

Charlotte Flatwoods Environmental Park
Land Management Plan
FCT Project #98-008-P7A

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Prepared for
Florida Communities Trust and

by
Charlotte County
Community Services Department

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Abbreviations and Acronyms

ATV	All-terrain vehicle
CHEC	Charlotte Harbor Environmental Center
DEP	Florida Department of Environmental Protection
DNR	Florida Department of Natural Resources
DOF	Fl. Dep. of Agri, And Consumer Svc. Div. of Forestry
FNAI	Fl. Natural Areas Inventory
FWC	Fl. Fish and Wildlife Conservation Commission
HCP	Habitat Conservation Plan
MP	Management Plan
Natural Resources	Charlotte County Natural Resources Division
SWFWMD	SWFL Water Management District
USGS	United States Geologic Survey
USFWS	United States Fish and Wildlife Service

1.0 INTRODUCTION

Charlotte Flatwoods Environmental Park is a 487.3 acre tract of environmentally sensitive land located in south eastern Charlotte County (**Exhibit A**). US 41 (Tamiami Trail) borders the east boundary of the park, Zemel Road borders the southern boundary and the northern and western boundaries are adjacent to state conservation lands (Yucca Pens Management Unit) managed by the Florida Fish and Wildlife Conservation Commission (FWC). The Park is located in Township 42 South, Range 23 East, Section 24 and Township 42 South, Range 24 East, Section 19.

Approximately 28 acres of the site consists of a shallow borrow pit which now serves as a functioning fresh water marsh ecosystem. Natural fresh water wetlands make up another 39 acres, with the remaining areas of the site being either wet or mesic flatwoods. Listed species that have been documented within the park include bald eagle (*Haliaeetus leucocephalus*), osprey (*Pandion haliaetus*), eastern indigo snake (*Drymarchon corais*), red-cockaded woodpecker (*Picoides borealis*), Florida sandhill crane (*Grus canadensis pratensis*), and Florida grasshopper sparrow (*Ammodramus savannarum floridamis*). A complete listing of species, including select documented but yet to be verified occurrences is provided with the annual FCT Stewardship Reports.

Grant funding from the Florida Communities Trust (FCT) was used to acquire a portion of the park. The remainder was acquired using the Charlotte County Local Option Sales Tax. This Management Plan outlines the monitoring and management activities for the park and was developed to ensure that the park will be managed in accordance with the Grant Award Agreement (**Appendix C**) and in furtherance of the purpose of the grant application. Literature and advertising will identify that Charlotte Flatwoods was acquired, in 1996, with funds from the Florida Communities Trust. Key management strategies include prescribed burns and exotic/invasive species removal. Activities such as garbage removal, site security, grading of ditch lines and plow lines, and mechanical vegetation reduction are also important aspects in the restoration and management of the park. The park is and will remain open to the public with trails and a wildlife observation area that further the public enjoyment of this site. Occasional tours or educational hikes of the park may be scheduled for the public. Only passive use recreation (e.g. hiking, bird watching, etc.) will be allowed within the Park. Ordinances prohibit destructive uses such as ATV use, illegal dumping, hunting, etc.

The park provides public outdoor recreation that is compatible with the conservation, protection, and enhancement of the site. Passive recreation is a desired use of the park and considered important in building public appreciation. Such use is also important in furthering the protection of the Park and the plants and animals found there.

2.0 PURPOSE

The purpose for acquiring this Property was for the protection of natural ecosystems and threatened and endangered species. Several listed species are found on Charlotte Flatwoods. Since the acquisition of this property, it has become apparent that environmental parks and preserves are important in preserving many other species that may be threatened, or in danger of becoming threatened or endangered, but have not received the political or legal status of a listed species. The purpose of this park, therefore, includes the preservation of all native species found on within the park, to enhance region wide preservation of the status of non-threatened species, and recovery of threatened species regardless of legal protection status. In order to meet this purpose, all native species found on the park are considered protected from harm, harassment or take.

It is the goal of Charlotte County to continue to restore and manage the park for the optimal health of each habitat and to maximize the diversity of both flora and fauna within the communities and habitats onsite.

Priority management objectives include:

- Focus on managing for the Red-cockaded wood peckers as an umbrella species where appropriate
- Protect wetland resources and functions within the park boundaries
- Increase habitat suitability for other known or potential listed species
- Manage for appropriate species diversity

These objectives do not allow for the displacement of any natural habitat or environmental community by another by management design: i.e. it is not acceptable to manage mesic flatwoods for scrub-jay habitat.

The future land use and zoning designations were changed between 2002-2006. The final future land use designation for Charlotte Flatwoods is Resource Conservation. The final zoning designation for Charlotte Flatwoods is Environmentally Sensitive.

Objectives of Recreation and Open Space Element, of the Charlotte County, Smart Charlotte 2050 Plan that would be furthered by managing the park include:

- **REC Objective 1.2 Park and Recreation Maintenance and Management**
To protect and maintain existing parks and assets to preserve physical, environmental, functional, recreational and aesthetic values.
- **REC Policy 1.2.1 Public Awareness**
The County shall protect, restore, and manage natural resources in parks and provide interpretive information regarding environmental resources, conservation easements and ecosystems within parks. The County shall consider

the proper long-term ecological functions and recreational value of the land and will work to increase public awareness and understanding of ecological systems.

- **REC Policy 1.2.2 Park Management and Maintenance Guidelines**
The County shall develop and implement guidelines for all park assets and improvements that will serve to provide a uniform basis for establishing management and maintenance practices and criteria which consider periodic, short and long-term needs.
- **REC Policy 1.2.3 Invasive Species Removal**
The County shall develop and pursue invasive, exotic plant and animal eradication programs for parks and open space by 2012.

Objectives of Natural Resources Element, of the Charlotte County, Smart Charlotte 2050 Plan that would be furthered by managing the park include:

- **ENV Policy 2.2.7 Environmental Acquisition and Management**
The County shall acquire and manage environmental lands using all available opportunities including, but not be limited to: levying an ad valorem tax; obtaining State, Federal and non-profit grant funding; land swaps; public/private partnerships; public/public partnerships (such as Florida Communities Trust); community land trusts; and conservation easements. All lands acquired by the County for preservation shall be managed to retain their environmental value.
- **ENV Policy 2.2.10 Land Management**
The County, or duly authorized management agencies, shall develop and implement long range management plans for preservation or conservation lands consistent with the natural resources found on these properties.
- **ENV Policy 2.2.11 Public Awareness of Environmental Lands**
In cooperation with other government agencies and non-profit groups, the County shall work to increase public awareness, appreciation, and (consistent with the resources found at each site) access to the publicly owned preserves and environmental parks within the County's borders.
- **ENV Policy 2.3.6 Exotic Plant Removal**
The County shall continue to enforce the removal of invasive exotic plants. The County shall also prohibit the planting of species listed as noxious weeds by 5B-57.007, Florida Administrative Code, and listed as invasive species on the Florida Exotic Pest Plant Council Invasive Plant Lists.
- **ENV Policy 2.3.8 Environmental Education**

The County shall support efforts to increase the public's understanding and stewardship of wildlife, natural communities, and other natural resources through partnerships with non-profit organizations such as the Florida Master Naturalist Program, the Florida Yards and Neighborhoods Program, and the University of Florida Food and Agricultural Sciences program.

3.0 NATURAL AND CULTURAL RESOURCES

The valuable natural resources in Charlotte Flatwoods Environmental Park include natural communities such as depression marsh, wet flatwoods, and mesic flatwoods. Many threatened and endangered species depend on these ecosystems and are found within the park. The most important tools for the management of the natural resources within the park include prescribed fire and invasive species removal (Sections 3.4 and 3.5). The natural communities of the park are defined according to the Florida Natural Areas Inventory (FNAI) definitions and are delineated in *Exhibit D*.

Native vegetation communities will be managed in a manner that maintains the natural, functional and or successional integrity. Charlotte Flatwoods Initiative, whose main goal is to restore historic sheet flow to the region, will reconnect the project site and Charlotte Harbor designated by the Department of Environmental Protection as Class II Outstanding Florida Waters aquatic preserve and National Estuary. Staff monitors the site throughout the year, when occurrences of previously unknown protected and special plant and animal species are observed onsite these observations will be reported to FNAI utilizing the FNAI Field Report Forms or on the FNAI web site at: http://www.fnai.org/FNAI_data/RareSpeciesDataForm.cfm.

3.1 Natural Communities

Wet and Mesic Flatwoods

There are approximately 112 acres of wet flatwoods, are found within the boundaries of Charlotte Flatwoods. Wet flatwoods are characterized by FNAI as pine forests with a sparse or absent midstory and a dense groundcover of hydrophytic grasses, herbs, and low shrubs. The pine canopy typically consists of one or a combination of longleaf pine (*Pinus palustris*), slash pine (*P. elliottii*), pond pine (*P. serotina*), or South Florida slash pine (*P. elliottii* var. *densa*). The subcanopy, if present, consists of scattered sweetbay (*Magnolia virginiana*), swamp bay (*Persea palustris*), and loblolly bay (*Gordonia lasianthus*). Shrubs include large gallberry (*Ilex coriacea*), fetterbush (*Lyonia lucida*), Saw palmetto (*Serenoa repens*) and gallberry (*I. glabra*) may be present. Herbs include wiregrass (*Aristida stricta* var. *beyrichiana*), blue maidencane (*Amphicarpum muhlenbergianum*), and/or hydrophytic species such as toothache grass (*Ctenium aromaticum*), coastalplain yellow-eyed grass (*Xyris ambigua*), Carolina redroot (*Lachnanthes carolina*), beaksedges (*Rhynchospora chapmanii*, *R. latifolia*, *R. compressa*), and pitcherplants (*Sarracenia* spp.), among others.

Charlotte flatwoods also contains approximately 313 acres of Mesic flatwoods. Mesic

flatwoods is characterized by an open canopy of tall pines and a dense, low ground layer of low shrubs, grasses, and forbs. Although slash pine (*Pinus elliottii*) is currently more common than longleaf pine in mesic flatwoods in northern Florida, this a result of invasion by, or planting of, slash pine after logging of longleaf pine followed by a long period of fire exclusion in the early part of the twentieth century (Garren 1943). Early accounts mention slash pine only in wet flatwoods sites (Clewell 1986). Characteristic shrubs include saw palmetto (*Serenoa repens*), gallberry (*Ilex glabra*), coastalplain staggerbush (*Lyonia fruticosa*), and fetterbush (*Lyonia lucida*). Rhizomatous dwarf shrubs, usually less than two feet tall, are common and include dwarf live oak (*Quercus minima*), runner oak (*Q. elliottii*), shiny blueberry (*Vaccinium myrsinites*), Darrow's blueberry (*V. darrowii*), and dwarf huckleberry (*Gaylussacia dumosa*).

Wet/mesic Flatwoods currently make up the majority of the site and occur as alternating strands through the park with only slight differences between them. Current vegetation community maps show mesic flatwoods as more predominant. With the impacts of roads and ditches surrounding the park, however, the entire property does not drain as it did historically, making it difficult to separate the mesic and wet flatwoods. Much of the historical mesic flatwoods may currently meet the criteria for wet flatwoods and the park is generally referred to as a wet flatwoods system. Efforts will be made to more accurately map these two communities and determine if any additional restoration can and should be done.

While tree density ranges widely, with basal areas of 40 to 95 square feet per acre, most of the flatwoods exhibits an open or moderately open canopy. The pines do not generally have a stunted look, but are very small for their age, presumably because of the wet nature of the park. Palmetto and underbrush density is moderate, with areas of low and high density scattered throughout. This habitat burns on a 3-5 year cycle for habitat restoration and maintenance.

Management goals for these habitat types are as follows:

- Conduct 2 prescribed burns in units containing mesic/wet flatwoods
- Reduce pine density by at least 15 percent
- Continue to manage exotic/invasive species

Depression Marsh

FNAI describes the depression marshes as forming the characteristic pockmarked landscape seen on aerial photographs of the flat landscapes of the Florida peninsula. They form when the overlying sands slump into depressions dissolved in underlying limestone. These marshes also frequently form an outer rim around swamp communities such as dome swamps. Depression marshes often burn with the surrounding landscape and are seasonally inundated. The deepest zones (dominated by pickerelweed, bulltongue arrowhead or sawgrass) may have a peat substrate and a continuous layer of sphagnum moss, while shallower zones (dominated by peelbark St. John's wort) have a sandy substrate. Maidencane may occur on either sand or peat (Winchester et al. 1985).

Freshwater marshes make up 35 acres of the park. The deeper centers of the natural systems are important water sources for wildlife during dry conditions. Typically these holes are vegetated with alligator flag (*Thalia geniculata*) and Carolina willow (*Salix caroliniana*). Five undisturbed depression marshes are found on site. One disturbed marsh has become a central feature.

The 28-acre disturbed wetland in the middle of the park was originally a large area of wet prairie which connected three depression marshes. During the construction of US 41, the prairie and northeast wetland was dug out as a borrow pit. The southern prairie and wetland is still intact and is cut off from the impacted area by a berm and trail. The northwest wetland is also still intact, but connected directly to the borrow pit wetland. While the borrow pit includes three deeper holes, most of it is relatively shallow and dries up during the winter.

Though it is not a natural feature, this man-made wetland has been in place long enough to become naturalized and is considered an important part of the park's ecosystem. The deeper holes are equivalent to "gator holes" during the dry season and hold many species of fish, as well as turtles and alligators. Many species of wading birds can be seen feeding at the holes and throughout the marsh. It is also a common place to see bald eagles in large numbers. Every year for the past several years the borrow pit marsh has been the nesting site for a pair of Florida sandhill cranes, a listed species.

Four other small borrow pits can be found in the park. Two of these are very small but also seem to enhance the ecosystem. The other two are much like large ponds which hold fish, turtles and alligators. These two borrow pits may be modified to create a more natural looking feature, but it is unlikely that the County will be able to completely restore them. Due to the high degree of utilization by a variety of species from the American Alligator to multiple protected listed wading birds backfilling of the borrow pits may not be beneficial. Alligators and their young are frequently seen utilizing the borrow pits and have been observed nesting in the direct vicinity. Listed wading birds are commonly seen foraging in these borrow pits.

The borrow pits are also a feature that was listed when FWC issued a permit for the County to relocate small alligators found on County property and designated Charlotte Flatwoods as a relocation site. The need for such internal relocation is rare but important.

Management goals for this habitat type are as follows:

- Continue maintenance of exotic/invasive species

Listed Plant Species

Threatened plants that have been documented on the park include: Catesby Lily (*Lilium catesbaei*), blue-flower butterwort (*Pinguicula caerulea*), yellow-flower butterwort

(*Pinguicula lutea*), Southern ladies tresses (*Spiranthes torta*), and Florida Loosestrife (*Lythrum flagellare*).

The natural communities will be monitored once per year. In this routine monitoring, photo points will be taken, and any information on identified listed species will be forwarded to the Florida Natural Areas Inventory using the forms located in (**Appendix A**).

3.2 Invasive/Exotic Plants and Feral Species Management

Exotic, or nonnative, plants reduce the quantity and quality of habitat available for native wildlife, especially when those exotic species are invasive; meaning that they spread quickly and out-compete native species. Exotic species should be removed for overall environmental health of the natural communities and ecosystem, as well as to preserve diversity and the listed and sensitive species.

Exotic invasive species observed within Charlotte Flatwoods include Brazilian pepper (*Schinus terebinthifolia*), downy rose-myrtle (*Rhodomyrtus tomentosa*), melaleuca (*Melaleuca quinquenervia*), lantana (*Lantana strigocamara*), Australian Pine (*Casuarina equisetifolia*), torpedograss (*Panicum repens*), Earleaf acacia (*Acacia auriculiformis*), and cogongrass (*Imperata cylindrica*), with the most widely distributed being the downy rose-myrtle and the melaleuca. These species are ranked as a Category I Invasive Species according to the 2019 List of Invasive Species from the Florida Exotic Pest Plant Council (FLEPPC). Category I species alter plant communities by displacing native species, changing community structures or ecological functions, or hybridizing with natives. This definition does not rely on the economic severity or geographic range of the problem, but on the documented ecological damage caused (FLEPPC, 2019).

Prevention is the most effective method of control; staff continually monitors the sites for early detection and control of populations. Currently, efforts to eradicate these Category I species closely parallel the exotic species control plans recommended by FLEPPC. Application of the most recent treatment recommendations by species is available via the FLEPPC web site (<http://www.fleppc.org/>). **Appendix B**

Exotic/Feral Animals

Feral pigs are a threat to native plants, communities and most native ground dwelling wildlife. County staff has contracted with the United States Department of Agriculture since 2016 for the control of exotic/invasive fauna on County conservation lands. Pigs have been a constant problem at Charlotte Flatwoods and numbers remain fairly stable in spite of ongoing trapping. Part of the difficulty is that the pigs come and go in response to the hunting activity on the neighboring State land where they are managed as a game animal.

Cuban anoles (*Norops sangrei*) and Cuban treefrogs (*Osteopilus septentrionalis*) have also been observed in the park. There is no state, federal, or local eradication program being implemented for these species.

European starlings (*Sturnus vulgaris*) have been seasonally observed within the park in small numbers. There is no state, federal, or local eradication program being implemented for European starlings, except in individual situations. Other than recording incidental observations, there is no monitoring planned for European starlings.

Monitoring

The site is monitored on a regular basis, to exclusively assess the presence of invasive/exotic plant and animal species.

3.3 Restoration

Charlotte Flatwoods has been County owned and maintained since 1998. All restoration projects have been completed.

3.4 Prescribed Burning

Prescribed burning has taken place on Charlotte Flatwoods since its purchase for both ecosystem restoration and maintenance. Each of the major vegetation communities found within the park are fire adapted and the use of prescribed fire is the best way for staff to manage a healthy ecosystem.

Burn priorities and rotations schedules are revisited throughout each year as both management resources and growing conditions change. All management units have perimeter fire-lines which are maintained throughout the year. Burning is coordinated with the DOF. Charlotte County's outreach program to inform residents of the area of the benefits of prescribed burns includes presentations, direct mailings and additional coordination with FFS.

3.5 Listed Species

Charlotte County maintains a list of species observed within Charlotte Flatwood by County staff. As additional species are observed the list shall be updated. Species found on the Federal and/or State endangered and threatened species lists are referred to as "listed species." For management purposes, Charlotte County Community Services also refers to the biological status as reported by FNAI.

Listed Species of Charlotte Flatwoods Environmental Park

Endangered (E), Threatened (T)

Common Name	Genus	Species	State	Fed
Reddish Egret	<i>Egretta</i>	<i>rufescens</i>	T	
Wood Stork	<i>Mycteria</i>	<i>americana</i>		T
Little Blue Heron	<i>Egretta</i>	<i>caerulea</i>	T	

Tricolored Heron	<i>Egretta</i>	<i>tricolor</i>	T	
American alligator	<i>Alligator</i>	<i>mississippiensis</i>		T (S/A)
Gopher Tortoise	<i>Gopherus</i>	<i>polyphemus</i>	T	

Staff will coordinate as necessary with both the Florida Fish and Wildlife Conservation Commission and U.S. Fish and Wildlife Service with regards to management and protection of listed species.

3.6 Inventory of the Natural Communities

The natural communities will be monitored as part of ongoing maintenance activities and any information on identified listed species will be forwarded to the Florida Natural Areas Inventory utilizing the FNAI Field Report Forms or on the FNAI web site at: http://www.fnai.org/FNAI_data/RareSpeciesDataForm.cfm.

3.7 Archeological, Cultural, and Historical Resources

Charlotte Flatwoods Park does not contain, or is not within ¼ mile of, a site listed on the National Register of Historic Places by the National Park Service or a site listed in the Florida Master Site File maintained by the Department of State, Division of Historical Resources (Historical Resources).

An archeological survey was conducted in April 2015, and Charlotte Flatwoods is not recognized by a local historic board or the Historical Resources as being significant at the local, regional, or state level. (**Appendix D**)

The Historical Resources will be contacted immediately if evidence is found to suggest an archaeological or historic resource/site at the Park. If artifacts or historic sites are discovered, collection or disturbance will be prohibited without authorization from the Division of Historical Resources. If artifacts or historical sites are discovered, the Division of Historical Resources will be coordinated with and management will comply with Chapter 267, Florida Statutes, Section 267.061 2(a) and (b). Any significant resources will be interpreted for the public using educational signs.

4.0 SITE DEVELOPMENT AND IMPROVEMENT

4.1 Acknowledgement Sign

The acknowledgment sign will be designed to "FCT" specifications, at least 3' x 4', and include the FCT logo, the date the park was acquired and with FCT funds. Signs are being created to assist the public in enjoying the features of this property.

4.2 Existing Physical Improvements

Existing physical structures within the Park include fences and gates, walking trails, parking areas, and an observation area, naturalized borrow pit marsh.

- **Entrance Signage** – An entrance sign, bearing the Charlotte County logo and park name has been installed at the entrance area on US 41. Included with this sign is an additional acknowledgement sign identifying the Park as being purchased with funds from “Florida Communities Trust.”
- **Fencing** - Four strand smooth wire fencing surrounds the park and delineates the boundaries. Gates with pedestrian walk-throughs are strategically placed and the gate at the main entrance, leading to the parking area is automated with a timer, opening at 7 am and closing at 8:30 pm.
- **Kiosk** – A kiosk at the main trailhead has been installed with an informational sign.
- **Walking Trails** - Seven miles of walking trails exist throughout the park. Most trails are native surface and serve as fire breaks for prescribed burning.
- **Parking Areas** - Parking is available along the +/- ¼ mile main entry providing access to several trails. The entry ends at a small developed parking lot with crushed shell surface near the large marsh and loop trail. Limited road-side parking is also available at the access gate on the south border of the Park along Zemel Rd.
- **Observation Area** - An observation area exists as a finger of land jutting out into the large marsh. A picnic table is currently in place at this location. The lookout area is an excellent place to see bald eagles, American alligators, many species of wading birds, warblers, fish, and other wildlife. This area may be enhanced or improved if funding becomes available.
- **Picnic Areas** – There is one picnic area located west of the parking lot near the observation area.

4.3 Proposed Physical Improvements

Proposed physical improvements (*Exhibit F*) will provide for appropriate public access, while meeting the management goal of conservation, protection, and enhancement of the Park’s natural resources. Charlotte County will request written approval from FCT before undertaking any alterations or physical improvements that are not addressed in the MP.

- **Trail Map and Points of Interest Signage** – Two additional signs will be installed at the existing Kiosk. The first sign will be a map of the existing hiking trails, and the locations of the “Points of interest.” The second sign will contain information associated with each “Point of Interest”, which will include facts about Freshwater Marshes, Sandhill Cranes, Bird Boxes, Alligators, Hydric Prairie, and Otters.

Surveys will identify any protected vegetation or wildlife inhabiting the site. Site plans will be adjusted accordingly to protect any such species. Relocation of listed species may be considered as an alternative. Any relocation efforts will adhere to all permits as may be required by FWC and USFWS.

4.4 Low Impact Development and Buffers

A wetland buffer will be provided between parking lots, major facilities, and wetlands wherever feasible and as dictated by state/federal permitting.

4.5 Stormwater Facilities

No storm water facilities are being proposed for the park. If storm water facilities are implemented, they will be designed to provide recreational open space or wildlife habitat in a park-like setting

4.6 Hazard Mitigation

The project site is in FEMA Zone D, meaning the flood risk is undetermined. No major structures are planned for construction within the park. This property will function as a buffer for wind and storm surge associated with a storm event.

4.7 Education Program

Charlotte County is committed to providing at least 4 regularly scheduled environmental or historical education programs at the project site conducted by the trained educators and resource professional. The curriculum will focus on the history of Charlotte County and the historic significance of the area along with an array of environmental awareness, education, and information. Additionally, special events are held throughout the year at the park and coordinated by Parks and Recreation staff. Charlotte County has a current contract with Charlotte Harbor Environmental Center. This contract provides for 4 educational outreach events onsite per year.

4.8 Permits

All applicable permits and/or approvals will be obtained prior to any permissible activities occurring on the project site.

4.9 Easements, Concessions and Leases

No easements or leases are found on Charlotte Flatwoods Environmental Park. No concessions have been granted to date.

Any revenue generated on the site will be placed into a separate account to be used solely for the management of Charlotte Flatwoods. Charlotte County will provide FCT 60 days prior written notice and information regarding any lease, management contract, or concession agreement proposed for the site and will seek FCT approval before granting any such revenue generating contract.

5.0 MANAGEMENT NEEDS

5.1 Coordinated Management

Community Services' staff is committed to working with all interested parties in accomplishing the management goals. When appropriate, Staff works on coordination and management of these lands with various County Departments, the Parks and Recreation Advisory Board and ESLOC. Coordination also takes place with FFS, DEP, and FWC concerning permitting and wildlife management where necessary. The Charlotte County Sherriff's Office assist in coordinating security in the park.

5.2 Greenways and Trails

Charlotte County Resolution No. 980440A0 pledged to develop an integrated system of trails, greenways, corridors, preserves, and waterways, in order to provide a foundation for the eco-tourism industry, provide wildlife corridors, and enhance public access to and appreciation of the County's natural resources. Charlotte Flatwoods Environmental Park enhances Charlotte County's integrated network of greenways by creating publicly-owned, passive-use open space adjacent to and in the general vicinity of this integrated network. A map of publicly-owned land within the vicinity of the Park is provided in Figure 6. The Yucca Pens Unit of the State-owned Fred C. Babcock-Cecil M. Webb Wildlife Management Area abuts the park on the west and north.

It is important that the Division coordinate with federal, state, and local agencies on the management of this greenway corridor, as management of one property may affect or enhance the management objectives of another. Coordinated management is discussed in Sections 3.5 and 5.1

5.3 Staffing

The Division will provide staffing, management, and maintenance for the Park. A full time Environmental Specialist will be directly responsible for all land management activities. Assistance from other Environmental Specialists and additional Department staff will be available as needed and the support of the Division Manager and other administrative positions will be available. Additional staffing may be obtained through volunteers, non-profit organizations, and/or contracted services as needed.

5.4 Public Education and Outreach

The County is committed to providing appropriate passive outdoor recreational opportunities by allowing public access to the Park. Additional educational programming opportunities designed to facilitate a greater understanding and appreciation of the natural resources may be provided as appropriate and as the need and public interest develops. The environmental education program may include:

- **Organized excursions into the Park.** Organized programs will meet FCT requirements. Currently a non-profit organization is contracted to lead

educational nature walks throughout the year. Additional organized programming may be developed by staff or by non-profit organizations at the direction of the Division.

- **Self-guided excursions into the Park.** Trail signs and educational kiosks (including a large site map) will be installed at the Park. Trail maps and a wildlife checklist will be posted on the County's website; because of printing costs, the County does not plan to provide printed copies at the Park.

Organized program descriptions will be included in the annual FCT Stewardship Report, including types of programs and the number of participants.

5.5 Maintenance

Charlotte County Community Services has the responsibility for managing and maintaining the Park. The maintenance objectives for the Park are visitor and employee health, safety, and welfare, maintenance of aesthetic qualities, and protection of natural resource values. Structures, such as bridges and fences, are inspected during monthly site inspections for maintenance and repair needs. Exotic vegetation treatment needs are met with both habitat management and trail maintenance activities. The site will have dedicated staff to perform routine maintenance tasks, including

- Mowing and pruning of vegetation around the entrance, parking areas, trails, and fire breaks
- Upkeep and cleaning of the facilities (including parking areas, fencing, kiosks, and signage)
- Garbage and debris removal
- Land Management (including removal of exotic species and prescribed burning)

The Division may utilize contracted and/or volunteer services as needed to assist in maintenance tasks.

5.6 Security

Charlotte County is concerned about both the safety of visitors and the protection of natural resources. The Community Services' Parks and Natural Resources Division staff ultimately has the responsibility for site security, including prevention of vandalism, property damage, unauthorized vehicle access, and trespassing. A three-tiered approach to site security is employed:

- **Signage and Fencing** – Signs and fencing shall be installed to restrict vehicle access and warn against other restricted or prohibited activities.
- **Staff** – Division staff shall monitor the integrity of the fences, repair damage by vandalism, monitor the site for evidence of ATV use, and take measures to clarify restricted areas and activities to citizens with signage
- **Sheriff, Fire/EMS, and DOF** – Shall respond to emergency calls from citizens

Activities that are not compatible with passive natural resource based activities are prohibited. Such prohibited activities include alcoholic consumption, social gatherings except for nature hikes, personal acts considered indecent or not appropriate for all ages and all groups within the public, disturbance of the peace, hunting except for the contracted removal of exotic and/or nuisance animals, harassing of wildlife, harvesting, destruction and/or removal of vegetation, any other activity that may have a negative impact on visitors, wildlife and/or the ecosystem.

All wildlife species are protected, including venomous snakes and other dangerous animals, and shall not be killed, harmed or harassed by visitors or staff unless they present an immediate, clear and unavoidable threat, or are part of an exotic species removal program to be carried out by authorized personnel only. Safety against wildlife species is not considered a viable reason to carry a lethal weapon. Except when carrying a concealed weapon for personal safety, accompanied by a license to do so by the state, possessing a firearm, bow, crossbow, trap or other hunting device is considered the intent to hunt or take wildlife and is prohibited.

6.0 COST ESTIMATE AND FUNDING SOURCES

A portion of this Park was acquired using funds from FCT. The remainder was funded by Charlotte County Local Option Sales Tax. The Park will be managed using ad valorem County taxes.

The annual cost estimate was broken into seven major categories:

- **Natural Resource Protection**
 - Exotic vegetation treatment - \$10,000
 - Feral animal/Exotic plant monitoring – in house
 - Listed species survey – in house or volunteer
- **Resource Enhancement**
 - Controlled burning – \$7200 (One rotation of all management units, approximately 450 burnable acres at approximately \$16 per acre, in house cost)
 - Mechanical thinning -In house
- **Archeological and Historical Resource Protection**
- **Educational Program**
 - Educational signs and kiosk - \$3000
- **Maintenance**
 - Mowing and pruning of vegetation around the entrance, fence, parking area, trails, and fire breaks -In House Upkeep of facilities (parking area, fencing, kiosk, signage) - \$1500 annually (Cost estimate based on current contract for environmental fencing)
- **Staffing** – See Section 5.3

7.0 PRIORITY SCHEDULE

A priority schedule that details a timeline for major events is included in **Appendix E**. This priority schedule covers 2019-2034.

8.0 MONITORING AND REPORTING

Charlotte County Natural Resources staff will prepare and submit an Annual Stewardship Report on October 30th of each year that will outline the implementation of the management plan. If any modification of the management plan is needed, or site alterations are needed, Charlotte County will seek FCT review and approval prior to any such work.

Division staff will also prepare and submit an annual revenue report. This report will contain data on revenue earned during the previous State Fiscal Year. FCT provides a Revenue Reporting Form for this purpose.

8.1 FCT Stewardship Report

It is the Division's responsibility to provide an Annual FCT Stewardship Report each year on or before October 30th, as required by Rule 9K-7.013 F.A.C. which evaluates the implementation of the Management Plan.

Any proposed modification of the Management Plan and/or undertaking any site alternations or physical improvements that are not addressed in the FCT-approved Management Plan requires FCT review and approval.

8.2 Revenue Report

The FCT is required annually to report on revenue earned on project sites acquired with FCT grant funds. In order to meet this requirement, by July 31 of each year, the Division will provide an annual report of revenue earned in the previous State Fiscal Year, July 1 through June 30. All fees collected will be placed in a segregated account solely for the upkeep and maintenance of the project site.

8.3 Habitat Assessment Monitoring

The goals of habitat assessment monitoring are to evaluate management efforts to ensure they are meeting ideal habitat requirements that are required for the associated plant and animal species to thrive. Evaluations from these monitoring efforts will be included in the Annual FCT Stewardship Report.

Monitoring efforts have been described in Sections 3.1, 3.4, and 3.5. Those monitoring efforts are summarized as:

- Ongoing inspection for feral pig (or other invasive species) damage.
- Listed Plant Survey
- Habitat photo monitoring

- Bird surveys
- Gopher tortoise surveys as needed
- General surveys/site inspections

8.4 Single Audit Act Report

It is the Charlotte County's responsibility to determine whether or not a State Single Audit or project-specific audit report for any given fiscal year should be submitted in accordance with Section 21.97, Florida Statutes; applicable rules of the Department of Financial Services and Chapter 10.550, Rules of the Auditor General.

9.0 REFERENCES

FLEPPC. 2017. *List of Florida's Invasive Species*. Florida Exotic Pest Plant Council. Internet: <http://www.fleppc.org/list/2015FLEPPCLIST-LARGEFORMAT-FINAL.pdf>

Florida Natural Areas Inventory Web Site: <http://www.fnai.org/>

Florida Natural Areas Inventory and Florida Department of Natural Resources. 1990. *Guide to the natural communities of Florida*.

Hipes, D., D. Jackson, K. NeSmith, D. Printiss, and K. Brandt. 2001. *Field guide to the rare animals of Florida*. Florida Natural Areas Inventory.

Myers, R. and J. Ewel. 1992. *Ecosystems of Florida*. University of Central Florida Press.

Soil Conservation Service. 1981. *Soil survey of Charlotte County*. United States Department of Agriculture.

Wunderlin, R. P., and B. F. Hansen. 2008. Atlas of Florida Vascular Plants (<http://www.plantatlas.usf.edu/>). [S. M. Landry and K. N. Campbell (application development), Florida Center for Community Design and Research.] Institute for Systematic Botany, University of South Florida, Tampa.