Draft Land Management Plan

Cypress Creek Preserve

Southwest Florida
Water Management District

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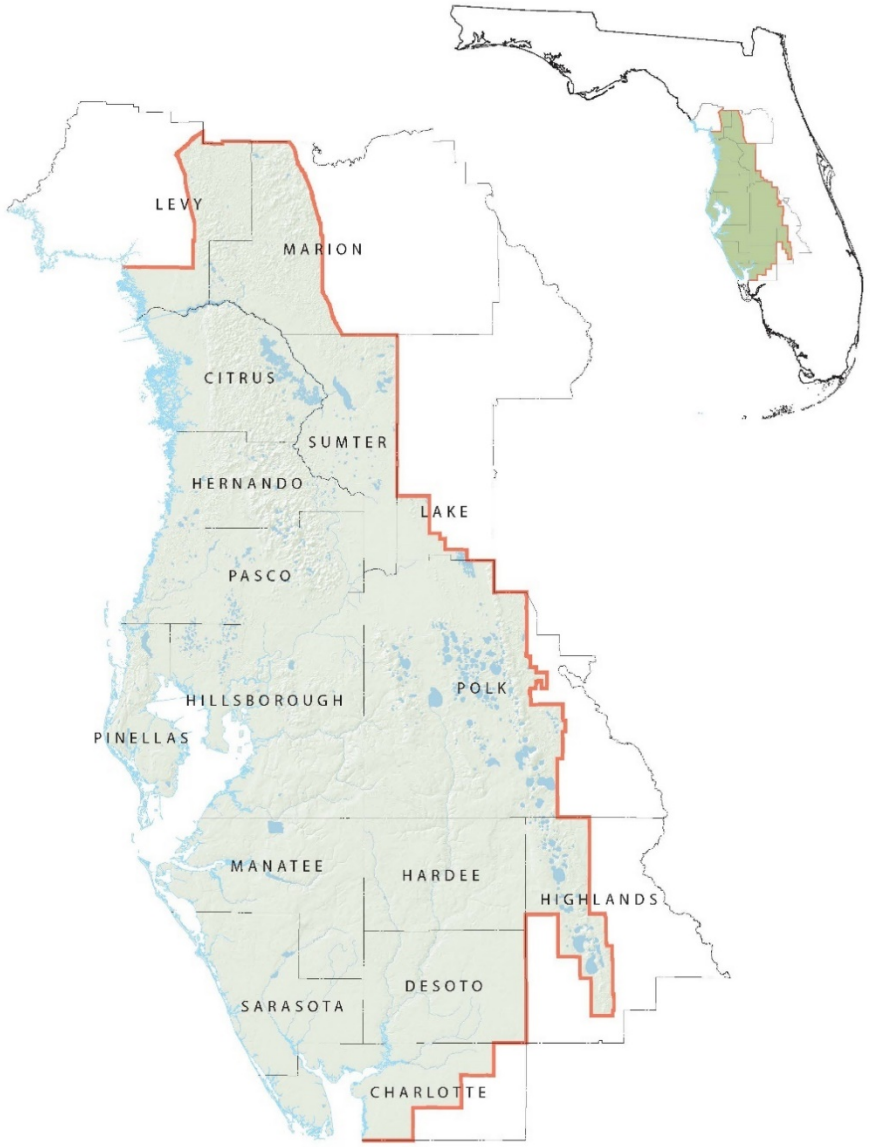
July 2, 2021

The Southwest Florida Water Management District (District) is a science-based organization responsible for managing and protecting water resources in west-central Florida. The District's job is to ensure there are adequate water supplies to meet the needs of current and future users while protecting and restoring water and related natural resources.

The District encompasses all or part of 16 counties, from Levy County in the north to Charlotte County in the south. It extends from the Gulf of Mexico east to the highlands of central Florida. The District contains 97 local governments spread over approximately 10,000 square miles, with a total population estimated to be 5.4 million in 2020.



Executive Summary

Acres: 8,515

Acquisition Dates: 1970-2020

Plan Term: 10 Years (2022-2032)

Primary Basin: Hillsborough River

Secondary Basin: Cypress Creek

Location: Pasco County

Funding Source: Water Management Lands Trust Fund, Save our Rivers, Preservation 2000, Donation

Partnerships: Tampa Bay Water (TBW)

Natural Systems: The Cypress Creek Preserve (Preserve) primarily consists of riverine swamp and other forested and non-forested wetlands associated with Cypress Creek. Uplands can be found imbedded and flanking the river swamp. These are predominately pine flatwoods, mesic hammock, and improved pasture occurring on former flatwoods.

Water Resources: Water management benefits associated with the property include non-structural and structural flood protection, water quality enhancement, and water supply; specifically, the wellfield operated by TBW.

Land Management: The District's land management practices applied on the Preserve result in healthy, natural systems. Management activities include prescribed fire, invasive plant management, feral hog population management, forest management, range management, and restoration and enhancement efforts.

Cultural and Historical Resources: Evidence of human activity within the Preserve ranges from the Archaic period to the present. Four prehistoric sites have been identified, as well as several more modern sites, including the Ehren Cemetery inholding.

Recreation: The types of recreation that are offered at the Preserve include bicycling, inline skating, camping, horseback riding, fishing, birding, and hiking. There are approximately 19 miles of multi-use trails which are also designated as part of the Florida Greenways and Trails network.

Special Use Authorization: There are various special uses on the Preserve, which require Special Use Authorization (SUA) approval from the District as set forth in Florida Administrative Code §40D-9. The typical special use types occurring on the Preserve can be categorized as recreation, research, law enforcement training, and construction activities.

Access: Public access to the property is provided by three separate walkthrough access points to allow the general public to partake in the available outdoor recreation opportunities.

Real Estate: The District will continue to consider opportunities to purchase lands adjacent to the Preserve with the goal of promoting the District's mission of protecting the natural features of conservation lands for the benefit of flood protection, water quality, and water supply. In late 2020, the District received a donation of an approximately 1,000-acre parcel that is adjacent to the Preserve along Ehren Cutoff (CR 583).

Cooperative agreements, leases, and easements: The District holds agreements with TBW for public water supply, in addition to agreements with a cattle lease and multiple apiary farmers. Furthermore, there are multiple easements assigned to utility companies, such as Duke Energy, Withlacoochee River Electric, and Verizon Communications for linear facilities. The Preserve holds ingress and egress easements for the private entities such as access to the Ehren Cemetery inholding, Circle 8 Angus Ranch, and other private entities to allow for stormwater pipe inspection and maintenance.

Table of Contents

List of Figures

List of Tables

Introduction and General Information

Management Plan Purpose

The purpose of this management plan is to set forth the District's management strategy of the Preserve for the next 10 years. The implementation of this management plan is governed by the District's Governing Board Land Use and Management Policy (District Policy), which outlines the use and management of District-owned conservation lands. District conservation lands are managed for the protection of water resources and natural systems through the application of effective and efficient land management practices. This Management Plan provides an overview of the property, a summary of past achievements, and an outline of goals and objectives for the next 10-year planning period.

District Planning Philosophy

The District's planning philosophy was intended to identify the method in which Management Plans are developed and implemented with input from both internal and external stakeholders. Management Plans are designed to guide the use and management of District conservation lands and incorporate input from stakeholders as to the use and management.

Management Plans are developed following an extensive process of planning, coordination, data review, field review, and the creation of strategic goals and objectives. Through this process, a draft Management Plan is created and reviewed by key stakeholders, including District staff, subject matter experts, state agencies, local governments, partners, non-governmental organizations, and other interest groups.

Following the review of the draft Management Plan by the key stakeholders identified above, a public workshop is held to solicit public input as to the draft Management Plan. The workshop is advertised in local newspapers, on the District's website, and via social media outlets, and is held in the region the property is located. Additionally, the public has an opportunity to provide input via the District's website for a period both preceding and following the workshop. Once the comment period has expired, a final draft of the Management Plan that considers public input received is prepared, and ultimately presented to the District's Governing Board for approval at a regular Governing Board meeting.

Public Involvement

In addition to the input from public workshops during the development of the Management Plan, the District also provides the opportunity for stakeholders to provide input during the Land Management Review process. This process occurs every five years as way to inform the public and hold the District accountable for the management of the property. This process assures the District is managing the land in accordance with the Management Plan and it is consistent with purpose for which the property was acquired. The land management review team is comprised of team members from various state agencies, cooperative partners, private land managers and other entities involved in land management. The focus is on management activities and includes a thorough review of the property followed by an evaluation which is reviewed by the District.

Management Authority

The Preserve is considered by the District as conservation land which signifies the management intent for the property. Pursuant to Subsection 373.089(6)(c) of the Florida Statutes, all lands titled

to the District prior to July 1, 1999, were designated as having been acquired for conservation purposes. This would bring parcels that were purchased originally as water control project within the purview of conservation land management. Other parcels that were later acquired under conservation land acquisition programs are also managed for these same purposes.

Furthermore, pursuant to Section 373.1391 of the Florida Statutes, lands titled to the District should be managed and maintained, to the extent practicable, in such a way as to ensure a balance between public access, recreation and the restoration and protection of their natural state and condition. District Policy governs the use and management of these lands in accordance with Chapters 259 and 373 of the Florida Statutes.

Location

The Preserve is located in south central Pasco County, near the cities of Wesley Chapel and Land O' Lakes (Figure 1 and Figure 2). Cypress Creek is part of the Hillsborough River Basin, and the Preserve exists along the southern extent of the Cypress Creek where it enters Hillsborough County. The Preserve is bordered to the north by an abandoned Seaboard Coastline Railroad right-of-way and to the south by State Road 54 (SR 54). Along the eastern and western boundary is a combination of low density, rural housing and higher density, residential developments such as Lake Padgett Estates, Plantation Palms, Enclave, Quail Hollow, and The Oaks neighborhoods. This Preserve forms continuous protection of riverine corridor along a 10-mile segment of the Cypress Creek.

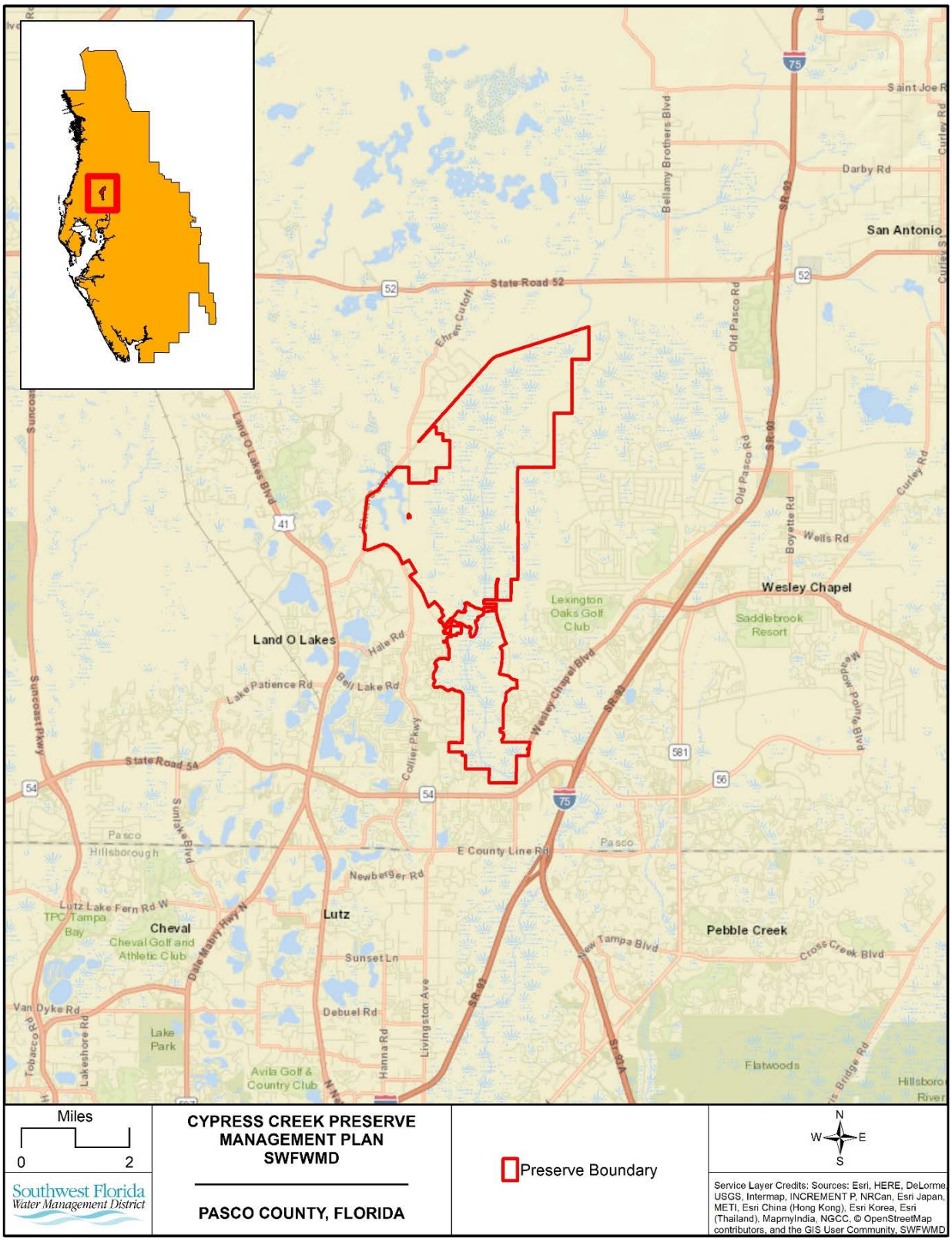


FIGURE 1. GENERAL LOCATION

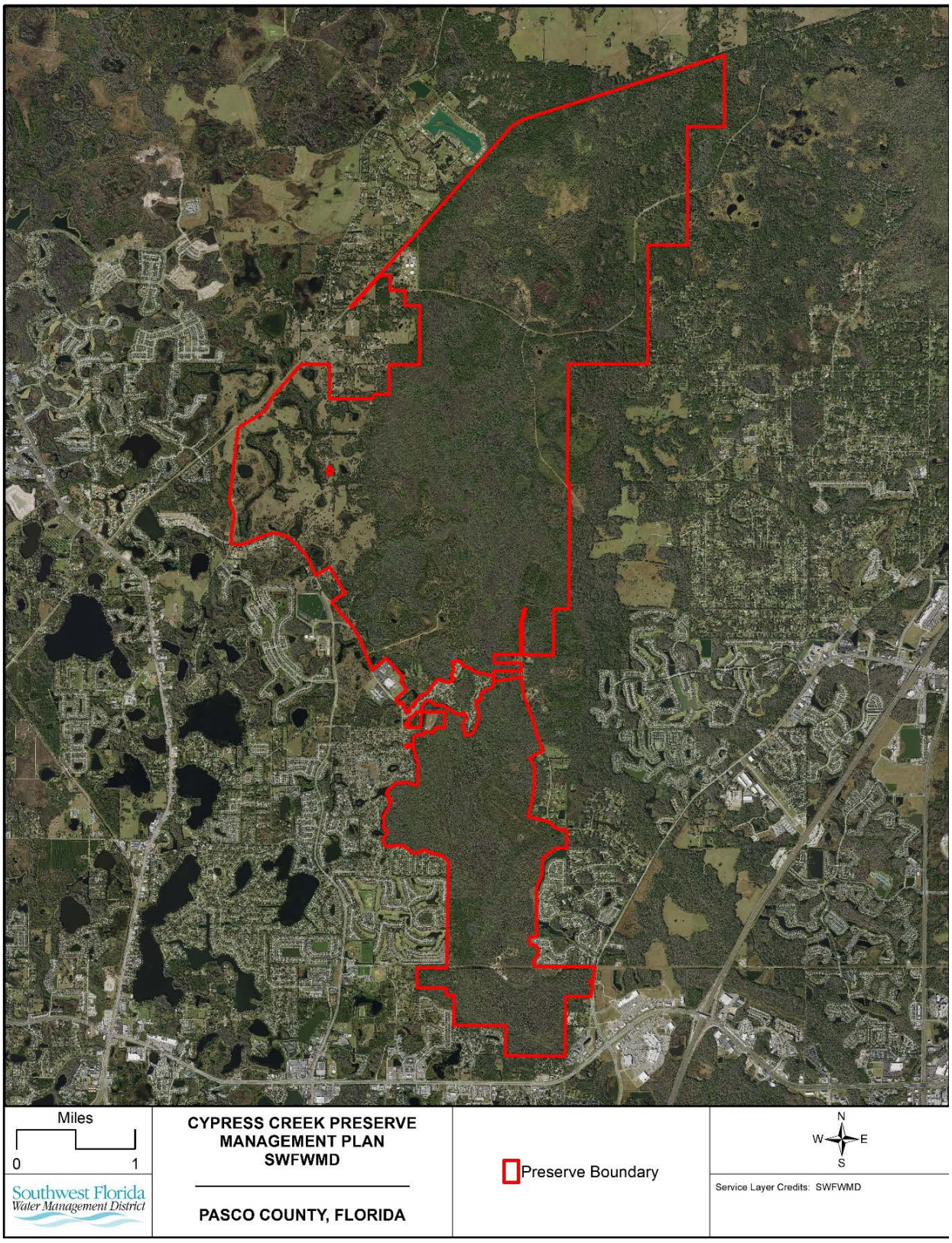


FIGURE 2. AERIAL OVERVIEW

Acquisition

The District purchases land for the purposes of protecting and conserving water supply, flood protection, water quality, and natural systems. These purposes are referred to as the Areas of Responsibility (AORs) of the District. The primary purpose for the purchase of the Preserve was to protect, restore, and maintain the quality and natural functions of the land, water, and wetland systems, natural flood control and water detention, and to provide natural resource-based public recreational opportunities within the region. The specific resource management is discussed further in the proceeding sections.

History

Acquisition of parcels in Cypress Creek began in the early 1970s as part of the Four Rivers Basin Project. This project was intended to provide structural flood protection of communities downstream in the lower portion of the Hillsborough River, including the cities of Temple Terrace and Tampa. This acquisition also supported the implementation of the Cypress Creek Wellfield. Later, as part of land acquisitions programs like Preservation 2000 and Save Our Rivers, additional parcels were purchased in the 1990s to complete protection of Cypress Creek south to Highway 54. In conjunction with these acquisitions, several permanent access easements were also acquired. The District also has less-than-fee ownership in the form of conservation easements associated with the Preserve.

- Cypress Creek Wellfield- *3,233 acres*. The initial parcel acquired within Cypress Creek was intended to support two functions. First, was to serve as public water supply wellfield and the second, was to utilize a structure and levee system to temporarily retain floodwaters and alleviate conditions downstream in the Hillsborough River.
- Save our Rivers- *3,653 acres*. There were numerous parcels acquired using Water Management Lands Trust Fund or "Save our Rivers" funds. This phase of acquisition was focused on protection of the Cypress Creek floodplain from the original parcel south to Highway 54. This resulted in protection of a 10-mile segment of the Cypress Creek and its associated floodplain.
- Donation- *1,042 acres*. This donation on the west side of the property is bordered on the north and west by CR 583 and on the south by Parkway Boulevard. This parcel was donated by the Lavender Trust Company, a Trustee of The Esther and Harold Mertz Foundation. The Esther and Harold Mertz Foundation was started by Harold Mertz, the founder of Publisher's Clearing House.
- Other- *587 acres*. This includes various small acquisitions from a number of different sources including Ad Valorem, exchanges, and other funding sources.

Regional Significance

Along with protecting a significant portion of the Cypress Creek corridor, the Preserve is considered a Priority 1 Florida Natural Areas Inventory (FNAI) resource priority in areas of landscape, integrity, and surface water resources (CLIP Technical report). The Preserve serves as a public water supply wellfield that supports the needs of the Tampa Bay region. In its natural state, the wetlands and natural systems of the Preserve provide significant flood protection.

Protection and ownership of the water resources of this property maintains water quality from surface waters that enter the Preserve from surrounding areas and exit through the Cypress Creek. The Preserve also provides a unique recreation experience for the area and experiences high demand for hiking and biking.

FNAI ranks the Preserve as:

- Priority 1 in Biodiversity Resources
- Priority 1 in Surface Water Resources
- Rare Species Habitat

As part of the Hillsborough River, Cypress Creek is included as part of the Special Outstanding Florida Waters for its significant water resource value.

Regional Conservation Network

The Preserve is part of larger group of conservation lands in the Tampa Bay area (Figure 3). The Preserve provides a significant contribution to this regional network of conservation land by connecting the Hillsborough River corridor to several key acquisitions and conservation easements in central Pasco county. These include Conner Preserve, Cypress Creek Nature Preserve (Hillsborough County), Cross Bar Ranch Wellfield (Pinellas County) and several conservation easements owned by the District. Beyond the direct connection to Cypress Creek, there is a wider collection of conservation lands that contribute to regional network of protected lands owned by the District, Pasco and Hillsborough County, and other state agencies (Table 1).

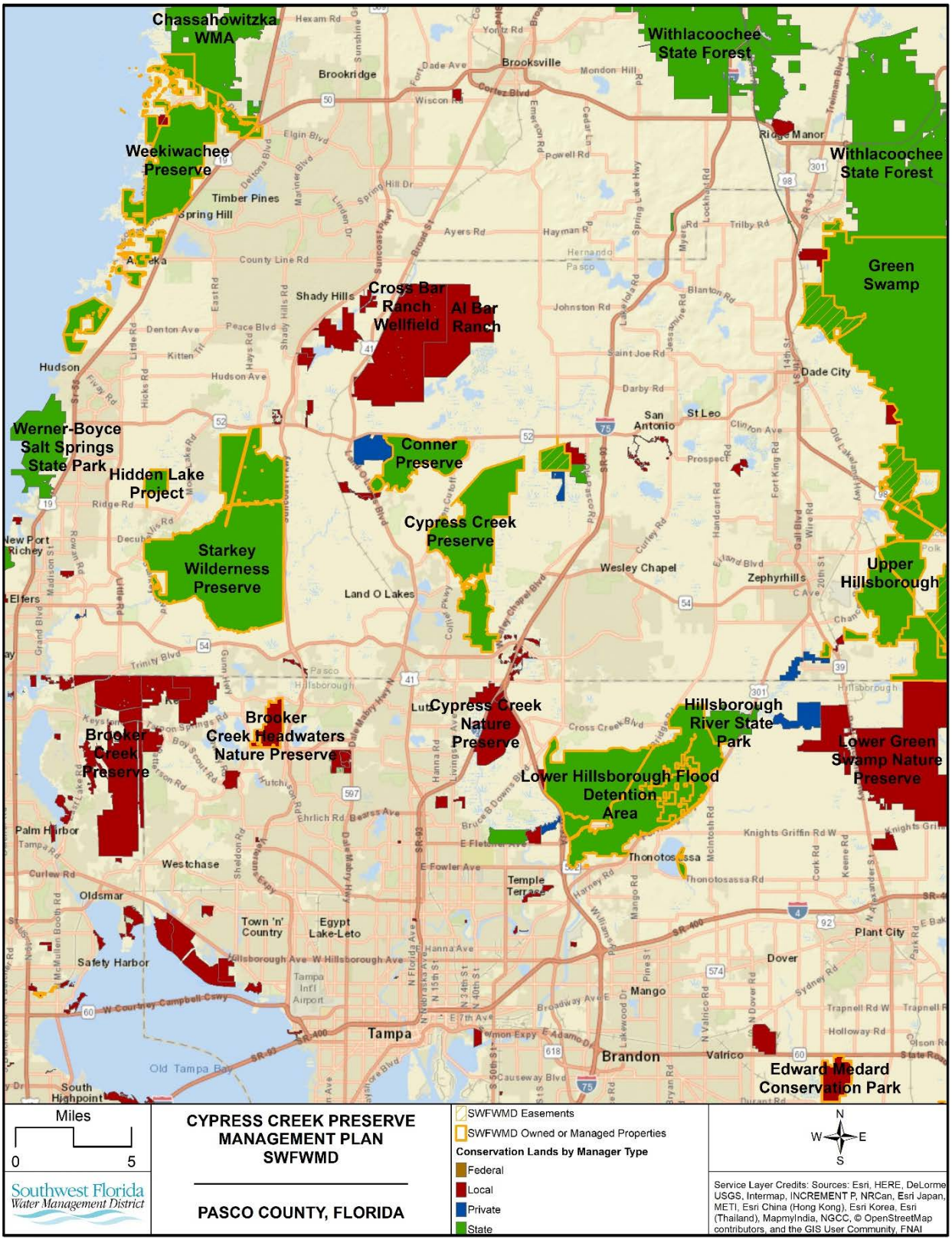


FIGURE 3. REGIONAL CONSERVATION NETWORK

TABLE 1. REGIONAL CONSERVATION LANDS- PROJECTS WITHIN 20-MILE BUFFER

Name	Manager	Owner	County	Acreage
Green Swamp Wilderness Preseve	SWFWMD	SWFWMD	Lake/Pasco/Polk/Sumter	104,275
Lower Hillsborough Flood Detention Area	SWFWMD	SWFWMD	Hillsborough	16,063
Starkey Wilderness Preserve	SWFWMD	SWFWMD	Pasco	19,853
Cypress Creek Preserve	SWFWMD	SWFWMD	Pasco	8,515
Upper Hillsborough	SWFWMD	SWFWMD	Hillsb/Pasco/Polk	9,440
Weekiwachee Preserve	SWFWMD	SWFWMD	Hernando/Pasco	11,237
Conner Preserve	SWFWMD	SWFWMD	Pasco	3,488
Hidden Lake Project	SWFWMD	SWFWMD	Pasco	589
Hillsborough River Corridor	SWFWMD	SWFWMD	Pasco	356
Weeki Wachee Springs State Park	FL DEP	SWFWMD	Hernando	928
Withlacoochee State Forest	FDACS, FFS	State	Citrus/Hern/Pasco	160,055
Hillsborough River State Park	FDEP	State	Hillsborough	3,319
Werner-Boyce Salt Springs State Park	FDEP	State	Pasco	3,999
Colt Creek State Park	FDEP	State	Polk	5,067
Withlacoochee State Trail	FDEP	State	Citr/Hern/Pasc	762
Chinsegut Wildlife and Environmental Area	FWC	State	Hernando	853
Little Gator Creek Wildlife and Environmenta	FWC	State	Pasco	566
Chassahowitzka Wildlife Management Area	FWC	State	Hernando	28,190
Eagle Point Park	Pasco	Pasco	Pasco	678
Jumping Gully Preserve	Pasco	Pasco	Pasco	1,701
Brooker Creek Headwaters Nature Preserve	Hillsborough	SWFWMD	Hillsborough	1,111
Lettuce Lake Regional Park	Hillsborough	Hillsborough	Hillsborough	240
Rocky Creek Coastal Preserve	Hillsborough	Hillsborough	Hillsborough	352
Brooker Creek Buffer Nature Preserve	Hillsborough	Hillsborough	Hillsborough	490
Upper Tampa Bay Park	Hillsborough	Hillsborough	Hillsborough	573
Sydney Dover Conservation Park	Hillsborough	Hillsborough	Hillsborough	697
Lake Dan Nature Preserve	Hillsborough	Hillsborough	Hills/Pasc/Pine	1,172
Bower Tract Preserve	Hillsborough	State	Hillsborough	1,548
Lake Frances Preserve	Hillsborough	Hillsborough	Hills/Pasco	1,664
Blackwater Creek Nature Preserve	Hillsborough	Hillsborough	Hillsborough	2,026
Cypress Creek Nature Preserve	Hillsborough	Hillsborough	Hillsborough	2,684
Lower Green Swamp Nature Preserve	Hillsborough	Hillsborough	Hillsborough	12,800
Cypress Lakes Preserve (Hernando County)	Hernando	Hernando	Hernando	331
Mobbly Bayou Preserve	Pinellas	City of Oldsmar	Pinellas	402
Al Bar Ranch	Pinellas	Pinellas	Pasco	4,253
Cross Bar Ranch Wellfield	Pinellas	Pinellas	Pasco	8,181
Brooker Creek Preserve	Pinellas	Pinellas	Pinellas	8,746
	Total			**427,203**

Current Land Use

The Preserve protects natural resources and offers recreational resources to visitors. The Preserve will continue to support a multiple-use concept for environmental conservation, public water supply, and recreational access. The Preserve protects natural wetland and upland systems that provide habitat for many notable species of wildlife and plant life, including many federal and stated listed species. The Preserve offers visitors opportunities for passive nature-based recreation. Various recreational opportunities which are open to the public are outlined later in this plan.

Local Government Land Use Designation

The Pasco County 2025 Comprehensive Plan was developed in accordance with the requirements of Chapter 163 of the Florida Statutes, and Chapter 9J-5 of the Florida Administrative Code. The Pasco County 2025 Comprehensive Plan designates the Preserve as a Conservation Area. Most of the Preserve is identified as a Category 1 Wetland.

Zoning

Pasco County has zoned the Preserve mostly as Agriculture (AC). Smaller portions of the site- especially on the south side of the Preserve- are zoned as Master Planned Unit Development (MPUD), Planned Unit Development (PUD), and Agriculture-Residential District (AR). This zoning data ranges back to the 1970s and 1980s (prior to the acquisition of the Preserve) and has not been recently updated.

The newly acquired land donation is designated as Residential 1 and Residential 3 areas. The northern half is designated as Residential 1 (RES-1), and the southern half is designated as Residential 3 (RES-3). RES-1 allows 1 dwelling unit per developable residential acre. RES-3 allows 3 dwelling units per developable residential acre. This area will most likely have its future land use designation changed now that the land has been donated.

Adjacent Land Uses

Residential communities are present along the east, south, and west boundaries of the property. TBW owns property to the northeast of the Preserve together making up the Cypress Creek Wellfield and is primarily managed for conservation and water supply. Cattle grazing and agricultural uses are present along the northern boundary of the property.

Management Challenges

The challenges associated with the management of this parcel are primarily due to the location of the parcel within an increasing area of development. This additional development has potential to put pressure on the natural systems and could increase flood control needs in the area. In addition, the abundance of Wildland Urban Interface (WUI) and major highways along the boundary of the Preserve increase the complexities of land management activities like prescribed fire operations. This results in an increased amount of planning to mitigate and limit impacts to smoke sensitive features.

Recreational opportunities on all District conservation lands are typically passive, nature-based, outdoor activities. As the WUI becomes more prevalent near the Preserve, there is the possible challenge upon the District to manage requests for more expansive recreational opportunities. In similar past situations, the District has approved cooperative agreements with other local governing agencies to manage expansive recreational opportunities as the District does not have the staff to manage such opportunities. Prior to the District approving any cooperative agreements for expansive recreational opportunities, the District Governing Board will need to deem such opportunities as “compatible”, as outlined in the District Policy.

Water and Natural Resources

Water Resources and Core Mission
Water Quality
Water Supply
Flood Protection

THESE SECTIONS ARE UNDER DEVELOPMENT

Natural Systems

The Preserve is dominated by wetlands associated with Cypress Creek itself. Among the wetlands are basin swamps, dome swamps, wet flatwoods, and hydric hammock. The uplands on the Preserve include mesic flatwoods, mesic hammock, scrubby flatwoods, ruderal, and pine plantation. The newly donated western section of the Preserve has not been surveyed to confirm FNAI natural community types.

The Preserve's natural systems are maintained through land management activities and restoration projects. These natural wetland and upland systems preserve natural habitat for many notable species of wildlife and plant life inhabiting the Preserve including many federal and state listed species such as pitcher plants, orchids, airplants, gopher tortoises, Florida sandhill cranes, southeastern American kestrels, wood storks, and numerous other wading birds.

Habitat restoration is a critical component of natural systems protection. The District Policy states that sites on District-owned land that have been altered from a natural state and condition should be restored to a natural condition whenever practical. Habitat restoration is ongoing and is addressed elsewhere in this plan.

Variability in habitat structure in the natural systems described below may occur and is directly related to fire return frequency. Some areas are burned less frequently due to soil moisture and the location on site. Areas that have long periods of inundation are burned less frequently as well.

The District uses natural communities as defined by FNAI to describe the habitats on their properties (FNAI, 2010). Eleven natural communities have been identified by FNAI to occur within the Preserve (Figure 4). Below is a summary of the natural communities and Table 2 summarizes the acreage and percent cover of each community type.

TABLE 2. NATURAL COMMUNITY SUMMARY

Natural Community Type	Acreage	Percentage of Land Cover
Basin Swamp	3,171	37%
Hydric Hammock	1,460	17%
Dome Swamp	117	1%
Wet Flatwoods	32	0.4%
Mesic Flatwoods	1,358	16%
Depression Marsh	35	0.4%
Mesic Hammock	491	6%
Scrubby Flatwoods	8	0.1%
Ruderal *Abandoned Field/Abandoned Pasture*	645	8%
Pine Plantation	127	1%
Improved Pasture	2	0.02%
Not Surveyed	1,068	13%
Total Acreage	**8,515**	**100%**

Wetland Communities

Basin Swamp (3,171 acres)

Basin swamp is the most dominant habitat type on the Preserve. It comprises approximately 3,171 acres, about a third of the Preserve's land. This wetland is mostly centered around the creek, with fingers of swamp reaching out and creating a mosaic of more upland habitats and lower, wetter areas. This habitat contains species that are hydrophytic: species that can withstand long periods of standing water. Typical overstory species found in this habitat include pond cypress and swamp tupelo, and in the drier areas slash pine, water oak, sweetgum, swamp bay, magnolia, and red maple. The basin swamp in Cypress Creek contains a thick herbaceous layer of maidencane, lizard's tail, arrowheads, and fern (which species).

This wetland is inundated for a majority of the year. Percolation of rainwater from the surrounding uplands supplies the water. Historically, hydrological modifications caused by well usage created longer dry periods. These longer dry periods made the habitat more susceptible to species found in drier communities.

The flow of cypress creek as well as the Preserve's vicinity to surrounding developments make a haven for invasive species. Old World climbing efrn, Brazilian peppertree, and torpedograss are all invasive plant species that can be found within the basin swamp habitat.

Hydric Hammock (1,460 acres)

Hydric hammock comprises just under a quarter of the site. This habitat is found bordering the basin swamp systems on the property. These areas are dominated by evergreen hardwoods and palms with a sparse herbaceous understory. The soils in this habitat type are generally moist and support species that can handle wetter habitats. Species composition is dictated solely on inundation patterns. The canopy is typically dominated by swamp laurel oak, water oak, live oak, cabbage palm, magnolia, and sweetgum.

Dome Swamp (117 acres)

Dome swamp is an isolated freshwater wetland located within the fire-maintained communities of mesic flatwoods. The water from the surrounding, higher communities flows down into these wetlands. This habitat gets its distinctive shape by the smaller trees growing in the shallower waters along the edges and the taller trees growing within the deeper parts of the wetland. Pond cypress is the dominate tree in this ecosystem.

Wet Flatwoods (32 acres)

Wet flatwoods can be described as a slash pine forest with a ground cover of hydrophytic grasses. Some scattered shrubs such as saw palmetto and gallberry are frequently found in these areas. On the Preserve, wet flatwoods serve as an ecotone between mesic flatwoods and basin swamp, with species from both habitats found here.

Depression Marsh (35 acres)

The depression marshes on site are isolated, small, rounded depressions that are surrounded by fire-maintained communities. These marshes are composed largely of an herbaceous element with species like maidencane, sawgrass, pickerelweed, and sand cordgrass.

Upland Communities

Mesic Flatwoods (1,358 acres)

Mesic flatwoods are located on mesic soils in the drier areas on site. This habitat contains species that are able to withstand periods of soil inundation and periods of dry conditions. On this site, the mesic flatwoods are associated with the hydric hammocks and basin swamps. This habitat type typically has a sparse canopy of slash and longleaf pine, with an understory of saw palmetto, gallberry, and wiregrass.

Mesic Hammock (491 acres)

The mesic hammock on site supports an evergreen hardwood forest on higher "islands" within the basin swamps and hydric hammocks. The soils on this habitat are rarely inundated. The closed canopy of the mesic hammock is dominated with live oak, water oak, cabbage palm, and southern magnolia. Pignut hickory and sweetgum also thrive in this community type. The understory is fairly open with a mix of saw palmetto, beautyberry, persimmon, and wax myrtle scattered.

Scrubby Flatwoods (8 acres)

Scrubby flatwoods are found on xeric soils on the southern end of the Preserve. This high, dry island slopes down into mesic flatwoods. This habitat can be characterized by an open canopy with widely scattered pine trees, and an understory with palmettos, scrub oaks, and *Lyonia* species. Patches of wiregrass, broomsedge, gopher apple, and goldenrod break up the barren white sand.

Ruderal (645 acres)

The ruderal areas on site describe a variety of environments. These areas include the TBW offices located off of Pump Station Road, hiking trails, water level control pumps, and open pasture going through passive restoration.

Pine Plantation (127 acres)

Slash pine timber stands remain in their historic locations and are actively timbered. The District timbers these areas every 25+ years. Funds generated from the timbering go into a large fund that will off-set land management costs of all the District's properties.

Improved Pasture (2 acres)

The improved pasture on site typically consists of a dense groundcover of bahia and bermuda grasses. Native species like gallberry, wax myrtle, broomsedge, various blackberry species, and prickly-pear cactus, with a sparse canopy of slash and longleaf pine trees. There is an active cattle lease on site.

Not Surveyed (1068 acres)

There are approximately 1,068 acres in the Preserve that have not yet been surveyed to confirm FNAI habitat communities. A significant portion of this includes the newly donated parcel which was primarily improved pasture with embedded wetlands. This will be surveyed in the future and included in the next management plan update.

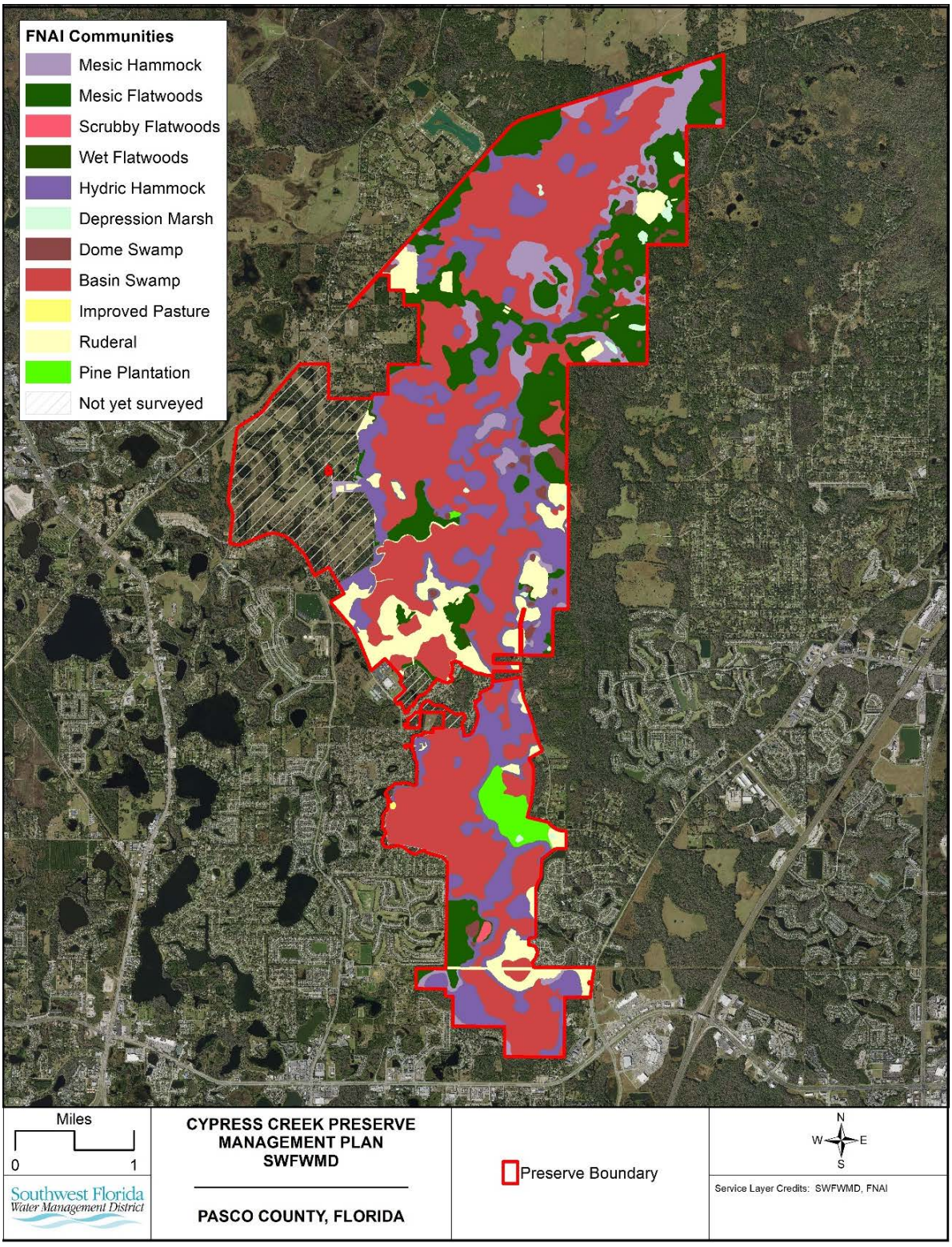


FIGURE 4. NATURAL COMMUNITIES- FNAI

Soils and Topography

Soils

There are three distinct soil groupings based on soil moisture: xeric, mesic, and hydric (Figure 5). Xeric soils are located on higher and drier areas, capable of supporting scrub, sandhill, scrubby flatwoods, and xeric hammock. Mesic soils are located in areas that seasonally retain moisture and are capable of supporting pine flatwoods and mesic hammock habitat types. Hydric soils are located in lower, wetter areas and support riverine swamp and other wetland communities. (Pasco County Soil Survey 1989).

Xeric soils on site occupy the pasture, day use areas, and campgrounds. Cassia fine sand, Newnan fine sand, Tavares fine sand, Zolfo fine sand, and Quartzipsamments. The recently acquired parcel has a majority of Tavares sand and Quartzipsamments soil types. Xeric soils have a high depth to water table. These soils have high permeability: water drains quickly through the soil. These soils do not remain saturated for long periods of time.

Mesic soils present on site are Narcoosse fine sand, Symrna fine sand, EauGallie fine sand, Wauchula fine sand, Pompano fine sand, Pineda fine sand, Ona-Ona fine sand, and Adamsville fine sand. These soil types are associated with the pine flatwoods, mesic hammocks, and pasture areas on sites. These areas are somewhat poorly drained; during certain times of the year the water table can be well over the soil surface and at other times be well below the soil surface.

The majority of the site supports hydric soils. Hydric soils on site include Chobee, Basinger fine sand, Basinger fine sand depressional, Felda fine sand, Myakka depressional, Pomona depressional, Sellers mucky loamy fine sand, Wabasso-Wabasso fine sand, Zephyr muck, and Okeelanta-Terra Ceia association. Chobee soils underly the entire riverine swamp. These soils are, topographically, located in lower ridges and along stream banks/beds. They are poorly drained and remain saturated through the majority of the year with the water table above the soil surface. Marshes, cypress swamps, bottomland forests, and wet prairie (check this one) are all found on hydric soils.

Udalifc Arents-Urban land complex soil type and Quartzipsamments are located in areas of soil disturbance. These two soil types are associated with lawns, playgrounds, vacant lots, buildings, and streets. The Udalfic Arents-Urban land complex is found where the District's and TBW buildings are located off of SR 54. Quartzipsamment soil type is a heavily disturbed soil. It consists of reworked marsh soil with an added sandy component.

Topography

The Preserve is gently sloping with elevations ranging from 75 feet to the lowest elevations of 50 and 45 feet above sea level along the creek bed. The Preserve gently slopes down from its borders to the creek and drains to the south into Hillsborough County. The hydrology of these uplands is strongly influenced by the flatter topography and a landform which produces little stormwater runoff. Downward percolations are slowed by poorly drained soil, and where present, an underlying clay hardpan.

The Preserve is within the Southern Coastal Plain Ecoregion; specifically, the Southwestern Florida Flatwoods Subregion (Griffith et al. 1994). This ecoregion covers parts of northern Florida and most of central Florida. The subregion includes barrier islands and peninsulas, Gulf Coastal lowlands and valleys, and parts of the Bone Valley in Polk County. This subregion gives rise to forested wetlands, pastures and rangelands, and pine flatwoods.

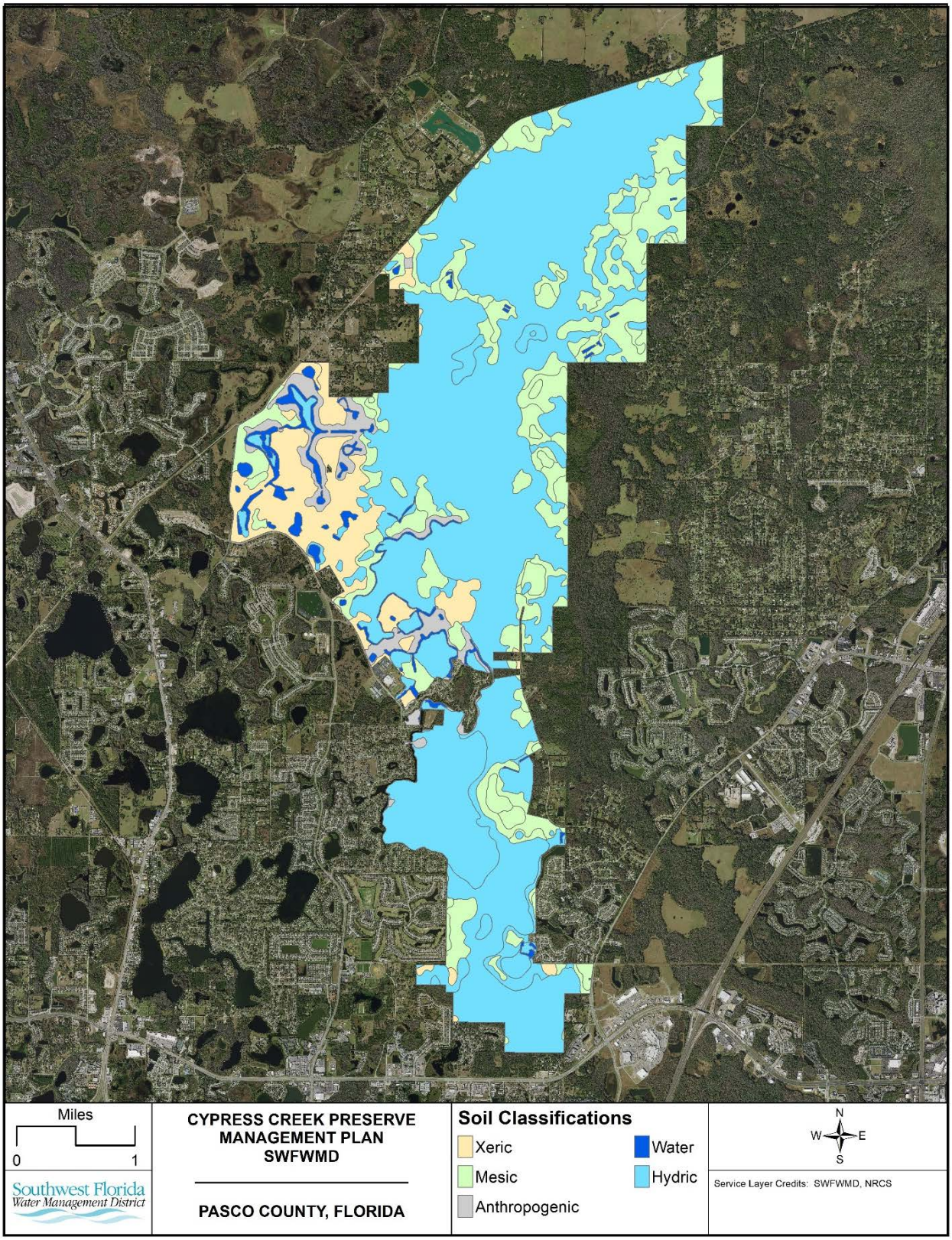


FIGURE 5. SOILS MAP

Historical Land Use and Cultural Resources

Historical Land Use

The majority of the Preserve is a floodplain, with sheet-flow rather than distinct, channelized flow south into the Hillsborough River. With the forest wet most of the year, this made development and agriculture practices difficult. Historically, the Preserve was just as it is now, flooded forest. A few areas of uplands along the edges of the current Preserve boundaries were once in agriculture and pasture. The TBW office located off Pump Station Road on the west side of Cypress Creek is placed on land purchased by the District from the Burnside family citrus grove business. The Mertz company historically purchased thousands of acres of forestland in central Pasco County in the late 1970s and early 1980s. When the founder, Harold Mertz, passed away, his wife Esther Mertz and the Trust sold portions of this land to the District in the early 1990s as part of a buffer between neighborhoods and the Preserve.

Cultural and Archaeological Resources

The Preserve contains four archaeological sites that have been recorded in the Florida Master File of the Florida Department of State, Division of Historical Resources. These include the Barn Pond Mound (ceramic scatter), Big Cypress Swamp mound (lithic scatter), Rattlesnake Island Flaking Area (lithic scatter/quarry), and the Cable Guy Site (pre-historic but lacking pottery).

The District will provide the Best Management Practices for upholding the integrity of the historical and cultural resources that are documented within the confines of the Preserve. District staff will alert law enforcement, when necessary, as illegal activities have historically occurred at the Preserve. Management of these archaeological and historical resources will consist primarily of preventing disturbance. The sites may be made available for supervised study by archaeological researchers.

Land Management and Land Use

Land Management

As part of the ownership of Conservation Lands, the District is responsible for the protection of water resources and natural systems through the application of effective and efficient land management practices. These land management practices include prescribed fire, forest management, habitat restoration, exotic and invasive species control, and habitat maintenance. The primary land management tool that managers utilize is the application of prescribed fire. This is the most cost-effective method to maintain the natural communities in their natural condition. Along with prescribed fire, the District uses other common land management techniques to achieve specific land management objectives. The goal of the District's land management program is to maintain and restore natural systems according to their natural community descriptions outlined in the FNAI.

Fire Management

Prescribed fire is the primary tool for management of District conservation lands. Fire is a natural process that has occurred on Florida's landscape for thousands of years. The goal of the District's fire program is to mimic that natural process and apply prescribed fire in a safe, efficient, and effective manner to maintain the natural function of the plant and animal communities. Many of the plant and animal species that occur on the Preserve are specifically adapted to fire to maintain a healthy and successful population. As a result, the District aims to apply fire to all fire-dependent natural communities based on their natural fire return intervals defined by the FNAI (Guide to the Natural Communities of Florida, 2010 edition).

The program targets the natural fire season, or the "growing" season, which occurs during the spring and summer. Research indicates that burning during the growing season has the most beneficial impact on native plant communities but maintaining a consistent burn frequency can be just as valuable. Therefore, the District conducts prescribed burns throughout the year to achieve various objectives.

The District's fire management program seeks to achieve the following:

- Maintain and restore natural systems.
- Promote water resource benefits.
- Reduce hazardous fuel loads and minimize wildfire risk.
- Promote native plant diversity and habitat function.
- Maintain wildlife habitat quality.
- Support forest management activities.
- Maintain aesthetics and access for recreation.

On the Preserve, there are 38 management units with approximately 2,022 acres of fire-dependent natural communities. District burn managers always take precautions to limit potential impacts from prescribed burns and target specific weather conditions. There is a network of firelines and

natural firebreaks throughout the property that allow for successful fire management and limit the potential for wildfires. These management units are outlined in Figure 6.

The purpose of the Condition Class Evaluation Program is to provide an accurate representation of the condition of lands managed by the District with fire. It is the District's goal to preserve, protect, and restore natural systems to support their natural hydrologic and ecological functions. The term "condition class" is a reference to the status of District-owned and managed lands relative to a historic fire return interval described in the natural history of each community type. The primary objective of the Land Management Condition Class Evaluation Program is to assign a condition class value to all fire management units based on the natural fire return interval of the targeted community type.

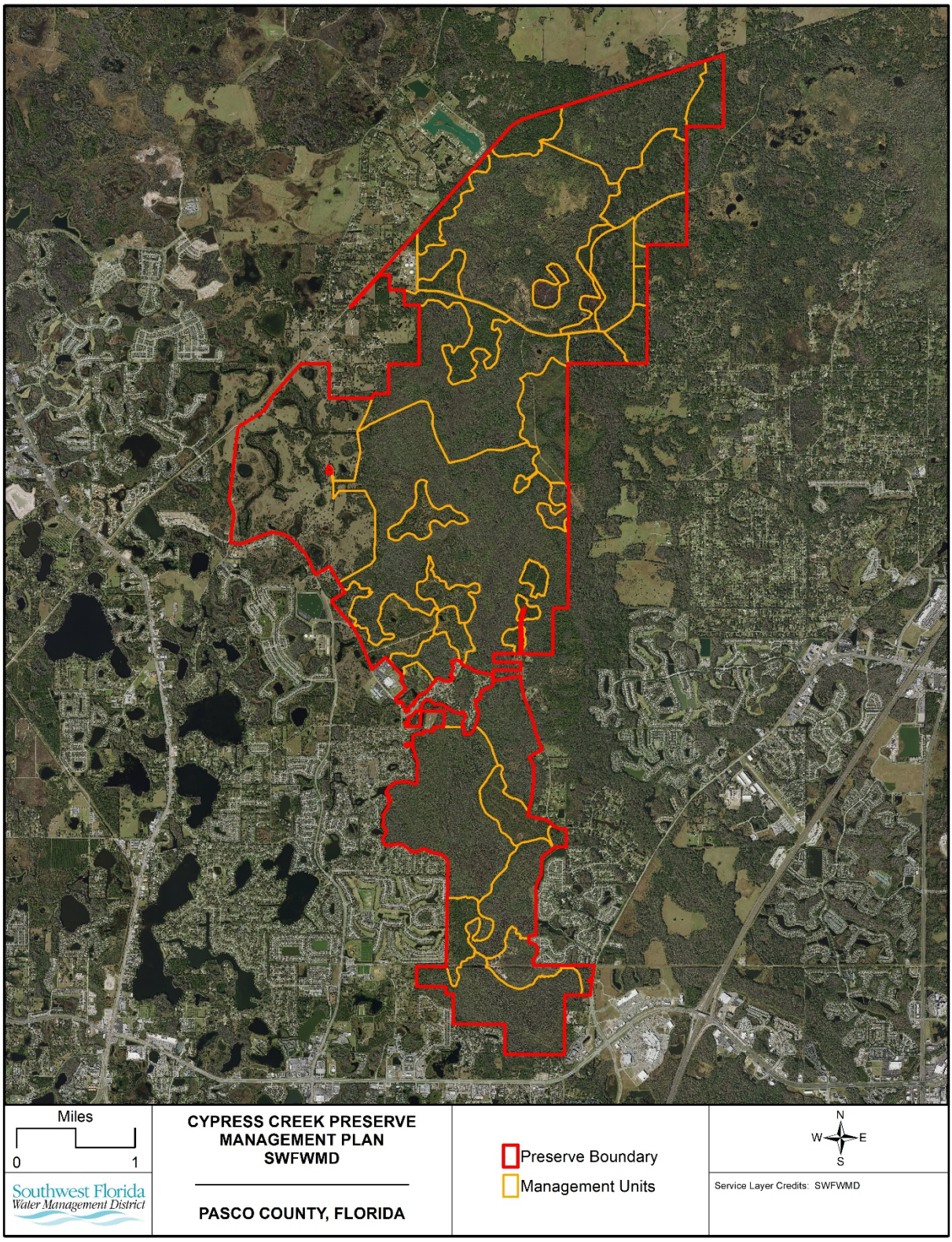


FIGURE 6. MANAGEMENT UNITS

Forest Management

The Preserve contains two Timber Management Zones (TMZ) located in the southern and central portion of the Preserve. These plantations were created to restore the pine overstory in previously altered areas, in this case, improved pasture. The goal is to manage these areas using standard silvicultural practices to maintain forest health, provide habitat, support local economies, and generate revenue to offset the cost to manage these properties. The District uses planted pine and timber harvesting as a tool for land management, forest health, restoration, and to salvage timber lost to fire, insects, or disease.

The two TMZ's on the Preserve are the Oaks and the Island plantations which are outlined in Figure 7. The Oaks stand is 107 acres of slash pine planted in 2001. This stand was harvested for the first time in 2015 using a third-row thinning. The Island stand is a series of three small individual stands totaling 56 acres of longleaf pine planted in 2008. This stand is scheduled to be thinned in 2023.

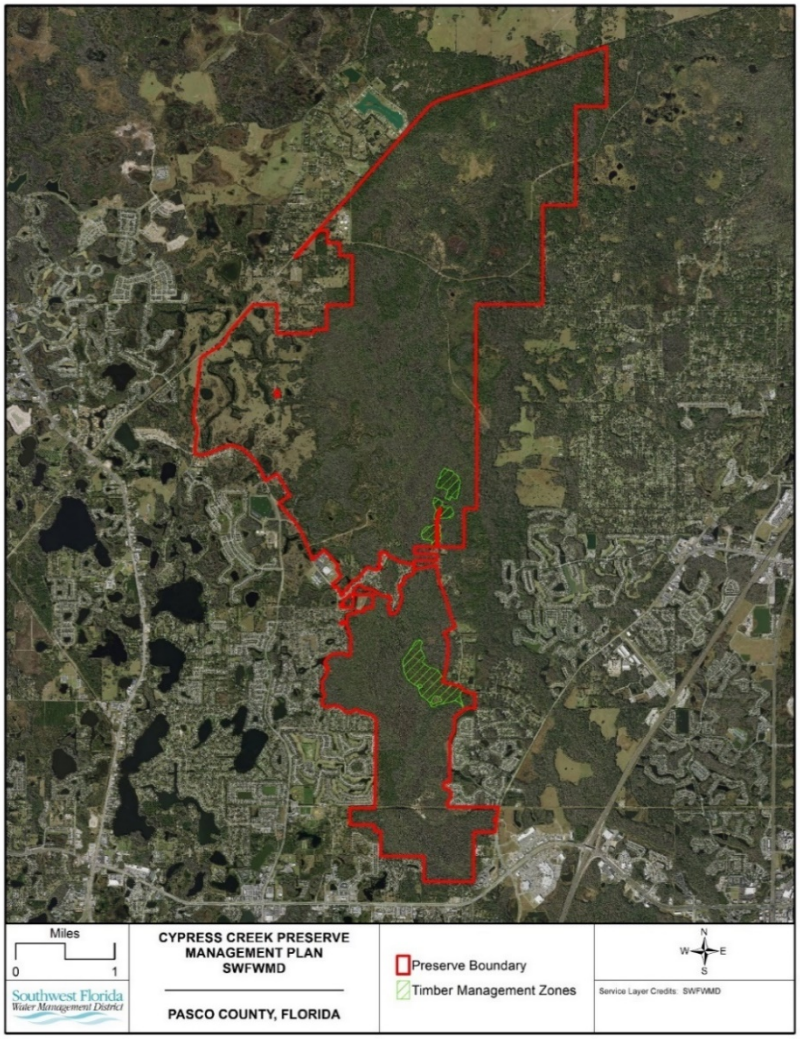


FIGURE 7. TIMBER MANAGEMENT ZONES

Restoration and Maintenance

Managing altered lands on conservation tracts often necessitates additional management activity, especially if fire dependent communities can no longer carry fire at the necessary time (seasonality) or intensity. Cypress Creek is a tributary of the Hillsborough River. Formerly, water control structures along Pump Station Road were utilized to help control water flow down the creek, limiting water levels in the Hillsborough River. In the past, this helped keep the Hillsborough River from flooding. Now, the water control structure helps to maintain water levels on the northern side of the property. This has assisted in restoring the wetland areas north of Pump Station Road previously impacted by over-pumping in the wellfield. Upland species were encroaching into these wetlands and soil subsidence was occurring. The increased hydroperiod and higher water levels helped to limit many of these encroaching species and has improved the wetland habitats.

Exotic and Invasive Species Management

Invasive Plant Management

Invasive, non-native plants are a threat to ecosystems worldwide and are an especially serious issue in Florida due to the state's warm, amenable climate and many ports of entry which import non-native plants. This high rate of introduction, combined with the sub-tropical climate, makes it more likely for non-native plant species to be introduced into the wild and to establish successful self-propagating populations. As a result, Florida is home to many non-native plant species that have become aggressive invaders that severely impact natural systems.

The Florida Exotic Pest Plant Council (FLEPPC) tracks non-native plant species in the state, compiles species lists, and categorizes these species based on their impact to natural systems. Category I species are the most aggressive and can impact natural communities by displacing native species, changing community structure or ecological functions, or by hybridizing with native species. Category II species are those that are increasing in abundance but have not yet altered Florida plant communities to the extent shown by Category I species. Many species on the FLEPPC lists also appear on the Florida Department of Agriculture and Consumer Service's Noxious Weed List.

The District is committed to the management of invasive exotic plant species and uses a diversified approach to control their establishment and spread on the Preserve. The District has a Vegetation Management Section, with dedicated staff, that spearhead control efforts by surveying, prioritizing, and treating invasive exotic plant populations on District conservation lands. The District focuses management efforts on invasive exotic plant species which the FLEPPC has deemed Category I or II plants, as discussed above. Furthermore, the Vegetation Management Section uses the framework set out in The Nature Conservancy's Site Weed Management Plan Template to analyze and prioritize invasive exotic plant species for treatment based on several factors, including:

1. their infestation levels
2. the current and potential impacts of the species
3. the value of habitat that the species does or could infest. and;
4. the difficulty controlling the species.

This prioritization scheme ensures that the District's resources are spent where they will have the greatest impact on the ecosystem. Additionally, the District has implemented an Early Detection, Rapid Response (EDRR) strategy which identifies and rapidly treats occurrences of exotic species that are not currently present or are not widespread on the property but have the potential to become invasive if they get established.

The most problematic invasive plant species found at Cypress Creek are listed in Table 3. Invasive species found at Cypress Creek Preserve. along with their priority level for control, with lower numbers indicating a higher priority and vice versa. The species of primary concern on the Preserve include cogon grass (*Imperata cylindrica*), Chinese tallowtree (*Triadica sebifera*), Japanese climbing fern (*Lygodium japonicum*), Old World climbing fern (*Lygodium microphyllum*), coral ardesia (*Ardisia crenata*) and rosary pea (*Abrus precatorius)*. Infestations of invasive exotic plant species at the Preserve are most commonly found in historically disturbed sites such as pastures, old home sites, adjacent to roadways, and housing developments.

The District employs a variety of measures to control invasive exotic plant species including thorough surveying, chemical treatment (basal-bark treatment, cut-stump applications, hack-and-squirt methods, and foliar applications), mechanical treatment, the use of biological control agents or some combination thereof, which are done with both in house and contracted labor. Upland treatments are often scheduled to occur in the year following a prescribed burn because access to a site is easier and visibility is increased at this time. Treatments utilizing herbicides comply with instructions found on the herbicide label and employ the Best Management Practices for their application.

TABLE 3. INVASIVE PLANT SPECIES THAT OCCUR AT CYPRESS CREEK PRESERVE.

Common Name	Scientific Name	FLEPPC Category	Priority Level for Control
Old world climbing fern	*Lygodium microphyllum*	1	4
Tropical soda apple	*Solanum viarum*	1	5
Chinese tallow-tree	*Triadica sebifera*	1	5
Japanese climbing fern	*Lygodium japonicum*	1	6
Coral ardesia	*Ardisia crenata*	1	6
Rosary pea	*Abrus precatorius*	1	6
Cogongrass	*Imperata cylindrica*	1	7
Brazilian pepper	*Schinus terebinthifolia*	1	7
Chinaberry tree	*Melia azedarach*	2	7
Arrowhead vine	*Syngonium podophyllum*	1	7
Skunk vine	*Paederia foetida*	1	8
Castor bean	*Ricinus communis*	2	8
Wild taro	*Colocasia esculenta*	1	8
Lantana	*Lantana strigocamara*	1	8
Sword fern	*Nephrolepis cordifolia*	1	9
Air potato	*Dioscorea bulbifera*	1	9
Ear pod tree	*Enterolobium cyclocarpum*	N/A	10
Caesar weed	*Urena lobata*	1	15
Water Hyacinth	*Eichhornia crassipes*	1	N/A
Hydrilla	*Hydrilla verticillata*	1	N/A

Invasive Wildlife Management

The monitoring and control of non-native animal species statewide is overseen by The Florida Fish and Wildlife Conservation Commission (FWC). The District obtains annual control permits through FWC to conduct and track invasive wildlife removal practices on District-owned properties.

The Preserve is host to several invasive wildlife species. The primary invasive wildlife species that the District focuses eradication efforts on is the feral hog (*Sus scrofa*). Feral hogs are the most conspicuous and destructive exotic animal species found throughout the conservation lands owned and managed by the District. The species' ability to readily adapt to a wide variety of habitats, combined with their high reproductive rates and a lack of significant natural predators has led to rapidly increasing population densities throughout North America (West, Cooper and Armstrong 2009).

Feral hogs cause millions of dollars in damages to lawns, ponds, natural areas, flood control structures, and rights-of-way each year (Giuliano 2016). Feral hogs are capable of carrying multiple zoonotic and epizootic diseases, including brucellosis, leptospirosis and pseudorabies. They also have the potential to be aggressive if startled or angered and are vectors for many invasive plant species on site; specifically, Caesar's weed. Furthermore, feral hogs also compete

with native species for forage and have been documented preying on native species themselves; specifically, ground-nesting birds.

Recognizing the severe ecological threat posed by this exotic species, the District first developed and implemented a feral hog population control plan in 1995. Due to the adaptive nature of wild hogs, the District has since taken a multi-faceted approach to their removal. Current control methods include trapping, FWC administered Wildlife Management Area hog hunts, special District administered hog hunts, and on select properties aerial operations conducted by the United States Department of Agriculture – Wildlife Services program. The use of electronically controlled hog traps in targeted areas has proved highly effective.

Given the current array of practical, environmental, and social constraints, it is generally recognized that the complete eradication of feral hogs from District conservation lands is an unattainable goal. Therefore, the overall goal of the feral hog management strategy is to reduce the number of hogs on District conservation lands to a maintenance level, thus reducing the overall ecological damage resulting from feral hog rooting. This is done through the use of a comprehensive and scientifically based management strategy that is humane, cost-effective, and compatible with ecologically sustainable land management.

Imperiled Species

Wildlife

The term 'Imperiled Species' refers to plant and animal species that are designated as Endangered or Threatened by the FWC or the U.S. Fish and Wildlife Service. The District manages the Preserve in a holistic fashion and according to Best Management Practices which benefit a wide array of native plant and animal species, including those that are considered imperiled. Although exhaustive plant and animal surveys have not been conducted, numerous imperiled species are known to exist on the Preserve.

The FNAI Biodiversity Matrix Map Server is a screening tool which provides site specific lists of the rare species that are known to occur or are likely to occur on a given parcel of land. According to the FNAI Biodiversity Matrix Report for the Preserve, 11 federal and/or state listed wildlife species are likely to occur or have the potential on the property (Table 4). Additionally, numerous federal and state listed plant species are likely to occur or have the potential to occur there as well.

TABLE 4. IMPERILED WILDLIFE SPECIES THAT COULD OCCUR OR ARE KNOWN TO OCCUR

Scientific Name	Common Name	Federal Status*	State Listing**
Athene cunicularia florida	Florida Burrowing Owl	N	ST
Drymarchon couperi	Eastern Indigo Snake	LT	FT
Egretta caerulea	Little Blue Heron	N	ST
Egretta tricolor	Tricolor Heron	N	ST
Gopherus polyphemus	Gopher Tortoise	C	ST
Grus canadensis pratensis	Florida Sandhill Crane	N	ST
Lampropeltis extenuata	Short-tailed Snake	N	ST
Mycteria americana	Wood Stork	LT	FT
Picoides borealis	Red-cockaded Woodpecker	LE	FE
Pituophis melanoleucus mugitus	Florida Pine Snake	N	ST
Sciurus niger shermani	Sherman's Fox Squirrel	N	ST

*N=Not federally listed, LT=Federally Threatened, LE=Federally Endangered, C=Candidate species
** ST=State Threatened, FT=Federally Threatened, FE=Federally Endangered

Plants

There are 30 species of imperiled plants known to occur or are likely to occur in the Preserve (Appendix A). Imperiled plants include federally protected and commercially exploited species (Anderson and Weaver 2010). Federally endangered species documented on the Preserve include Tampa mock vervain *Glandularia tampensis* and Hand fern *Ophioglossum palmatum*.

Arthropod Management

In compliance with Section 388.4111 Florida Statutes and in Section 5E-13.042, Florida Administrative Code, all lands in the Cypress Creek Preserve in Pasco County have been evaluated and subsequently designated as environmentally sensitive and biologically highly productive. Such designation is appropriate and consistent with the previously documented natural resources and ecosystem values and affords the appropriate protection for these resources from arthropod control practices that could impose a potential hazard to fish, wildlife, and other natural resources existing on this property.

Recreation

Part of the District Policy governs the authority of the District to provide passive, natural resource dependent, recreational uses on its conservation lands, as well as appropriate public access. The compatibility for such recreational uses and public access points considers the environmental sensitivity and the suitability of the property. Compatible uses generally consist of outdoor recreation and educational activities, while public access points are minimal and only allow for walkthrough foot traffic. The District Governing Board holds authority to determine the compatibility of recreational uses on District conservation lands, as based upon the purpose of the property acquisition.

For some District properties, there are cooperative agreements associated with other public agencies to provide for a more expansive recreational use. These agreements are discussed further in 'Partnerships and Cooperative Agreements' below.

The recreational activities permitted at the Preserve are bicycling, inline skating, camping, horseback riding, fishing, birding, and hiking (Figure 8). Public access to the property is provided by four walkthrough access points. An access to the northern portion of the Preserve is provided by a gate and parking area at the west end of Pump Station Road, which is accessed from CR 583, midway between State Road 52 and U.S. Highway 41. A second access for the northern portion of the property is provided by a gate and parking area on the east side of the property at the end of Quail Hollow Boulevard. A third access point is also provided by a gate and parking area at the west end of the Preserve on Parkway Boulevard, just north of the Pine View Middle School. A fourth access point is provided by a walkthrough at the end of Eagle Island Boulevard. There are informational kiosks located at the north and south public access points which contain a large trail map of the property and trail map brochures. Motorized access on the property is restricted to authorized personnel directly affiliated with the District, and any other non-affiliated personnel that are held in cooperative agreement with the District. See Section 4.3 for Land Use Administration details.

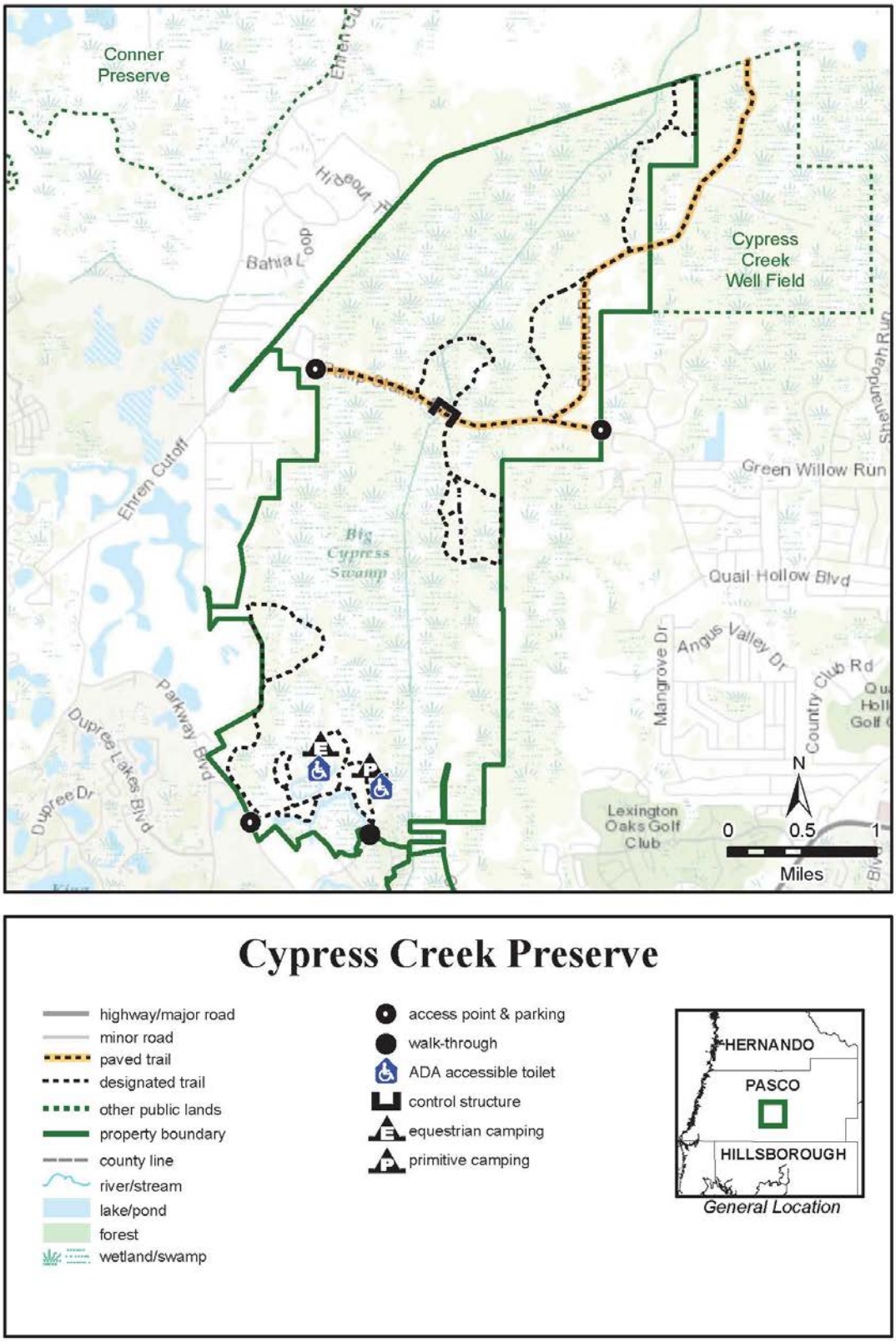


FIGURE 8. RECREATION AND ACCESS

Trails

The Preserve provides for approximately 19 miles of multi-use trails. These trails are also promoted under the designation of the Florida Greenways and Trails network. Trails give nature-based experiences while minimizing impacts to the lands and natural systems. Trail markers identify the type of recreational use and the arrows indicate the direction of the trail. The main trail intersections are numbered, which coincide with the trail map brochure.

Of the 19 miles of multi-use trails, there are approximately 8 miles of paved trails, accessible from Pump Station Road, and approximately 11 miles of unpaved trails that provide for the additional uses of bicycling and inline skating. Furthermore, approximately 14 miles of the multi-use trails provide for equestrian use. It is required that each rider must carry proof of their horse's current negative Coggins test results.

Camping

The Preserve provides primitive and equestrian camping opportunities. There are two camping sites that are accessible from the Parkway Boulevard access point. Each of the sites are equipped with picnic tables, pavilion, fire rings, and portable toilets. Potable water is not provided on the property. Camping at the Preserve is available at no cost to the user, but a free reservation must be made through the WaterMatters.org/Reservation website prior to camping at a site.

Wildlife Viewing, Hunting, Fishing and Boating

The Preserve has a wide variety of wildlife viewing opportunities. Cypress Creek itself flows through the property and provides the opportunity for observing an abundance of bird species. The property contains many other species of wildlife, such as deer, gopher tortoises, turkeys, sandhill cranes, fox squirrels, and bald eagles. This positive species richness is indicative of proper land management practices which have created flourishing natural habitats throughout the Preserve.

Currently, the Preserve is not open to hunting, with the exception of any feral hog population management hunts administered by the District.

Fishing is typically open along Cypress Creek during the highwater periods and at the manmade impoundments located at the Parkway Recreation area. Fishing is regulated by the FWC and a license may be required.

Although the Cypress Creek watercourse may appear to be suitable for canoeing or kayaking on a seasonal basis, there is no designated launch site, and the waterway is not maintained for boating recreation. Furthermore, the water control structure located at the intersection of the creek and the wellfield road serves as an additional impediment to this use. Currently, boating is not a designated recreational use on the Preserve.

Americans with Disabilities Act

The District does not discriminate on the basis of disability. This nondiscrimination policy involves every aspect of the District's functions, including access to and participation in the District's programs, services, and activities. Anyone requiring reasonable accommodation, or who would like information as to the existence and location of accessible services, activities, and

facilities, as provided for in the Americans with Disabilities Act, should contact the Human Resources Office Chief, at 2379 Broad St., Brooksville, FL 34604-6899; telephone (352) 796-7211 or 1-800-423-1476 (FL only), ext. 4747; or email ADACoordinator@WaterMatters.org. If you are hearing or speech impaired, please contact the agency using the Florida Relay Service, 1-800-955-8771 (TDD) or 1-800-955-8770 (Voice). If requested, appropriate auxiliary aids and services will be provided at any public meeting, forum, or event of the District. In the event of a complaint, please follow the grievance procedure located at WaterMatters.org/ADA.

Land Use Administration

The land uses administered on District conservation lands are governed by District Policy. According to policy, appropriate land use types are separated into two categories: public recreation use and non-recreational public use. Public recreation uses vary by property, and compatibility is based upon the environmental sensitivity and suitability of the property. Furthermore, some District conservation lands hold cooperative agreements with other public agencies to administer the responsibilities for any expansive recreational opportunities that the District may deem as compatible on its conservation land. The specific public recreation uses at the Preserve are discussed in the previous Section. Non-recreational public uses include, but are not limited to, linear facilities, scientific research opportunities, water resource development projects, sustainable forestry, and environmental education. Like cooperative agreements for expansive recreational uses, the District holds a variety of agreements with private entities for the allowance of the aforementioned use types. The administration of non-recreational and recreational public uses for the Preserve is discussed in the subsequent sections.

Partnerships and Cooperative Management

The District holds a public water supply license agreement with TBW for the purpose of providing public water supply from multiple wellheads and facilities located within the northern region of the Preserve. There is also a license agreement with an apiary farmer for the private production of honey.

There is a designation agreement with The Florida Department of Environmental Protection's (FDEP) Office of Greenways and Trails (OGT) for the designation of the recreation trails on the Preserve for the purpose of providing recognition as part of the OGT trail network.

The District also holds access easements and utility easements on the property. The access easements are for access permissions onto the Preserve for Circle 8 Angus Ranch, Withlacoochee River Electric, the Ehren Cemetery private inholding, and for private entities to perform culvert maintenance tasks. The utility easements are held with TBW, Withlacoochee River Electric, and Duke Energy for the purposes of linear facilities located on the Preserve.

During the 2021 fiscal year, the District entered into an agreement with a lessee for the administration of a cattle lease on the donated parcel of the Preserve.

Research Opportunities

District properties provide for a variety of research opportunities for the benefit of natural resource conservation and preservation efforts and advancements. These opportunities can range from

wildlife surveys, groundwater sampling, natural communities research or wetland studies. Overall, District properties provide an abundance of research opportunities due to the proper management of healthy ecosystems.

The Preserve has been a frequent location for wetland studies, amphibian surveys and soil investigations.

Special Use Authorizations

For any requests for undesignated uses on District property, it is required to submit for a SUA from the District's Land Resources Bureau. The SUA submittal will be reviewed to determine the compatibility of the requested use on District conservation lands.

The types of approved SUAs on the Preserve can be categorized under recreational uses, research opportunities, training, and general granted access allowances. As previously mentioned, the approval for obtaining access to the designated trails for a mobility disabled person is completed through the SUA process. Recreational uses have typically been for events that included, but not limited to, marathons, equestrian outings, and charity events. As mentioned in the previous section, the specific research opportunities have included, but not limited to, wetland studies, amphibian surveys, and soil investigations. The general granted accesses have typically been for the purposes of allowing access to construction crews for the purpose of performing maintenance activities on the Preserve and adjacent property owners.

Future Land Conservation

The District will continue to consider the opportunities for purchasing adjacent lands to the Preserve to promote the District's mission of protecting the natural systems and water resource benefits of flood protection, water quality, and water supply. It would be advantageous to seek possible opportunities for acquiring fee simple and less-than-fee properties to further promote protections of the natural systems within the region.

Land Maintenance and Operations

Roads and Boundaries

The District is responsible for maintaining the infrastructure on District lands for access to conduct management activities, to provide recreational opportunities, and to provide site security. This includes roads, trails, firelines, culverts, wet-crossings, recreational amenities, and perimeter fencing that requires periodic maintenance which occurs throughout the year. Properly established and maintained roads are required to provide access for management activities and public use. Well-maintained roads will provide quick access for wildfire protection and serve as firelines for prescribed fires. Continuous observation will ensure that roads remain clear and that they are vehicle worthy for management and public use.

Motorized access on the Preserve is restricted to authorized personnel only. The main access road, Pump Station Road, is paved and maintained by TBW to support access and management of the Cypress Creek Wellfield. It also serves as a multiple-use trail within the recreational trails network. Several management roads are utilized as service roads to support management activities and regional hydrological data collection. Since the acquisition of the Preserve, most of the unnecessary roads have been closed and are being allowed to revegetate naturally.

As part of the general road maintenance, the District maintains a network of culverts and low crossings to ensure the conveyance of water. Culverts are periodically replaced based on the results from the culvert inspection process which identifies culverts that are damaged or are nearing the end of their expected service life. Low crossings are utilized, where feasible, to mimic the natural conveyance of water and to provide limited disturbance in wet areas. These low water crossings are typically at ground level and are improved with rock or some other material to limit erosion while allowing for the natural flow of water down drain.

Properly marked and maintained boundaries help to minimize disputes, encroachments, trespassing, and other unwanted impacts from adjoining properties. Well-marked boundaries also aid in proper placement of fire lines for wildfire protection and prescribed fire application. Boundaries on the Preserve are identified by perimeter fencing and District boundary signs.

District staff secure the property by maintaining perimeter fencing, removing unauthorized access gates, posting appropriate boundary signage, identifying frequent points of unauthorized access, documenting evidence of illegal activities, and placing entry barriers at designated points to stop unauthorized vehicle access. The District also contracts with the FWC law enforcement for site security. Additionally, TBW provides security in and around their infrastructure with a high level of security afforded the water treatment plant because of its importance in the regional water supply.

Facilities and Infrastructure

Consistent with legislation that was adopted by the state in 1999, lands acquired through state-funded acquisition programs can be used for a variety of public facilities. These include utility lines and other linear facilities, stormwater management projects, and water supply development projects. Approval of such uses is contingent upon a number of criteria, including: the use must be compatible with the natural resource values of the property, reasonable compensation must be provided to the titleholder of said lands, the proposed use must be located appropriately on the

lands, with due consideration given to use of other lands, and the proposed use must not be inconsistent with the management plan for the property.

The Preserve supports a number of public facilities and utilities lines. A Duke Energy right-of-way containing a transmission line crosses the southern portion of the property and is not directly associated with District functions. The other utility lines on the property provide service exclusively to on-site facilities. Utility easements, which enter the property and provide service to the on-site facilities, include two Withlacoochee River Electric Cooperative power line easements and a Verizon Communications telephone line.

The Cypress Creek Wellfield is located on the northern end of the Preserve and is managed by TBW. The wellfield facilities include a total of 13 water production wells, 5 of which are located on the Preserve. The Cypress Creek Water Treatment Plant, which currently produces 60 million gallons of treated potable water per day, is located on the west end of the Preserve near the west gate at Pump Station Road and serves the Cypress Creek, Cross Bar Ranch, and Cypress Bridge Wellfields. The treatment plant is the primary operations center for TBW and controls all water distribution to member counties. Three transmission mains service the treatment plant. One of the mains enters the property from the north, transporting water from Crossbar Ranch Wellfield to the Cypress Creek Water Treatment Plant. Another conveys treated water from the treatment plant to Pinellas County and the third links the Cypress Creek pumping station with the Cypress Bridge Wellfield to the south. Also, on site are two 5-million-gallon water storage tanks, a pumping station, and a series of monitoring station.

The District provides public access in the most efficient, cost-effective manner with minimal impact on the natural resources. Development and construction of recreational facilities on the Preserve will be kept to the minimum required to provide access for resource-based recreational activities and to administer and manage the Preserve. There are currently no improved recreation facilities located on the Preserve.

Goals and Objectives

Overview

The following represents a general overview of the goals and objectives over the next 10-year planning period for the Preserve. This set of goals will serve as an outline of management expectations and provide direction over the management activities for the life of this plan. These goals are not an annual work plan which is beyond the scope of this plan.

Resource Protection and Management

Hydrologic Management

Goal: Protect water resources within the Preserve and associated tributaries.

- Objective 1: Continue to observe and assess water resources within the Preserve to ensure desired hydrologic function and develop restoration projects, as necessary.
- Objective 2: Continue monitoring water quality and wetland conditions through the data collection network and periodic wetland assessments.
- Objective 3: Protect water resources during management activities by continued implementation of Silvicultural and Agricultural Best Management Practices.

Goal: Continue to support regional watershed initiatives and maintain agreements with regional water authorities for water supply functions.

- Objective 1: Coordinate with TBW on mitigation projects within the wellfield to enhance hydrologic conditions in wetlands.
- Objective 2: Maintain existing agreement with TBW for operation of the Cypress Creek Wellfield for public water supply.

Fire Management

Goal: Maintain and restore function of natural systems through application of prescribed fire as the primary management tool.

- Objective 1: Develop and implement an annual burn plan and apply prescribed fire according to the District's Fire Management Guidelines.
- Objective 2: Conduct majority of prescribed burns during the growing season to support development of native fire-dependent species and habitat function.
- Objective 3: Update and maintain condition class database to track management activities on specific management units.
- Objective 4: Maintain perimeter firelines on an annual basis and disk strategic internal management lines supporting the seasonal needs of prescribed fire program.

Restoration and Natural System Maintenance

Goal: Evaluate individual management units and develop restoration projects to recover historic natural communities.

- Objective 1: Assess habitat conditions and develop restoration strategy to recover historic natural communities on previously altered sites targeting imperiled natural communities.
- Objective 2: Utilize information obtained from historic imagery, FNAI Natural Communities Mapping and on-site investigations, to implement site specific restoration projects that support the District's restoration goals.

Goal: Maintain and enhance natural system structure and function.

- Objective 1: Continue to maintain existing habitat enhancement projects over the long-term to achieve desired future conditions outlined in the FNAI Natural Community Guide.
- Objective 2: Evaluate and develop habitat enhancement projects to improve habitat function.
- Objective 3: Implement habitat management projects that support the improvement and development of native plant and animal communities, including imperiled species.

Forest Management

Goal: Manage the forest resources on the Preserve by applying sound silvicultural techniques, with consideration for maintenance of sustainable forest resources to achieve the District's land stewardship goals.

- Objective 1: Manage the forest resources in accordance with the District's 10-Year Timber Management Plan and conduct timber harvests as scheduled.
- Objective 2: Evaluate and develop forest management projects to support specific restoration and enhancement objectives developed for the Preserve.
- Objective 3: Conduct annual inspections of forest resources for indication of disease, insect infestations, or damage from fire to promote forest health and sustainability.

Imperiled Species Management

Goal: Manage and maintain natural systems to support development of imperiled, threatened, or endangered plant and animal species.

- Objective 1: Implement land management strategies and techniques that support development of habitat required for known imperiled species.
- Objective 2: In cooperation with other agencies and partners, implement survey and monitoring protocol, where feasible, for imperiled species and identify strategies for their recovery.
- Objective 3: Work with other state agencies, conservation organizations, and landowners to maintain habitat connectivity.

Invasive and Exotic Species Management

Goal: Manage the populations of exotic and invasive plants and animals found on the Preserve at a maintenance level.

- Objective 1: Implement the District's Invasive Plant Management Plan for the Preserve.
- Objective 2: Employ an EDRR methodology on new infestations identified in the Invasive Plant Management Plan.
- Objective 3: Implement the feral hog control plan and manage the feral hog population on the Preserve.

Infrastructure and Maintenance

Goal: Manage and maintain the infrastructure to protect the water resources and support the District's management objectives.

- Objective 1: Annually inspect and maintain roads and trails according to their designated maintenance schedule.
- Objective 2: Monitor and maintain culverts, bridges, and low water crossings to prevent adverse impacts on hydrology.
- Objective 3: Periodically inspect boundary fencing and gates to assure adequate protection and site security of resources and repair, as needed.

Administration

Land Acquisition

Goal: Pursue land acquisition projects that support the Florida Forever acquisition plan and seek to obtain conservation easements to maintain critical habitat linkages.

- Objective 1: Consider acquisition of inholding parcels to complete project boundary and improve management.
- Objective 2: Evaluate opportunities to acquire fee interest of parcels within the District's optimal boundary and Florida Forever work plan.
- Objective 3: Pursue acquisition of less-than-fee interest through strategic conservation easements that complement the District's existing network of fee interest and less-than-fee acquisitions.

Land Use and Recreation

Goal: Manage District lands for multiple-use purposes through the administration of leases, easements, and various types of agreements.

- Objective 1: Routinely review agreements, easements, and leases. Routinely review and update as necessary agreements, easements, and leases.
- Objective 2: Review special requests and issue special use authorizations for uses that are consistent with the District policies.
- Objective 3: Maintain cooperative relationships with state, local and other governmental entities along with stakeholders.

Goal: Provide quality, resource-based passive recreational opportunities for the public's enjoyment.

- Objective 1: Maintain appropriate public access and quality compatible recreational opportunities.
- Objective 2: Evaluate requests for additional compatible public access and recreational opportunities.

Archaeological and Cultural Resources

Goal: Manage cultural and historical resources to protect and preserve natural and cultural history.

- Objective 1: Coordinate and follow the Division of Historical Resources' recommendations for protection on known sites. Continue to monitor, protect, and preserve as necessary any identified sites.
- Objective 2: Take precautions to protect these sites from potential impacts resulting from management or maintenance activities.
- Objective 3: Maintain qualified staff as an Archaeological Site Monitor.

Security

Goal: Provide site security and resource protection.

- Objective 1: Identify, document, and address security issues, including encroachments and unauthorized access.
- Objective 2: Maintain and inspect boundary fences, boundary lines, and gates to deter encroachment and unauthorized access. Post and maintain rule and boundary signage.
- Objective 3: Maintain and as needed, update law enforcement agreement with FWC or other agencies as appropriate.

Significant Management Accomplishments

Below is a summary of the significant management accomplishments over the last 10 years for the Preserve. This is not an exhaustive list of all the management activities that have occurred, but a summary of the significant accomplishments.

Table of previous Goals and Objectives, Comments and Percent Accomplished

THIS SECTION IS UNDER DEVELOPMENT

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Appendix A

Imperiled Plant Species known to occur or likely to occur

Species	FDA[1]	Habitat	Management Recommendations
Hooded Pitcher Plant *Sarracenia minor*	E	Flatwoods/cypress dome ecotones	Manage Flatwoods with fire, take care in positioning firebreaks in dome/flatwoods ecotones.
Spreading airplant *Tillandsia utriculata*	E	Mesic/hydric hammocks, cypress swamp	Occurs in areas with infrequent fire-return intervals. Threatened by Mexican bromeliad weevils, illegal collection, and habitat destruction
Treat's rainlily *Zephyranthes atamasca*	E	Flatwoods, wet prairie, wet roadside ditches	Protection and proper management of habitat w/ appropriate burn regime.
Auricled spleenwort *Asplenuim erosum*	E	Cypress swamps, mesic hammocks	Protection and proper management of habitat
Brown hair-comb fern *Ctentis submarginalis*	E	Mesic hammock	Protect and maintain habitat
Cardinal airplant *Tillandsia fasciculata*	E	Mesic hammock, riverine swamp, cypress swamp	Protect and maintain habitat
Pond spice *Litsea aestivalis*	E	Cypress strands and swamps	Allow dome swamp canopy species to mature.
Giant airplant *Tillandsia utriculata*	E	Mesic hammock, riverine swamp, cypress swamp	Protect and maintain habitat
Swamp plume polypody *Pecluma ptilodon*	E	Mesic hammock	Protect and maintain habitat
Tampa vervain *Gandularia tampensis*	E	Hardwood hammocks and pine flatwoods	Protection of habitats, proper fire management
Hand fern *Ophioglossum palmatuma*	E	Mesic-hydric hardwood forests	Protection of hardwood forests; proper fire management
Giant orchid *Pteroglossaspis ecristata*	T	Sandhill, scrub, pine flatwoods	Use of prescribed fire to create sunny openings and reduce competition of woody species.
Cardinal flower *Lobelia cardinalis*	T	Forested creek and river edges	Sustain riparian habitats. Often pollenated by hummingbirds.
Catesby's lily *Lillium catesbaei*	T	Pine flatwoods and wet prairies	Manage areas with lilly using habitat-appropriate burn regimes.
Lacelip ladiestresses *Spiranthes laciniata*	T	Pine flatwoods, wet/dry prairies	Manage areas with ladiestresses with habitat appropriate burn regimes.
Yellow-fringed orchid *Plantantera cilaris*	T	Pine flatwoods, herbaceous wetlands	Maintain and manage habitats on appropriate burn regimes
Northern needleleaf *Tillandsia balbisiana*	T	Mesic hammock	Maintain habitat
Rain lily *Zephyranthes atamasco*	T	Herbaceous wetlands	Maintain habitat on appropriate burn regimes

Rose pogonia *Pogonia ophioglossoides*	T	Pine flatwoods and cypress swamp	Maintain habitat on appropriate burn regimes
Simpson's zephyr-lily *Zephyranthes simponii*	T	Herbaceous wetlands	Maintain habitat on appropriate burn regimes
Snowy orchid *Plantantera nivea*	T	Pine flatwoods, herbaceous wetlands	Maintain and manage habitats on appropriate burn regimes
Twisted airplant *Tillandsia flexuosa*	T	Riverine swamp	Protect and maintain habitat
Gypsy spikes *Plantantera flava*	T	Riverine swamp, cypress swamp	Protect and maintain habitat
Florida butterfly orchid *Encyclia tampensis*	CE	Mesic/hydric hammocks	Protect mesic and hydric hammocks. Prevent commercial exploitation.
Green-fly orchid *Epindrum conopseum*	CE	Mesic/hydric hammocks	Protect mesic and hydric hammocks. Prevent commercial exploitation.
Cinnamon fern *Osmunda cinnamomea*	CE	Forested wetlands	Protection of forested wetlands.
Royal fern *Osmunda regalis*	CE	Forested wetlands	Protection of forested wetlands.
Royal fern *Osmunda regalis*	CE	Forested wetlands	Control commercial exploitation
Needle Palm *Rhapidophyllum hystirx*	CE	Forested wetlands	Control commercial exploitation
Coontie *Zamia pumila*	CE	Mesic flatwoods, mesic hammock	Protect mesic flatwoods and mesic hammock. Prevent commercial exploitation.