastern indigo snake <i>Drymarchon couperi</i>	FT	LT		G3, S3	14	Tier 1
Gopher tortoise <i>Gopherus polyphemus</i>	LT			G3, S3	2, 10	Tier 2
Florida pine snake <i>Pituophis melanoleucus mugitus</i>	SSC			G4, T3, S3	14	Tier 1
BIRDS						
Little blue heron <i>Egretta caerulea</i>	SSC			G5, S4	14	Tier 1
Snowy egret <i>Egretta thula</i>	SSC			G5, S3	14	Tier 1
Tricolored heron <i>Egretta tricolor</i>	SSC			G5, S4	14	Tier 1
Swallow-tailed kite <i>Elanoides forficatus</i>				G5, S2	14	Tier 1
White ibis <i>Eudocimus albus</i>	SSC			G5, S4	14	Tier 1
Limpkin <i>Aramus guarauna</i>	SSC			G5, S3	14	Tier 1
Florida sandhill crane <i>Grus canadensis pratensis</i>	ST			G5,T2 T3,S2, S3	14	Tier 1
Wood stork <i>Mycteria americana</i>	FT	LT		G4, S2	14	Tier 1

Common and Scientific Name	Imperiled Species Status				Management Actions	Monitoring Level
	FWC	USFWS	FDACS	FNAI		
Red-cockaded woodpecker <i>Picoides borealis</i>	FE	LE		G3, S2	14	Tier 1
MAMMALS						
Sherman's fox squirrel <i>Sciurus niger shermani</i>	SSC			G5, T3, S3	14	Tier 1

Management Actions:

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Prescribed Fire 2. Exotic Plant Removal 3. Population Translocation/Augmentation/Restock 4. Hydrological Maintenance/Restoration 5. Nest Boxes/Artificial Cavities 6. Hardwood Removal 7. Mechanical Treatment | <ol style="list-style-type: none"> 8. Predator Control 9. Erosion Control 10. Protection from visitor impacts (establish buffers)/law enforcement 11. Decoys (shorebirds) 12. Vegetation planting 13. Outreach and Education 14. Other |
|---|---|

Monitoring Level:

- Tier 1. Non-Targeted Observation/Documentation: includes documentation of species presence through casual/passive observation during routine park activities (i.e. not conducting species-specific searches). Documentation may be in the form of Wildlife Observation Forms, or other district specific methods used to communicate observations.
- Tier 2. Targeted Presence/Absence: includes monitoring methods/activities that are specifically intended to document presence/absence of a particular species or suite of species.
- Tier 3. Population Estimate/Index: an approximation of the true population size or population index based on a widely accepted method of sampling.
- Tier 4. Population Census: A complete count of an entire population with demographic analysis, including mortality, reproduction, emigration, and immigration.
- Tier 5. Other: may include habitat assessments for a particular species or suite of species or any other specific methods used as indicators to gather information about a particular species.

Detailed management goals, objectives, and actions for imperiled species in this unit are discussed in the Resource Management Program section of this component and the Implementation Component of this plan.

Exotic and Nuisance Species

Exotic species are plants or animals not native to Florida. Invasive exotic species are able to out-compete, displace or destroy native species and their habitats, often because they have been released from the natural controls of their native range, such as diseases, predatory insects, etc. If left unchecked, invasive exotic plants and animals alter the character, productivity and conservation values of the natural areas they invade.

At least 36 exotic plant species have been recorded within the Withlacoochee State Trail corridor at one time or another. To varying degrees, every zone along the length of the trail has infestations of invasive exotic plants. A comprehensive detailed survey for Florida Exotic Pest Plant Council (FLEPPC) Category I and Category II exotic plant species along the trail needs to be updated in order to assess current threats and determine treatment priorities.

Chemical control of exotics along the Withlacoochee State Trail has occurred at irregular intervals over the past 15 years. Species previously targeted for treatment have included paper mulberry (*Broussonetia papyrifera*), camphortree (*Cinnamomum camphora*), Chinaberrytree (*Melia azederach*), Chinese tallowtree (*Sapium sebiferum*), Brazilian pepper (*Schinus terebinthifolia*), cogongrass (*Imperata cylindrica*), natalgrass (*Melinus repens*), Johnsongrass (*Sorghum halepense*), air-potato (*Dioscorea bulbifera*), Japanese climbing fern (*Lygodium japonicum*), skunkvine and castorbean (*Ricinus communis*). Contract treatments of large cogongrass infestations covering a total of 259 acres took place in 2009. Additional contract herbicide treatments of cogongrass, totaling 311 acres, occurred in the fall of 2010 and spring of 2011.

The present focus of chemical control in the park is on cogongrass and skunkvine, the species that have the greatest potential to spread rapidly along the length of the trail and into adjacent natural areas. Treating infestations located near or adjacent to publicly managed natural areas is critical. The park needs to continue its exotics control program of identifying invasive exotic plants along the trail, mapping infestation sites on a broad scale, and entering the sites into the statewide exotic plant database maintained by the Florida Park Service. Staff should survey the trail corridor biennially to update exotic plant location data. Infestations of particularly invasive species that are near or adjacent to managed natural areas such as Fort Cooper State Park and Withlacoochee State Forest should be treated with herbicides at least annually. Any mowers or other equipment used along the trail must be cleaned thoroughly before entering other public lands adjacent to the corridor, particularly Fort Cooper State Park.

Table 3 contains a list of the Florida Exotic Pest Plant Council (FLEPPC) Category I and II invasive exotic plant species known to occur within the unit in 2013 (FLEPPC 2011). The table also identifies relative distribution for each species and the management zones in which they are known to occur. An explanation of the codes is provided following the table. For an inventory of all exotic species found within the trail corridor, see Addendum 5.

Table 3. Inventory of FLEPPC Category I and II Exotic Plant Species			
Common and Scientific Name	FLEPPC Category	Distribution	Management Zone (s)
PLANTS			
Camphor tree <i>Cinnamomum camphora</i>	I	1	WT-03
Air potato <i>Dioscorea bulbifera</i>	I	2	WT-01, WT-02, WT-03, WT-04, WT-05, WT-06, WT-07, WT-08, WT-09, WT-10
Cogongrass <i>Imperata cylindrica</i>	I	2	WT-06, WT-07, WT-08
		3	WT-01, WT-02, WT-03, WT-04, WT-05, WT-09, WT-10
Skunkvine <i>Paederia foetida</i>	I	2	WT-01, WT-02, WT-03, WT-07, WT-08
		3	WT-04, WT-05, WT-06, WT-09, WT-10
Brazilian pepper <i>Schinus terebinthifolius</i>	I	2	WT-03
Paper mulberry <i>Broussonetia papyrifera</i>	II	2	WT-06, WT-10
Chinaberrytree <i>Melia azedarach</i>	II	2	WT-10
Arrowleaf elephant's ear <i>Xanthosoma sagittifolium</i>	II	2	WT-04

Distribution Categories:

- 0 No current infestation: All known sites treated and no plants are currently evident.
- 1 Single plant or clump: One individual plant or one small clump of a single species.
- 2 Scattered plants or clumps: Multiple individual plants or small clumps of a single species scattered within the gross area infested.
- 3 Scattered dense patches: Dense patches of a single species scattered within the gross area infested.
- 4 Dominant cover: Multiple plants or clumps of a single species that occupy a majority of the gross area infested.
- 5 Dense monoculture: Generally, a dense stand of a single dominant species that not only occupies more than a majority of the gross area infested, but also covers or excludes other plants.
- 6 Linearly scattered: Plants or clumps of a single species generally scattered along a linear feature, such as a road, trail, property line, ditch, ridge, slough, etc. within the gross area infested.

Exotic animal species include non-native wildlife species, free ranging domesticated pets or livestock, and feral animals. Because of the negative impacts to natural systems attributed to exotic animals, the DRP actively removes exotic animals from state parks, with priority being given to those species causing the greatest ecological damage.

Several exotic animal species have been recorded within the trail corridor. Most are transients rather than actual residents. Among the exotic species recorded, domestic dogs and cats, feral hogs, and armadillos are the most significant threats to native wildlife and habitat. In areas where the rooting of feral hogs has caused significant damage along the trail corridor, park officials will cooperate with adjacent landowners and managers of public lands in hog control efforts.

In some cases, native wildlife may also pose management problems or nuisances within state parks. A nuisance animal is an individual native animal whose presence or activities create special management problems. Examples of animal species from which nuisance cases may arise include raccoons, venomous snakes and alligators that are in public areas. Nuisance animals are dealt with on a case-by-case basis in accordance with the DRP's Nuisance and Exotic Animal Removal Standard.

Detailed management goals, objectives, and actions for management of invasive exotic plants and exotic and nuisance animals are discussed in the Resource Management Program section of this component.

Cultural Resources

This section addresses the cultural resources present in the trail corridor that may include archaeological sites, historic buildings and structures, cultural landscapes and collections. The Florida Department of State (FDOS) maintains the master inventory of such resources through the Florida Master Site File (FMSF). State law requires that all state agencies locate, inventory and evaluate cultural resources that appear to be eligible for listing in the National Register of Historic Places. Addendum 7 contains the FDOS, Division of Historical Resources (DHR) management procedures for archaeological and historical sites and properties on state-owned or controlled properties; the criteria used for evaluating eligibility for listing in the National Register of Historic Places, and the Secretary of Interior's definitions for the various preservation treatments (restoration, rehabilitation, stabilization and preservation). For the purposes of this plan, significant archaeological site, significant structure and significant landscape means those cultural resources listed or eligible for listing in the National Register of Historic Places. The terms archaeological site, historic structure or historic landscape refer to all resources that will become 50 years old during the term of this plan.

Condition Assessment

Evaluating the condition of cultural resources is accomplished using a three-part evaluation scale, expressed as good, fair and poor. These terms describe the present condition, rather than comparing what exists to the ideal condition. Good describes a condition of structural stability and physical wholeness, where no obvious deterioration other than normal occurs. Fair describes a condition in which there is a discernible decline in condition between inspections, and the wholeness or physical integrity is and continues to be threatened by factors other than normal wear. A fair assessment is usually a cause for concern. Poor describes an unstable condition where there is palpable, accelerating decline, and physical integrity is being compromised quickly. A resource in poor condition suffers obvious declines in physical integrity from year to year. A poor condition suggests immediate action is needed to reestablish physical stability.

Level of Significance

Applying the criteria for listing in the National Register of Historic Places involves the use of contexts as well as an evaluation of integrity of the site. A cultural resource's significance derives from its historical, architectural, ethnographic or archaeological context. Evaluation of cultural resources will result in a designation of NRL (National Register or National Landmark Listed or located in an NR district), NR (National Register eligible), NE (not evaluated), or NS (not significant) as indicated in the table at the end of this section.

There are no criteria for use in determining the significance of collections or archival material. Usually, significance of a collection is based on what or whom it may represent. For instance, a collection of furniture from a single family and a particular era in connection with a significant historic site would be considered highly significant. In the same way, a high quality collection of artifacts from a significant archaeological site would be of important significance. A large herbarium collected from a specific park or trail over many decades could be valuable to resource management efforts. Archival records are most significant as a research source. Any records depicting critical events in the trail's history, including construction and resource management efforts, would all be significant.

The following is a summary of the FMSF inventory for the Withlacoochee State Trail corridor. This inventory contains site descriptions and evaluations of site significance.

Prehistoric and Historic Archaeological Sites

Desired future condition: All significant archaeological sites within the Withlacoochee State Trail corridor that represent Florida's cultural periods or significant historic events or persons are preserved in good condition in perpetuity, protected from physical threats and interpreted to the public.

Description: The FMSF lists 11 archaeological sites, three linear resource groups and four historic cemeteries that either occur within the trail corridor or are

adjacent to the trail and have boundaries that may overlap the corridor boundaries. Four of the archaeological sites contain prehistoric components and the remainder are from the historic era (see Table 4). The three linear resource groups constitute the remains of the former rail lines. A predictive model has not been completed for the park.

The Floral City Lake and the Stupid Flake sites, #8CI1010 and #8CI1013 respectively, are prehistoric ceramic sites consisting of ceramic and lithic fragments found in subsurface soils. The Floral City Lake site is located north of Floral City between the Withlacoochee Trail and the Highway U. S. 41 right-of-way. The Stupid Flake site is located less than one-quarter mile south of the Floral City Lake site, also between the trail and U. S. 41. The Floral City Lake site is much larger in area than the Stupid Flake site; however, both were found to have a low density of artifacts when sampled in 1996.

The Seaboard Coast Line Railroad Tracks (linear resource group #8CI335) is an adaptively reused, abandoned railroad bed that once belonged to the Atlantic Coastline Railroad, but now consists of a 12-foot wide paved bicycle and pedestrian trail, paralleled by a natural surface trail for equestrian use. According to the FMSF record, the original rail bed was constructed in 1893 by Henry Plant to complete the Plant System's West Coast Route. That railroad became the Atlantic Coastline Railroad in 1902, the Seaboard Line in 1967, and CSX Transportation in 1980. By 1987, business had declined to the point that the line was abandoned and the crossties and rails removed. The State of Florida purchased the property in 1989 through the Rails-to-Trails program. According to site surveyors, the former rail line is not eligible for the National Register because of the removal of significant details (crossties, rails, and tie plates) and the paving of the rail bed. Several historic railroad structures that are still intact within the trail corridor remain unrecorded. The FMSF form for 8CI335 should be updated to include these sites.

The Depot site, #8CI837, contains a scatter area and trash pit, with artifacts deposited circa 1890-1910. It is thought to be associated with a train depot. The site is located west of the Withlacoochee Trail right-of-way near Country Club Drive in Citrus Springs. Archaeological testing in 1994 in preparation for a proposed road expansion revealed that the Depot site was located in proximity to the historic railroad and contained various bottles and inkwells, as well as animal bones.

The Croom, Istachatta, and Nobelton sites, #8HE289, #8HE300, and #8HE302 respectively, overlap the trail corridor and are probable sites of historic towns located around and adjacent to the former railroad and within the limits of modern towns bearing the same names. The Istachatta site, which includes building remains, graves, and earthworks within its boundaries, is classified as Post-Reconstruction (1880-1897). The Croom site, consisting of building remains and road segments, is considered more recent (1898-1916). The Nobelton site contains building remains from the boom period from 1921-1929 and may contain human remains. Rural agriculture and residential development are currently the predominant land uses at these sites.

Four historic cemeteries are adjacent to the trail: #8CI260 Williams Cemetery; #8CI261 Frazier Cemetery, Community Graveyard; #8CI333 Dampier Cemetery; and #8CI953 Rooks-Bellamy Cemetery. At least two of these are African American cemeteries. Some of the cemeteries extended into the trail area at the time of the railroad development. Gravesites were moved away from the rail bed by the railroad company.

The boundaries of some of the FMSF sites listed in Table 4 are not well defined. Some sites described as adjacent to the trail may actually extend onto the trail property. The historic town sites of Rital Station/Bay City (#8HE295) and Nobleton (#8HE302) are both located adjacent to the historic railroad, within small modern-day towns bearing the same names. Other recorded sites that are near, but probably do not overlap, the trail include various lithic deposits, historic cemeteries, the Istachatta Mound, and Fort Cooper. Boundaries of many sites need to be better defined to determine if any parts of the sites exist within the state trail property.

Condition Assessment: All sites are currently in good condition. Protection from ground disturbance and looting will be necessary to keep them in that condition. The park should take extra care when maintaining these sites.

Level of Significance: Three recorded linear resource groups and five of the recorded archaeological sites within the park have been determined ineligible for the National Register of Historic Places by the State Historic Preservation Officer (SHPO). The remaining archaeological sites have not been formally evaluated for significance.

On September 17, 2003, the Seaboard Coast Line Railroad Tracks (8CI335) was determined to be NR ineligible by the SHPO, who agreed with the surveyor's opinion that the removal of significant details and the application of materials inconsistent with the railroad's period of significance (placing the paved trail on the former railroad bed) adversely affected the historic integrity of the railroad. The Depot Site (8CI837) was determined ineligible by SHPO on August 10, 1995. The SHPO agreed with the surveyor's findings that, due to lack of building remains and the limited nature of historic deposit, there was a lack of archaeological information available to render the site eligible for the National Register. On October 28, 1996, Floral City Lake (8CI1010) and Stupid Flake (8CI1013) were both determined ineligible by the SHPO, who concurred with the surveyor's opinion that there was a low research potential for both sites due to their limited artifact density and diversity.

General management measures: DRP staff will continue to protect and preserve all cultural sites within the park boundaries. Archaeological sites within the trail corridor that are not yet well defined, as well as outside sites that may overlap park boundaries, need to be delineated more clearly. The park staff may know about other sites that have not yet been recorded; these will need to be submitted to the FMSF. Prior to construction activities or site alterations along the trail, staff must ensure that appropriate archaeological surveys have been completed. Staff should attend the Division of Historic Resources' Archaeological Resource Management training when the opportunity arises.

Historic Structures

Desired future condition: All significant historic structures and landscapes that represent Florida's cultural periods or significant historic events or persons are preserved in good condition in perpetuity, protected from physical threats and interpreted to the public.

Description: Historic structures within Withlacoochee State Trail corridor include a trestle over a western lobe of Henderson Lake near Inverness, train station foundations, blockhouses, mileposts, and whistle markers. The foundations of the original Trilby train station, built circa 1900, remain within the trail corridor at Trilby. In addition, remnants of the railroad yard structures such as the sand tower, water tower, and coal tower are still present along the edge of the trail corridor. The Inverness train station, built in 1892, is now privately owned. Restored to near original condition, it has been moved across the railroad bed from its original location. The original foundations of the Inverness train station may still exist beneath modern structures that now occupy that space.

Blockhouses, mileposts and whistle markers, all remnants of the former railroad line, are scattered along the trail corridor. Equipment was stored in the blockhouses, train operators used the three-sided, cement mileposts as reference points, and the whistle markers signaled engineers to sound the train whistle when approaching railroad crossings. These historic features are not currently recorded in the FMSF. The park could remedy that by updating the FMSF description for linear resource group CI335 to include the locations and descriptions of all the historic structures within the Withlacoochee Trail corridor, as noted above. These structures are visible to observant trail users and contribute to the interpretive value of the trail.

In addition to these unrecorded railroad-related structures there are recorded historic structures which are privately owned but may be encroaching onto state trail property. These include 8CI304, Hanson Home; 8CI620, 325 Washington Avenue; 8CI621, 329 Washington Avenue; 8CI702, Wallace Brooks Park; and 8CI787, 410 North Apopka Avenue. It will be necessary to determine if these private structures actually encroach onto the park. The National Register Listed Floral City Historic District, is adjacent to the state trail but is outside of the trail boundary.

Condition Assessment: The train station foundations are in poor condition and the Henderson Lake trestle is in good condition. The condition of the various blockhouses, mileposts, and whistle markers ranges from fair to good.

Level of Significance: None of the standing historic structures in the park have been formally evaluated for significance.

General management measures: DRP efforts to preserve elements of the original Trilby train station, primarily consisting of remnant building foundations, will include vegetation control and protection from ground disturbing activities. The DRP will

also institute a preventive maintenance program for remnant railroad structures such as the blockhouses and mileposts. A combination of brochures and personal interpretation provided by park volunteers and staff will help to increase public awareness of historic resources within the park and emphasize the importance of continued preservation.

Collections

Desired future condition: All historic, natural history and archaeological objects within the park that represent Florida's cultural periods, significant historic events or persons, or natural history specimens are preserved in good condition in perpetuity, protected from physical threats and interpreted to the public.

Description: Withlacoochee State Trail does not have a collection.

Condition Assessment: Not applicable.

Level of Significance: Not applicable.

General management measures: Although the park does not currently maintain a collection, the staff still should develop a Scope of Collections Statement. This document would serve to guide future collections management programs in the park. Items should only be accepted for any future collection if they fit within the goals of the Scope of Collection and the trail's interpretive themes. To define the latter, a Statement of Interpretation needs to be developed for the trail.

Detailed management goals, objectives, and actions for the management of cultural resources in this trail corridor are discussed in the Cultural Resource Management Program section of this component. Table 4 contains the name, reference number, culture or period, and brief description of all the cultural sites within the park that are listed in the Florida Master Site File. The table also summarizes each site's level of significance, existing condition, and recommended management treatment. An explanation of the codes is provided following the table.

Table 4. Cultural Sites Listed in the Florida Master Site File					
Site Name and FMSF #	Culture/Period	Description	Significance	Condition	Treatment
8CI260 Williams Cemetery	1880 - 20 th Century	Historic Cemetery	NE	F	P
8CI261 Frazier Cemetery, Community Graveyard	1880 - 20 th Century	Historic Cemetery	NE	F	P
8CI304 Hanson Home	1926	Historic Structure	NS	NE	N/A
8CI333 Dampier Cemetery	1881	Historic Cemetery	NE	NE	P
8CI335 Seaboard Coast Line Railroad Tracks	Historic late 19 th to early 20 th Century	Linear Resource Group	NS	F	ST
8CI620 325 Washington Avenue	C1945	Historic Structure	NE	NE	N/A
8CI621 329 Washington Avenue	C1945	Historic Structure	NE	NE	N/A
8CI702 Wallace Brooks Park	C 1960	Historic Structure	NE	NE	N/A

Table 4. Cultural Sites Listed in the Florida Master Site File					
Site Name and FMSF #	Culture/Period	Description	Significance	Condition	Treatment
8CI787 410 North Apopka Avenue	C1940	Historic Structure	NE	NE	N/A
8CI837 The Depot Site	Historic late 19th to early 20th century	Archaeological Site	NS	G	P
8CI853 U.S. 41 Overpass	Circa 1935	Historic Bridge	NE	F	N/A
8CI953 Rooks-Bellamy Cemetery	1880 - 20 th Century	Historic Cemetery	NE	NE	P
8CI970 Calphos Phosphate Mine	19 th & 20 th Century American	Archaeological Site	NE	G	P
8CI971 Felicia Phosphate Mine	Pre-historic, 19 th & 20 th Century	Archaeological Site	NE	G	P
8CI972 Seacoll Phosphate Mine I	Pre-historic, 19 th & 20 th Century	Archaeological Site	NE	G	P
8CI1010 Floral City Lake	Prehistoric	Archaeological Site	NS	G	P
8CI1013 Stupid Flake	Prehistoric	Archaeological Site	NS	G	P
8CI1071 Late Historic Herty Cup Scatter	Twentieth century American, 1900-present	Archaeological Site	NE	NE	P
8CI1125 Seaboard Airline Railroad	1900 to present	Linear Resource Group	NS	NE	P

Table 4. Cultural Sites Listed in the Florida Master Site File						
Site Name and FMSF #	Culture/Period	Description	Significance	Condition	Treatment	
8HE289 Croom	Historic 1898-1916	Archaeological Site	NE	G	P	
8HE295 Rital Station	Historic 1821-present	Archaeological Site	NE	NE	P	
8HE300 Istachatta	Historic 1880-1897 Post-Reconstruction	Archaeological Site Possible Human Remains	NE	G	P	
8HE302 Nobelton	Boom Times, 1921-1929	Archaeological Site Possible Human remains	NE	G	P	
8HE514 Florida Southern Rail Line	19 th & 20 th Century American	Linear Resource Group	NS	P	P	

Significance:

NRL National Register listed
 NR National Register eligible
 NE Not evaluated
 NS Not significant

Condition:

G Good
 F Fair
 P Poor
 NA Not accessible
 NE Not evaluated

Recommended Treatment:

RS Restoration
 RH Rehabilitation
 ST Stabilization
 P Preservation
 R Removal
 N/A Not applicable

RESOURCE MANAGEMENT PROGRAM

Management Goals, Objectives, and Actions

Measurable objectives and actions have been identified for each of the DRP's management goals for the Withlacoochee State Trail. Please refer to the Implementation Schedule and Cost Estimates in the Implementation Component of this plan for a consolidated spreadsheet of the recommended actions, measures of progress, target year for completion and estimated costs to fulfill the management goals and objectives of this trail.

While, the DRP utilizes the ten-year management plan to serve as the basic statement of policy and future direction for each unit, a number of annual work plans provide more specific guidance for DRP staff to accomplish many of the resource management goals and objectives of the park. Where such detailed planning is appropriate to the character and scale of the park's natural resources, annual work plans are developed for prescribed fire management, exotic plant management, and imperiled species management. Annual or longer-term work plans are developed for natural community restoration and hydrological restoration. The work plans provide the DRP with crucial flexibility in its efforts to generate and implement adaptive resource management practices in the state park system.

The work plans are reviewed and updated annually. Through this process, the DRP's resource management strategies are systematically evaluated to determine their effectiveness. The process and the information collected is used to refine techniques, methodologies and strategies, and ensures that each park's prescribed management actions are monitored and reported as required by Sections 253.034 and 259.037, Florida Statutes.

The goals, objectives and actions identified in this management plan will serve as the basis for developing annual work plans for the park. The ten-year management plan is based on conditions that exist at the time the plan is developed, and the annual work plans provide the flexibility needed to adapt to future conditions as they change during the ten-year management planning cycle. As the park's annual work plans are implemented through the ten-year cycle, it may become necessary to adjust the management plan's priority schedules and cost estimates to reflect these changing conditions.

Natural Resource Management

Hydrological Management

Goal: Protect water quality and quantity in the park, restore hydrology to the extent feasible and maintain the restored condition.

The natural hydrology of most state parks has been impaired prior to acquisition to one degree or another. Florida's native habitats are precisely adapted to natural drainage patterns and seasonal water level fluctuations, and variations in these

factors frequently determine the types of natural communities that occur on a particular site. Even minor changes to natural hydrology can result in the loss of plant and animal species from a landscape. Restoring state park lands to original natural conditions often depends on returning natural hydrological processes and conditions to the park. This is done primarily by filling or plugging ditches, removing obstructions to surface water "sheet flow," installing culverts or low-water crossings on roads, and installing water control structures to manage water levels.

Objective: Conduct/obtain an assessment of the trail's hydrological restoration needs.

The most significant hydrological features along the Withlacoochee State Trail are the river floodplain lakes associated with the Withlacoochee River. Below are hydrological assessment actions recommended for Withlacoochee State Trail.

Action 1: Cooperate closely with state and federal agencies engaged in hydrological research and monitoring programs within waterways that intersect the trail.

Action 2: Provide timely response if it is determined that the location of the trail's rail bed within wetlands is causing significant water quantity impacts along the trail corridor. If necessary, mitigate such impacts using the best available options.

The DRP will continue its tradition of close cooperation with state and federal agencies that monitor waterways intersecting the trail. The DRP will rely upon agencies such as the SWFWMD, USGS, and FDEP to keep it informed about any declines in groundwater or surface water quality or quantity that might have occurred in watersheds through which the trail passes.

Restoration of the original hydrology along the trail route would likely entail removal of the rail bed and restoration of the corridor to original grade, which is not feasible. However, after detailed assessment of natural flow rates and patterns, a project could be designed that would help mitigate the hydrologic alterations associated with the railroad berm and restore, to the extent feasible, the original flow patterns between wetlands. Improving the hydrologic function of the surrounding watershed should be a chief consideration in the design of any hydrological restoration project.

Natural Communities Management

Goal: Restore and maintain natural communities/habitats of the park unit.

As discussed above, the DRP practices natural systems management. In most cases, this entails returning fire to its natural role in fire-dependent natural communities. Other methods to implement this goal include large-scale restoration projects as well as smaller scale natural communities' improvements. Following are the natural community management objectives and actions recommended for the Withlacoochee State Trail.

Prescribed Fire Management: Prescribed fire is used to mimic natural lightning-set fires, which are one of the primary natural forces that shaped Florida's ecosystem. Prescribed burning increases the abundance and health of many wildlife species. A large number of Florida's imperiled species of plants and animals are dependent on periodic fire for their continued existence. Fire-dependent natural communities gradually accumulate flammable vegetation; therefore, prescribed fire reduces wildfire hazards by reducing these wild land fuels.

All prescribed burns in the Florida state park system are conducted with authorization from the FDACS, Florida Forestry Service (FFS). Wildfire suppression activities in the park are coordinated with the FFS.

There are no fire-type natural communities within the Withlacoochee State Trail corridor. Consequently, there are no objectives in this plan relative to maintenance of fire-dependent natural communities within optimum fire return intervals.

Natural Communities Restoration: In some cases, the reintroduction and maintenance of natural processes is not enough to reach the natural community desired future conditions in the park, and active restoration programs are required. Restoration of altered natural communities to healthy, fully functioning natural landscapes often requires substantial efforts that may include mechanical treatment of vegetation or soils and reintroduction or augmentation of native plants and animals. For the purposes of this management plan, restoration is defined as the process of assisting the recovery and natural functioning of degraded natural communities to desired future condition, including the re-establishment of biodiversity, ecological processes, vegetation structure and physical characters.

Examples that would qualify as natural community restoration, requiring annual restoration plans, include large mitigation projects, large-scale hardwood removal and timbering activities, roller-chopping and other large-scale vegetative modifications. The key concept is that restoration projects will go beyond management activities routinely done as standard operating procedures such as routine mowing, the reintroduction of fire as a natural process, spot treatments of exotic plants, and small-scale vegetation management.

The Withlacoochee State Trail corridor is, by its very nature, a developed or altered landscape. There are no plans to initiate natural community restoration activities along it, and consequently there are no restoration objectives listed here.

Natural Communities Improvement: Improvements are similar to restoration but on a smaller, less intense scale. This typically includes small-scale vegetative management activities or minor habitat manipulation. Following are the natural community/habitat improvement actions recommended at the park.

The Withlacoochee State Trail corridor is by its very nature a developed or altered landscape. There are no plans to initiate natural community improvement activities along it, and consequently there are no improvement objectives listed here.

Imperiled Species Management

Goal: Maintain, improve, or restore imperiled species populations and habitats in the park.

The DRP strives to maintain and restore viable populations of imperiled plant and animal species primarily by implementing effective management of natural systems. Single species management is appropriate in state parks when the maintenance, recovery or restoration of a species or population is complicated due to constraints associated with long-term restoration efforts, unnaturally high mortality or insufficient habitat. Single species management should be compatible with the maintenance and restoration of natural processes, and should not imperil other native species or seriously compromise park values.

In the preparation of this management plan, DRP staff consulted with staff of the FWC's Imperiled Species Management or that agency's Regional Biologist and other appropriate federal, state, and local agencies for assistance in developing imperiled animal species management objectives and actions. Likewise, for imperiled plant species, DRP staff consulted with FDACS. Data collected by the USFWS, FWC, FDACS, and FNAI as part of their ongoing research and monitoring programs will be reviewed by DRP staff periodically to inform management of decisions that may have an impact on imperiled species within the trail corridor.

Ongoing inventory and monitoring of imperiled species in the state park system is necessary to meet the DRP's mission. Long-term monitoring is also essential to ensure the effectiveness of resource management programs. Monitoring efforts must be prioritized so that the data collected provides information that can be used to improve or confirm the effectiveness of management actions on conservation priorities. Monitoring intensity must at least be at a level that provides the minimum data needed to make informed decisions to meet conservation goals. Not all imperiled species require intensive monitoring efforts on a regular interval. Priority must be given to those species that can provide valuable data to guide adaptive management practices. Those species selected for specific management action and those that will provide management guidance through regular monitoring are addressed in the objectives below.

Objective: Update baseline imperiled species occurrence inventory lists for plants and animals.

Action 1: Enlist the assistance of academic researchers and staff from other agencies in developing imperiled species occurrence inventory lists for the trail.

Objective: Monitor and document 1 selected imperiled animal species.

Action 1: Conduct at least one gopher tortoise survey (burrow count) along the trail corridor within the next ten years.

Informal surveys for imperiled animal species in the trail corridor have focused primarily on vertebrates. There have been no formal surveys for gopher tortoises;

consequently, there are no baseline population estimates for that species within the corridor. Periodic burrow counts along the trail might be useful in determining whether DRP management activities are affecting resident gopher tortoises.

Objective: Monitor and document 1 selected imperiled plant species.

Action 1: Survey the trail corridor for possible surviving populations of sand butterfly pea.

DRP staff conducted an extensive plant survey along the Withlacoochee State Trail prior to 2002, but additional inventory would likely augment the trail's species list and might reveal hitherto unknown populations of sand butterfly pea.

Exotic Species Management

Goal: Remove exotic and invasive plants and animals from the trail and conduct needed maintenance control.

The DRP actively removes invasive exotic species from state parks, with priority given to those causing the most ecological damage. Removal techniques may include mechanical treatment, herbicides or biocontrol agents.

Objective: Annually treat 4 acres of exotic plant species.

Action 1: Annually treat at least four infested acres of cogongrass, skunkvine and Japanese climbing fern.

Action 2: Conduct a comprehensive survey of the trail for Category I and Category II exotic plants, and repeat biennially.

Action 3: Develop an exotics treatment plan that identifies the major infestation sites and prioritizes site treatments based on species composition and on danger of spread to non-infested areas of the trail.

A considerably higher number of gross acres of exotic plants will need to be surveyed and treated in order to achieve the target goal for infested acres. Top priority for treatment should be infestations within the trail corridor that are near or adjacent to other public natural areas. For maximum effectiveness, staff should treat cogongrass in the fall before the first frost, and if possible, treat skunkvine before it bears fruit and Japanese climbing fern before it forms spores.

Objective: Develop and implement measures to prevent the accidental introduction or further spread of invasive exotic plants.

Action 1: Develop and practice preventive measures, including protocols for inspection and decontamination of equipment, designed to limit the accidental introduction and spread of exotic species.

Exotic plants often invade an area accidentally through preventable means of entry.

Activities such as mowing, landscaping, trail construction, and debris disposal can redistribute exotics along the trail via contaminated equipment, or worse, introduce exotics to uncontaminated natural areas outside the trail corridor. Some new infestations of exotics may be preventable by ensuring that contractors clean their equipment before performing duties in the park. The further spread of exotics already established in the park may be avoided by making sure that staff and contractors do not move equipment or landscaping debris or soil from a contaminated site to an exotic free area within the trail corridor or into adjacent public natural areas. Any equipment that is relocated from a contaminated area to an exotic free area should be cleaned prior to moving.

The exotic plants of particular concern for accidental spread within the Withlacoochee State Trail corridor are cogongrass, skunkvine, and Japanese climbing fern. Equipment can easily carry propagules of these species into non-infested areas and create new infestations. Whenever an infested area is mowed, the equipment used should be cleaned thoroughly before leaving that area and entering a non-infested area.

Objective: Implement control measures on 0 exotic animal species.

Action 1: Cooperate with adjacent landowners and managers of public lands in the implementation of hog control efforts on their properties.

While DRP staff will not implement feral hog control measures within the park itself, the DRP will cooperate with adjacent landowners and public lands managers in their control efforts for areas where the rooting of feral hogs has caused significant damage along the trail corridor.

Special Management Considerations

Timber Management Analysis

Chapters 253 and 259, Florida Statutes, require an assessment of the feasibility of managing timber in land management plans for parcels greater than 1,000 acres if the lead agency determines that timber management is not in conflict with the primary management objectives of the land. The feasibility of harvesting timber at this park during the period covered by this plan was considered in context of the DRP's statutory responsibilities and an analysis of the trail's resource needs and values. The long-term management goal for forest communities in the state park system is to maintain or re-establish old-growth characteristics to the degree practicable, with the exception of those communities specifically managed as early successional.

A timber management analysis was not conducted for this trail since its total acreage is below the 1,000-acre threshold established by Florida Statute as a criterion for considering timber management.

Arthropod Control Plan

Mosquito control plans (i.e., Arthropod Management Plan) are typically proposed by county mosquito control districts when they desire to treat on public lands that are protected by Ch. 388.4111 (CCMCD 2012; FDACS 2012). No arthropod control plans have been established for the Withlacoochee State Trail, although plans may exist for publically owned and managed lands along the trail corridor.

Cultural Resource Management

Cultural resources are individually unique, and collectively, very challenging for the public land manager whose goal is to preserve and protect them in perpetuity. The DRP is implementing the following goals, objectives, and actions, as funding becomes available, to preserve the cultural resources found in the Withlacoochee State Trail corridor.

Goal: Protect, preserve, and maintain cultural resources.

The management of cultural resources is often complicated because these resources are irreplaceable and extremely vulnerable to disturbances. The advice of historical and archaeological experts is required in this effort. All activities related to land clearing, ground disturbing activities, major repairs or additions to historic structures listed or eligible for listing in the National Register of Historic Places must be submitted to the FDOS, Division of Historical Resources (DHR) for review and comment prior to undertaking the proposed project. Recommendations may include, but are not limited to concurrence with the project as submitted, pre-testing of the project site by a certified archaeological monitor, cultural resource assessment survey by a qualified professional archaeologist, modifications to the proposed project to avoid or mitigate potential adverse effect. In addition, any demolition or substantial alteration to any historic structure or resource must be submitted to DHR for consultation and the DRP must demonstrate that there is no feasible alternative to removal and must provide a strategy for documentation or salvage of the resource. Florida law further requires that the DRP consider the reuse of historic buildings in the trail corridor in lieu of new construction and must undertake a cost comparison of new development versus rehabilitation of a building before electing to construct a new or replacement building. This comparison must be accomplished with the assistance of DHR.

Objective: Assess and evaluate 6 of 24 recorded cultural resources.

Action 1: DRP staff will work with the SHPO to determine the significance of sites which have not been evaluated for the National Register. There is no need for historic structures reports during this planning period.

Objective: Compile reliable documentation for all recorded historic and archaeological resources.

A predictive model has not been completed for the trail. All known archaeological sites are currently on record with the FMSF, but additional cultural resources along

the trail such as historic structures are not yet recorded. Staff should be watchful for other unrecorded resources and submit any new finds to the FMSF promptly. Cultural resource information should be integral to the trail's interpretive plan.

Action 1: Document and submit to the FMSF any additional cultural sites found within the trail corridor.

Action 2: Update the FMSF description for linear resource group CI335 to include the locations and descriptions of all historic structures within the Withlacoochee State Trail corridor that are not currently on file in the FMSF.

Action 3: Develop and adopt a Statement of Collections that includes a description of the trail's interpretive themes.

Action 4: Cooperate with appropriate agencies to determine which historic structures not owned by the state are encroaching onto state property.

Objective: Bring 0 of 6 recorded cultural resources into good condition.

Action 1: Adopt and implement a regular schedule of visitation to all cultural sites within the park to ensure their continued protection.

Action 2: Institute a monitoring and preventive maintenance program for remnant railroad structures such as the blockhouses and mileposts.

All cultural sites within the trail corridor are currently in good condition, and improvement of their condition beyond that point may not be feasible. There are no stabilization needs for the trail's cultural resources at this time. However, the trail needs to develop and implement a site inspection protocol that will help to ensure that its cultural resources remain in good condition.

Resource Management Schedule

A priority schedule for conducting all management activities that is based on the purposes for which these lands were acquired, and to enhance the resource values, is located in the Implementation Component of this management plan.

Land Management Review

Section 259.036, Florida Statutes, established land management review teams to determine whether conservation, preservation and recreation lands titled in the name of the Board of Trustees are being managed for the purposes for which they were acquired and in accordance with their approved land management plans. The DRP considered recommendations of the land management review team and updated this plan accordingly.

Withlacoochee State Trail has not been the subject of a land management review during this 10-year period.

LAND USE COMPONENT

Introduction

Land use planning and development decisions for the state park system are based on the dual responsibilities of the Florida Department of Environmental Protection (DEP), Division of Recreation and Parks (DRP). These responsibilities are to preserve representative examples of original natural Florida and its cultural resources, and to provide outdoor recreation opportunities for Florida's citizens and visitors.

The general planning and design process begins with an analysis of the natural and cultural resources of the unit, and then proceeds through the creation of a conceptual land use plan that culminates in the actual design and construction of park facilities. Experts in environmental sciences, cultural resources, park operations, and management, through public workshops, and environmental groups, provide input to the plan. With this approach, the DRP's objective is to provide quality development for resource-based recreation throughout the state with a high level of sensitivity to each unit's natural and cultural resources.

This component of the unit plan includes a brief inventory of the external conditions and the recreational potential of the unit. Existing uses, facilities, special conditions on use and specific areas within the management unit that require special protection are identified. The land use component then summarizes the current conceptual land use plan, identifying the existing or proposed activities suited to the resource base of the management unit. Any new facilities needed to support the proposed activities are described and located in general terms.

External Conditions

An assessment of the conditions that exist beyond the boundaries of the trail corridor can identify any special development problems or opportunities that exist because of the management unit's unique setting or environment. This also provides an opportunity to deal systematically with various planning issues such as location, regional demographics, adjacent land uses, and trail interaction with other facilities.

The Withlacoochee State Trail extends through three counties (Citrus, Hernando, and Pasco), spanning a distance of approximately 46 miles from southwest of US Highway 41 in north Citrus County to US Highway 301 in Pasco County. At its northern end, the trail right-of-way intersects with the active railroad line at Gulf Junction. For over half of its length, the trail parallels US Highway 41. Among the major roads that cross the trail right-of-way are US Highway 41, County Road 491, County Road 486, State Road 44, State Road 48, County Road 476, US Highway 50/98, and US Highway 301. Interstate 75 crosses the trail right-of-way near the south end of the Withlacoochee State Forest in central Hernando County.

According to the U.S. Census, the population of the three counties in 2010 was 778,711 of which 141,236 was in Citrus, 172,778 in Hernando, and 464,697 in Pasco. This represents a 19.6% increase in Citrus, a 32.1% increase in Hernando, and a 34.8% percent increase in Pasco since 2000. Even though Census data shows Citrus County having the lowest growth rate in this tri-county area, the newly designated urbanized area, Homosassa Springs-Beverly Hills-Citrus Springs, with a combined population exceeding 80,000 residents, has spurred growth within the county. The 2013 Tampa Bay-Central Florida Study Area Concept Report (Report) indicated some of the region's strongest growth might occur along the Suncoast to north of Tampa Bay. This growth could accelerate with the proposed development of Port Citrus as the state's 15th deep-water seaport and targeted growth in technology industries through developing business incubators and airport industrial parks.

The WST is located in the Central West Vacation Region, which includes Citrus, Hernando, Hillsborough, Pasco and Pinellas counties. According to the 2011 Florida Visitor Survey, 10% of domestic visitors to Florida visited this region. Of the estimated 8.7 million domestic visitors who came to this region in 2011, approximately 86% traveled for leisure. Visiting the beach/waterfront and visiting friends/relatives were the most popular activities for visitors. Spring was the most popular season for visitors, but visitation was generally spread throughout the year. Most visitors traveled by non-air means (53%), reporting an average stay of 4.6 nights and spending an average of \$130 per person per day (Visit Florida 2011).

Established recreation areas within close proximity of the trail corridor provide an array for resource based and user-oriented recreation opportunities. Some of these provide a direct connection to the WST.

Withlacoochee State Forest: A portion of the WST corridor extends through the 159,625-acre Withlacoochee State Forest. Additional trail connections from this portion of the trail include the Croom off-road biking trails and the Florida National Scenic Trail. Declared as one of the "10 Coolest Places You've Never Been in North America" by the World Wildlife Fund, the Withlacoochee State Forest is popular among outdoor enthusiasts. Activities include miles of trails for hiking, bicycling, horseback riding, and paddling. Several campgrounds are available and feature full-facility, primitive, and group camping areas. Seasonal hunting is available throughout most of the forest and fishing is plentiful on many lakes and waterways throughout the forest.

In Hernando County, the trail passes through the Withlacoochee State Forest for 5.5 miles. During the winter hunting season (November-March), hunting activity occurs on both sides of the trail corridor. Coordination between the DRP, FFS, and FWC continues as part of the effort to integrate these complementary recreational activities.

The Withlacoochee River: The Withlacoochee River generally parallels the WST and in Hernando County is separated only by a short distance. This Outstanding Florida Water is one of the very few rivers in the world that flows south to north. Designated as a Florida Paddling Trail, this pristine river has wonderful views of Cypress trees and an abundance of wildlife.

Subtropical Agricultural Research Station (STARS): Located in Hernando County near Brooksville, STARS is a 3200-acre cooperative research unit of the US Department of Agriculture, Agricultural Research Service and the University of Florida, Institute of Food and Agricultural Sciences. STARS is adjacent to both the WST and Withlacoochee State Forest. The federally managed property offers a local conservation benefit, but no recreational opportunities.

Fort Cooper State Park: The adjacent 735-acre state park provides a direct connection to the WST. Its nearly 6.2 miles of hiking trails offer some of best birding and wildlife viewing in Citrus County. Fishing on Lake Holathlikaha is a popular activity and swimming is available when the lake level is sufficiently high. The parks also offers a picnic and playground area.

Central Ridge District Park: This local park consists of 133 acres located in Beverly Hills (Citrus County) and provides a direct connection to the WST. The park includes a jogging trail, playground, and baseball/softball fields.

Hernando Trailhead Park: The City of Inverness' municipal park is adjacent to the WST and offers picnic tables, bike racks, and grills. Potential multi-use pathways to connect the park to the WST are being explored.

Whispering Pines Park: is a 290-acre park located in the City of Inverness (Citrus County) that has mountain bike and hiking trails, including a one-mile segment of the Florida Trail. The DRP will to work with Citrus County to evaluate a potential connection between this park and the WST.

Wallace Brooks Park: A half-acre parcel located on the shoreline of Lake Tsala Apopka in the City of Inverness (Citrus County). Bordering the WST, the park is a perfect base for cyclists and walkers to begin exploration of the trail, including a stroll via the boardwalk or trail to Liberty Park.

Liberty Park: Located on Lake Henderson in the City of Inverness (Citrus County), and provides a direct connection to the WST. The Park includes a canoe/kayak launch and picnic pavilions.

Lake Townsen Regional Park: Located on 37 developed acres and 338 acres of open space in the eastern part of the Hernando County near Brooksville, and provides direct access to the WST. This regional park offers hiking, jogging, biking and equestrian trails in a densely wooded area, bounded by the state forest to the north and the Withlacoochee River on the east. Other recreational opportunities include a fishing pier/boat ramp and picnic areas.

Marjorie Harris Carr Cross Florida Greenway: A 110-mile corridor crossing Central Florida from the Gulf of Mexico to the St. Johns River, is just north of the WST. It encompasses diverse natural habitats for observing Florida's native flora and fauna and offers a wide variety of trails and recreation areas. With hiking, biking, equestrian and paddling trails, boat ramps, fishing spots, campgrounds, and picnic shelters, the Cross Florida Greenway offers recreational opportunities for all interests and ages. Closing the two-mile gap between the CFG and the WST is a priority. Acquisition for this gap closure is noted in the Optimum Boundary section.

Regional Context and Connectivity

The Florida Greenways and Trails System (FGTS) is made up of existing, planned and conceptual non-motorized trails and ecological greenways that form a connected, integrated statewide network. The FGTS serves as a green infrastructure plan for Florida, tying together the greenways and trails plans and planning activities of communities, agencies and non-profit organizations throughout Florida. Trails include paddling, hiking, biking, multi-use, and equestrian trails. The Florida Priority Trails Network is the focused priorities within the FGTS vision.

The WST is a key component in the Florida Greenways and Trail System, and is part of the Florida Priority Trails Network. The WST connects to the Coast-to-Coast Connector, a multi-use trail corridor that spans from Titusville to St. Petersburg, and is an integral part of the Heart of Florida Loop through our State's heartland. Components of these long distance corridors that provide direct connections to the WST include:

Good Neighbor Trail: A 16-mile paved trail connecting the 42-mile Suncoast Trail to the Withlacoochee State Forest.

Marjorie Harris Carr Cross Florida Greenway: Efforts are currently underway to close the 2-mile gap between the Cross Florida Greenway, a 110-mile corridor stretching across Florida from Palatka to Yankeetown, and the WST.

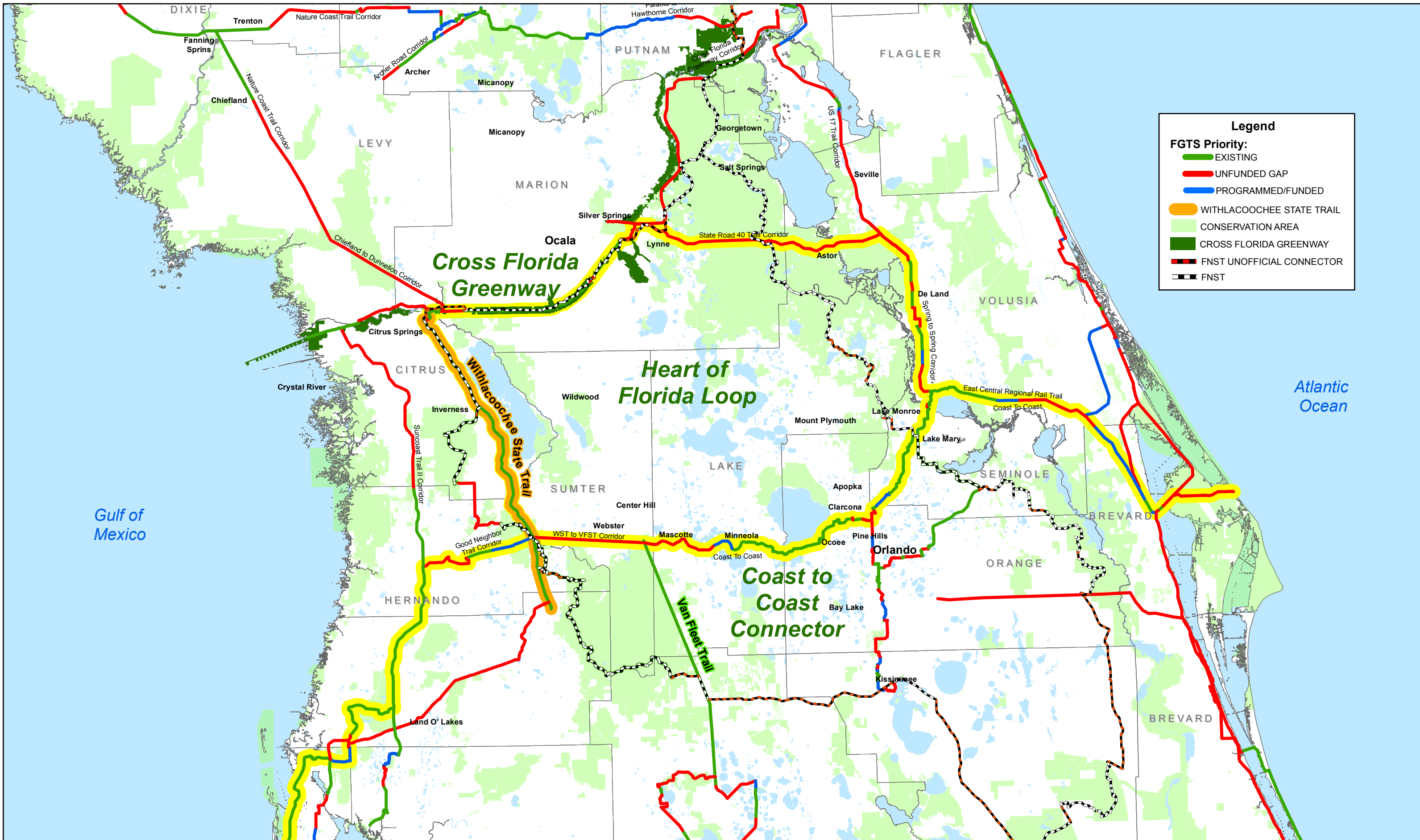
South Sumter Connector: An alignment study is currently underway to connect the WST to the General James A. Van Fleet State Trail.

Other significant trails that provide a connection to the WST include:

General James A. Van Fleet State Trail: A 29-mile paved trail will connect to the WST via the South Sumter Connector.

Florida National Scenic Trail: The 1300-mile FNST intersects the WST and follows the corridor for a distance of approximately 14 miles.

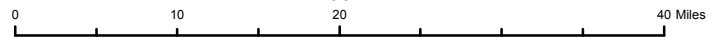
Withlacoochee State Forest: Mountain biking and hiking trails within the forest are accessible from the WST.



Legend

FGTS Priority:

- EXISTING
- UNFUNDED GAP
- PROGRAMMED/FUNDED
- WITHLACOOCHEE STATE TRAIL
- CONSERVATION AREA
- CROSS FLORIDA GREENWAY
- FNST UNOFFICIAL CONNECTOR
- FNST



Withlacoochee State Trail Regional Connectivity Map
2012 FGTS Priority Trail Network

Existing Use of Adjacent Lands

Land uses adjacent to the WST include agricultural, rural residential, suburban residential, urban residential, commercial, industrial, mixed, institutional, conservation and recreation and open space. The effects of adjacent uses on the recreational trail are both beneficial and detrimental. Benefits include the ease of access to the trail for a sizable population, connections to established city, county and state recreation facilities and the visual qualities of the undeveloped and pastoral landscapes through which the trail passes. Detrimental effects include traffic congestion, multiple crossings of roads and driveways, and occasional noise and air pollution from traffic and adjacent industrial activities. Likewise, ease of access occasionally leads to intrusions by motor vehicles. Management activities, cooperative land use planning, and clearly marking boundaries along the trail corridor will assist with these types of externalities.

Planned Use of Adjacent Lands

Local land development regulations should discourage adjacent land uses that are incompatible with the recreational trail. If development of such land uses is unavoidable, efforts to screen them may be partially effective. Establishment and maintenance of buffer zones with trees and shrubs along the edges of the trail corridor on the state-owned land will help mitigate visual impacts. Adjacent property owners should be encouraged to leave a buffer of undeveloped land outside the trail boundary for the same purpose.

In Hernando and Pasco counties, current future land use designations are conservation, recreation, rural and planned development in Hernando County and agricultural and residential in Pasco County.

Planned land use of adjacent lands is not expected to change significantly along the trail corridor. However, any future adjacent development will affect the recreational trail by generating increased vehicular traffic and additional road and driveway crossings along the trail. Standard policies for review and permitting of new crossings have been developed by the FDEP. Crossing requests will be analyzed individually and permits will be granted with conditions that protect the safety and quality of the trail facility. Efforts will be made, where possible, to consolidate driveways. Clear sight lines and signage will be required at each crossing. Traffic control devices may be required where warranted by anticipated traffic levels. All road and driveway intersections with the WST should be designed to maximize safety and for compliance with the Manual on Uniform Traffic Control Devices (MUTCD).

The Florida Department of Transportation (FDOT) will eventually widen U.S. Highway 41 between Inverness and Floral City. The widening of this roadway emphasizes the need for screening and buffering along the trail. The Division will coordinate with FDOT on the design of this project to ensure that impacts to the state trail are given due consideration.

Property Analysis

Effective planning requires a thorough understanding of the management unit's natural and cultural resources. This section describes the resource characteristics and existing uses of the property. The management unit's recreation resource elements are examined to identify the opportunities and constraints they present for recreational development. Past and present uses are assessed for their effects on the property, compatibility with the site and relation to the unit's classification.

Recreation Resource Elements

This section assesses the park unit's recreation resource elements, those physical qualities that, either singly or in certain combinations, supports the various resource-based recreation activities. Breaking down the property into such elements provides a means for measuring the property's capability to support individual recreation activities. This process also analyzes the existing spatial factors that either favor or limit the provision of each activity.

Land Area

The abandoned rail corridor varies from 50 to 200 feet in width, with the majority of its length having a right-of-way width of 100, 120, or 200 feet. The corridor includes irregularly shaped parcels where the railroad had installed sidings and signal equipment. This includes a 10-acre parcel located at the trail's southern terminus in the town of Trilby, a 12-acre parcel located in Citrus Springs. The management unit also includes three parcels comprising approximately 9.21 acres, known as the Kabrich property, located adjacent to Tsala Apopka Lake.

The rail bed is elevated above the adjacent grade along parts of the corridor. The elevation difference is greatest as it traverses low areas. The slopes of the approximate centerline of the corridor were designed to be relatively level, making the resulting grade ideal for a shared-use trail system.

Water Area

The trail parallels the Withlacoochee River, and in Hernando County there are several locations where the trail is only a short distance from the river. A paddling outfitter on County Road 476 popularly facilitates access to the river. Other significant water bodies along the trail right-of-way are Little Lake Henderson and Tsala Apopka Lake. The trail provides access to Little Lake Henderson from Liberty Park and to Lake Tsala Apopka via the Wallace Brooks Park, both managed by the City of Inverness.

Natural Scenery

The visual resources of the trail corridor cover a spectrum from excellent to poor. Outstanding vistas of pasturelands, sandhill, floodplain forests and the view crossing Little Lake Henderson contribute to user enjoyment. Visual

screening of unattractive surrounding land uses will continue to be a goal of the Division's vegetation management along the trail boundaries.

Significant Natural Features

No significant natural features are located within the trail corridor. The most important natural features are the adjacent lands of Fort Cooper State Park, the Withlacoochee State Forest, and the Withlacoochee River. Interpretation of these features should be included in existing and new trail facilities.

Archaeological and Historic Features

No intact archeological features are expected to be found within the right-of-way. Historic features located along the trail include the privately-owned Inverness train depot, the town of Croom, the station and switching yard in the town of Trilby, Fort Cooper, and various early 20th century phosphate mining sites. The trails interpretive programs should incorporate interpretation of the history of this region of Florida, as affected by the development of the railroad.

Assessment of Use

The base map delineates legal boundaries, significant natural features, structures, facilities and roads (see Base Map). Specific uses of the trail corridor are briefly described in the following sections.

Past Uses

After abandonment of the rail line by CSX Transportation, Inc., the trail corridor had a variety of uses. These included private access to adjacent land holdings, as a public road, as parking for trailer trucks and adjacent businesses, hunt access within the Withlacoochee State Forest (Croom Tract), trash dumping and other unauthorized uses. Gaining control of vehicular access to the trail has been a major management task since the Division assumed management responsibility.

Future Land Use and Zoning

The DRP works with local governments to establish designations that provide both consistency between comprehensive plans and zoning codes and permit typical state park or trail uses and facilities necessary for the provision of resource-based recreation.

In Hernando County, there is currently no zoning designation. In Pasco County, the length of the corridor is zoned for agricultural. Citrus County land is predominantly zoned as residential. Current future land use in Citrus County is Recreation. In Hernando County, future land use mirrors the adjacent lands, which is conservation, recreation, rural, and planned development. Agricultural and residential uses are identified for future land use in Pasco County.

Current Recreational Use and Visitor Programs

The WST corridor provides 46 miles of paved multi-use trail for bicycling, walking/hiking/jogging, and inline skating, and is part of the congressionally

designated Florida National Scenic Trail. A natural surface equestrian trail parallels the paved trail for the majority of its length. Portions of the corridor provide opportunities for nature study and wildlife observation. Other supported activities include picnicking and geocaching.

The Withlacoochee State Trail recorded 405,632 visitors in FY 2013/2014. By DRP estimates, FY 2013/2014 visitors contributed \$30,139,500 million in direct economic impact and supported 422 jobs to the local economy (FDEP 2014).

Protected Zones

A protected zone is an area of high sensitivity or outstanding character from which most types of development are excluded as a protective measure. Generally, facilities requiring extensive land alteration or resulting in intensive resource use, such as parking lots, camping areas, shops or maintenance areas, are not permitted in protected zones. Facilities with minimal resource impacts, such as trails, interpretive signs and boardwalks are generally allowed. All decisions involving the use of protected zones are made on a case-by-case basis after careful site planning and analysis. No areas are designated as protected zones along the WST.

Existing Facilities

Recreation Facilities

The entire length of the corridor includes a paved asphalt surface that is 12 feet wide. A natural surface trail parallels the paved trail, mostly on the eastern side, but at times crosses at intersections to the western side. There are rest areas approximately every two miles. Additionally, there are the facilities listed below (see Base Map).

Gulf Junction Trailhead
-Stabilized parking
-Restroom
-Picnic pavilion (2 tables)

South Citrus Trailhead
-Stabilized parking
-Restroom
-Gazebo

Hernando Parking Area
-Unimproved parking

Inverness Trailhead
-Stabilized parking
-Restroom
-Picnic pavilion (4 tables)

Floral City Rest Stop
-Gazebo
-Restroom

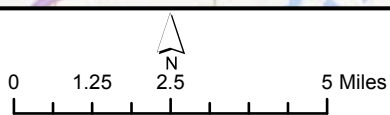
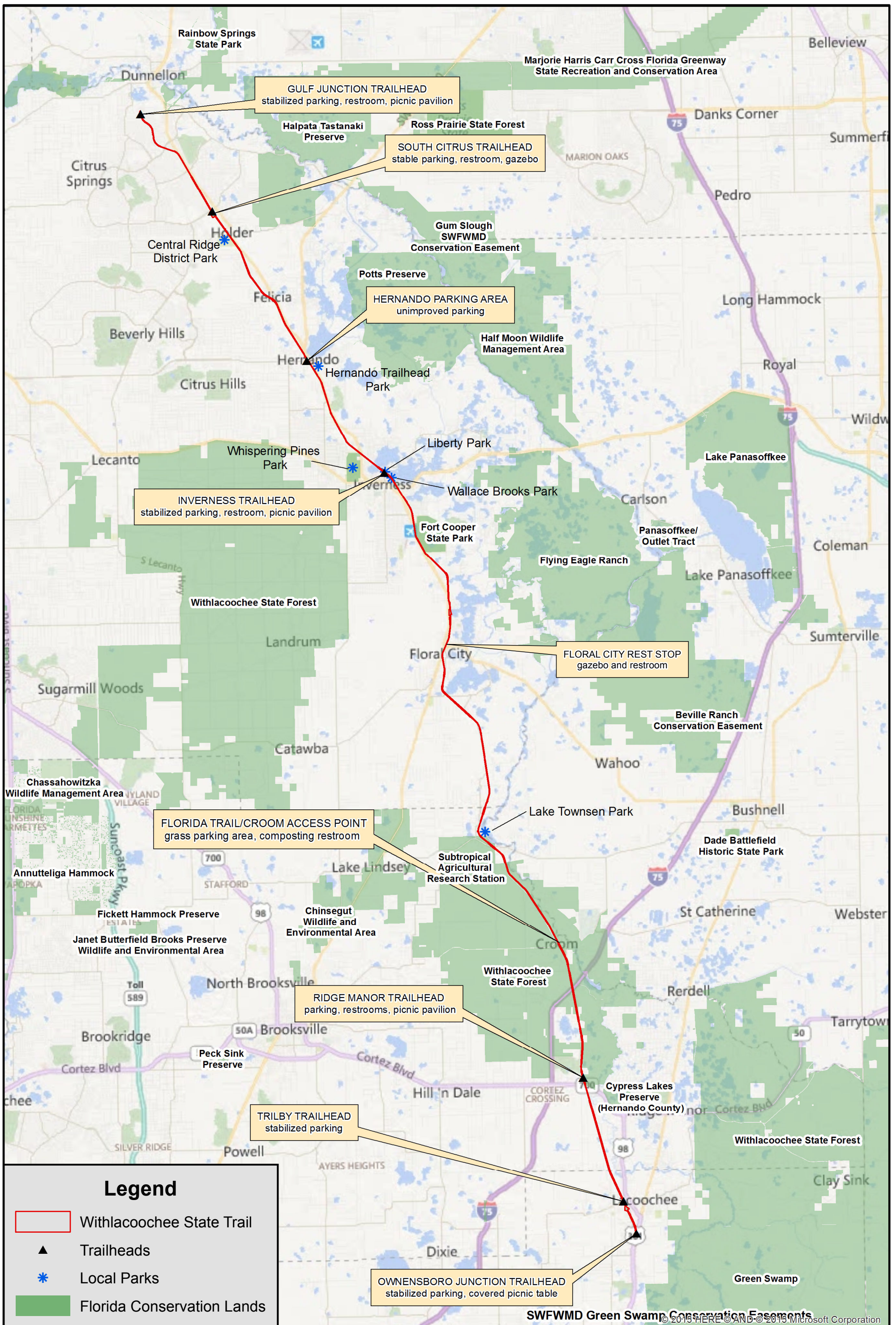
Florida Trail/Croom Access Point
-Grass parking area
-Restroom

Ridge Manor Trailhead
-Stabilized parking
-Restroom
-Picnic pavilion (4 tables)

Trilby Trailhead
-Stabilized parking

Owensboro Junction Trailhead
-Stabilized parking

*Support facilities are located at Fort Cooper State Park.



Conceptual Land Use Plan

The following narrative represents the current conceptual land use proposal for the WST. The conceptual land use plan is the long-term, optimal development plan for the trail corridor, based on current conditions and knowledge of the resources, landscape and social setting (see Conceptual Land Use Plan). The conceptual land use plan will be reassessed during the next update of the trail management plan. As new information is provided regarding the environment, cultural resources, recreational use, and as new land is acquired, the conceptual land use plan may be amended to address the new conditions as needed. A detailed development plan and a site plan for specific facilities will be developed based on this conceptual land use plan, as funding becomes available.

During the development of the conceptual land use plan, DRP assessed the potential impacts of proposed uses or development on the resources and applied that analysis to decisions for the future physical plan of the trail corridor as well as the scale and character of proposed development. Potential impacts are more thoroughly identified and assessed as part of the site planning process once funding is available for facility development. At that stage, design elements (such as existing topography and vegetation, sewage disposal and storm-water management) and design constraints (such as imperiled species or cultural site locations) are more thoroughly investigated. Municipal sewer connections, advanced wastewater treatment or best available technology systems are applied for on-site sewage disposal. Storm-water management systems are designed to minimize impervious surfaces to the greatest extent feasible, and all facilities are designed and constructed using best management practices to limit and avoid resource impacts. Federal, state and local permit and regulatory requirements are addressed. This includes the design of all new facilities consistent with the universal access requirements of the Americans with Disabilities Act (ADA). After new facilities are constructed, the staff monitors conditions to ensure that impacts remain within acceptable levels.

Potential Uses

Public Access and Recreational Opportunities

Goal: Provide public access, recreational opportunities, and multi-modal transportation opportunities on the state trail.

The existing recreational activities of the WST are appropriate to the natural and cultural resources contained within the trail corridor and should be continued.

Objective: Maintain a Level of Service (LOS*) score of B or higher for the Trail.

*Level-of-Service (LOS) is a scoring system that ranks a given roadway's ability to handle current traffic volume (usage). If a roadway's current traffic volume exceeds

its carrying capacity, traffic flow may be impeded and unsafe and that roadway's LOS score will be low. Conversely, if a roadway's carrying capacity is greater than the roadway's current usage (thereby allowing traffic to flow freely and safely), then the LOS score for that roadway will be high. LOS scores are typically awarded on an ordinal "letter grade" scale of *A* through *F*, with *A* representing the highest/best LOS score possible.

In July 2006, the Federal Highway Administration (FHWA) released a report on how to calculate LOS for "shared use paths" (i.e., trails). The centerpiece of the report was a spreadsheet calculation tool that can determine the LOS for a given trail based on basic input data from the trail manager. According to FHWA, a trail's carrying capacity (and thus LOS) is primarily a function of trail width and user type (e.g., cyclist, inline skater, pedestrian). Trail user conflicts typically occur during passing (opposite direction meetings and same direction over-takings) – interactions largely influenced by trail width. Length is not a factor in determining trail carrying capacity.

Using the FHWA trail LOS calculation tool, a standard 12-foot-wide paved multi-use trail with an hourly one-way trail user volume of 55-164 (passing a single, precise point on the trail) will receive an LOS score of *B*. User volume below 55 receives an LOS score of *A*, while user volume above 164 receives a *C* or lower. The FDEP Office of Greenways and Trails defines trail carrying capacity as "the trail user volume which will allow a trail to retain an LOS score of *B* or better." Consequently, FDEP considers all 12-foot-wide trails to have a one-way hourly carrying capacity of 164 or a daily two-way carrying capacity of 3,936 [164×2 (two-way traffic) $\times 12$ (daily number of hours of operation)]. Any usage rate above this figure is likely to increase conflicts between trail users to such an extent as to degrade user enjoyment and safety. If such a threshold is reached, trail managers may need to consider widening the trail or segregating the various types of trail users. The WST has a current LOS score of *A* calculated based on the 405,632 visitors recorded for fiscal year 2013-2014.

Objective: Continue to provide and improve the current repertoire of 1 interpretive educational and recreational programs on a regular basis.

Self-guided interpretive signs and kiosks educate visitors about the railroad era, the Seminole Wars, Fort Cooper, wildlife, and other topics of interest.

The original structure and engineering of the trail corridor, established in 1885 by Henry B. Plant, represents one of the most notable periods in Florida's history. Interpretation of this era and the history of rails in Florida following the Civil War was one of the major driving forces in the opening of peninsular Florida and should be the main feature of the interpretive programs of the park. A system of interpretative kiosks and signage at trailheads and along the trail are recommended to interpret the railroad era in Florida, including the preservation and conservation of the historic railroad corridors through rail-trails.

Interpretive facilities should also inform the public about resource management activities occurring along the trail, and incorporate some of the preservation, stewardship, land use ideas and issues related to the Florida Park System.

Objective: Develop 1 new educational program.

Park staff plans to work with the Florida Audubon Society to implement a guided birdwatching tour along the trail.

There are no educational or cultural centers planned within the WST property boundary. The historic 1892 Inverness Train Depot, which is adjacent to the trail, could provide future opportunities if acquired. The Ridge Manor Trailhead could also possibly accommodate a Visitor Orientation Center.

Proposed Facilities

Capital Facilities and Infrastructure

Goal: Develop and maintain the capital facilities and infrastructure necessary to implement the recommendations of the management plan.

The proposed development concept for the park unit is two-fold. It includes improvements to existing use areas that will enhance the visitor experience and increase access to recreational opportunities. In addition, new facilities are proposed that will add recreational activities that are compatible with those currently offered in the trail corridor.

Objective: Maintain all public and support facilities in the park unit.

All capital facilities, trails, and roads within the park unit will be kept in proper condition through the daily or regular work of park staff and/or contracted help.

Objective: Improve/repair 5 existing facilities and 46 miles of trail.

Major repair projects for park facilities may be accomplished within the ten-year term of this management plan if funding is made available. These include the modification of existing park facilities to bring them into compliance with the Americans with Disabilities Act (a top priority for all facilities maintained by DRP). Listed below are other recommended improvements and repairs organized by use area within the park.

Trail-wide: The 46-mile trail should be resurfaced to repair cracks, potholes and other damage caused by roots, sustained use, and weathering. The trail has not been re-paved since it was constructed approximately 23 years ago.

A new 9-1-1 emergency system is planned, which involves the placement of decals along the trail to identify the exact location of a series of "station numbers" assigned to the WST. The use of station numbers will enable 9-1-1 call takers to

know the exact location of trail users in need of emergency response services and immediately know which units to dispatch and the best way for emergency responders to reach the incident.

Volunteer campsites are recommended for all trailheads along the Withlacoochee State Trail.

A ranger residence is recommended to facilitate management and provide security after-hours. Possible locations include Gulf Junction, South Citrus Springs, Inverness, or Kabrich Trailheads.

Where improvements to the trail are made or new intersections with the trail are created, MUTCD-compliant signage and other design features will be significant for maintaining the safety of trail users.

Opportunities for connectivity to recreational resources within the vicinity of the trail corridor, including linking to Whispering Pines Park, will be cooperatively explored with the local governments of the region.

Ridge Manor Trailhead: An updated restroom facility is proposed at the Ridge Manor trailhead to replace the existing wooden facility.

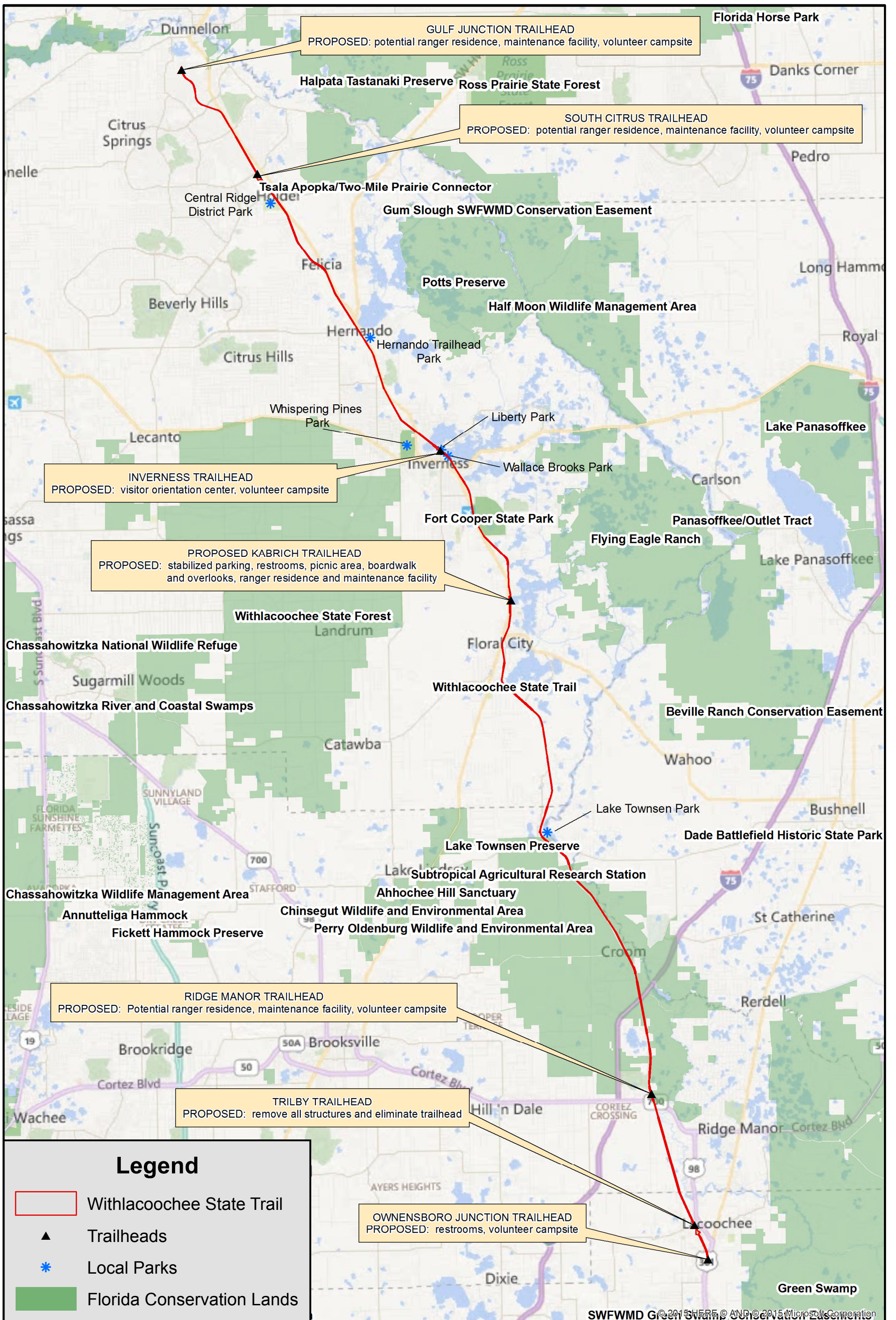
Owensboro Junction Trailhead/US 301: It is recommended that the Trilby Trailhead be removed from trail maps and not promoted as a trailhead facility because it is deemed unsafe due to its remoteness and high level of vandalism and crime in the area. To offset this action, it is recommended that the Owensboro Junction Trailhead/US 301 Trailhead, which is located less than one mile away, be redesigned to increase its capacity and recreational opportunities. Once the redesign of the trailhead is complete, additional facilities such as a restroom and picnic pavilion should be added.

Park staff will work with the Florida Department of Transportation (FDOT) in an effort to have a turn lane off US 301 and a sign directing users to the trailhead added. Safety of trail users should be a priority in this effort.

Objective: Construct 1 new facility.

Kabrich Trailhead: An additional trailhead is proposed on property that was purchased from Marjorie Kabrich, which will include a boardwalk and overlooks to afford views of Tsala Apopka Lake and the wetland communities, a picnic area with two small shelters, restroom and stabilized parking area (for up to 20 vehicles).

The boardwalks and overlook will be on a portion of the property that is separated from the trail by Old Floral City Road. To ensure that trail users will be able to cross Old Floral City Road safely, a signalized, pedestrian crosswalk and other MUTCD-compliant traffic control devices should be installed. These safety measures will be coordinated with the FDOT and the relevant local governments.



Facilities Development

Preliminary cost estimates for recommended facilities and improvements are provided in the Ten-Year Implementation Schedule and Cost Estimates (Table 6) located in the Implementation Component of this plan. These cost estimates are based on the most cost-effective construction standards available at this time. The preliminary estimates are provided to assist DRP in budgeting future park improvements, and may be revised as more information is collected through the planning and design processes. New facilities and improvements to existing facilities recommended by the plan include:

Gulf Junction Trailhead

Volunteer Campsite

South Citrus Trailhead

Volunteer Campsite

Inverness Trailhead

Volunteer Campsite

Ridge Manor Trailhead

Restroom

Volunteer Campsite

Owensboro Junction Trailhead /US 301

Reconfigure Trailhead

Restroom

Picnic Pavilion

Volunteer Campsite

Kabrigh Trailhead

Parking (20 vehicles)

Trailhead Kiosk (1)

Restroom

Boardwalks/Overlook

Picnic Shelter (2)

Volunteer Campsite

Residence (1)

Optimum Boundary

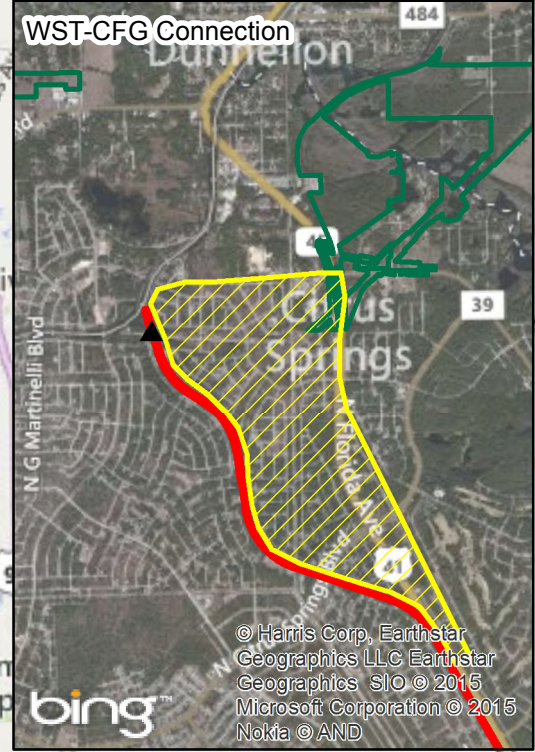
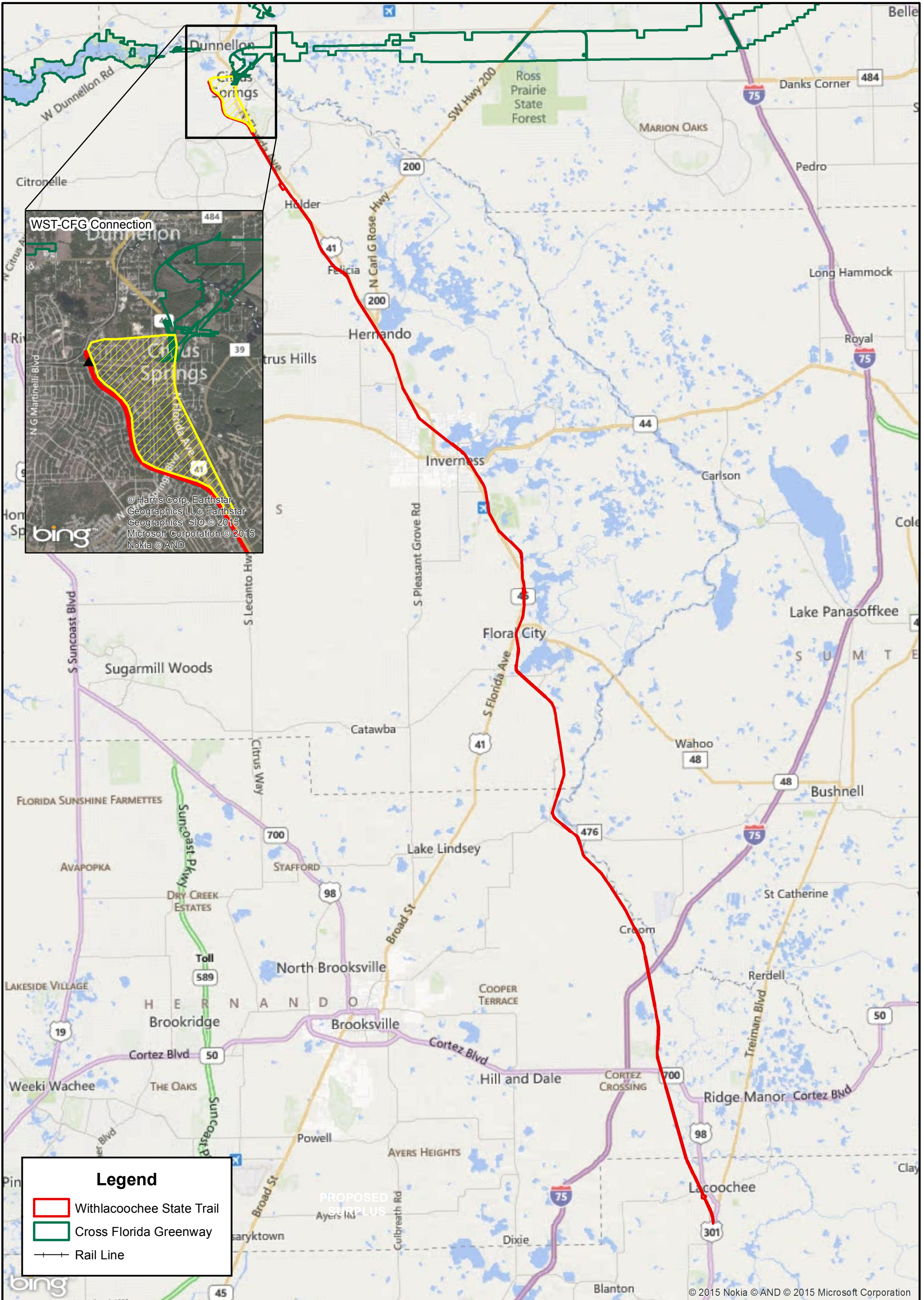
The optimum boundary map reflects lands identified as desirable for direct management by DRP as part of the state park unit. These parcels may include public as well as privately owned lands that improve the continuity of existing parklands, provide the most efficient boundary configuration, improve access to the park, provide additional natural and cultural resource protection or allow for future expansion of recreational activities. The map also identifies lands that are potentially surplus to the management needs of DRP. As additional needs are identified through park use, development, or research, and changes to land use on adjacent private property occurs, modification of the park's optimum boundary may be necessary.

Identification of parcels on the optimum boundary map is intended solely for planning purposes. It is not to be used in connection with any regulatory purposes. Any party or governmental entity should not use a property's identification on the optimum boundary map to reduce or restrict the lawful rights of private landowners. Identification on the map does not empower or suggest that any government entity should impose additional or more restrictive environmental land

use or zoning regulations. Identification should not be used as the basis for permit denial or the imposition of permit conditions.

Closing the two-mile gap between the DRP managed Marjorie Harris Carr Cross Florida Greenway and the Withlacoochee State Trail is a high priority, and therefore identified on the optimum boundary map. Citrus County is currently working to close this gap.

At this time, no lands are considered surplus to the recreational interests or management needs of the Withlacoochee State Trail.



Legend

- Withlacoochee State Trail
- Cross Florida Greenway
- +— Rail Line

IMPLEMENTATION COMPONENT

The resource management and land use components of this management plan provide a thorough inventory of the trail's natural, cultural, and recreational resources. They outline the trail's management needs and problems, and recommend both short and long-term objectives and actions to meet those needs. The implementation component addresses the administrative goals for the trail and reports on the Division of Recreation and Parks (DRP) progress toward achieving resource management, operational and capital improvement goals and objectives since approval of the previous management plan for this trail. This component also compiles the management goals, objectives, and actions expressed in the separate parts of this management plan for easy review. Estimated costs for the ten-year period of this plan are provided for each action and objective, and the costs are summarized under standard categories of land management activities.

MANAGEMENT PROGRESS

Since approval of the last management plan for Withlacoochee State Trail in 2003, significant accomplishments and progress have been made towards meeting the DRP's management objectives. These accomplishments fall within all five of the five general categories that encompass the mission of the unit and the DRP.

Acquisition

- 0.41 acres pf Murphy Act lands adjacent to the trail corridor just north of Lecanto Highway were added to Lease 3876 as Amendment 3.
- A 0.67-acre parcel near Moonrise Lane in Floral City was donated by William Weber. The parcel was added to Lease 3876 as Amendment 4 in 12/2010.

Unit Administration and Operations

- The management of the WST was transferred back to the Division of Recreation and Parks as part of the Office of Greenways and Trails merger into the Division.
- The WST's Citizen Support Organization (CSO) has remained very active, continuing to conduct fund-raising and other activities to benefit the trail, and to attract new members and retain long-term members. The CSO expends an average of \$6,000 - \$8,000 per year, and in 2014 provided \$20,000 for a restroom in Floral City.
- The CSO's annual ride has grown to approximately 1,000 riders and raises over \$20,000 after expenses.
- Volunteer hours donated to the trail annually averages over 6,500 and are expected to increase by 40 percent in the current year.
- 911 address were obtained for all of the trailheads.

Resource Management

Natural Resources

- Exotic species are plants or animals not native to Florida. Invasive exotic species are able to out-compete, displace or destroy native species and their habitats, often because they have been released from the natural controls of their native range, such as diseases, predatory insects, etc. If left unchecked, invasive exotic plants and animals alter the character, productivity and conservation values of the natural areas they invade.
- At least 36 exotic plant species have been recorded within Withlacoochee Trail State Park. The Florida Exotic Pest Plant Council (FLEPPC) lists 15 of those species as Category I and 8 as Category II plants that are known to disrupt natural communities and therefore require special management attention. To varying degrees, every zone along the length of the trail has infestations of invasive exotic plants. A comprehensive detailed survey for Category I and Category II exotic plant species along the trail needs to be completed soon in order to assess current threats and determine treatment priorities.
- Chemical control of exotics along the Withlacoochee Trail has occurred at irregular intervals over the past 15 years. Species targeted for treatment have included paper mulberry (*Broussonetia papyrifera*), camphortree (*Cinnamomum camphora*), Chinaberrytree (*Melia azederach*), Chinese tallowtree (*Sapium sebiferum*), Brazilian pepper (*Schinus terebinthifolia*), cogongrass (*Imperata cylindrica*), natalgrass (*Melinus repens*), Johnsongrass (*Sorghum halepense*), air-potato (*Dioscorea bulbifera*), Japanese climbing fern (*Lygodium japonicum*), skunkvine and castorbean (*Ricinus communis*). Contract treatments of large cogongrass infestations covering 259 acres took place in 2009. Additional contract herbicide treatments of cogongrass, totaling 311 acres, occurred in the fall of 2010 and spring of 2011.
- The present focus of chemical control is on cogongrass and skunkvine, the species that have the greatest potential to spread rapidly along the length of the trail and into adjacent natural areas. Treating infestations located near or adjacent to publicly managed natural areas is critical. The park needs to continue its exotics control program of identifying invasive exotic plants along the trail, mapping infestation sites on a broad scale, and entering the sites into the statewide exotic plant database maintained by the Florida Park Service. Staff should survey the trail corridor biennially to update exotic plant location data. Infestations of particularly invasive species that are near or adjacent to managed natural areas such as Fort Cooper State Park should be treated with herbicides at least annually.

Cultural Resources

- The historic 1925 rail caboose along the trail was restored.

Recreation and Visitor Services

- Acquired National Recreation Trail designation.
- Completed trail connection between Fort Cooper State Park and the WST.
- ADA facilities, including picnic tables, benches, and accessible ramps were added at various locations to facilitate circulation throughout the trail corridor by people with disabilities.

Trail Facilities

- Citrus Springs Gazebo, which includes four benches and two tables added.
- Replacement metal roofing was installed on six asphalt roof covered picnic benches.
- Kiosk and picnic benches installed at 301 Trailhead.
- Renovated ramp at Citrus Springs.
- Replaced benches along the trail.
- Built eight additional bike docks.
- History and educational kiosks installed.
- Memorial bench placed at trestle bridge in Inverness.

MANAGEMENT PLAN IMPLEMENTATION

This management plan is written for a timeframe of ten years, as required by Section 253.034 Florida Statutes. The Ten-Year Implementation Schedule and Cost Estimates (Table 7) summarizes the management goals, objectives, and actions that are recommended for implementation over this period, and beyond. Measures are identified for assessing progress toward completing each objective and action. A time frame for completing each objective and action is provided. Preliminary cost estimates for each action are provided and the estimated total costs to complete each objective are computed. Finally, all costs are consolidated under the following five standard land management categories: Resource Management, Administration and Support, Capital Improvements, Recreation Visitor Services, and Law Enforcement.

Many of the actions identified in the plan can be implemented using existing staff and funding. However, a number of continuing activities and new activities with measurable quantity targets and projected completion dates are identified that cannot be completed during the life of this plan unless additional resources for these purposes are provided. The plan's recommended actions, time frames and cost estimates will guide the DRP's planning and budgeting activities over the period of this plan. It must be noted that these recommendations are based on the information that exists at the time the plan was prepared. A high degree of adaptability and flexibility must be built into this process to ensure that the DRP can adjust to changes in the availability of funds, improved understanding of the trail's natural and cultural resources, and changes in statewide land management issues, priorities and policies.

Statewide priorities for all aspects of land management are evaluated each year as part of the process for developing the DRP's annual legislative budget requests. When preparing these annual requests, the DRP considers the needs and priorities of the entire state park system and the projected availability of funding from all sources during the upcoming fiscal year. In addition to annual legislative appropriations, the DRP pursues supplemental sources of funds and staff resources wherever possible, including grants, volunteers and partnerships with other entities. The DRP's ability to accomplish the specific actions identified in the plan will be determined largely by the availability of funds and staff for these purposes, which may vary from year to year. Consequently, the target schedules and estimated costs identified in Table 7 may need to be adjusted during the ten-year management planning cycle.

Addendum 1—Acquisition History

Withlacoochee State Trail Acquisition History

Purpose of Acquisition:

The Board of Trustees of the Internal Improvement Fund (Trustees) of the State of Florida purchased the abandoned rail corridor for use as a paved recreational trail.

Sequence of Acquisition:

On September 26, 1989, the Board of Trustees of the Internal Improvement Trust Fund (Trustees) approved the purchase of 739.30 acres of rail corridor comprised of two abandoned CSX Transportation, Inc. segments known as the Gulf Junction-Inverness and the Inverness-Owensboro abandonments. Purchased through the Rails to Trails Program utilizing Preservation 2000 funds, the Trustees acquired fee simple title on December 21, 1989. Subsequent to the initial purchase, there were additional lands added as follows:

- 06/1995 - 12 acres were donated to the Trustees by Citrus County.
- 12/1998 - 9.21 acres were purchased from Marjorie Kabrich through the Florida Greenways and Trails Program utilizing Preservation 2000 funds. The acquisition was comprised of three parcels located near the intersection of US Highway 41 and Kabrich Road in Floral City. The Kabrich parcels were leased to DRP as Amendment 2 to Lease 3876.
- 05/2009 - 0.41 acres of Murphy Act lands adjacent to the trail corridor just north of Lecanto Highway were added to Lease 3876 as Amendment 3.
- 04/2010 – A 0.67-acre parcel near Moonrise Lane in Floral City was donated by William Weber. The parcel was added to Lease 3876 as Amendment 4 in 12/2010.

A 0.08-acre parcel was sold to Bob Watson Enterprises. Currently, the total acreage is 761.67 acres.

Title Interest:

The Trustees hold fee simple title interest in the Withlacoochee State Trail corridor.

Lease Agreement:

On June 29, 1990, the Trustees conveyed management authority for the Withlacoochee State Trail to the Florida Department of Environmental Protection (DEP), Division of Recreation and Parks (DRP), under Lease No. 3876. The terms of this 50-year lease will expire on June 28, 2040.

According to Lease No. 3876, the DRP manages the Withlacoochee State Trail for public recreational trail use and other related purposes.

Withlacoochee State Trail
Acquisition History

Special Conditions on Use:

Withlacoochee State Trail is designated single-use to provide recreational trail use and other related uses. Uses such as water resource development projects, water supply projects, storm-water management projects, and linear facilities and sustainable agriculture and forestry (other than those forest management activities specifically identified in this plan) are not consistent with this plan or the management purposes of the trail.

Outstanding Reservations:

The DRP's lease from Trustees stipulates that all the property be used for public recreational trail use and other related purposes. The following is a list of outstanding rights, reservations and encumbrances that apply to Withlacoochee State Trail.

Instrument: Easement (Easement No. 28995)
Instrument Holder: Hernando County, FL
Beginning Date: April 27, 1993
Ending Date: April 26, 2043
Outstanding Rights, Uses, Etc.: Installation/operation of a sewer force main pipeline (approx. 041 acres)

Instrument: Easement (Easement No. 28936)
Instrument Holder: Citrus County, FL
Beginning Date: November 1, 1993
Ending Date: October 31, 2043
Outstanding Rights, Uses, Etc.: Construction of a public road (South Citrus Boulevard) and all appurtenances (approx. 0.276 acres)

Instrument: Easement (Easement No. 28937)
Instrument Holder: Citrus County, FL
Beginning Date: April 12, 1994
Ending Date: April 11, 2044
Outstanding Rights, Uses, Etc.: Construction and maintenance of public road (Inverness Byway) and appurtenances (approx. 0.45 acres)

Instrument: Easement (Easement No. 29284)
Instrument Holder: L. Norman Adams
Beginning Date: February 15, 1995
Ending Date: February 14, 2045
Outstanding Rights, Uses, Etc.: Driveway access to private parcel (.05 acres)

Instrument: Easement (Easement No. 29596)
Instrument Holder: United Telephone Company of Florida

Withlacoochee State Trail
Acquisition History

Beginning Date: November 1, 1995
Ending Date: November 1, 2045
Outstanding Rights, Uses, Etc.: Installation/operation of underground
telephone lines (approx. 0.137 acres)

Instrument: Easement (Easement No. 29656)
Instrument Holder: Marcell Harris
Beginning Date: April 18, 1996
Ending Date: April 17, 2046
Outstanding Rights, Uses, Etc.: Access to private parcel (approx. 0.08 acres)

Instrument: Easement (Easement No. 30440)
Instrument Holder: Withlacoochee Electric Cooper, Inc.
Beginning Date: August 8, 1999
Ending Date: August 7, 2049
Outstanding Rights, Uses, Etc.: Installation/operation of an overhead power
line (approx. 5.9 acres)

Instrument: Easement (Easement No. 30588)
Instrument Holder: Floral City Water Association, Inc.
Beginning Date: April 3, 2001
Ending Date: April 2, 2051
Outstanding Rights, Uses, Etc.: Installation of a water main within the trail
corridor for approx. 4.05 miles (10 feet
wide; approx. 4.91 acres)

Instrument: Easement (Easement No. 30829)
Instrument Holder: James Pfeiffer
Beginning Date: October 22, 2001
Ending Date: Perpetual
Outstanding Rights, Uses, Etc.: Access to private parcel (approx. 0.24 acres)

Instrument: Easement (Easement No. 31177)
Instrument Holder: Kenneth Adkins
Beginning Date: March 15, 2004
Ending Date: Perpetual
Outstanding Rights, Uses, Etc.: Access to private parcel (approx. 24 acres)

Instrument: Easement (Easement No. 31219)
Instrument Holder: Florida Department of Transportation
Beginning Date: April 23, 2004
Ending Date: Perpetual
Outstanding Rights, Uses, Etc.: Stormwater drainage from US 41 near
Watson Street (approx. 2.894 acres)

Withlacoochee State Trail
Acquisition History

Instrument: Easement (Easement No. 31360)
Instrument Holder: Timothy Fladd
Beginning Date: January 18, 2005
Ending Date: Perpetual
Outstanding Rights, Uses, Etc.: Access to private parcel (approx. 0.06 acres)

Instrument: Easement (Easement No. 31388)
Instrument Holder: Citrus County, FL
Beginning Date: February 22, 2005
Ending Date: February 21, 2055
Outstanding Rights, Uses, Etc.: Installation and maintenance of stormwater drainage pipe along MLK Avenue (approx. 0.05 acres)

Instrument: Easement (Easement No. 31356)
Instrument Holder: Citrus County, FL
Beginning Date: December 5, 2005
Ending Date: Perpetual
Outstanding Rights, Uses, Etc.: Public road right-of-way for realignment of CR 486 at US Highway 41 (approx. 0.07 acres)

Instrument: Easement (Easement No. 31857)
Instrument Holder: Citrus County, FL
Beginning Date: May 5, 2008
Ending Date: Perpetual
Outstanding Rights, Uses, Etc.: Trail connection from Central Ridge Park (approx. 0.05 acres)

Instrument: Easement (Easement No. 31963)
Instrument Holder: Citrus County, FL
Beginning Date: April 1, 2009
Ending Date: March 31, 2059
Outstanding Rights, Uses, Etc.: Installation and maintenance of stormwater drainage pipe along US 41/SR 200 (approx. 2.41 acres)

Instrument: Easement (Easement No. 31513)
Instrument Holder: Charles O'Dell
Beginning Date: July 29, 2010
Ending Date: Perpetual
Outstanding Rights, Uses, Etc.: Access to private parcel (approx. 0.098 acres)

Instrument: Easement (Easement No. 32540)
Instrument Holder: Hernando County

Withlacoochee State Trail
Acquisition History

Beginning Date: February 2, 2013
Ending Date: February 1, 2063
Outstanding Rights, Uses, Etc.: Paved crossing for access and utility from
Lake Townsen to boat landing. (approx.
0.123 acres)

Instrument: Easement (Easement No. _____)
Instrument Holder: AT & T
Beginning Date: Pending
Ending Date:
Outstanding Rights, Uses, Etc.: Installing aerial fiber optic cable crossing for
communication purposes in Citrus County
(approx. 0.055 acres)

Instrument: Easement (Easement No. _____)
Instrument Holder: SECO Energy
Beginning Date: Pending
Ending Date:
Outstanding Rights, Uses, Etc.: Electric transmission crossing and access in
Floral City, Citrus County. (approx. 0.369
acres)

The deed and/or title insurance policy should list any easements granted prior to ownership by the Trustees. The 2003 Unit Management Plan for the WST states that CSX Transportation granted 33 easements prior to the Trustees taking title to the property.

Addendum 2—Advisory Group Members and Report

**Withlacoochee State Trail
Advisory Group Members and Report**

Local Government Representatives

Citrus County

Commissioner Scott Carnahan, District 4
Citrus County Board of County
Commissioners

City of Inverness

Honorable Bob Plisted, Mayor
City of Inverness

Hernando County

Honorable James Adkins
Hernando County Board of County
Commissioners

Pasco County

Honorable Ted Schrader
Pasco County Board of County
Commissioners

**Tourist and Economic Development
Council Representatives**

Citrus County

Adam Thomas, Director
Citrus County Visitors & Convention Bureau

Hernando County

Tammy Heon, Coordinator
Hernando County Tourism Development

Pasco County

Ed Caum
Tourism Manager
Pasco County Office of Tourism
Development

Agency Representatives

Harry Mitchell, Manager
Division of Recreation and Parks
Fort Cooper State Park and Withlacoochee
State Trail

Lita Hart, Recreation Coordinator
Florida Forest Service
Withlacoochee State Forest

Tom M. Matthews
Biological Scientist III/Recreation Planner
Florida Fish and Wildlife Conservation
Commission

Mike Wisenbaker, Archeology Supervisor
Bureau of Archeological Research
Division of Historical Resources

**Environmental and Historical
Representatives**

Eileen Riccio, Vice President
Board of Directors
Citrus County Audubon Society

Maryvonne Devensky, Chair
Sierra Club, Suwanee-St. Johns Group

Steve Farnsworth, President
Native Plant Society, Citrus Chapter

Katherine Turner Thompson
Citrus County Historical Society

Recreational User Groups

Cycling

Susan Straley, President
Withlacoochee Riders

Equestrian

Kathy Thompson
Nature Coast Back Country Horsemen

Hiking

Ralph Hancock
Chair & Trail Coordinator
Suncoast Chapter
St. Petersburg, Florida 33704

Citizen Support Organizations

Frank Trepanier, President
Friends of Fort Cooper State Park

Jerry Willert, President
Rails to Trails of the Withlacoochee

Adjacent Landowners

Terry Miller

Robert & Bonnie Norman

Withlacoochee State Trail Advisory Group Members and Report

The Advisory Group meeting to review the proposed unit management plan (UMP) for Fort Cooper State Park and Withlacoochee State Trail was held in the Lakeside Pavilion at Fort Cooper State Park on Thursday, July 23, 2015 at 9:00 AM.

Frank DiGiovanni represented Mayor Bob Plisted. Debbie Shaughnessy represented Kathy Thompson. Kimberly Poppke represented Tammy Heon (Hernando County Tourism Development). James Crink represented Frank Trepanier. Dennis Reiland represented Jerry Willert. Commissioner James Adkins, Commissioner Ted Schrader, Tom Matthews, Eileen Riccio, Maryvonne Devensky, Terry Miller, and Robert Norman were not in attendance. Mike Wisenbaker was not in attendance, but submitted written comments. All other appointed Advisory Group members were present.

Attending Division of Recreation and Parks (DRP) staff members were Brian Fugate, Daniel Pearson, Harry Mitchell, Dianne Drye, Lew Scruggs, Ralph Perkins, and Daniel Alsentzer.

Mr. Scruggs began the meeting by explaining the purpose of the Advisory Group and reviewing the meeting agenda. He provided a brief overview of the DRP's planning process and summarized the previous evening's public workshop. Mr. Scruggs then asked each member of the Advisory Group to express his or her comments on the draft plan.

Summary of Advisory Group Comments

Neil Fox (Florida Trail Association) inquired how the proposed campground is projected to affect the park's carrying capacity and how the number of campers per site would be managed. He noted that a high volume of campers within the small proposed area could affect the visitor experience. He additionally asked for clarification on the amenities that would be provided as part of the standard facility campground.

Frank DiGiovanni (City of Inverness) stated that he supports the draft plans for both Fort Cooper State Park and Withlacoochee State Trail. He agrees that accessing Fort Cooper State Park from U.S. Highway 41 would enhance visitation that would benefit the park. Mr. DiGiovanni requests that the DRP address several issues related to the proposed new entrance, including the need for cyclist protection and not compromising trail functionality when creating an entrance that intersects the trail. He stated that the addition of a campground may increase traffic conflicts between trail users and drivers entering/exiting the park. To mitigate safety concerns, he encourages designing the entrance-trail intersection to

Withlacoochee State Trail Advisory Group Members and Report

maximize visibility of vehicles and trail users. Mr. DiGiovanni stated that removing natural buffer is not desirable and the entrance/exit approach should maintain as much natural buffer as possible. He further explained that vehicles exiting the park are likely to stack, especially when exiting vehicles make left turns onto U.S. Highway 41. Vehicle stacking will conflict with use of the trail. Mr. DiGiovanni recommends installment of trail crossing signals at Eden Drive, Gobbler Road, Orange Avenue, Turner Camp Road, and at the proposed entrance/exit to Fort Cooper State Park. Additional hazards and nuisances that Mr. DiGiovanni addressed include low-hanging or encroaching vegetation on the trail, pedestrians walking abreast on the trail, waste from pets, pavement disrepair, and unmarked road crossings along the trail. To better promote tourism and economic development around the trails, Mr. DiGiovanni recommends additional wayfinding signage and developing a smartphone application to share community information. He cited Whispering Pines Municipal Park as an example of a popular feature located near the trail, to which a connection should be constructed. He noted that City of Inverness officials desire to work with the DRP to implement a connector trail.

Steve Farnsworth (Native Plant Society) commented that the park's current strategy for sandhill restoration in the pine plantation is not feasible. Mr. Farnsworth noted that the remnant groundcover characteristic of sandhill is diminished. Given the existing conditions, he is concerned that the area will become increasingly populated with hardwoods. He recommends clearcutting the planted slash pines in the southeastern portion of the park and replanting with longleaf pines and wiregrass. Mr. Farnsworth noted that many of the slash pines in this area are over 60 years old and may be especially valuable as timber.

Commissioner Scott Carnahan (Citrus County Board of County Commissioners) affirmed the need to repave the Withlacoochee State Trail and more broadly address safety issues affecting trail users. Commissioner Carnahan agrees that the park and community would benefit from an entrance to Fort Cooper State Park from U.S. Highway 41 and recommends aligning the entrance with the Airport Road intersection. He acknowledges that the additional trail-crossing poses safety concerns for trail users. Commissioner Carnahan supports increased connectivity with county and municipal parks.

Kathy Thompson (Nature Coast Back Country Horsemen) supports the draft plans for both Fort Cooper State Park and the Withlacoochee State Trail. She commends the large-scale volunteer efforts in the park and along the trail. Ms. Thompson recommends allowing volunteers to use their own equipment in order to expand the volunteer program. She acknowledged the potential impacts caused by equipment spreading seeds of exotic-invasive plant species, but suggests that with basic training, volunteers are responsible stewards and significantly reduce the cost of

Withlacoochee State Trail Advisory Group Members and Report

resource management and maintenance labor. Additionally, Ms. Thompson commented that without compromising natural communities and user safety, she is interested in greater connectivity between other trails, local parks, and Withlacoochee State Trail.

Katherine Turner Thompson (Citrus County Historical Society) requests that when planning new development, the DRP carefully evaluate potential impacts to cultural resources both in Fort Cooper State Park and along the Withlacoochee State Trail corridor. Ms. Thompson recommends prioritizing management and interpretation of the historic features and archaeological sites that the units offer. She states that the Citrus County Historical Society is able to offer guidance on the history of these cultural resources. Additionally, Ms. Thompson inquired about the status of the Floral City Rest Stop and whether the existing amenities at this location will be kept.

Susan Straley (Withlacoochee Riders) commented that the rural character and well-managed natural communities along the Withlacoochee State Trail corridor should be preserved. She notes the scenic attraction of the rural and natural features. Ms. Straley supports new development that will increase trail users' experiences in scenic settings, such as Whispering Pines Municipal Park. She countered that the proposed new entrance to Fort Cooper State Park will create an additional interruption in the trail's scenic corridor and poses a traffic hazard. Ms. Straley inquired whether the existing park entrance road, which the new entrance proposes to replace, will be demolished and restored to natural community. She noted that restoring the north section of park road is significant to avoid bisecting the park. Ms. Straley recommends considering alternatives to the new entrance and inquired about the level of need. She additionally noted that many trail users do not prioritize the proposed Kabrich Trailhead. She stated that she favors a Floral City Trailhead. Ms. Straley supports upgrades to the Owensboro Trailhead, closure of the Trilby Trailhead, and future connection to the Van Fleet Trail. Additionally, she supports the use of donation boxes and more interpretive programming on wildlife.

James Crink (Friends of Fort Cooper State Park) commented that a campground at Fort Cooper State Park should anticipate the preferences of multiple user groups, including tent campers arriving by bicycle, pop-up campers and other compact trailers, and RVs. Mr. Crink recommends designing the campground to maintain natural vegetation but also include adequate capacity for large vehicles to navigate and also exit the park safely without requiring U-turns on U.S. Highway 41. He agrees that reducing traffic on Old Floral City Road by relocating the park entrance would benefit the adjacent neighborhood. Mr. Crink discussed the value of Lake Holathlikaha and supports the proposed observation deck, but suggests prioritizing restoration of the lake - given its eutrophic characteristics which have resulted from

Withlacoochee State Trail Advisory Group Members and Report

nonpoint sources of pollution. Mr. Crink stated that the lake bottom is presently not well-suited for swimming due to algae. He recommends adding lake restoration to the park's resource management plan in order to keep it as a recreational asset of the park and region.

Dennis Reiland (Rails to Trails of the Withlacoochee) supports the draft plans for both Fort Cooper State Park and the Withlacoochee State Trail, but offered recommendations for re-prioritizing new development and trail maintenance. Mr. Reiland stated that many trail users are not in favor of additional traffic crossings/stop signs on the Withlacoochee State Trail. He explained that traffic crossings impede the fast-paced ridership of the trail and are hazardous. For this reason, Mr. Reiland explained that he does not support development of a new park entrance at U.S. Highway 41 and encouraged that the park create an entrance on Fort Cooper Road. Mr. Reiland commends the increased popularity of the trail, but cautions that its carrying capacity is being met or exceeded – such that the trail needs to be widened and additional amenities need to be constructed. Mr. Reiland stated that he does not support the development of a new trailhead at Kabrich, but does support improving the existing Floral City Rest Stop and Parking Area to meet the needs of a new trailhead. He recognizes the need to collaborate with Citrus County Government for this project and identified recent and proposed improvements made by Citrus County that will enhance Floral City's suitability for a trailhead. He supports connecting the trail to Whispering Pines Municipal Park. He supports acquisition of an adjacent developed parcel at the corner of U.S. Highway 41 and Fort Cooper Road. Alternatively, Mr. Reiland recommends use of the Fort Cooper shop area on the south end of the park. Mr. Reiland commented that these sites would be suitable for storage, maintenance, and volunteer staging. Mr. Reiland encourages repavement of the entire Withlacoochee State Trail to improve safety and the quality of the riding and walking experience. He offers volunteer support from the citizen support organization to continue repairing the trail as needed in the interim. Mr. Reiland additionally commented that use agreements and easements have resulted in high volumes of vehicle traffic on the trail, which also reduce the safety of the trail for users and causes undue damage to the asphalt. He notes that the previous management plan includes language to more effectively address vehicle intrusions.

Lita Hart (Florida Forest Service) supports the land use planning and resource management proposed in the draft plans for both Fort Cooper State Park and the Withlacoochee State Trail. Ms. Hart commented that a campground in the park will generate significant recreational interest in the community and attract visitors more widely. She noted the frequency of inquiries received at the Withlacoochee State Forest Visitor Center about camping opportunities in the area, especially with direct access to the Withlacoochee State Trail. Ms. Hart agrees with closing the Trilby

Withlacoochee State Trail Advisory Group Members and Report

Trailhead and inquired about plans for the volunteer campsite at Ridge Manor. She stated that the DRP can partner with the Florida Forest Service for development and management of this site. She recommends restricting vehicle access to the Withlacoochee State Trail from Ridge Manor, as she is aware of unauthorized driving on this section. Ms. Hart encourages future connections to the Good Neighbor and Coast to Coast Trails.

Ed Caum (Pasco County Office of Tourism) stated that he is in agreement with the proposals of both plans. Mr. Caum encourages development of wayfinding standards for the Withlacoochee State Trail and stated the significance of wayfinding for enhancing the trail user experience and broadening the scope of recreational opportunity in the region. Likewise, he stated that constructing connector trails to adjacent parks and downtown areas would boost regional economics. Mr. Caum supports development of the Owensboro Trailhead as an alternative to the Trilby Trailhead. Mr. Caum introduced Allen Howell, the Pasco County Metropolitan Planning Organization bicycle/pedestrian planner. Mr. Howell discussed potential connections of Pasco and Hernando County trails to the Withlacoochee State Trail.

Kimberly Poppke (Hernando County Tourism) agrees with the proposed improvements and new developments of draft plans for both Fort Cooper State Park and the Withlacoochee State Trail. She encourages enhanced wayfinding and use of digital applications or social media to exchange updated information about recreational opportunities along the trail. She noted that tourism in the region is growing and the plans for both the park and trail propose improvements that will allow the units to keep up with increased visitor volume.

Adam Thomas (Citrus County Visitors and Convention Bureau) attended the advisory group meeting but did not comment on the draft plans for Fort Cooper State Park or the Withlacoochee State Trail.

Summary of Written Comments

Mike Wisenbaker (Division of Historical Resources, Bureau of Archaeological Research) provided written comments to address cultural resource management at both Fort Cooper State Park and the Withlacoochee State Trail. Mr. Wisenbaker's comments commended the DRP's stewardship and interpretation of the archaeological and historic resources at Fort Cooper State Park. He noted that the draft plan for Fort Cooper State Park refers to six archaeological sites, whereas DHR records list only three archaeological sites and one resource group for the park; explaining that the Ole Military Wagon Trail falls under the site file category of *resource group*. Additionally, Mr. Wisenbaker noted that the site file forms for the

Withlacoochee State Trail Advisory Group Members and Report

Lake Holathlikaha Foundation (CI1374) and the Fort Cooper Phosphate Pit (CI1373) have not been submitted to DHR. Mr. Wisenbaker shared with staff, the Fryman Report – a detailed account of archaeological survey work completed at the Fort Cooper site. Mr. Wisenbaker also offered comments on the draft plan for the Withlacoochee State Trail, noting that the DRP has diligently identified and managed the resources along this corridor. He shared detailed notes on the Florida Master Site Files for the trail's resources to resolve a discrepancy in the draft plan. Mr. Wisenbaker additionally recommends citing Archaeology Resources Managed Training (ARM) in the plan to train staff on cultural resource management.

Public Comments

Steve Diez commented that trail maps and smartphone applications should be developed to improve wayfinding along the Withlacoochee State Trail and associate specific locations with GPS waypoints for user safety and general quality of experience. Mr. Diez notes that many of the proposed trail maintenance and development projects recommended are eligible for federal Transportation Alternatives funds, ranging from trail repaving to exotic-invasive species control.

Harry van den Berg discussed the need for Manual on Uniform Traffic Control Devices (MUTCD) compliance in the draft plan for the Withlacoochee State Trail. He noted that most of the trail's crossings do not comply with these standards. Mr. van den Berg recommends removing stop signs from the trail and promoting yielding or stopping of automobile traffic. He commented that vehicular traffic on the trail has been gradually increasing and encourages the DRP to evaluate criteria for allowable uses of the trail by utility companies or maintenance crews. He notes the damage caused to the trail pavement by unauthorized vehicular traffic. Mr. Van den Berg cautioned that degraded asphalt and the presence of vehicles on the trail pose safety hazards for cyclists and pedestrians.

Withlacoochee State Trail Advisory Group Members and Report

Staff Recommendations

The staff recommends approval of the proposed management plans for Fort Cooper State Park and Withlacoochee State Trail as presented, with the following significant changes and management actions:

Withlacoochee State Trail Management Plan

- The DRP will continue to work with Citrus, Hernando, and Pasco counties and the City of Inverness to repave the trail and plan for trail connections to adjacent recreational assets.
- Language will be added to the plan to further describe opportunities for connectivity to recreational resources within the vicinity, including linking the Withlacoochee State Trail to Whispering Pines Municipal Park.
- The DRP will conduct assessment of trail conditions to identify and prioritize maintenance needs and associated costs. The DRP will further explore local, state, and federal funding opportunities for repaving and repair of the Withlacoochee State Trail.
- Language will be added to the unit management plan for the Withlacoochee State Trail to plan for design of safe and MUTCD-compliant trail crossings at road and driveway intersections. The initial phase of the assessment may be included in the maintenance needs assessment mentioned above.
- Language will be revised in the 2015 draft plan that addresses vehicle intrusions to appropriately match language in the 2003 approved unit management plan for the Withlacoochee State Trail.
- The DRP will revise its description of cultural resources in the plans for both Fort Cooper State Park and the Withlacoochee State Trail according to comments provided by DHR.
- Language will be added to reference ARM training for DRP staff in the cultural resource management section of the Resource Management Component for the Withlacoochee State Trail.
- Despite past efforts, DRP was unable to acquire land for trailhead parking in Floral City. The DRP encourages efforts by Citrus County to develop parking in Floral City that would support public access to the trail.

Withlacoochee State Trail Advisory Group Members and Report

Fort Cooper State Park Management Plan

- The DRP has received recommendations from members of the public and advisory group to align the proposed new park entrance with the intersection of U.S. Highway 41 and Airport Road. The proposed new park entrance cannot be aligned with Airport Road because of the additional length of the park road that would require and the resulting disturbance of the protected sand hill natural community. Alignment of the proposed entrance will be planned to prioritize safe traffic access and egress and to minimize inconvenience on the Withlacoochee State Trail.
- DRP staff reviewed and revised the scale and location of the proposed 30-site standard camping area (see attached Conceptual Land Use Plan). Additional area is now included in the proposed development area, incorporating a portion of the park road and the ranger station, both of which can be incorporated into the camping area design. These changes will enhance the quality of the development and reduce the impact on natural areas of the park.

Additional revisions were made throughout the document to address editorial corrections, consistency of spellings and notations, and other minor corrections.

Notes on Composition of the Advisory Group

Florida Statutes Chapter 259.032 Paragraph 10(b) establishes a requirement that all state land management plans for properties greater than 160 acres will be reviewed by an advisory group:

“Individual management plans required by s. 253.034(5), for parcels over 160 acres, shall be developed with input from an advisory group. Members of this advisory group shall include, at a minimum, representatives of the lead land managing agency, co-managing entities, local private property owners, the appropriate soil and water conservation district, a local conservation organization, and a local elected official.”

Advisory groups that are composed in compliance with these requirements complete the review of state park management plans. Additional members may be appointed to the groups, such as a representative of the park’s Citizen Support Organization (if one exists), representatives of the recreational activities that exist in or are planned for the park, or representatives of any agency with an ownership interest in the property. Special issues or conditions that require a broader representation for adequate review of the management plan may require the appointment of additional members. DRP’s intent in making these appointments is to create a group

**Withlacoochee State Trail
Advisory Group Members and Report**

that represents a balanced cross-section of the park's stakeholders. Decisions on appointments are made on a case-by-case basis by DRP staff.

Addendum 3—References Cited

Withlacoochee State Trail References Cited

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Addendum 4 – Soil Descriptions

Withlacoochee Trail State Park Soil Descriptions

(C2, H1, P11) Adamsville fine sand - This soil is nearly level and somewhat poorly drained. It is on low ridges in the coastal swamps and in the flatwoods and is at the base of the lower slopes on the uplands. It gradually releases water to more poorly drained soil in natural drainageways, swamps, ponds, and marshes. The mapped areas are irregular in shape or somewhat circular and range from about 5 to 150 acres. The slopes are 2 percent or less.

The surface layer is dark grayish brown fine sand about 7 inches thick. The underlying material to a depth of 80 inches is light yellowish brown and very pale brown sand.

The water table is between depths of 20 and 40 inches for 2 to 6 months. During dry seasons, the water table generally recedes to a depth of more than 40 inches. Internal drainage is slow.

(H2) Anclote fine sand - This is a very poorly drained soil in depressional areas. Slopes are usually concave and less than 2 percent.

Typically, the surface layer is black fine sand about 7 inches thick. The subsurface layer is very dark gray fine sand about 7 inches thick. Below that is fine sand. The upper 6 inches of it is grayish brown, the next 10 inches is light to brownish gray, and the next layer is gray to a depth of 80 inches or more.

Included with this soil in mapping are small areas of Basinger soils, depressional, and Delray, Floridana, and Pompano soils. Also included are similar soils that have a thin surface layer of muck. Included soils make up about 15 percent of any mapped area.

In most years, under natural conditions, the water table is above the surface for 3 to 6 months during wet seasons and recedes to a depth of more than 20 inches during dry seasons. This soil has medium available water capacity to a depth of about 14 inches and low available water capacity below this depth. Permeability is rapid throughout. Internal drainage, however, is slow because it is impeded by a shallow water table. Natural fertility and organic matter content are high to a depth of about 14 inches and low below this depth.

(C16, H6, P43) Arredondo fine sand, 0 to 5 percent slopes - This soil is nearly level to gently sloping and well drained. It is on upland ridges. The mapped areas are mainly oblong and range from 5 to 200 acres.

Typically, the surface layer is very dark grayish-brown fine sand 9 inches thick. The subsurface layer, to a depth of 41 inches, is dark yellowish brown and yellowish brown fine sand. The upper part of the subsoil, to a depth of 65 inches, is strong brown loamy fine sand. The lower part to a depth of 80 inches is strong brown sandy clay loam.

Included with this soil in mapping are small areas of Apopka, Candler, Kendrick, Lake, and Sparr soils. Also included are small areas of Arredondo

Withlacoochee Trail State Park Soil Descriptions

soils that have slopes of up to 9 percent. The included soils make up less than 20 percent of the map unit.

The water table is more than 6 feet below the surface in most years. A perched water table is on the top of the subsoil for 2 days or less following heavy rains. Rain is rapidly absorbed, and runoff is slow if the surface layer is vegetated. Permeability is rapid in the sandy layers and moderate to slow in the loamy layers. The available water capacity is low to moderate in the sandy layers and moderate in the loamy layers. The soil is droughty during periods of low rainfall.

(C29) Astatula fine sand, 0 to 5 percent slopes - This soil is nearly level to gently sloping and excessively drained. It is in a few level areas and on uneven side slopes and convex ridgetops on the uplands. The mapped areas are nearly oval and range from about 10 to more than 500 acres, and some areas on elevated landscapes on the flatwoods are irregular in shape and range from about 4 to 10 acres.

Typically, the surface layer is light brownish-gray fine sand about 5 inches thick. The underlying material to a depth of 80 inches is yellow and reddish yellow fine sand.

Included in this soil in mapping are areas of Candler, Lake, Paola, and Tavares soils. Also included are small areas of Astatula soils that have slopes of more than 5 percent. The included soils make up about 20 percent of the map unit.

The water table is more than 80 inches below the surface throughout the year. Permeability is very rapid. The available water capacity is very low. If the surface layer is protected by vegetation, rain is rapidly absorbed into the soil and runoff is slow. Reaction ranges from very strongly acid to slightly acid. Natural fertility is very low.

(C30) Astatula fine sand, 5 to 8 percent slopes - This soil is moderately sloping and excessively drained. It is on uneven side slopes and upland ridges. The mapped areas are irregular in shape and range from 5 to about 100 acres.

Typically, the surface layer is gray fine sand 2 inches thick. The underlying material to a depth of 80 inches is brownish yellow and yellow fine sand.

Included with this soil in mapping are small areas of Candler, Lake, Paola, and Tavares soils. Also included are small areas of Astatula soils that have slopes of more than 8 percent. The included soils make up about 20 percent of the map unit.

The water table is more than 80 inches below the surface throughout the year. Permeability is very rapid. The available water capacity is very low. The soil rapidly becomes droughty during periods of low rainfall. If the surface is protected by a vegetative cover, rain is rapidly absorbed into the soil, and runoff is slow. Unprotected areas have increased erosion hazard. Natural

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fertility is very low. Reaction ranges from very strongly acid to slightly acid.

(C5, H9) Basinger fine sand - This soil is nearly level and poorly drained. It is found in poorly defined drainageways and sloughs throughout the county. The mapped areas are irregular in shape, following the local drainage patterns. These areas range from about 5 to 100 acres. The slopes are less than 2 percent.

Typically, the surface layer is black fine sand 3 inches thick. The subsurface layer, to a depth of 8 inches, is light gray fine sand. The next layer, to a depth of 24 inches, is a mixture of light brownish-gray subsurface material and dark reddish brown and dark brown subsoil material. The substratum to a depth of 80 inches or more is light gray and white fine sand.

Included in this soil in mapping are small areas of EauGallie, Immokalee, Myakka, and Pompano soils. Also included are small areas of soils that are similar to Basinger soil but have limestone bedrock at a depth of 65 inches or more. These similar soils mainly are in the coastal and extreme eastern parts of the county. The included soils make up about 25 percent of the map unit.

The water table is at a depth of less than 10 inches for 2 to 6 months. During dry seasons, it recedes to a depth of 30 inches or more. Internal drainage is slow. Permeability is rapid. The available water capacity is low. Reaction ranges from extremely acid to neutral. Natural fertility is low.

(C6, H10, P23) Basinger fine sand, depressional - This soil is nearly level and poorly drained. It occurs in depressions and is adjacent to some bodies of water. The mapped areas are irregular in shape, long and narrow, or nearly circular and range from 3 to 50 acres. The slopes are less than 2 percent.

Typically, the surface layer is black fine sand 5 inches thick. The subsurface layer, to a depth of 24 inches, is light gray fine sand. The next layer, to a depth of 36 inches, is a mixture of gray subsurface material and dark brown and light brown subsoil material. The substratum to a depth of 80 inches is light gray sand.

Included with this soil in mapping are small areas of Adamsville, EauGallie, Immokalee, Myakka, and Tavares soils. Also included are a few small areas of soils that are similar to Basinger soil but have scattered limestone boulders at a depth of 60 inches or more and also a few depressional areas of soils on the upland ridges that are ponded about once in 6 years. The included soils make up less than 20 percent of the map unit.

This soil is ponded for periods of 3 to 9 months. In slightly elevated positions around the margins of the ponded areas, the water table is within 10 inches of the surface, and these areas are ponded in years of heavy rainfall. In dry periods, the water table recedes to a depth of 10 inches or more. Permeability is very rapid. The available water capacity is low. Reaction ranges from extremely acid to mildly alkaline. Natural fertility is low.

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(C60) Broward fine sand - This soil is nearly level and somewhat poorly drained. It is on broad flat woods near the coast. This soil is underlain by limestone between depth of 20 and 40 inches. In some areas, scattered boulders and rocks are at or near the surface, and some previously cultivated areas have cobbles scattered across the surface. Rock outcrop occurs in a few areas. The mapped areas are broad and rounded or irregular in shape and range from 10 to 150 acres.

Typically, the surface layer is very dark gray fine sand 5 inches thick. The upper part of the underlying material, to a depth of 15 inches, is gray fine sand. The lower part to a depth of 35 inches is brownish yellow fine sand underlain by limestone bedrock.

Included with this soil in mapping are small areas of Boca and Redlevel soils. Also included are some areas of soils near the Cross Florida Barge Canal that have been drained. The included soils make up about 20 percent of the map unit.

The water table is at a depth of 20 to 30 inches for periods of 2 to 6 months. In very wet years, it may rise about 20 inches for brief periods. Permeability is rapid throughout. The available water capacity is low to very low. Natural fertility is low. Rain is rapidly absorbed, and runoff is slow. Reaction ranges from medium acid to moderately alkaline.

(C3, H14, P13) Candler fine sand, 0 to 5 percent slopes - This soil is nearly level to gently sloping and excessively drained. It is on uneven side slopes and convex ridgetops of the uplands. The mapped areas range from 4 to about 2,000 acres.

Typically, the surface layer is dark grayish-brown fine sand about 4 inches thick. The subsurface layer, to a depth of 72 inches, is very pale brown or light yellowish-brown fine sand. The next layer to a depth of 80 inches or more is very pale brown fine sand that has yellowish-brown loamy fine sand lamellae.

Included with this soil in mapping are areas of Adamsville, Apopka, Arredondo, Astatula, Lake, and Tavares soils. The included soils make up less than 20 percent of the map unit.

The water table is more than 80 inches below the surface throughout the year. Permeability is rapid. The available water capacity is very low or low. The soil is very droughty during periods of low rainfall. If the surface is protected by a vegetative cover, rain is rapidly absorbed and runoff is slow. If the vegetative cover is weakened or disturbed, wind and water erosion is a hazard on the more sloping areas. Natural fertility is low or very low. Reaction ranges from very strongly acid to medium acid except where lime has been applied.

(C4, P14) Candler fine sand, 5 to 8 percent slopes - This soil is moderately sloping and excessively drained. It is on uneven side slopes on

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upland ridges. The mapped areas are irregular in shape and range from about 3 to 75 acres.

Typically, the surface layer is very dark gray fine sand about 4 inches thick. The subsurface layer, to a depth of 60 inches is brown, brownish yellow, and light yellowish brown fine sand. The next layer to a depth of 80 inches or more is very pale brown fine sand that has brown loamy fine sand lamellae.

Included with this soil in mapping are areas of Apopka, Arredondo, Astatula, Lake, and Tavares soils. Also included are small areas of Candler soils that have slopes of less than 5 percent and small areas of Candler soils that have slopes of up to 12 percent. The included soils are less than 20 percent of the map unit.

The water table is more than 80 inches below the surface throughout the year. Permeability is rapid. The available water capacity is low or very low. The soil is very droughty during periods of low rainfall. Runoff is slow in vegetated areas, and evaporation is minimal. Unprotected areas are subject to moderate wind and water erosion. Reaction ranges from very strongly acid to medium acid except where lime has been applied. Natural fertility is low.

(C32) Candler-Urban land complex, 0 to 8 percent slopes - This complex consists of nearly level to moderately sloping Candler soils and areas of Urban land. Candler soils are mainly on lawns, vacant lots, and playgrounds. The Urban land part of the map unit is areas covered by buildings, streets, and parking lots. The individual areas of Candler soils and Urban land in this map unit are too mixed or too small to map separately at the scale used for the maps in the soil survey publication.

Candler soil makes up about 55 percent of the map unit. Urban land generally makes up about 35 percent. The included soils make up about 10 percent.

Typically, Candler soil has a surface layer that is gray fine sand about 3 inches thick. The subsurface layer, to a depth of 60 inches, is pale brown and light yellowish brown fine sand. Below the subsurface layer to a depth of about 80 inches is very pale brown fine sand that has scattered lamellae of dark yellowish brown sandy loam.

Included with these soils in mapping are small areas of Arredondo, Astatula, Lake, Paola, and Tavares soils. Also included are some areas of Urban land that make up more than 50 percent of the map unit.

Candler soil has a water table at a depth of more than 80 inches throughout the year. Permeability is rapid. The available water capacity is low to very low. This soil is very droughty during periods of low rainfall. Natural fertility is very low. If sloping areas are not protected by vegetation, runoff and the hazard of erosion is increased.

(C47) Fort Meade loamy fine sand, 0 to 5 percent slopes - This soil is

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nearly level to gently sloping and well drained. It is on upland ridges. This soil is surrounded by soils on higher elevations and receives runoff from them. The mapped areas are irregular in shape or nearly circular and range from 5 to about 100 acres. Vegetation on this soil is denser than on adjacent soils.

Typically, the surface layer is black loamy fine sand 13 inches thick. The underlying material to a depth of 80 inches is very dark yellowish brown, dark brown, and strong brown loamy fine sand.

Included with this soil in mapping are small areas of Arredondo, Candler, and Lake soils. Also included are soils that are similar to Ft. Meade soil but have a surface layer of 10 inches thick.

The water table is more than 6 feet below the surface throughout the year. Permeability is rapid. The available water capacity ranges from low to medium in the surface layer and is low in the underlying layer. Runoff is slow to medium. Natural fertility is low. The soil is droughty during dry periods. Reaction ranges from strongly acid to neutral in the surface layer and from very strongly acid to medium acid in the underlying layers.

(H24) Floridana-Basinger association, occasionally flooded - This association consists of poorly drained and very poorly drained soils in regular and repeating patterns along streams and rivers in the eastern part of the county. The Floridana soils are in the lowest places, and the Basinger soils are slightly higher. The areas are mostly long and narrow and generally adjacent to the Withlacoochee River. Individual areas of each soil range from 5 to 25 acres.

The very poorly drained Floridana soils make up about 55 percent of the association. Typically, the surface layer is very dark gray loamy fine sand about 14 inches thick. The subsurface layer is dark grayish-brown fine sand that extends to a depth of 24 inches. Beneath the subsurface layer is grayish brown sandy clay loam to a depth of 30 inches and gray sandy clay loam to a depth of 80 inches or more.

Floridana soils have rapid permeability in the surface layer and moderate permeability in the subsoil the available water capacity and natural fertility are medium. The organic matter content is high. The water table is at a depth of less than 10 inches for 1 to 4 months during most years, and the soil is frequently flooded.

The poorly drained Basinger soils make up about 30 percent of the association. Typically, the surface layer is black fine sand about 3 inches thick. The subsurface layer is light to brownish-gray fine sand about 5 inches thick. Beneath this to a depth of 24 inches is grayish-brown fine sand intermixed with very dark grayish-brown fine sand. Light gray and white fine sand extend to a depth of 80 inches or more.

Basinger soils have very rapid permeability. Available water capacity is very

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low. Natural fertility and organic matter content are low. Minor soils make up about 15 percent of the association. Delray soils are the most extensive.

(C18) Kendrick fine sand, 0 to 5 percent slopes - This soil is nearly level to gently sloping and well drained. It occurs on upland ridges. The mapped areas are irregular in shape and range from 5 to 200 acres. The slopes are smooth to concave.

Typically, the surface layer is dark grayish-brown sand about 4 inches thick. The subsurface layer, to a depth of 28 inches, is yellowish brown and brownish yellow fine sand. The upper part of the subsoil, to a depth of 34 inches, is yellowish-brown fine sandy loam. The middle part, to a depth of 63 inches, is yellowish brown and strong brown sandy clay. The lower part to a depth of 80 inches is mottled strong brown, dark red, and light gray sandy clay loam.

Included in this soil in mapping are small areas of Arredondo, Lochloosa, Micanopy, and Williston soils. Also included are small areas of Kendrick soils that have slopes of 5 to 8 percent. The included soils make up about 20 percent of the map unit.

In most years, the water table is more than 6 feet below the surface throughout the year. Permeability is rapid in the sandy layers and moderately slow or slow in the subsoil. The available water capacity is low to moderate in the sandy layers and high in the subsoil. Reaction is very strongly acid or strongly acid except where lime has been applied. Natural fertility is low.

(C14, P32) Lake fine sand, 0 to 5 percent slopes - This soil is nearly level to gently sloping and excessively drained. It occurs on upland ridges. The mapped areas are irregular in shape or somewhat circular and range from about 5 to 500 acres.

Typically, the surface layer is dark brown fine sand about 7 inches thick. The underlying material to a depth of 80 inches or more is yellowish brown and brownish yellow fine sand.

Included with this soil in mapping are small areas of Arredondo, Astatula, Candler, and Tavares soils. Also included are small areas of Lake soil that have slopes of 5 to 9 percent. The included soils make up less than 20 percent of the map unit.

The water table is more than 80 inches below the surface throughout the year. Internal drainage is rapid. The available water capacity is low or very low. Reaction is very strongly acid or strongly acid except where lime has been applied. Natural fertility is low.

(C15) Lake fine sand, 5 to 8 percent slopes - This soil is moderately sloping and excessively drained. It is on side slopes on the uplands. The mapped areas are irregular in shape and range from 5 to 50 acres.

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Typically, the surface layer is dark brown fine sand about 8 inches thick. The underlying material to a depth of 80 inches or more is yellowish brown, strong brown, and reddish yellow fine sand.

Included with this soil in mapping are small areas of Arredondo, Astatula, Candler, and Tavares soils. Also included are small areas of Lake soils that have slopes of less than 5 percent and small areas of Lake soils that have slopes of up to 12 percent. The included soils make up less than 20 percent of the map unit.

The water table is more than 80 inches below the surface throughout the year. Internal drainage is rapid. The available water capacity is low or very low. Reaction is very strongly acid or strongly acid except where lime has been applied. Natural fertility is low.

(C25) Lochloosa fine sand, 0 to 5 percent slopes - This soil is nearly level to gently sloping and somewhat poorly drained. It occurs in gently undulating areas on the upland ridges. The mapped areas mainly range from small areas of as much as about 15 acres to a few extensive areas of 200 acres or more.

Typically, the surface layer is grayish brown fine sand about 8 inches thick. The subsurface layer, to a depth of 27 inches, is brown and light yellowish-brown fine sand.

A few faint grayish brown mottles are in the lower 10 inches in the subsurface layer. The upper part of the subsoil, to a depth of 37 inches, is light gray sandy clay loam. The lower part, to a depth of 63 inches, is gray clay. The substratum to a depth of 80 inches is light gray sandy clay loam.

Included with this soil in mapping are small areas of Broward, Kendrick, and Sparr soils. Also included are small areas of soils that are similar to Lochloosa soil but more poorly drained. The included soils make up less than 20 percent of the map unit.

The water table is between depths of 30 and 60 inches from 1 month to 4 months. It may rise about 30 inches for periods of less than 3 weeks during periods of heavy rainfall. The water table is at a depth of more than 60 inches during dry periods. In some areas, side slopes are wet for longer periods because of seepage.

Permeability is rapid or moderately rapid in the surface and subsurface layers and ranges from moderate to slow in the subsoil. The available water capacity is very low or low in the surface and subsurface layers and medium to high in the subsoil. Reaction is strongly acid to extremely acid except where lime has been applied. Natural fertility is low.

(C33) Micanopy loamy fine sand, 2 to 5 percent slopes - This soil is gently sloping and somewhat poorly drained. It occurs on upland ridges. The mapped areas generally are irregular in shape and are less than 50 acres in size. The slopes are smooth to concave.

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Typically, the surface layer is black to very dark gray loamy fine sand 8 inches thick. The subsurface layer, to a depth of 15 inches, is brown loamy fine sand. The upper part of the soil, to a depth of 25 inches, is yellowish brown sandy clay. The middle part, to a depth of 55 inches, is gray sandy clay. The lower part, to a depth of 63 inches, is mottled gray, yellowish brown, strong brown, and yellowish red sandy clay.

Included with this soil in mapping are small areas of Lochloosa soils. Also included are small areas of Micanopy soils that have slopes of less than 2 percent, small areas of Micanopy soils that have slopes of more than 5 percent, and small areas of soils that have more than 5 percent plinthite in the subsoil. The included soils make up less than 25 percent of the map unit.

A perched water table occurs between depths of 1.5 and 2.5 feet for 1 month to 3 months and is more than 60 inches below the surface during dry periods. Permeability is rapid in the surface and subsurface layers and slow in the subsoil. The available water capacity is low in the surface and subsurface layers and ranges from moderate to high in the subsoil. Natural fertility is low.

(H35) Myakka fine sand - This is a nearly level, poorly drained soil in broad areas in the flatwoods. Slopes are smooth to concave and range from 0 to 2 percent.

Typically, the surface layer is black fine sand about 5 inches thick. The subsurface layer is light gray fine sand about 20 inches thick. The subsoil is weakly cemented fine sand about 17 inches thick. The upper 4 inches is very dark grayish brown, the next 5 inches is very dark gray, and the lower 8 inches is dark reddish brown. The next layer is light brownish-gray fine sand to a depth of about 50 inches and light gray fine sand below.

Included with this soil in mapping are similar soils that differ from Myakka fine sand by having a black surface layer more than 8 inches thick. Also included are small areas of Adamsville, Basinger, EauGallie, and Pompano soils. Limestone boulders, 2 to 6 feet in diameter, are in some areas of this soil at a depth of about 60 to 100 inches. Included soils make up about 16 percent of any mapped area.

The water table is at a depth of less than 10 inches for 1 to 4 months in most years and recedes to a depth of more than 40 inches during very dry seasons. Myakka soils have medium available water capacity in the subsoil, but very low available water capacity in the other layers. Permeability is rapid in the surface layer and substratum and moderate or moderately rapid in the subsoil. These soils have slow internal drainage and slow runoff. Natural fertility is low.

(H37) Okeelanta-Terra Ceia association - This association consists of very poorly drained soils in regular and repeating patterns. The landscape is a broad, low swamp area which is interspersed with a few low ridges. The Okeelanta soils are around the edges of the mapping unit, where the organic

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material is thinner. This association makes up a large part of Weekiwachee and Chassahowitzka swamps. Mapped areas are mostly long and very broad, and individual areas of each soil range from about 25 to 300 acres.

Okeelanta soils make up about 60 percent of this association. Typically, they have layers of black and very dark gray muck to a depth of about 27 inches. Below the muck is light gray fine sand.

Okeelanta soils have a water table at or near the surface except during extended dry periods. They have rapid permeability, very high available water capacity, very high organic matter content, and moderate natural fertility.

Terra Ceia soils make up as much as 30 percent of this association. Typically, Terra Ceia soils are black and dark grayish brown muck to a depth of 65 inches or more.

Terra Ceia soils have a water table on or above the surface except during extended dry periods. Runoff is slow. Internal drainage and permeability are rapid. These soils have very high available water capacity, very high organic matter content, and moderate natural fertility.

Minor soils make up about 10 percent of the association. Anclote soils are the most extensive of the minor soils. Also included are small areas of Myakka, Basinger Delray, and Tavares soils. These soils, with the exception of Delray soils, are on low ridges scattered throughout the association.

(C61) Orsino fine sand, 0 to 5 percent slopes - This soil is nearly level and moderately well drained. It is on knolls and ridges throughout the eastern part of the county. Most areas of this soil are surrounded by soils in lower areas that are more poorly drained. The mapped areas vary from long and narrow or somewhat circular and range from about 5 to 100 acres. The slopes are 5 percent or less.

Typically, the surface layer is dark grayish-brown fine sand about 5 inches thick. The subsurface layer, to a depth of 14 inches, is white fine sand. The subsoil, to a depth of 48 inches, is brownish yellow and very pale brown fine sand. The substratum to a depth of 80 inches is white fine sand.

Included with this soil in mapping are small areas of Basinger, Paola, Pomello, and Tavares soils. The included soils make up about 20 percent of the map unit.

The water table is between depths of 40 and 72 inches for 6 months. Permeability is rapid. The available water capacity is very low. Reaction ranges from extremely acid to medium acid. Natural fertility is low.

(C20) Pits - This map unit consists of irregularly shaped, open pits from which the soil and phosphate, but in some areas sand and other soil material, were removed. These excavations are 5 to 50 feet below the surrounding

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natural ground level. The walls are strongly sloping to nearly vertical, consisting of exposed layers of sand and other soil material, and frequently bedrock.

In most areas, the bottoms of the pits consist of a highly variable mixture of smooth to strongly sloping sand and geologic materials. These materials may contain scattered limestone boulders or limestone bedrock, or both. In areas where the pits have been excavated to near groundwater level, they retain water for variable periods and have a seasonal high water table. Some pits are permanent bodies of water and, if large enough, are shown on the soil maps as water. In these areas, fish and other wildlife have become established. Other pits have exposed bedrock.

(C9) Pompano fine sand - This soil is nearly level and poorly drained. It is adjacent to poorly defined drainageways and is in broad, flat low areas throughout the county. The mapped areas are irregular in shape, long and narrow, or nearly circular and range from 5 to about 200 acres. The slopes are less than 2 percent.

Typically, the surface layer is black fine sand about 5 inches thick. The underlying material to a depth of 80 inches is light brownish gray and light gray fine sand.

Included with this soil in mapping are small areas of Adamsville and Basinger soils. Also included are soils that are similar to the Pompano soil but have an organic layer 2 to 6 inches thick; soils that have a surface layer more than 20 inches thick; and soils that have a sandy loam subsoil layer at a depth of more than 40 inches. The included soils make up less than 20 percent of the map unit.

The water table is within 10 inches of the surface layer for 2 to 6 months of the year. It is more than 30 inches below the surface during extended dry periods. This soil has slow internal drainage. Permeability is rapid, and runoff is slow. The available water capacity is very low. Reaction ranges from very strongly acid to mildly alkaline. Natural fertility is low.

(C10) Pompano fine sand, depressional - This soil is nearly level and poorly drained. It occurs in depressions in the flatwoods and in river valley lowland parts of the county. The mapped areas are irregular in shape or somewhat circular and range from about 5 to 150 acres. The slopes are 2 percent or less.

Typically, the surface layer is a dark gray fine sand about 9 inches thick. The underlying material to a depth of 80 inches or more is light brownish gray, gray, and light gray fine sand.

Included with this soil in mapping are small areas of Adamsville, Basinger, EauGallie, Kanapaha, and Tavares soils. The included soils make up less than 20 percent of the map unit.

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This soil is ponded for 3-9 months. In slightly elevated positions around the margins of the ponded areas, the water table is within 10 inches of the surface, and these areas are ponded in years of heavy rainfall. The water table is rarely at a depth of more than 10 inches. Permeability is rapid. The available water capacity is very low. Reaction ranges from very strongly acid to mildly alkaline. Natural fertility is low or very low.

(C22) Quartzipsamments, 0 to 5 percent slopes - This soil is nearly level to gently sloping. It has been reworked and shaped by earthmoving equipment. It is commonly adjacent to urban lands, but can occur throughout the area. Many areas of this soil were formerly sloughs, marshes, shallow ponds, or other areas of standing water. These areas have been filled with sandy soil material to the level of the surrounding landscape or higher. In a few areas, this soil originally was on the high ridges that were excavated to below the natural ground level. Smoothing and shaping have made the soil better suited to use as sites for buildings, roads and streets, recreation areas, and other related uses.

The color and thickness of the various layers of this soil are variable. One of the more common profiles has a surface layer of mottled brownish yellow and pale brown fine sand 54 inches thick. The upper part of the underlying material, to a depth of 59 inches, is dark gray fine sand. The lower part to a depth of 80 inches is brownish yellow fine sand.

Included with this soil in mapping are small areas of Basinger and Immokalee soils that have not been disturbed. Also included are small areas that have less than 20 inches of fill material on the surface, and areas where small amounts of soil material, such as sandy loam, sandy clay loam, and sandy clay, are mixed with the sand. Scattered fragments of hard limestone are in some places. The included soils generally make up less than 20 percent of the map unit.

The depth to the water table is variable, but it ranges from about 20 inches to more than 72 inches, depending on the thickness of the fill material and drainage of the underlying soil. In most excavated areas, the water table is at a depth of more than 72 inches. Permeability is variable, but generally very rapid. The available water capacity is also variable, but generally it is very low. Reaction ranges from very strongly acid to mildly alkaline. Natural fertility is very low.

(C35, H47, P7) Sparr fine sand, 0 to 5 percent slopes - This soil is nearly level to gently sloping and somewhat poorly drained. It occurs in seasonally wet areas on the upland ridges, at the base of some sloping areas, and near some poorly drained areas. The mapped areas are nearly circular to very irregular in shape and range from 5 to about 100 acres. The slopes are smooth to slightly concave.

Typically, the surface layer is grayish brown fine sand 8 inches thick. The

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subsurface layer, to a depth of 50 inches, is brown, pale brown, and very pale brown fine sand. The upper part of the subsoil, to a depth of 59 inches, is light yellowish-brown fine sandy loam. The middle part, to a depth of 70 inches, is light yellowish-brown sandy clay loam. The lower part to a depth of 80 inches is light brownish-gray sandy clay loam. Mottles of brown, red, yellow, and gray occur from a depth of about 20 to 80 inches.

Included with this soil in mapping are small areas of Arredondo, Kendrick, and Lochloosa soils. Also included are small areas of Sparr soils that have slopes of more than 5 percent and a few small areas of soils that are similar to Sparr soils but have limestone boulders in the subsoil. These areas are mainly adjacent to soils that contain bedrock or boulders in their profiles. The included soils make up less than 25 percent of the map unit.

The water table is at a depth of 2.5 to 3.5 feet for periods of 1 month to 4 months. Permeability is rapid in the sandy surface and subsurface layers and slow in the subsoil. Runoff is slow. The available water capacity is low to moderate. Natural fertility is low.

(C31) Sparr fine sand, 5 to 8 percent slopes - This soil is moderately sloping and somewhat poorly drained. It is on side slopes and on upland ridges. The mapped areas are irregular in shape and range from 5 to about 50 acres. The slopes are smooth to concave.

Typically, the surface layer is grayish brown fine sand about 8 inches thick. The subsurface layer, to a depth of 45 inches, is pale brown and light yellowish-brown fine sand. The upper part of the subsoil, to a depth of 51 inches, is light yellowish-brown fine sandy loam. The lower part to a depth of 80 inches is pale brown and light gray sandy clay loam.

Included with this soil in mapping are small areas of Arredondo, Kendrick, and Lochloosa soils. Also included are small areas of Sparr soils that have slopes of less than 5 percent and a small area of soils that are similar to Sparr soil but have limestone boulders in the subsoil. These areas are mainly adjacent to soils that contain bedrock or boulders in their profiles. The included soils make up less than 25 percent of the map unit.

The water table is at a depth of 1.5 to 3.5 feet for periods of 1 month to 4 months. Permeability is rapid in the sandy surface and subsurface layers and slow in the subsoil. Runoff is medium.

(C11, H49) Tavares fine sand, 0 to 5 percent slopes - This soil is nearly level to gently sloping and moderately well drained. It occurs on knolls and ridges throughout the county and on lower ridges in the uplands. The mapped areas are long and narrow or somewhat circular and range from 5 to 200 acres. The slopes are 5 percent or less.

Typically, the soil consists of fine sand throughout. The surface layer is dark grayish brown about 3 inches thick. The upper part of underlying material, to

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a depth of 63 inches, is very pale brown. The lower part to a depth of 80 inches is white.

Included with this soil in mapping are small areas of Adamsville, Candler, and Lake soils. Also included are small areas that are similar to Tavares soil but have a few limestone boulders at a depth of about 60 inches or more. The included soils make up about 20 percent of the map unit

The water table is between depths of 40 and 72 inches for up to 6 months. Permeability is rapid or very rapid. The available water capacity is very low. The soil becomes droughty during periods of low rainfall. Reaction ranges from extremely acid to medium acid in the surface layer and from very strongly acid to medium acid in the other layers. Natural fertility is low.

(P6) Tavares sand, 0 to 5 percent slopes – This is a nearly level to gently sloping, moderately well drained soil. It has a very dark grayish-brown sand surface layer about 7 inches thick. Below this is a layer of very pale brown sand that has faint yellowish brown mottles to a depth of 25 inches. The next layer, to a depth of 34 inches, is light yellowish brown sand. Very pale brown sand that has faint yellow mottles is at depths between 34 and 61 inches. Below this is white sand mottled with very pale brown. The water table is at a depth of 40 to 60 inches for more than 6 months of the year. During periods of drought, it is below 60 inches.

Included in mapping are a few small areas of soils that have a sandy clay loam subsoil at a depth of 40 to 80 inches. Tavares sand is very rapidly permeable. Available water capacity and organic-matter content are very low. Natural fertility is low.

(C55) Udorthents, 0 to 5 percent slopes - This refers to nearly level to gently sloping manmade soils. These soils are mainly in the central part of the county and are generally adjacent to pits. Most of these soils are in areas that have been mined and in a few areas, the mines are still active. In some areas, pits have been partly filled with the Udorthents. The individual areas of these soils range from 5 to 100 acres. The slopes are predominantly 5 percent or less. In a few areas, these soils have a somewhat undulating surface consisting of a series of short, moderately steep slopes that range from 12 to 20 percent.

These soils are a highly variable mixture of sandy and loamy overburden material, (removed to obtain the phosphate or limestone deposits), geologic material from mining operations, and colloidal clay material. They reflect the differences in individual mined deposits and differences in mining methods used. Three generalized pedons make up the Udorthents. One consists chiefly of loamy material to a depth of 80 inches or more. A second kind consists of thick to thin layers of sands alternating with finer textured material, mainly colloidal clays. The third kind consists of a sandy to loamy matrix that contains few to common sand strips and pockets of clayey material mixed throughout. All of these generalized pedons are in most areas and are intermixed. In most

Withlacoochee Trail State Park Soil Descriptions

areas, few to common broken fragments of limestone, chert, and low-grade phosphate rock are throughout the soils. Boulders of these materials are in a few areas. In most areas, the surface is sandy; but in a few areas, it is a thin to thick layer of clayey material. The sand grains mainly are well coated with colloidal clay material, but areas of uncoated sand are common. Soil color is variable and ranges from white and gray to shades of yellow, brown, and red. In vegetated areas, a dark layer has formed on the surface. Reaction ranges from strongly acid to neutral. The thickness of the Udothents is commonly 80 inches or more, but ranges from 20 to more than 80 inches. In a few areas, hard or soft bedrock is at a depth of 60 to 80 inches.

Soil drainage is variable and ranges from excessively drained to well drained in sandy areas and poorly drained in areas that have a high clay content. A perched water table is on the clayey layers. Permeability ranges from rapid in the sand areas to slow in the areas of high clay content. The available water capacity ranges from low to very low to medium.

**Withlacochee Trail State Park
Soil Descriptions**

Addendum 5—Plant and Animal List

Withlacoochee State Trail

Plants

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

Spleenwort	<i>Asplenium</i> sp.	
Ebony spleenwort	<i>Asplenium platyneuron</i>	
Japanese climbing fern	<i>Lygodium japonicum</i> *	
Widespread polypody	<i>Pecluma dispersa</i>	
Comb polypody	<i>Pecluma ptilodon</i> var. <i>bourgeauana</i>	
Resurrection fern.....	<i>Pleopeltis polypodioides</i> var. <i>michauxiana</i>	
Whisk-fern.....	<i>Psilotum nudum</i>	
Tailed bracken.....	<i>Pteridium aquilinum</i> var. <i>pseudocaudatum</i>	
Chinese ladder brake	<i>Pteris vittata</i> *	
Ovate marsh fern	<i>Thelypteris ovata</i>	
Netted chain fern.....	<i>Woodwardia areolata</i>	

GYMNOSPERMS

Red cedar	<i>Juniperus virginiana</i>	
Sand pine	<i>Pinus clausa</i>	
Slash pine	<i>Pinus elliotii</i>	
Longleaf pine	<i>Pinus palustris</i>	
Florida arrowroot; Coontie	<i>Zamia pumila</i>	

ANGIOSPERMS

MONOCOTS

Florida bluestem	<i>Andropogon floridanus</i>	
Bushy bluestem.....	<i>Andropogon glomeratus</i> var. <i>hirsutior</i>	
Bushy bluestem.....	<i>Andropogon glomeratus</i> var. <i>pumilus</i>	
Splitbeard bluestem	<i>Andropogon ternarius</i>	
Broomsedge bluestem	<i>Andropogon virginicus</i>	
Nodding nixie	<i>Apteria aphylla</i>	
Woollysheath threeawn	<i>Aristida lanosa</i>	
Arrowfeather threeawn.....	<i>Aristida purpurascens</i>	
Wiregrass	<i>Aristida stricta</i> var. <i>beyrichiana</i>	
Big carpetgrass	<i>Axonopus furcatus</i>	
Australian beardgrass.....	<i>Bothriochloa bladhii</i> *	
King ranch bluestem	<i>Bothriochloa ischaemum</i> var. <i>songarica</i>	
Watergrass	<i>Bulbostylis barbata</i> *	
Capillary hairsedge	<i>Bulbostylis ciliatifolia</i>	
Ware's hairsedge	<i>Bulbostylis warei</i>	
Pindo palm; Jelly palm	<i>Butia capitata</i> *	
Florida scrub roseling	<i>Callisia ornata</i>	

* Non-native species

Withlacoochee State Trail

Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Coastal sandbur	<i>Cenchrus spinifex</i>	
Longleaf woodoats	<i>Chasmanthium laxum</i> var. <i>sessiliflorum</i>	
Jamaica swamp sawgrass	<i>Cladium jamaicense</i>	
Whitemouth dayflower	<i>Commelina erecta</i>	
Wiry flatsedge	<i>Cyperus filiculmis</i>	
Fragrant flatsedge	<i>Cyperus odoratus</i>	
Variable witchgrass	<i>Dichantherium commutatum</i>	
Cypress witchgrass	<i>Dichantherium dichotomum</i>	
Cypress witchgrass	<i>Dichantherium ensifolium</i>	
Eggleaf witchgrass	<i>Dichantherium ovale</i>	
Hemlock witchgrass	<i>Dichantherium portoricense</i>	
Southern crabgrass.....	<i>Digitaria ciliaris</i>	
Slender crabgrass	<i>Digitaria filiformis</i>	
Air-potato.....	<i>Dioscorea bulbifera</i> *	
Spikerush	<i>Eleocharis</i> sp.	
Green-fly orchid	<i>Epidendrum conopseum</i>	
Elliott's lovegrass.....	<i>Eragrostis elliotii</i>	
Centipedegrass	<i>Eremochloa ophiuroides</i> *	
Pinewoods fingergrass	<i>Eustachys petraea</i>	
Slender fimbry	<i>Fimbristylis autumnalis</i>	
Southern umbrellasedge	<i>Fuirena scirpoidea</i>	
Bearded skeletongrass	<i>Gymnopogon ambiguus</i>	
Toothpetal false reinorchid	<i>Habenaria floribunda</i>	
Sweet tanglehead	<i>Heteropogon melanocarpus</i> *	
Cogongrass.....	<i>Imperata cylindrica</i> *	
Carolina redroot	<i>Lachnanthes carolina</i>	
Southern cutgrass	<i>Leersia hexandra</i>	
Smallflower halfchaff sedge.....	<i>Lipocarpha micrantha</i>	
Hairawn muhly.....	<i>Muhlenbergia capillaris</i>	
Southern waternymph	<i>Najas guadalupensis</i>	
Basketgrass	<i>Oplismenus</i> sp.	
Woodsgrass; Basketgrass	<i>Oplismenus hirtellus</i>	
Cuban bulrush.....	<i>Oxycaryum cubense</i> *	
Beaked panicum	<i>Panicum anceps</i>	
Maidencane	<i>Panicum hemitomon</i>	
Switchgrass	<i>Panicum virgatum</i>	
Egyptian paspalidium	<i>Paspalidium geminatum</i>	
Blue crowngrass	<i>Paspalum caespitosum</i>	
Bahiagrass.....	<i>Paspalum notatum</i> *	
Bahiagrass.....	<i>Paspalum notatum</i> var. <i>saurae</i> *	
Thin paspalum	<i>Paspalum setaceum</i>	
Seashore paspalum.....	<i>Paspalum vaginatum</i>	
Florida needlegrass	<i>Piptochaetium avenacioides</i>	
Pickerelweed.....	<i>Pontederia cordata</i>	
Illinois pondweed.....	<i>Potamogeton illinoensis</i>	

* Non-native species

Withlacoochee State Trail

Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Bunched beaksedge	<i>Rhynchospora cephalantha</i>	
Starrush whitetop	<i>Rhynchospora colorata</i>	
Giant whitetop	<i>Rhynchospora latifolia</i>	
Sandyfield beaksedge.....	<i>Rhynchospora megalocarpa</i>	
Longbeak beaksedge.....	<i>Rhynchospora scirpoides</i>	
Cabbage palm	<i>Sabal palmetto</i>	
American cupscale	<i>Sacciolepis striata</i>	
Bulltongue arrowhead	<i>Sagittaria lancifolia</i>	
Broadleaf arrowhead	<i>Sagittaria latifolia</i>	
Little bluestem	<i>Schizachyrium scoparium</i>	
Florida feathershank	<i>Schoenocaulon dubium</i>	
Softstem bulrush.....	<i>Schoenoplectus tabernaemontani</i>	
Fringed nutrush.....	<i>Scleria ciliata</i>	
Tall nutgrass.....	<i>Scleria triglomerata</i>	
Saw palmetto.....	<i>Serenoa repens</i>	
Yellow bristlegrass	<i>Setaria parviflora</i>	
Earleaf greenbrier	<i>Smilax auriculata</i>	
Sarsaparilla vine.....	<i>Smilax pumila</i>	
Yellow indiagrass	<i>Sorghastrum nutans</i>	
Lopsided indiagrass.....	<i>Sorghastrum secundum</i>	
Sand cordgrass	<i>Spartina bakeri</i>	
Marshhay cordgrass	<i>Spartina patens</i>	
Smutgrass.....	<i>Sporobolus indicus</i> *	
West Indian dropseed.....	<i>Sporobolus indicus</i> var. <i>pyramidalis</i> *	
Pineywoods dropseed.....	<i>Sporobolus junceus</i>	
St. Augustinegrass.....	<i>Stenotaphrum secundatum</i>	
Bartram's airplant.....	<i>Tillandsia bartramii</i>	
Ballmoss	<i>Tillandsia recurvata</i>	
Spanish moss.....	<i>Tillandsia usneoides</i>	
Giant air plant	<i>Tillandsia utriculata</i>	MEH
Longleaf spiderwort	<i>Tradescantia roseolens</i>	
Tall redtop.....	<i>Tridens flavus</i>	
Threebirds.....	<i>Triphora trianthophoros</i>	MEH
Broadleaf cattail	<i>Typha latifolia</i>	
Spanish bayonet.....	<i>Yucca aloifolia</i>	
Adam's needle.....	<i>Yucca filamentosa</i>	

DICOTS

Red maple	<i>Acer rubrum</i>
Hammock snakeroot	<i>Ageratina jucunda</i>
Silktree; Mimosa	<i>Albizia julibrissin</i> *
Southern amaranth.....	<i>Amaranthus australis</i>
Common ragweed.....	<i>Ambrosia artemisiifolia</i>
Bastard false indigo	<i>Amorpha fruticosa</i>

* Non-native species

Withlacoochee State Trail

Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Clusterspike false indigo	<i>Amorpha herbacea</i>	
Peppervine	<i>Ampelopsis arborea</i>	
Devil's walkingstick	<i>Aralia spinosa</i>	
Dutchman's-pipe	<i>Aristolochia</i> sp.	
Florida indian plantain	<i>Arnoglossum floridanum</i>	
Florida milkweed	<i>Asclepias feayi</i>	
Pinewoods milkweed	<i>Asclepias humistrata</i>	
Velvetleaf milkweed	<i>Asclepias tomentosa</i>	
Butterflyweed	<i>Asclepias tuberosa</i>	
Whorled milkweed	<i>Asclepias verticillata</i>	
Slimleaf pawpaw	<i>Asimina angustifolia</i>	
Bigflower pawpaw	<i>Asimina obovata</i>	
Smallflower pawpaw	<i>Asimina parviflora</i>	
Dwarf pawpaw	<i>Asimina pygmaea</i>	
Netted pawpaw	<i>Asimina reticulata</i>	
Bearded milkvetch	<i>Astragalus villosus</i>	
Smooth yellow false foxglove ...	<i>Aureolaria flava</i>	
Silverling	<i>Baccharis glomeruliflora</i>	
Groundsel tree; Sea-myrtle.....	<i>Baccharis halimifolia</i>	
Blue waterhyssop	<i>Bacopa caroliniana</i>	
Herb-of-grace	<i>Bacopa monnieri</i>	
Coastalplain honeycombhead ...	<i>Balduina angustifolia</i>	
Pineland wild indigo	<i>Baptisia lecontei</i>	
Florida greeneyes	<i>Berlandiera subacaulis</i>	
Beggarticks; Romerillo	<i>Bidens alba</i>	
Burrmarigold.....	<i>Bidens laevis</i>	
False nettle; Bog hemp.....	<i>Boehmeria cylindrica</i>	
Red Spiderling; Wineflower	<i>Boerhavia diffusa</i>	
American beautyberry	<i>Callicarpa americana</i>	
Hedge false bindweed	<i>Calystegia sepium</i> subsp. <i>limnophila</i>	
Trumpet creeper.....	<i>Campsis radicans</i>	
Coastalplain chaffhead.....	<i>Carphephorus corymbosus</i>	
Vanillaleaf	<i>Carphephorus odoratissimus</i>	
Pineland purple	<i>Carphephorus odoratissimus</i> var. <i>subtropicanus</i>	
American hornbeam	<i>Carpinus caroliniana</i>	
Pignut hickory	<i>Carya glabra</i>	
Madagascar periwinkle	<i>Catharanthus roseus</i> *	
New Jersey tea.....	<i>Ceanothus americanus</i>	
Littleleaf buckbrush.....	<i>Ceanothus microphyllus</i>	
Sugarberry; Hackberry	<i>Celtis laevigata</i>	
Spadeleaf	<i>Centella asiatica</i>	
Spurred butterfly pea	<i>Centrosema virginianum</i>	
Common buttonbush.....	<i>Cephalanthus occidentalis</i>	
Partridge pea	<i>Chamaecrista fasciculata</i>	
Pillpod sandmat	<i>Chamaesyce hirta</i>	

* Non-native species

Withlacoochee State Trail

Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Hyssopleaf sandmat	<i>Chamaesyce hyssopifolia</i>	
White fringetree	<i>Chionanthus virginicus</i>	
Camphortree.....	<i>Cinnamomum camphora</i> *	
Purple thistle.....	<i>Cirsium horridulum</i>	
Nuttall's thistle	<i>Cirsium nuttallii</i>	
Sour orange.....	<i>Citrus x aurantium</i> *	
Lemon	<i>Citrus x limon</i> *	
Netleaf leather-flower.....	<i>Clematis reticulata</i>	
Turk's-turban	<i>Clerodendrum indicum</i> *	
Atlantic pigeonwings	<i>Clitoria mariana</i>	
Tread-softly	<i>Cnidocolus stimulosus</i>	
Flowering dogwood	<i>Cornus florida</i>	
Lanceleaf rattlebox	<i>Crotalaria lanceolata</i> *	
Smooth rattlebox	<i>Crotalaria pallida var. obovata</i> *	
Rabbitbells.....	<i>Crotalaria rotundifolia</i>	
Showy rattlebox	<i>Crotalaria spectabilis</i> *	
Silver croton	<i>Croton argyranthemus</i>	
Rushfoil.....	<i>Croton michauxii</i>	
Marsh parsley	<i>Cyclosporum leptophyllum</i>	
Leafless swallowwort	<i>Cynanchum scoparium</i>	
Summer farewell	<i>Dalea pinnata</i>	
Western tansymustard	<i>Descurainia pinnata</i>	
Zarabacoa comun	<i>Desmodium incanum</i>	
Carolina ponyfoot	<i>Dichondra carolinensis</i>	
Poor Joe.....	<i>Diodia teres</i>	
Virginia buttonweed	<i>Diodia virginiana</i>	
Common persimmon	<i>Diospyros virginiana</i>	
Oblongleaf twinflower.....	<i>Dyschoriste oblongifolia</i>	
Tall elephantsfoot	<i>Elephantopus elatus</i>	
Oakleaf fleabane.....	<i>Erigeron quercifolius</i>	
Prairie fleabane	<i>Erigeron strigosus</i>	
Dogtongue wild buckwheat	<i>Eriogonum tomentosum</i>	
Baldwin's eryngo	<i>Eryngium baldwinii</i>	
Coralbean; Cherokee bean	<i>Erythrina herbacea</i>	
Dogfennel.....	<i>Eupatorium capillifolium</i>	
Yankeeweed	<i>Eupatorium compositifolium</i>	
Roundleaf thoroughwort	<i>Eupatorium rotundifolium</i>	
Lateflowering thoroughwort.....	<i>Eupatorium serotinum</i>	
Cottonweed	<i>Froelichia floridana</i>	
Elliott's milkpea	<i>Galactia elliotii</i>	
Soft milkpea	<i>Galactia mollis</i>	
Eastern milkpea	<i>Galactia volubilis</i>	
Bedstraw	<i>Galium sp.</i>	
Caribbean purple everlasting	<i>Gamochaeta antillana</i>	

* Non-native species

Withlacoochee State Trail

Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Pennsylvania everlasting.....	<i>Gamochaeta pensylvanica</i>	
Garberia.....	<i>Garberia heterophylla</i>	SH
Southern beeblossom.....	<i>Gaura angustifolia</i>	
Yellow jessamine.....	<i>Gelsemium sempervirens</i>	
Carolina cranesbill.....	<i>Geranium carolinianum</i>	
Prostrate globe amaranth.....	<i>Gomphrena serrata</i> *	
Spanish daisy.....	<i>Helenium amarum</i>	
Pinebarren frostweed.....	<i>Helianthemum corymbosum</i>	
Florida scrub frostweed.....	<i>Helianthemum nashii</i>	
Camphorweed.....	<i>Heterotheca subaxillaris</i>	
Coastalplain hawkweed.....	<i>Hieracium megacephalon</i>	
Bluet.....	<i>Houstonia</i> sp.	
Innocence; Roundleaf bluet.....	<i>Houstonia procumbens</i>	
Manyflower marshpennywort....	<i>Hydrocotyle umbellata</i>	
St. Andrew's-cross.....	<i>Hypericum hypericoides</i>	
Tropical bushmint.....	<i>Hyptis mutabilis</i> *	
Carolina holly; Sand holly.....	<i>Ilex ambigua</i>	
Dahoon.....	<i>Ilex cassine</i>	
American holly.....	<i>Ilex opaca</i>	
Yaupon.....	<i>Ilex vomitoria</i>	
Carolina indigo.....	<i>Indigofera caroliniana</i>	
Man-of-the-earth.....	<i>Ipomoea pandurata</i>	
Cypressvine.....	<i>Ipomoea quamoclit</i> *	
Piedmont marshelder.....	<i>Iva microcephala</i>	
Sandspur.....	<i>Krameria lanceolata</i>	
Virginia dwarfdandelion.....	<i>Krigia virginica</i>	
Grassleaf lettuce.....	<i>Lactuca graminifolia</i>	
Lantana; Shrubverbena.....	<i>Lantana camara</i> *	
Virginia pepperweed.....	<i>Lepidium virginicum</i>	
Hairy lespedeza.....	<i>Lespedeza hirta</i>	
Shortleaf gayfeather.....	<i>Liatris tenuifolia</i>	
Shortleaf gayfeather.....	<i>Liatris tenuifolia</i> var. <i>quadriflora</i>	
Gopher apple.....	<i>Licania michauxii</i>	
Canadian toadflax.....	<i>Linaria canadensis</i>	
Florida yellow flax.....	<i>Linum floridanum</i>	
Sweetgum.....	<i>Liquidambar styraciflua</i>	
Narrowleaf gromwell.....	<i>Lithospermum incisum</i>	
Skyblue lupine.....	<i>Lupinus diffusus</i>	
Rose-rush.....	<i>Lygodesmia aphylla</i>	
Rusty staggerbush.....	<i>Lyonia ferruginea</i>	
Wild bushbean.....	<i>Macroptilium lathyroides</i>	
Southern magnolia.....	<i>Magnolia grandiflora</i>	
Sweetbay.....	<i>Magnolia virginiana</i>	
Florida milkvine.....	<i>Matelea floridana</i>	SH
Black medick.....	<i>Medicago lupulina</i> *	

* Non-native species

Withlacoochee State Trail

Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Chinaberrytree	<i>Melia azedarach</i> *	
White sweetclover	<i>Melilotus albus</i> *	
Creeping cucumber	<i>Melothria pendula</i>	
Noyau vine	<i>Merremia dissecta</i>	
Florida Keys hempvine	<i>Mikania cordifolia</i>	
Climbing hempvine	<i>Mikania scandens</i>	
Sensitive brier	<i>Mimosa quadrivalvis</i> var. <i>angustata</i>	
Powderpuff	<i>Mimosa strigillosa</i>	
Partridgeberry	<i>Mitchella repens</i>	
Swamp hornpod	<i>Mitreola sessilifolia</i>	
Spotted beebalm	<i>Monarda punctata</i>	
Red mulberry	<i>Morus rubra</i>	
Southern bayberry; Wax myrtle	<i>Myrica cerifera</i>	
Spatterdock; Yellow pondlily	<i>Nuphar advena</i>	
American white waterlily	<i>Nymphaea odorata</i>	
Big floatingheart	<i>Nymphoides aquatica</i>	
Seabeach eveningprimrose	<i>Oenothera humifusa</i>	
False gromwell	<i>Onosmodium virginianum</i>	
Pricklypear	<i>Opuntia humifusa</i>	
Wild olive	<i>Osmanthus americanus</i>	
Common yellow woodsorrel	<i>Oxalis corniculata</i>	
Coastalplain palafox	<i>Palafoxia integrifolia</i>	
Coastalplain nailwort	<i>Paronychia herniarioides</i>	
Pineland nailwort	<i>Paronychia patula</i>	
Rugel's nailwort	<i>Paronychia rugelii</i>	
Virginia creeper	<i>Parthenocissus quinquefolia</i>	
Purple passionflower	<i>Passiflora incarnata</i>	
Buckroot	<i>Pedimelum canescens</i>	
Manyflower beardtongue	<i>Penstemon multiflorus</i>	
Red bay	<i>Persea borbonia</i>	
Silk bay	<i>Persea borbonia</i> var. <i>humilis</i>	
Florida phlox	<i>Phlox floridana</i>	
Florida false sunflower	<i>Phoebanthus grandiflorus</i>	
Oak mistletoe	<i>Phoradendron leucarpum</i>	
Turkey tangle fogfruit	<i>Phyla nodiflora</i>	
Chamber bitter	<i>Phyllanthus urinaria</i> *	
American pokeweed	<i>Phytolacca americana</i>	
Pitted stripeseed	<i>Piriqueta cistoides</i> subsp. <i>caroliniana</i>	
Narrowleaf silkgrass	<i>Pityopsis graminifolia</i>	
Rosy camphorweed	<i>Pluchea baccharis</i>	
Rosy camphorweed	<i>Pluchea rosea</i>	
Showy milkwort	<i>Polygala violacea</i>	
Tall jointweed	<i>Polygonella gracilis</i>	
October flower	<i>Polygonella polygama</i>	
Largeflower jointweed	<i>Polygonella robusta</i>	

* Non-native species

Withlacoochee State Trail

Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Hairy smartweed	<i>Polygonum hirsutum</i>	
Mild waterpepper	<i>Polygonum hydropiperoides</i>	
American plum	<i>Prunus americana</i>	
Carolina laurelcherry	<i>Prunus caroliniana</i>	
Black cherry.....	<i>Prunus serotina</i>	
Flatwoods plum; Hog plum.....	<i>Prunus umbellata</i>	
Wild coffee	<i>Psychotria nervosa</i>	
Blackroot	<i>Pterocaulon pycnostachyum</i>	
Carolina desertchicory	<i>Pyrrhopappus carolinianus</i>	
Chapman's oak.....	<i>Quercus chapmanii</i>	
Sand live oak	<i>Quercus geminata</i>	
Bluejack oak	<i>Quercus incana</i>	
Turkey oak	<i>Quercus laevis</i>	
Laurel oak; Diamond oak	<i>Quercus laurifolia</i>	
Sand post oak	<i>Quercus margaretta</i>	
Dwarf live oak	<i>Quercus minima</i>	
Myrtle oak	<i>Quercus myrtifolia</i>	
Water oak	<i>Quercus nigra</i>	
Live oak	<i>Quercus virginiana</i>	
Carolina buckthorn.....	<i>Rhamnus caroliniana</i>	
Pale meadowbeauty	<i>Rhexia mariana</i>	
Winged sumac.....	<i>Rhus copallinum</i>	
Michaux's snoutbean	<i>Rhynchosia michauxii</i>	
Dollarleaf.....	<i>Rhynchosia reniformis</i>	
Rough Mexican clover.....	<i>Richardia scabra</i> *	
Southern marsh yellowcress.....	<i>Rorippa teres</i>	
Sand blackberry	<i>Rubus cuneifolius</i>	
Southern dewberry	<i>Rubus trivialis</i>	
Blackeyed Susan	<i>Rudbeckia hirta</i>	
Carolina wild petunia.....	<i>Ruellia caroliniensis</i>	
Rose-of-plymouth	<i>Sabatia stellaris</i>	
Carolina willow	<i>Salix caroliniana</i>	
Azure blue sage.....	<i>Salvia azurea</i>	
Lyreleaf sage	<i>Salvia lyrata</i>	
American elder; Elderberry	<i>Sambucus nigra</i> subsp. <i>canadensis</i>	
Canadian blacksnakeroot	<i>Sanicula canadensis</i>	
Sassafras	<i>Sassafras albidum</i>	
Florida scrub skullcap.....	<i>Scutellaria arenicola</i>	
Maryland wild sensitive plant.....	<i>Senna marilandica</i>	
Coffeeweed; Sicklepod	<i>Senna obtusifolia</i>	
Whitetop aster; Dixie aster	<i>Sericocarpus tortifolius</i>	
Bladderpod	<i>Sesbania vesicaria</i> *	
Common wireweed	<i>Sida ulmifolia</i>	
Florida bully	<i>Sideroxylon reclinatum</i>	
Rufous Florida bully	<i>Sideroxylon rufohirtum</i>	

* Non-native species

Withlacoochee State Trail

Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Tough bully	<i>Sideroxylon tenax</i>	
Kidneyleaf rosinweed	<i>Silphium compositum</i>	
Chapman's goldenrod	<i>Solidago odora</i> var. <i>chapmanii</i>	
Wand goldenrod	<i>Solidago stricta</i>	
Queensdelight	<i>Stillingia sylvatica</i>	
Coastalplain dawnflower	<i>Stylisma patens</i>	
Scaleleaf aster	<i>Symphyotrichum adnatum</i>	
Climbing aster	<i>Symphyotrichum carolinianum</i>	
Eastern silver aster	<i>Symphyotrichum concolor</i>	
Rice button aster	<i>Symphyotrichum dumosum</i>	
Wood sage	<i>Teucrium canadense</i>	
Eastern poison ivy	<i>Toxicodendron radicans</i>	
Forked bluecurls	<i>Trichostema dichotomum</i>	
Clasping Venus' looking-glass ...	<i>Triodanis perfoliata</i>	
Winged elm	<i>Ulmus alata</i>	
American elm	<i>Ulmus americana</i>	
Eastern purple bladderwort	<i>Utricularia purpurea</i>	
Sparkleberry	<i>Vaccinium arboreum</i>	
Highbush blueberry	<i>Vaccinium corymbosum</i>	
Shiny blueberry	<i>Vaccinium myrsinites</i>	
Deerberry	<i>Vaccinium stamineum</i>	
Tall ironweed	<i>Vernonia angustifolia</i>	
Walter's viburnum	<i>Viburnum obovatum</i>	
Rusty blackhaw	<i>Viburnum rufidulum</i>	
Vetch	<i>Vicia</i> sp.	
Summer grape	<i>Vitis aestivalis</i>	
Muscadine	<i>Vitis rotundifolia</i>	
Calloose grape	<i>Vitis shuttleworthii</i>	
Tallow wood; Hog plum	<i>Ximenia americana</i>	
Hercules-club	<i>Zanthoxylum clava-herculis</i>	
Viperina	<i>Zornia bracteata</i>	

Withlacoochee State Trail

Animals

Primary Habitat Codes

Common Name

Scientific Name

(for all species)

INVERTEBRATES

Beetles

S-Banded Tiger Beetle *Cincindella trifasciata* SULK

Dragonflies

Halloween Pennant..... *Celithemis eponina* MTC

Butterflies and Skippers

Gulf Fritillary *Agraulis vanillae* MTC

Zebra Swallowtail..... *Eurytides marcellus* MTC

Pipe-vine Swallowtail *Battus philenor*..... MTC

Palamedes Swallowtail..... *Papilio palamedes*..... MTC

Spicebush Swallowtail..... *Papilio troilus* MTC

Cloudless Sulfur *Phoebis sennae* MTC

Soldier..... *Danaus eresimus*..... MTC

FISH

Bowfin *Amia calva*..... SULK

Everglades Pygmy Sunfish..... *Elassoma evergladei* SULK

Bluespotted Sunfish..... *Enneacanthus gloriosus*..... SULK

Lake Chubsucker..... *Erimyzon sucetta*..... SULK

Swamp Darter *Etheostoma fusiforme* SULK

Golden Topminnow..... *Fundulus chrysotus*..... SULK

Lined Topminnow *Fundulus lineolatus*..... SULK

Mosquitofish *Gambusia affinis*..... SULK

Least Killifish *Heterandria formosa* SULK

Flagfish..... *Jordanella floridae* SULK

Warmouth..... *Lepomis gulosus*..... SULK

Bluegill *Lepomis macrochirus* SULK

Dollar Sunfish *Lepomis marginatus*..... SULK

Readear Sunfish..... *Lepomis microlophus* SULK

Bluefin Killifish *Lucania goodei* SULK

Sailfin Molly..... *Poecilia latipinna* SULK

Black Crappie *Pomoxis nigromaculatus* SULK

Withlacoochee State Trail

Animals

Primary Habitat Codes

Common Name

Scientific Name

(for all species)

AMPHIBIANS

Frogs and Toads

Southern Cricket Frog.....	<i>Acris gryllus</i>	BM
Oak Toad.....	<i>Anaxyrus quercicus</i>	SH
Southern Toad.....	<i>Anaxyrus terrestris</i>	MTC
Eastern Narrow-mouthed Toad ...	<i>Gastrophryne carolinensis</i>	MTC
Green Treefrog.....	<i>Hyla cinerea</i>	MTC
Barking Treefrog.....	<i>Hyla gratiosa</i>	MEH, SHF
Gopher Frog.....	<i>Lithobates capito</i>	SH
Eastern Spadefoot Toad.....	<i>Scaphiopus holbrookii</i>	MEH, SH
Pig Frog.....	<i>Lithobates grylio</i>	BM, SULK
Southern Leopard Frog.....	<i>Lithobates sphenoccephalus</i>	BM, SULK

Sirens

Eastern Lesser Siren.....	<i>Siren intermedia intermedia</i>	SULK
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REPTILES

Crocodylians

American Alligator.....	<i>Alligator mississippiensis</i>	BM, SULK
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Turtles

Florida Softshell Turtle.....	<i>Apalone ferox</i>	SULK
Gopher Tortoise.....	<i>Gopherus polyphemus</i>	SH
Striped Mud Turtle.....	<i>Kinosternon baurii</i>	SULK
Peninsula Cooter.....	<i>Pseudemys peninsularis</i>	SULK
Eastern Musk Turtle; Stinkpot.....	<i>Sternotherus odoratus</i>	SULK
Yellow-bellied Slider.....	<i>Trachemys scripta scripta</i>	SULK

Lizards

Green Anole.....	<i>Anolis carolinensis</i>	MEH, SHF
Brown Anole.....	<i>Anolis sagrei</i> *.....	MTC
Six-lined Racerunner.....	<i>Aspidoscelis sexlineata</i>	SH
Eastern Glass Lizard.....	<i>Ophisaurus ventralis</i>	MTC
Peninsula Mole Skink.....	<i>Plestiodon egregius onocrepis</i>	SH
Southeastern Five-lined Skink.....	<i>Plestiodon inexpectatus</i>	MEH, SHF
Eastern Fence Lizard.....	<i>Sceloporus undulatus</i>	SH
Ground Skink.....	<i>Scincella lateralis</i>	MEH, SHF

* Non-native species

Withlacoochee State Trail

Animals

Primary Habitat Codes

Common Name

Scientific Name

(for all species)

Snakes

Florida Cottonmouth.....	<i>Agkistrodon piscivorus conanti</i>	BM, SULK
Southern Black Racer	<i>Coluber constrictor priapus</i>	MTC
Eastern Coachwhip.....	<i>Coluber flagellum flagellum</i>	SH
East. Diamond-backed Rattlesnake	<i>Crotalus adamanteus</i>	MTC
Eastern Indigo Snake	<i>Drymarchon couperi</i>	MTC
Eastern Mud Snake	<i>Farancia abacura abacura</i>	BM, SULK
Southern Hognose Snake.....	<i>Heterodon simus</i>	SH
Scarlet Kingsnake	<i>Lampropeltis elapsoides</i>	SH
Short-tailed Snake	<i>Lampropeltis extenuatum</i>	SH
Eastern Coral Snake.....	<i>Micrurus fulvius</i>	MTC
Florida Water Snake.....	<i>Nerodia fasciata pictiventris</i>	BM
Rough Green Snake	<i>Opheodrys aestivus</i>	MEH, SHF
Eastern Rat Snake	<i>Pantherophis alleghaniensis</i>	MTC
Eastern Corn Snake	<i>Pantherophis guttatus</i>	MTC
Florida Pine Snake	<i>Pituophis melanoleucus mugitus</i>	SH
Northern Florida Swamp Snake ...	<i>Seminatrix pygaea pygaea</i>	BM
Dusky Pigmy Rattlesnake	<i>Sistrurus miliarius barbouri</i>	MTC
Florida Crowned Snake	<i>Tantilla relicta</i>	SH
Eastern Garter Snake	<i>Thamnophis sirtalis sirtalis</i>	MEH, SHF

BIRDS

Waterfowl

Wood Duck	<i>Aix sponsa</i>	SULK, BM
Mallard.....	<i>Anas platyrhynchos</i>	SULK, BM
Ring-necked Duck.....	<i>Aythya collaris</i>	SULK

Partridges, Grouse, and Turkeys

Ring-necked Pheasant	<i>Phasianus colchicus</i> *	MTC
Wild Turkey	<i>Meleagris gallopavo</i>	SH, MEH

New World Quails

Northern Bobwhite	<i>Colinus virginianus</i>	SH
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Loons

Common Loon	<i>Gavia immer</i>	SULK, OF
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Grebes

Pied-billed Grebe	<i>Podilymbus podiceps</i>	SULK
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Cormorants

Double-crested Cormorant	<i>Phalacrocorax auritus</i>	SULK
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* Non-native species

Withlacoochee State Trail

Animals

Primary Habitat Codes

Common Name *Scientific Name* **(for all species)**

Anhingas

Anhinga *Anhinga anhinga* SULK

Frigatebirds

Magnificent Frigatebird *Fregata magnificens* OF

Herons and Egrets

Great Blue Heron *Ardea herodias* BM, SULK

Great Egret *Ardea alba* BM, SULK

Snowy Egret *Egretta thula* BM, SULK

Little Blue Heron *Egretta caerulea* BM, SULK

Tricolored Heron *Egretta tricolor* BM, SULK

Cattle Egret *Bubulcus ibis* BM, OF

Green Heron *Butorides virescens* BM, SULK

Ibises

White Ibis *Eudocimus albus* BM, SULK

Storks

Wood Stork *Mycteria americana* BM, SULK, OF

New World Vultures

Black Vulture *Coragyps atratus* MTC, OF

Turkey Vulture *Cathartes aura* MTC, OF

Hawks, Eagles, and Kites

Osprey *Pandion haliaetus* SULK, OF

Swallow-tailed Kite *Elanoides forficatus* OF

Bald Eagle *Haliaeetus leucocephalus* SULK, OF

Sharp-shinned Hawk *Accipiter striatus* MEH, SHF

Cooper's Hawk *Accipiter cooperi* MEH, SHF

Red-shouldered Hawk *Buteo lineatus* MTC, OF

Red-tailed Hawk *Buteo jamaicensis* SH, OF

Falcons

American Kestrel *Falco sparverius* SH

Rails and Coots

Purple Gallinule *Poryphyryula martinica* BM

Common Moorhen *Gallinula chloropus* BM

American Coot *Fulica americana* BM, SULK

Cranes

Sandhill Crane *Grus canadensis* BM, OF

* Non-native species

Withlacoochee State Trail

Animals

Primary Habitat Codes

Common Name *Scientific Name* (for all species)

Plovers

Killdeer..... *Charadrius vociferus*.....BM

Sandpipers

Ruddy Turnstone *Arenaria interpres*BM

Common Snipe *Gallinago gallinago*.....BM

American Woodcock *Scolopax minor*.....BM

Gulls and Terns

Herring Gull *Larus argentatus*..... SULK, OF

Least Tern *Sterna antillarum*..... SULK, OF

Doves

Mourning Dove *Zenaida macroura*.....MTC

Common Ground-Dove *Columbina passerina*SH

Cuckoos

Yellow-billed Cuckoo *Coccyzus americanus* MEH, SHF

Barn-Owls

Barn Owl *Tyto alba*MTC

Owls

Eastern Screech-Owl *Otus asio*SH, MEH, SHF

Barred Owl..... *Strix varia*..... MEH, SHF

Nightjars

Chuck-will's-widow *Caprimulgus carolinensis*..... MEH, SHF

Hummingbirds

Ruby-throated Hummingbird *Archilochus colubris*.....MTC

Kingfishers

Belted Kingfisher *Ceryle alcyon* SULK

Woodpeckers

Redheaded Woodpecker *Melanerpes erythrocephalus*SH

Red-bellied Woodpecker *Melanerpes carolinus*MTC

Downy Woodpecker *Picoides pubescens*MTC

Hairy Woodpecker *Picoides villosus*.....SH, MF

Northern Flicker *Colaptes auratus*.....SH

Pileated Woodpecker *Dryocopus pileatus*..... MEH, SHF

* Non-native species

Withlacoochee State Trail

Animals

Primary Habitat Codes

Common Name

Scientific Name

(for all species)

Mockingbirds and Thrashers

Gray Catbird	<i>Dumetella carolinensis</i>	MTC
Northern Mockingbird	<i>Mimus polyglottos</i>	MTC
Brown Thrasher	<i>Toxostoma rufum</i>	MTC

Starlings

European Starling	<i>Sturnus vulgaris</i> *	DV, OF
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Waxwings

Cedar Waxwing	<i>Bombycilla cedrorum</i>	MTC
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New World Warblers

Ovenbird	<i>Seiurus aurocapilla</i>	MEH, SHF
Black-and-white Warbler.....	<i>Mniotilta varia</i>	MEH, SHF
Prothonotary Warbler	<i>Protonotaria citrea</i>	BM
Common Yellowthroat	<i>Geothlypis trichas</i>	BM, DM
Hooded Warbler.....	<i>Setophaga citrina</i>	MEH, SHF
American Redstart	<i>Setophaga ruticilla</i>	MEH, SHF
Northern Parula	<i>Setophaga americana</i>	MTC
Magnolia Warbler	<i>Setophaga magnolia</i>	MEH, SHF
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	MEH, SHF
Palm Warbler	<i>Setophaga palmarum</i>	SH, DV
Pine Warbler	<i>Setophaga pinus</i>	SH, MF, PP
Yellow-rumped Warbler.....	<i>Setophaga coronata</i>	MTC
Yellow-throated Warbler	<i>Setophaga dominica</i>	MEH
Prairie Warbler	<i>Setophaga discolor</i>	SH, MEH

Tanagers

Summer Tanager	<i>Piranga rubra</i>	SH
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Sparrows and Allies

Eastern Towhee	<i>Pipilo erythrophthalmus</i>	SH, MF
Bachman's Sparrow.....	<i>Peucaea aestivalis</i>	SH
Chipping Sparrow	<i>Spizella passerina</i>	SH, DV

Cardinals, Grosbeaks and Buntings

Northern Cardinal	<i>Cardinalis cardinalis</i>	MTC
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Blackbirds and Allies

Red-winged Blackbird	<i>Agelaius phoeniceus</i>	BM, OF
Rusty Blackbird	<i>Euphagus carolinus</i>	BM
Common Grackle	<i>Quiscalus quiscula</i>	MTC
Boat-tailed Grackle	<i>Quiscalus major</i>	BM
Baltimore Oriole.....	<i>Icterus galbula</i>	MEH, SHF

* Non-native species

Withlacoochee State Trail

Animals

Primary Habitat Codes

Common Name

Scientific Name

(for all species)

Finches and Allies

American Goldfinch *Carduelis tristis*MTC

Old World Sparrows

House Sparrow *Passer domesticus* *DV

MAMMALS

Didelphids

Virginia Opossum *Didelphis virginiana*MTC

Insectivores

Eastern Mole *Scalopus aquaticus*SH

Edentates

Nine-banded Armadillo *Dasyus novemcinctus* *MTC

Lagomorphs

Eastern Cottontail *Sylvilagus floridanus*MTC

Marsh Rabbit *Sylvilagus palustris*BM

Rodents

Southeastern Pocket Gopher *Geomys pinetis*SH

Southern Flying Squirrel *Glaucomys volans* SH, MEH

Eastern Woodrat *Neotoma floridana* MEH, SHF

Golden Mouse *Ochrotomys nuttalli*MEH

Cotton Mouse *Peromyscus gossypinus*SH, MEH, SHF

Norway Rat *Rattus norvegicus* *MTC

Eastern Gray Squirrel *Sciurus carolinensis*MEH, SHF, DV

Sherman's Fox Squirrel *Sciurus niger shermani*SH

Carnivores

Coyote *Canis latrans* *MTC

River Otter *Lutra canadensis*BM, SULK

Bobcat *Lynx rufus*MTC

Striped Skunk *Mephitis mephitis*SH

Raccoon *Procyon lotor*MTC

Gray Fox *Urocyon cinereoargenteus*MTC

Red Fox *Vulpes vulpes* *MTC

Artiodactyls

White-tailed Deer *Odocoileus virginianus*MTC

* Non-native species

Addendum 6—Imperiled Species Ranking Definitions

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.

ENAL 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)

Imperiled Species Ranking Definitions

- 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

Imperiled Species Ranking Definitions

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

Imperiled Species Ranking Definitions

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 7—Cultural Information

Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Properties (revised March 2013)

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.

Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Properties (revised March 2013)

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
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Eligibility Criteria for National Register of Historic Places

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
 - e)** 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
 - f)** a property achieving significance within the past 50 years, if it is of exceptional importance.

Preservation Treatments as Defined by Secretary of Interior's Standards and Guidelines

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.