

**AMENDED FINAL MANAGEMENT PLAN  
Cypress Creek Sand Pine Preserve  
Conservation Land Site 78 D**



**Broward County  
Safe Parks and Land Preservation Bond**

**Prepared by  
City of Fort Lauderdale  
August, 2019**

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## **1. Introduction**

The Final Resource Management Plan for Conservation Land site 78D, Cypress Creek Sand Pine Preserve, was developed to ensure that the site will be developed in furtherance of the purposes of the Broward County Safe Parks and Land Preservation Bond Program, and in accordance with the approved Interlocal Agreement executed for the project by Broward County and the City of Fort Lauderdale.

Cypress Creek Sand Pine Preserve site is an 8.15-acre parcel known as Conservation Land Site 78D in the Broward County Conservation Land Inventory. The site contains sand pine scrub habitat that is listed as globally and state imperiled in the Florida Natural Areas Inventory "Guide to the Natural Communities of Florida" due to the rarity of the habitat. This meets the needs of the residents of the City of Fort Lauderdale for passive recreational opportunities. The property is located in northwest Broward County on the northeast corner of Cypress Creek Road and N.W. 21<sup>st</sup> Ave in the City of Fort Lauderdale. This sand pine community is located in the middle of a highly urbanized area. To the west is Calvary Chapel, to the north an abandoned fire station and an industrial facility, and to the east an office park. The site is separated to the south from the Fort Lauderdale Executive Airport by a six-lane divided highway (Appendix A – Project Site Location).

The Broward County Safe Parks and Land Preservation Bond Program provided funding for the acquisition of the Cypress Creek Preserve.

## **2. Purpose of the Project**

The main purposes of this project are to preserve ecologically important land in an area of Broward County characterized by intense urban development, and to provide outdoor recreational and environmental educational opportunities to the public while maintaining the City Level of Service Standard of 3 acres of open space per 1,000 residents. It will be managed only for the conservation, protection and enhancement of natural resources and for passive public outdoor recreation and education that is compatible with the conservation, protection and enhancement of the site.

### **2.1 Key Management Objectives**

To pursue the main purposes of the project, the following key management objectives have been established:

- 1.) Restoring native sand pine scrub habitat through invasive exotic plant removal, monitoring and landscaping with native plant species.
- 2.) Protecting natural resources and existing buffer areas from future development through land preservation.

- 3.) Preserving and protecting habitat for listed plant and animal species.
- 4.) Providing passive outdoor recreational facilities and environmental and historical information about the project in the form of a kiosk or other educational signage.
- 5.) Enhancing existing local greenways by connecting the project site to other natural resources adjacent to this property and in the area to provide an additional trailside destination point.

The following directives were taken verbatim from the 1990 Comprehensive Plan for the City of Fort Lauderdale, Florida. These directives will be furthered by acquisition and management of the project site as a passive park.

### **2.1.1 Conservation Element**

Policy 6.5: Promote the acquisition, retention and management of unique natural areas to preserve environmental, recreation and other public benefits.

### **2.1.2 Future Land Use Element**

Policy 1.3: Maintain a local level of service standard of 3 acres per 1,000 populations of Public Park, recreation and open spaces

### **2.1.3 Parks and Recreation Element**

Policy 2.1.5: The Parks Division shall utilize native plant material where appropriate in development of new parks, redevelopment of existing sites and at other public locations to achieve the benefits associated with such materials (lower maintenance costs, habitat provision, drought tolerance, etc.)

The *NatureScape Broward* program focuses on nine (9) principles for “Florida Friendly” landscapes. All applicable principles will be incorporated into park development. Either a *Backyard Wildlife Habitat* certification through the National Wildlife Federation or the *Florida Yards & Neighborhoods* certification through the University of Florida IFAS Extension will be applied for within three (3) months of opening the site to the public. For more information regarding the implementation of NatureScape practices, contact 954-519-0317.

## **2.2 Land Use Designation and Zoning**

The project site is currently zoned AIP – Fort Lauderdale Industrial Airpark. The City's land use and zoning designations and maps for the project site will be amended to be consistent with the County land use designation Conservation - Natural Reservation.

## 2.3 Identification of Site and Funding Sources

The project site will be identified in all literature and advertising as being publicly owned and operated as a natural conservation and outdoor recreation area and that the project site was acquired with Broward County Safe Parks and Land Preservation Bond Program funds.

## 3. Natural and Cultural Resources

### 3.1 Natural Communities

The site contains sand pine scrub habitat that is listed as globally and state imperiled in the Florida Natural Areas Inventory “Guide to the Natural Communities of Florida” due to the rarity of the habitat.

This predominantly sand pine scrub community has a fringe of Brazilian pepper (*Schinus terebinthifolius*) along the southern, eastern and northern borders comprising less than 10% of site coverage. The interior of the site is remarkably free of exotic plants and is a fine representation of the historical sand pine community. A list of the native plants on site is included as Table 1. The resources observed on site at the time of acquisition consist of the following below:

Table 1. Native plants on site, categorized by vegetative layer.

<b>Canopy</b>	
<i>Pinus clausa</i>	sand pine
<b>Subcanopy</b>	
<i>Quercus myrtifolia</i>	myrtle oak
<i>Quercus geminata</i>	sand live oak
<i>Quercus elliotii</i>	running oak
<i>Quercus chapmanii</i>	Chapman’s oak
<i>Tillandsia balbisiana</i>	inflated & reflexed wild pine
<i>Tillandsia fasciculata</i> var. <i>desispica</i>	cardinal airplant
<i>Tillandsia flexuosa</i>	banded airplant
<i>Tillandsia recurvata</i>	ball moss
<i>Tillandsia utriculata</i>	giant wild pine
<b>Shrub</b>	
<i>Callicarpa americana</i>	beautyberry
<i>Ximenia americana</i>	tallow wood
<i>Lyonia fruticosa</i>	coastalplain staggerbush
<b>Herb</b>	
<i>Ceratiola ericoides</i>	Florida rosemary
<i>Cladonia</i> spp.	Lichen
<i>Commelina erecta</i>	day-flower

<i>Conradina grandiflora</i>	scrub mint
<i>Lechea cernua</i>	nodding pinweed
<i>Licania michauxii</i>	gopher apple
<i>Opuntia humifusa</i>	pricklypear
<i>Sabal etonia</i>	scrub palmetto
<i>Rhynchospora megalocarpa</i>	sandyfield beaksedge
<i>Selaginella arenicola</i>	sand spike-moss
<i>Serenoa repens</i>	saw palmetto
<b>Vine</b>	
<i>Cassytha filiformis</i>	love vine
<i>Parthenocissus quinquefolia</i>	Virginia creeper
<i>Smilax auriculata</i>	earleaf greenbrier
<i>Vitis rotundifolia</i>	Muscadine grape

This site contains habitat for the gopher tortoise, a federally listed species due to habitat loss through development or declining quality of habitat. The availability of preferred foods such as graminoids, gopher apple, tallow-wood (hog plum), prickly-pear cactus, and saw palmetto enhances the suitability of this habitat for foraging. Maintenance of the scrub area will provide optimal breeding and foraging habitat, as well as continue to provide structured cover where they can construct burrows for refuge.

### 3.2 Geological Features

No geological features of relevance are present on the project site.

### 3.3 Water Quality

There are no water quality issues on this site.

### 3.4 Site Disturbance and Restoration

There is no evident disturbance of the site by feral animals. If disturbance or evidence of feral animals is found, a plan will be developed to humanely remove them from the project site.

Table 2. Exotic plant species that have been identified on site.

<i>Abrus precatorious</i>	rosary pea
<i>Acacia auriculiformis</i>	earleaf acacia
<i>Bischofia javanica</i>	bishop wood
<i>Cupaniopsis anacardioides</i>	carrotwood
<i>Eugenia uniflora</i>	Surinam cherry
<i>Jasminum dicotomum</i>	Gold Coast jasmine

<i>Kalanchoe pinnata</i>	life plant
<i>Momordica charantia</i>	balsam pear
<i>Schefflera actinophylla</i>	umbrella tree
<i>Schinus terebinthifolius</i>	Brazilian pepper
<i>Solanum diphyllum</i>	twoleaf nightshade
<i>Tabebuia heterophylla</i>	white cedar
<i>Tradescantia zebrina</i>	wandering Jew
<i>Tradescantia pallida</i>	purplequeen
<i>Tradescantia spathacea</i>	oyster plant

The site has a fringe of Brazilian pepper along the southern, eastern and northern borders comprising less than 10% of site coverage. The fringe of exotics will be removed with appropriate care taken for the native plants that are present, and replanting will be done with appropriate plants, including but not limited to, scrub oak, sand pine and saw palmetto.

The most recent Florida Exotic Pest Plant Council (FLEPPC) list of Invasive Species will be referenced in identifying invasive and exotic plant species on the project site. The most recent FLEPPC Invasive Species list is included as Appendix B to the management plan.

Exotic and invasive vegetation will be removed from the site. This removal will occur starting potentially in December 2019. Due to a large number of vehicular accidents at the intersection of NW 21<sup>st</sup> Ave and Cypress Creek Road, the site triangle has been kept clear of exotic vegetation since January 2007. The site will be replanted with native vegetation where the exotic species were removed within one year of invasive and exotic plant removal. Xeriscaping methods will be used as much as possible to conserve water. The site will be planted in native plant species at the percentage of the site required in the Conceptual Management Plan.

While only a small portion of the site is degraded by the invasion of exotic plants, all of the impacted area will be restored by the elimination of the invasive plants and replanting with appropriate plants for the habitat. The restoration area will comprise about one-half acre.

The restoration area is shown in the map included as Appendix C. All site restoration methods used will comply with the County approved Conservation Land Ecological Restoration Plan (CLERP) for the project site. A copy of the approved Conservation Land Ecological Restoration Plan (CLERP) is included as Appendix D to the management plan. Restoration activities as detailed in the Conservation Land Ecological Restoration Plan will be completed according to the timeline also contained in the CLERP.

Table 3. Potential native plant species to be used in site restoration.

Scientific Name	Common Name
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<b>Trees</b>	
<i>Quercus geminata</i>	Scrub oak
<i>Pinus clausa</i>	Sand pine
<b>Shrubs &amp; Ground Cover</b>	
<i>Serenoa repens</i>	Saw palmetto

The fringe of exotic vegetation, Brazilian pepper, along the southern, eastern and northern border will be removed with appropriate care taken for the native plants that are present, and will be replanted with appropriate native plants, including but not limited to, scrub oaks (*Quercus* spp.), sand pine (*Pinus clausa*), and saw palmetto (*Serenoa repens*). The site will be secured by split rail fencing, and maintained by the City of Fort Lauderdale through an interlocal agreement with Broward County.

As exotic and invasive vegetation is removed, a quarterly monitoring plan will be instituted to prevent re-infestation of the project site by invasive and exotic plants and to ensure the viability of restored and natural communities. This plan will not only include the removal of all exotic and invasive trees, shrubs, vines and groundcovers but the maintenance of the existing and newly planted material. Plant material that does not survive will be quickly replaced. The City of Fort Lauderdale Parks and Recreation Department will be responsible for this monitoring and maintenance.

### 3.5 Listed Species

Site development and management activities will be conducted to avoid impacts to native and listed species and their habitats whenever possible. The project site will be monitored annually for listed species and their locations will be recorded. If future monitoring of the project site reveals the presence of additional listed plant or animal species, they will be reported to the Florida Natural Areas Inventory (FNAI) on FNAI forms (Appendix E).

Table 4. Plant species have been observed on site.

<i>Tillandsia balbisiana</i>	inflated & reflexed wild pine	Threatened
<i>Tillandsia fasciculata</i> var. <i>desispica</i>	cardinal airplant	Endangered
<i>Tillandsia flexuosa</i>	banded airplant	Endangered
<i>Tillandsia utriculata</i>	giant wild pine	Endangered
<i>Conradina grandiflora</i>	scrub mint	Threatened
<i>Lechea cernua</i>	nodding pinweed	Threatened

Evidence of *Gopherus polyphemus*, gopher tortoise, a listed species, has been found on site.



### **3.6 Archaeological, Cultural, and Historical Resource Protection**

There are no generally known archaeological, cultural or historical resources on the project site. In the event such resources are found, or the evidence of such resources are found on the site, the City will immediately coordinate with the Florida Department of State, Division of Historic Resources (FDOS/DHR) to assess the resources of the find. Adequate protection measures will be implemented immediately by the City to protect all such resources. The collection of artifacts or the disturbance of archaeological, cultural or historic resources on the project site will be prohibited unless prior authorization has been obtained from the FDOS/DHR. Furthermore, the management of such resources will comply with the provisions of Chapter 267, Florida Statutes, specifically Sections 267.061 (2)(a) and (b).

## **4. Site Development and Improvement**

### **4.1 Acknowledgement Sign**

A sign will be erected at the entrance to the project site that acknowledges the partnership of the City of Fort Lauderdale and the Broward County Board of County Commissioners. It will further state that the project site was purchased in part with funds from the Broward County Safe Parks and Land Preservation Bond Program. The sign will be at least 3' by 4' in size and will include the City and Broward County logos and the year of acquisition.

### **4.2 Existing Physical Improvements**

There are no existing physical improvements on site.

### **4.3 Proposed Physical Improvements**

A universally accessible nature trail a minimum of 5' in width and no less than ½ mile in length will allow visual access to the entire site while protecting plant species. Access points to the project site will be designed to be compatible with all applicable state and federal construction standards, including the Americans with Disabilities Act.

Benches will be placed along trail adjacent to interpretive signage to provide an opportunity for rest and observation of flora and fauna. Picnic tables and trash cans will be added in areas along the trail and near the parking area.

No parking will be provided onsite as the intent is for the preserve to remain passive and as close to its natural state as possible. However, visible signage shall be provided at the park entrance indicating available parking at nearby Palm Aire Village Park 6401 NW 21<sup>st</sup> Avenue. The natural vegetation on the site as well as split rail fence will be installed on the project site to limit access to the preserve.

Any proposed modifications and/or undertaking of any site alterations or physical improvements not addressed in the approved management plan requires prior County review and approval according to Bond Program covenants.

*NatureScape Broward* principles will be utilized on the site after development occurs, including actions such as reducing the amount of irrigation, fertilizer and pesticide use on the site.

#### 4.4 Environmental Education Program

City Parks and Recreation Department staff has experience coordinating environmental awareness activities through established programs such as the Adopt-A- Park Program and the City’s annual Waterway Clean Up. City parks may provide visitors with self-guided tours depicting aspects of their natural resources. A goal of this project is to provide environmental educational opportunities to the public. To further this goal, an interpretive kiosk or trail map will be installed on the project site containing information about its natural resources. No other regularly scheduled environmental education programs will be conducted on the project site.

#### 4.5 Permits

Potential required permits are shown in Table 5 below. Other permits might be required in addition to, or in place of, those shown in Table 5. The City will obtain all required permits and approvals for management and development activities onsite prior to project initiation.

Table 5. Permits required or potentially required for development of the Cypress Creek Scrub Preserve.

<b>Type of Permit</b>	<b>Regulation Entity</b>
Environmental Resource License	Broward County Environmental Protection Department
Permits to work in right-of ways	Broward County Public Works and Transportation Department, City of Fort Lauderdale Public Services Department, Florida Department of Transportation
Standard General Environmental Resource Permit	South Florida Water Management District or Florida Department of Environmental Protection
Structural, landscaping, electrical, irrigation and zoning permits	Broward County Building Department and City of Fort Lauderdale Building Department
Tree Relocation/Removal Permit	City of Fort Lauderdale Landscaping Dept.

#### 4.6 Easements, Concessions and Leases

At present, no Easements, Rights of Way, Concessions or Leases exist.

### 5. Management Needs

#### 5.1 Coordinated Management

There are no adjacent or nearby sites that will require coordinated management.

#### 5.2 Trails and Greenways

The facilities in the project site will serve as trailside facilities to the county-wide greenway system (Appendix F). The trails to be developed on the project site will tie into the C-14 Canal – Cypress Creek Greenway that will connect at multiple points to the rest of the county-wide greenway system. As this section of the greenway is through a residential community at this point, the proposed site will provide a much needed trailhead for access to the system.

#### 5.3 Maintenance

The City will perform regular maintenance of the project site and amenities as indicated in Table 6. The project site will be maintained free of such materials in the future, through fencing and proper disposal methods. If any hazardous materials are discovered on the project site, the City will immediately notify the Broward County Environmental Protection Department.

Table 6. Operational plan of maintenance and monitoring activities at Cypress Creek Scrub Preserve.

<b>Time Frame</b>	<b>Activities</b>	<b>Responsible Agency</b>
Daily/Weekly as needed	Maintain public use amenities	City of Fort Lauderdale Parks & Recreation Dept.
Quarterly	Monitor site aesthetics	City of Fort Lauderdale Parks & Recreation Dept
Quarterly first year/annually thereafter or as needed	Monitor and treat for invasive and exotic plants	City of Fort Lauderdale Parks & Recreation Dept
Annually	Conduct plant surveys with photo points and descriptions of current conditions	City of Fort Lauderdale Parks & Recreation Dept
Annually, or as needed	Monitor and remove feral animals	City of Fort Lauderdale Parks & Recreation Dept
Annually	Conduct animal surveys	City of Fort Lauderdale Parks & Recreation Dept
Annually	Submit stewardship	City of Fort Lauderdale

	report, and any needed management plan changes, to Broward County Environmental Protection Department	Parks & Recreation Dept
Annually or as needed	Remove vines from trees	City of Fort Lauderdale Parks & Recreation Dept
As needed	Update management plan	City of Fort Lauderdale Parks & Recreation Dept

#### 5.4 Security

Surveillance of the project site and completed park will be provided by City police. City Parks and Recreation staff will regularly monitor the park for signs of disallowed use and they will coordinate as needed with City police to implement any additional security measures needed to ensure the continued integrity of the park.

#### 6. Cost Estimates and Funding Source

Activity	Fund	Cost Over 5-Year Period
<b><i>Initial Site Clean-up &amp; Revegetation</i></b>		
Trash and debris removal	CLERP	\$ 25,000
Exotic plant & vine removal	CLERP	\$ 30,000
Signage – acknowledgement sign	CIP	\$ 2,000 ea.
<b>Total</b>		<b>\$ 57,000</b>
<b><i>Site Development (Design, Construction and Installation)</i></b>		
Plans, engineering, permits	CLERP	\$ 53,000
Landscaping w/native plants - buffer	CLERP	\$ 100,000
Walking Trail	CLERP/Parks	\$ 101,450
Educational Kiosk & Signage	CIP	\$ 15,000
Entrance sign	CIP	\$ 4,000
Picnic tables (1)	CIP	\$ 1,100 ea.
trash cans (6)		\$ 1,250 ea.
benches (6)		\$ 3,000 ea.
<b>Total</b>		<b>\$ 300,050</b>
<b><i>Ongoing Activities</i></b>		
Assessment and treatment of exotic plants	Parks Operating Budget	\$ 50,000
Ground maintenance	Parks Operating Budget	\$ 10,000
Survey & monitoring (flora & fauna)	Parks Operating Budget	\$ 36,000

Survey & removal of feral animals	Parks Operating Budget	\$ 5,000
<b>Total</b>		<b>\$ 101,000</b>
<b>GRAND TOTAL</b>		<b>\$ 458,050</b>

## 7. Priority Schedule

A priority schedule is provided in Table 7 for implementing the development and management activities in this management plan

## 8. Monitoring and Reporting

The site will be regularly monitored for compliance with the management plan and an annual report detailing the progress of the project and success of management plan activities will be submitted to the Broward County Land Preservation Section, by December 31 of each year. These reports will be used to update the management plan only if any substantial changes are to occur in which case an amendment from the County shall be required.

Evaluating the success of project management goals is a long-term process, which requires monitoring ecosystem responses to management actions. General ecological monitoring and management-specific monitoring programs will be established as high priorities for the project site. Monitoring will be phased in conjunction with project site development. Monitoring will be divided into the following two programs. A baseline inventory of plant species onsite has already been completed.

### General Ecological Monitoring

#### Plant Communities

Plant communities on the project site will be monitored and documented annually, with photography and species lists, at fixed locations within each major vegetative community type and/or stratum. Any changes from one monitoring period to the next will be noted in a permanent record including listings of newly occurring species and those, which are no longer present.

#### Wildlife Populations and Distribution

Animal surveys will be conducted annually. Records will be kept of the species present, with photographic documentation where appropriate. Bird and gopher tortoise populations will be monitored using point count surveys. Incidental sightings of fauna on the project site will be recorded upon each visit by City and County staff.

## 9. Literature Cited

None

**APPENDICES**

Appendix A. Project Site Location and Legal Boundaries Map

Appendix B. FLEPPC List of Invasive Species

Appendix C. Master Site Plan Site Disturbance & Restoration Areas

Appendix D. Conservation Land Ecological Restoration Plan

Appendix E. Florida Natural Areas Inventory (FNAI) Forms

Appendix F. Trails and Greenways



# Broward County Board of County Commissioners

## Environmental Protection Department






### Land Preservation Inventory

Site 780

Cypress Creek Sand Pine Preserve

City of Fort Lauderdale

#### Protected Land

-  Preserve/Natural Park
-  Passive Park
-  Active Park
-  Mitigation or Other Protected Land
-  Conservation Land



THIS MAP IS FOR PLANNING PURPOSES ONLY.  
FOR FURTHER INFORMATION CALL  
THE LAND PRESERVATION SECTION (954-519-1239)

# Florida Exotic Pest Plant Council's 2015 List of Invasive Plant Species

**Purpose of the List:** To focus attention on —

- ▶ the adverse effects of exotic pest plants on Florida's biodiversity and native plant communities,
- ▶ the habitat losses in natural areas from exotic pest plant infestations,
- ▶ the impacts on endangered species via habitat loss and alteration,
- ▶ the need for pest plant management,
- ▶ the socio-economic impacts of these plants (e.g., increased wildfires or flooding in certain areas),
- ▶ changes in the severity of different pest plant infestations over time,
- ▶ providing information to help managers set priorities for research and control programs.

## CATEGORY I

Invasive exotics that are altering native 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.*

Scientific Name	Common Name	FLEPPC Category	Gov. List	Regional Distribution
<i>Abrus precatorius</i>	rosary pea	I	N	C, S
<i>Acacia auriculiformis</i>	earleaf acacia	I		C, S
<i>Albizia julibrissin</i>	mimosa, silk tree	I		N, C
<i>Albizia lebbbeck</i>	woman's tongue	I		C, S
<i>Ardisia crenata</i> ( <i>A. crenulata</i> misapplied)	coral ardisia	I	N	N, C, S
<i>Ardisia elliptica</i> ( <i>A. humilis</i> misapplied)	shoebutton ardisia	I	N	C, S
<i>Asparagus aethiopicus</i> ( <i>A. sprengeri</i> ; <i>A. densiflorus</i> misapplied)	asparagus-fern	I		N, C, S
<i>Bauhinia variegata</i>	orchid tree	I		C, S
<i>Bischofia javanica</i>	bishopwood	I		C, S
<i>Calophyllum antillanum</i> ( <i>C. calaba</i> misapplied)	Santa Maria, mast wood, Antilles calophyllum	I		S
<i>Casuarina equisetifolia</i>	Australian-pine, beach sheoak	I	P, N	N, C, S
<i>Casuarina glauca</i>	suckering Australian-pine, gray sheoak	I	P, N	C, S
<i>Cinnamomum camphora</i>	camphor tree	I		N, C, S
<i>Colocasia esculenta</i>	wild taro	I		N, C, S
<i>Colubrina asiatica</i>	lather leaf	I	N	S
<i>Cupaniopsis anacardioides</i>	carrotwood	I	N	C, S
<i>Deparia petersenii</i>	Japanese false spleenwort	I		N, C
<i>Dioscorea alata</i>	winged yam	I	N	N, C, S
<i>Dioscorea bulbifera</i>	air-potato	I	N	N, C, S
<i>Dolichandra unguis-cati</i> (= <i>Macfadyena unguis-cati</i> )	cat's claw vine	I		N, C, S
<i>Eichhornia crassipes</i>	water-hyacinth	I	P	N, C, S
<i>Eugenia uniflora</i>	Surinam cherry	I		C, S
<i>Ficus microcarpa</i> ( <i>F. nitida</i> and <i>F. retusa</i> var. <i>nitida</i> misapplied) <sup>1</sup>	laurel fig	I		C, S
<i>Hydrilla verticillata</i>	hydrilla	I	P, U	N, C, S
<i>Hygrophila polysperma</i>	green hygro	I	P, U	N, C, S
<i>Hymenachne amplexicaulis</i>	West Indian marsh grass	I		N, C, S
<i>Imperata cylindrica</i> ( <i>I. brasiliensis</i> misapplied)	cogon grass	I	N, U	N, C, S
<i>Ipomoea aquatica</i>	water-spinach	I	P, U	C
<i>Jasminum dichotomum</i>	Gold Coast jasmine	I		C, S
<i>Jasminum fluminense</i>	Brazilian jasmine	I		C, S
<i>Lantana camara</i> (= <i>L. strigocamara</i> )	lantana, shrub verbena	I		N, C, S
<i>Ligustrum lucidum</i>	glossy privet	I		N, C
<i>Ligustrum sinense</i>	Chinese privet, hedge privet	I	N <sup>2</sup>	N, C, S
<i>Lonicera japonica</i>	Japanese honeysuckle	I		N, C, S
<i>Ludwigia hexapetala</i>	Uruguay waterprimrose	I		N, C
<i>Ludwigia peruviana</i>	Peruvian primrosewillow	I		N, C, S
<i>Lumnitzera racemosa</i>	kriipa; white-flowered mangrove; black mangrove	I		S
<i>Luziola subintegra</i>	Tropical American water grass	I		S
<i>Lygodium japonicum</i>	Japanese climbing fern	I	N	N, C, S

<sup>1</sup>Does not include *Ficus microcarpa* subsp. *fuyuensis*, which is sold as "Green Island Ficus"

<sup>2</sup>Chinese privet is a FLDACS Noxious Weed except for the cultivar 'Variegatum'

**Exotic** – a species introduced to Florida, purposefully or accidentally, from a natural range outside of Florida.

**Native** – a species whose natural range includes Florida.

**Naturalized exotic** – an exotic that sustains itself outside cultivation (it is still exotic; it has not "become" native).

**Invasive exotic** – an exotic that not only has naturalized, but is expanding on its own in Florida native plant communities.

## Abbreviations:

Government List (Gov. List):  
P = Prohibited aquatic plant by the Florida Department of Agriculture and Consumer Services

N = Noxious weed listed by Florida Department of Agriculture & Consumer Services

U = Noxious weed listed by U.S. Department of Agriculture.

Regional Distribution:  
N = north, C = central, S = south, referring to each species' current distribution in general regions of Florida (not its potential range in the state). Please refer to the map below.





# Changes to the 2015 List:

## New Category I Listings:

### *Sporobolus jacquemontii* (West Indian dropseed)

This weedy grass, a native of the West Indies and tropical America, was introduced into Florida in the early 1900s. In the 1980s-1990s, it was becoming noticeable, especially in pastures where it crowds out forage grasses. It is not palatable for cattle and is very difficult to control. In recent years, this weed has been advancing into natural areas such as palmetto prairies and open flatwoods. West Indian dropseed is a close relative of, and very similar in appearance to, smut grass, *Sporobolus indicus*, leading to confusion with identification. The seedheads of both grasses can be affected by a smut fungus that leaves the seeds black and unfertile. Both grasses have spike-like seedheads. West Indian dropseed is taller, usually about 3-4 feet tall, with spreading seedhead branches. Smut grass is usually 1-2 feet tall with a tight cylindrical spike. Both species are very weedy, but West Indian dropseed is the one that has started invading native habitats.

David Hall

### *Vitex rotundifolia* (Beach vitex)

Beach vitex is a deciduous shrub that can grow to 1.5 m (5'). The nodal rooting system can extend 10m (34') with stems that can extend over 6m (20') from the main taproot. Young stems are green with fleshy tips that become larger in diameter, brown, and woody with age. Vitex has simple aromatic leaves that are sometimes palmately trifoliate. Leaves are 2-6.5 cm long and 1-4.5 cm wide. The flower is purple in color and appears in late spring to early summer. Vitex can be found on dunes, vacant lots, and along public right-of-ways.

Rick O'Connor, Florida Sea Grant/ University of Florida

## New Category II Listings:

### *Crassocephalum crepidioides* (redflower ragleaf)

*Crassocephalum crepidioides* is a member of the Aster family native to tropical Africa. This erect herb has a soft stem with lobed leaves and red flowers, with high seed production of more than 4000 per plant. Seeds are dispersed by the wind. First found

Scientific Name	Common Name	FLEPPC Category	Gov. List	Regional Distribution
<i>Lygodium microphyllum</i>	Old World climbing fern	I	N, U	C, S
<i>Macfadyena unguis-cati</i> (see <i>Dolichandra unguis-cati</i> )				
<i>Manilkara zapota</i>	sapodilla	I		S
<i>Melaleuca quinquenervia</i>	melaleuca, paper bark	I	P, N, U	C, S
<i>Melinis repens</i> (= <i>Rhynchelytrum repens</i> )	Natal grass	I		N, C, S
<i>Mimosa pigra</i>	catclaw mimosa	I	P, N, U	C, S
<i>Nandina domestica</i>	nandina, heavenly bamboo	I		N, C
<i>Nephrolepis brownii</i> (= <i>N. multiflora</i> )	Asian sword fern	I		C, S
<i>Nephrolepis cordifolia</i>	sword fern	I		N, C, S
<i>Neyraudia reynaudiana</i>	Burma reed, cane grass	I	N	S
<i>Nymphoides cristata</i>	crested floating heart	I	N	C, S
<i>Paederia cruddasiana</i>	sewer vine, onion vine	I	N	S
<i>Paederia foetida</i>	skunk vine	I	N	N, C, S
<i>Panicum repens</i>	torpedo grass	I		N, C, S
<i>Pennisetum purpureum</i>	Napier grass, elephant grass	I		N, C, S
<i>Phymatosorus scolopendria</i>	serpent fern, wart fern	I		S
<i>Pistia stratiotes</i>	water-lettuce	I	P	N, C, S
<i>Psidium cattleianum</i> (= <i>P. littorale</i> )	strawberry guava	I		C, S
<i>Psidium guajava</i>	guava	I		C, S
<i>Pueraria montana</i> var. <i>lobata</i> (= <i>P. lobata</i> )	kudzu	I	N	N, C, S
<i>Rhodomyrtus tomentosa</i>	downy rose-myrtle	I	N	C, S
<i>Rhynchelytrum repens</i> (See <i>Melinis repens</i> )				
<i>Ruellia simplex</i> <sup>1</sup>	Mexican petunia	I		N, C, S
<i>Salvinia minima</i>	water spangles	I		N, C, S
<i>Sapium sebiferum</i> (= <i>Triadica sebifera</i> )	popcorn tree, Chinese tallow tree	I	N	N, C, S
<i>Scaevola taccada</i> (= <i>Scaevola sericea</i> , <i>S. frutescens</i> )	scaevola, half-flower, beach naupaka	I	N	C, S
<i>Schefflera actinophylla</i> (= <i>Brassaia actinophylla</i> )	schefflera, Queensland umbrella tree	I		C, S
<i>Schinus terebinthifolius</i>	Brazilian-pepper	I	P, N	N, C, S
<i>Scleria lacustris</i>	Wright's nutrush	I		C, S
<i>Senna pendula</i> var. <i>glabrata</i> (= <i>Cassia coluteoides</i> )	climbing cassia, Christmas cassia, Christmas senna	I		C, S
<i>Solanum tampicense</i> (= <i>S. houstonii</i> )	wetland nightshade, aquatic soda apple	I	N, U	C, S
<i>Solanum viarum</i>	tropical soda apple	I	N, U	N, C, S
<i>Sporobolus jacquemontii</i> * (= <i>S. indicus</i> var. <i>pyramidalis</i> )	West Indian dropseed	I		C, S
<i>Syngonium podophyllum</i>	arrowhead vine	I		N, C, S
<i>Syzygium cumini</i>	jambolan-plum, Java-plum	I		C, S
<i>Tectaria incisa</i>	incised halberd fern	I		S
<i>Thespesia populnea</i>	seaside mahoe	I		C, S
<i>Tradescantia fluminensis</i>	small-leaf spiderwort	I		N, C
<i>Urena lobata</i>	Caesar's weed	I		N, C, S
<i>Urochloa mutica</i> (= <i>Brachiaria mutica</i> )	Para grass	I		C, S
<i>Vitex rotundifolia</i> *	beach vitex	I		N

## CATEGORY II

Invasive exotics that have increased in abundance or frequency but have not yet altered Florida plant communities to the extent shown by Category I species. *These species may become ranked Category I if ecological damage is demonstrated.*

Scientific Name	Common Name	FLEPPC Category	Gov. List	Regional Distribution
<i>Adenanthera pavonina</i>	red sandalwood	II		S
<i>Agave sisalana</i>	sisal hemp	II		C, S
<i>Aleurites fordii</i> (= <i>Vernicia fordii</i> )	tung oil tree	II		N, C
<i>Alstonia macrophylla</i>	devil tree	II		S
<i>Alternanthera philoxeroides</i>	alligator weed	II	P	N, C, S
<i>Antigonon leptopus</i>	coral vine	II		N, C, S
<i>Ardisia japonica</i>	Japanese ardisia	II		N
<i>Aristolochia littoralis</i>	calico flower	II		N, C, S

<sup>1</sup>Many names are applied to this species in Florida because of a complicated taxonomic and nomenclatural history. Plants cultivated in Florida, all representing the same invasive species, have in the past been referred to as *Ruellia brittoniana*, *R. tweediana*, *R. caerulea*, and *R. simplex*.

\*Added to the FLEPPC List of Invasive Plant Species in 2015

Scientific Name	Common Name	FLEPPC Category	Gov. List	Regional Distribution
<i>Asystasia gangetica</i>	Ganges primrose	II		C, S
<i>Begonia cucullata</i>	wax begonia	II		N, C, S
<i>Blechum pyramidatum</i> (see <i>Ruellia blechum</i> )				
<i>Broussonetia papyrifera</i>	paper mulberry	II		N, C, S
<i>Bruguiera gymnorrhiza</i>	large-leaved mangrove	II		S
<i>Callisia fragrans</i>	inch plant, spironema	II		C, S
<i>Casuarina cunninghamiana</i>	river sheoak, Australian-pine	II	P	C, S
<i>Cecropia palmata</i>	trumpet tree	II		S
<i>Cestrum diurnum</i>	day jessamine	II		C, S
<i>Chamaedorea seifrizii</i>	bamboo palm	II		S
<i>Clematis terniflora</i>	Japanese clematis	II		N, C
<i>Cocos nucifera</i>	coconut palm	II		S
<i>Crassocephalum crepidioides</i> *	redflower ragleaf, Okinawa spinach	II		C, S
<i>Cryptostegia madagascariensis</i>	rubber vine	II		C, S
<i>Cyperus involucratus</i> ( <i>C. alternifolius</i> misapplied)	umbrella plant	II		C, S
<i>Cyperus prolifer</i>	dwarf papyrus	II		C, S
<i>Dactyloctenium aegyptium</i>	Durban crowfoot grass	II		N, C, S
<i>Dalbergia sissoo</i>	Indian rosewood, sissoo	II		C, S
<i>Elaeagnus pungens</i>	silverthorn, thorny olive	II		N, C
<i>Elaeagnus umbellata</i>	silverberry, autumn olive	II		N
<i>Epipremnum pinnatum</i> cv. Aureum	pothos	II		C, S
<i>Eulophia graminea</i>	Chinese crown orchid	II		S
<i>Ficus altissima</i>	false banyan, council tree	II		S
<i>Flacourtia indica</i>	governor's plum	II		S
<i>Hemarthria altissima</i>	limpo grass	II		C, S
<i>Heteropterys brachiata</i> *	red wing	II		S
<i>Hibiscus tiliaceus</i> (See <i>Talipariti tiliaceum</i> )				
<i>Hyparrhenia rufa</i>	jaragua	II		N, C, S
<i>Ipomoea carnea</i> ssp. <i>fistulosa</i> (= <i>I. fistulosa</i> )	shrub morning-glory	II	P	C, S
<i>Kalanchoe pinnata</i> (= <i>Bryophyllum pinnatum</i> )	life plant	II		C, S
<i>Koelreuteria elegans</i> ssp. <i>formosana</i> (= <i>K. formosana</i> ; <i>K. paniculata</i> misapplied)	flamegold tree	II		C, S
<i>Landoltia punctata</i> (= <i>Spirodela punctata</i> )	spotted duckweed	II		N, C, S
<i>Leucaena leucocephala</i>	lead tree	II	N	N, C, S
<i>Limnophila sessiliflora</i>	Asian marshweed	II	P, U	N, C, S
<i>Livistona chinensis</i>	Chinese fan palm	II		C, S
<i>Macroptilium lathyroides</i>	phasey bean	II		N, C, S
<i>Melaleuca viminalis</i> (= <i>Callistemon viminalis</i> )	bottlebrush, weeping bottlebrush	II		C, S
<i>Melia azedarach</i>	Chinaberry	II		N, C, S
<i>Melinis minutiflora</i>	molasses grass	II		C, S
<i>Merremia tuberosa</i>	wood-rose	II		C, S
<i>Mikania micrantha</i>	mile-a-minute vine	II	N, U	S
<i>Momordica charantia</i>	balsam apple, balsam pear	II		N, C, S
<i>Murraya paniculata</i>	orange-jessamine	II		S
<i>Myriophyllum spicatum</i>	Eurasian water-milfoil	II	P	N, C, S
<i>Panicum maximum</i> (= <i>Urochloa maxima</i> , <i>Megathyrsus maximus</i> )	Guinea grass	II		N, C, S
<i>Passiflora biflora</i>	two-flowered passion vine	II		S
<i>Pennisetum setaceum</i>	green fountain grass	II		S
<i>Phoenix reclinata</i>	Senegal date palm	II		C, S
<i>Phyllostachys aurea</i>	golden bamboo	II		N, C
<i>Pittosporum pentandrum</i>	Philippine pittosporum, Taiwanese cheesewood	II		S
<i>Praxelis clematidea</i> *	praxelis	II		C
<i>Pteris vittata</i>	Chinese brake fern	II		N, C, S
<i>Ptychosperma elegans</i>	solitaire palm	II		S
<i>Rhoeo spathacea</i> (see <i>Tradescantia spathacea</i> )				

\*Added to the FLEPPC List of Invasive Plant Species in 2015

in the US in 1997 in Miami-Dade County, redbow ragleaf was documented in the panhandle in Escambia County in 2012.

Patricia L. Howell

### ***Heteropterys brachiata***

(red wing)

*Heteropterys brachiata* or "redwing" is a liana (woody vine) in the Malpighiaceae family. It is native to Mexico, Central America and South America. Redwing seedlings dominate the understory of hardwood hammocks, and older plants twine up into the canopy where their flowers and fruits are present, but out of reach, in winter months. The fruits of redwing are deep red, wind-dispersed samaras; hence the name "redwing."

Jennifer Possley, Fairchild Tropical Botanic Garden

### ***Praxelis clematidea***

(Praxelis)

*Praxelis clematidea* is an Aster with lavender colored flowers from South America. Its short life cycle and propensity to be moved by vehicles contribute to its recent invasion in Central Florida. Look for young, light green plants with irregularly toothed leaves that soon flower, and then develop tough stems and bases. Flowers are a series of florets produced in heads, each producing a single, bristle-topped seed that is seated on a conical receptacle. This key character is easy to see because the phyllaries fall to reveal the receptacle when the head is in fruit.

Colette Jacono

### ***Spermacoce verticillata***

(scrubby false buttonweed)

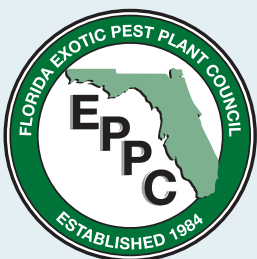
A common weed of disturbed sites for over 80 years, *Spermacoce verticillata* is advancing into natural areas, especially in southern Florida. A member of the coffee family, Rubiaceae, plants are best known for their nearly woody, multiple branched structure, opposite, stalkless leaves often clustered in a whorl; and axillary, cylindrical heads of densely packed flowers. Distinguish this species from our natives by its tubular white flowers that are no longer than 1mm and fruits that are less than 1.5mm long.

Colette Jacono

# Use of the FLEPPC List

**The FLEPPC List of Invasive Plant Species is not a regulatory list. Only those plants listed as Federal Noxious Weeds, Florida Noxious Weeds, Florida Prohibited Aquatic Plants, or in local ordinances are regulated by law.** FLEPPC encourages use of the Invasive Species List for prioritizing and implementing management efforts in natural areas, for educating lay audiences about environmental issues, and for supporting voluntary invasive plant removal programs. For more information on using the FLEPPC List of Invasive Plant Species, see *Proper Uses of FLEPPC Invasive Plant Lists* at [www.fleppc.org/list/list.htm](http://www.fleppc.org/list/list.htm)

**NOTE:** Not all exotic plants brought into Florida become pest plants in natural areas. The FLEPPC List of Invasive Plant Species represents only about 11% of more than 1,400 exotic species that have been introduced into Florida and have subsequently established outside of cultivation. Most escaped exotics usually present only minor problems in highly disturbed areas (such as road-sides). And there are other exotics cultivated in Florida that are “well-behaved” — that is, they don’t escape cultivation at all.



Scientific Name	Common Name	FLEPPC Category	EXHIBIT 1 Distribution	Page 19 of 41
<i>Richardia grandiflora</i>	large flower Mexican clover	II	N, C, S	
<i>Ricinus communis</i>	castor bean	II	N, C, S	
<i>Rotala rotundifolia</i>	roundleaf toothcup, dwarf Rotala, redweed	II	S	
<i>Ruellia blechum</i> (= <i>Blechum brownei</i> )	green shrimp plant, Browne's blechum	II	N, C, S	
<i>Sansevieria hyacinthoides</i>	bowstring hemp	II	C, S	
<i>Sesbania punicea</i>	purple sesban, rattlebox	II	N, C, S	
<i>Solanum diphyllum</i>	two-leaf nightshade	II	N, C, S	
<i>Solanum torvum</i>	susumber, turkey berry	II	N, U, N, C, S	
<i>Spermacoce verticillata</i> *	shrubby false buttonweed	II	C, S	
<i>Sphagneticola trilobata</i> (= <i>Wedelia trilobata</i> )	wedelia	II	N, C, S	
<i>Stachytarpheta cayennensis</i> (= <i>S. urticifolia</i> )	nettle-leaf porterweed	II	S	
<i>Syagrus romanzoffiana</i> (= <i>Arecastrum romanzoffianum</i> )	queen palm	II	C, S	
<i>Syzygium jambos</i>	Malabar plum, rose-apple	II	N, C, S	
<i>Talipariti tiliaceum</i> (= <i>Hibiscus tiliaceus</i> )	mahoe, sea hibiscus	II	C, S	
<i>Terminalia catappa</i>	tropical-almond	II	C, S	
<i>Terminalia muelleri</i>	Australian-almond	II	C, S	
<i>Tradescantia spathacea</i> (= <i>Rhoeo spathacea</i> , <i>Rhoeo discolor</i> )	oyster plant	II	S	
<i>Tribulus cistoides</i>	puncture vine, burr-nut	II	N, C, S	
<i>Vitex trifolia</i>	simple-leaf chaste tree	II	C, S	
<i>Washingtonia robusta</i>	Washington fan palm	II	C, S	
<i>Wedelia</i> (see <i>Sphagneticola</i> above)				
<i>Wisteria sinensis</i>	Chinese wisteria	II	N, C	
<i>Xanthosoma sagittifolium</i>	malanga, elephant ear	II	N, C, S	

### Citation example:

FLEPPC. 2015. List of Invasive Plant Species. Florida Exotic Pest Plant Council. <http://www.fleppc.org/list/list.htm>

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The Early Detection and Distribution Mapping System (EDDMapS) holds records of reported sighting of invasive species in Florida. Most records are from local, state, and federal parks and preserves; a few records document infestations in regularly disturbed public lands such as highways or utility rights-of-way. Natural area managers, veteran observers of Florida's natural landscapes, and others submit these records, with many supported further by voucher specimens housed in local or regional herbaria for future reference and verification. New and updated observations can be submitted online at EDDMapS [[www.eddmaps.org/florida/](http://www.eddmaps.org/florida/)]. All reports are verified by an expert. This database, along with other plant data resources such as the University of South Florida's Atlas of Florida Vascular Plants [[www.plantatlas.usf.edu](http://www.plantatlas.usf.edu)], the Florida Natural Areas Inventory database [[www.fnai.org](http://www.fnai.org)], and The Institute for Regional Conservation Floristic Inventory of South Florida database [[www.regionalconservation.org](http://www.regionalconservation.org)], provides important basic supporting information for the FLEPPC List of Invasive Plant Species. Greater success and accuracy in searching for plant information is likely if you search by scientific name rather than common name. Common names often vary in cultivation and across regions.

\*Added to the FLEPPC List of Invasive Plant Species in 2015



**Concept Plan**  
**CYPRESS CREEK SCRUB**  
**PERSERVE**  
Cypress Creek Road and NW 21st Avenue  
Fort Lauderdale, Florida



SCALE: NTS  
10-18-07

## Conservation Land Ecological Restoration Plan for Site 78D (Cypress Creek Scrub Preserve)



May 11, 2005

# Cypress Creek Scrub Preserve

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## Purpose and Goals

This document will provide guidelines for ecological restoration of the project site known as the Cypress Creek Scrub Preserve, Conservation Land Site 78D under the Safe Parks and Land Preservation Bond Program.

The primary goal of this initial restoration effort is the removal of invasive exotic vegetation from a South Florida sand pine scrub vegetative community.

## Site Description

The project site is about 8.15 acres of sand pine scrub located in the City of Fort Lauderdale. The site is located on the northeast corner of Cypress Creek Road and NW 21<sup>st</sup> Avenue. This site is north of the Fort Lauderdale Executive Airport. Exhibit 1 shows neighboring owners and property boundaries.

The site is a small fragment of the very rare scrub community remaining in Broward County. Less than two percent of the original extent of scrub habitat remains. The vegetation on the site is characterized as sand pine scrub composed of a canopy of sand pine and subcanopy of saw palmetto, small scrub oaks, and tallow wood. Exhibit 2 contains a list of the native plant species currently inventoried on the site.

Portions of the site have been invaded by non-native plant material and some illegal dumping has occurred. The list of exotic plant species found on the site may be found in Exhibit 3.

While fire is an important management tool for scrub areas to eradicate non-native and nuisance plant species, recycle nutrients, and to promote successional stability and vegetation restoration, the proximity to the Fort Lauderdale Executive Airport makes it unlikely that prescribed fires are a viable option.

A master plan will be developed for the site, considering ecological sensitivity, and presented to the Broward County Board of County Commissioners for approval. Possible compatible uses include limited nature trails, observation areas, environmental education, and scientific research. Future site monitoring will be an important task to ensure minimal disturbance to resources as a result of public access.

## Ecological Condition

### ***Stresses to the Site***

In general the site is significantly impacted by invading exotic vegetation and unchecked trespassing. Brazilian pepper (*Schinus terebinthifolius*) is the most common exotic vegetation specifically along the northern boundary shared with a City vacant fire station and City-owned vacant area. The project site's eastern boundary has been impacted with a

## Exhibit 2 – Native Plant Species List

Categorized by vegetative layer

<u>Specific epithet</u>	<u>Common Name</u>	<u>Threatened or Endangered and/or Endemic</u>
<b><u>Canopy</u></b>		
<i>Pinus clausa</i>	sand pine	
<b><u>Subcanopy</u></b>		
<i>Quercus myrtifolia</i>	myrtle oak	
<i>Quercus geminata</i>	sand live oak	
<i>Quercus elliotii</i>	running oak	
<i>Quercus chapmanii</i>	Chapman's oak	
<i>Tillandsia balbisiana</i>	inflated & reflexed wild pine	threatened
<i>Tillandsia fasciculata</i> var. <i>desispica</i>	cardinal airplant	endangered
<i>Tillandsia flexuosa</i>	banded airplant	endangered
<i>Tillandsia recurvata</i>	ball moss	
<i>Tillandsia utriculata</i>	giant wild pine	endangered
<b><u>Shrub</u></b>		
<i>Callicarpa americana</i>	beautyberry	
<i>Ximenia americana</i>	tallow wood	
<i>Lyonia fruticosa</i>	coastalplain staggerbush	
<b><u>Herb</u></b>		
<i>Ceratiola ericoides</i>	Florida rosemary	
<i>Cladonia</i> spp.	lichen	
<i>Commelina erecta</i>	day-flower	
<i>Conradina grandiflora</i>	scrub mint	threatened, endemic
<i>Lechea cernua</i>	nodding pinweed	threatened, endemic
<i>Licania michauxii</i>	gopher apple	
<i>Opuntia humifusa</i>	pricklypear	
<i>Sabal etonia</i>	scrub palmetto	endemic
<i>Rhynchospora megalocarpa</i>	sandyfield beaksedge	
<i>Selaginella arenicola</i>	sand spike-moss	
<i>Serenoa repens</i>	saw palmetto	
<b><u>Vine</u></b>		
<i>Cassytha filiformis</i>	love vine	
<i>Parthenocissus quinquefolia</i>	Virginia creeper	
<i>Smilax auriculata</i>	earleaf greenbrier	
<i>Vitis rotundifolia</i>	Muscadine grape	



variety of exotic species originating from landscaped species although Brazilian pepper remains the dominant invasive.

## **Soils**

(This section extracted from Langeland and Stocker, 2000)

The soils on the site are characterized as St. Lucie fine sand (Exhibit 4).

The St. Lucie series consists of nearly level, excessively drained soils on low knolls and ridges in the eastern part of the county. These soils formed in thick beds of marine sand. The water table is below a depth of 80 inches.

Typically, the surface layer is gray fine sand about 4 inches thick. White fine sand is between depths of 4 and 82 inches. Below this to a depth of 94 inches is white fine sand mottled with brown.

Permeability is very rapid throughout these soils. Available water capacity is very low in all layers. Natural fertility and content of organic matter are low.

St. Lucie soils are unsuited to cultivated crops or citrus and have only limited suitability for improved pasture.

Typical pedon of St. Lucie fine sand, 400 feet south of Cypress Creek Road and 3,320 feet west of NW 12th Avenue, NE1/4 NE1/4 SW1/4 sec. 9, T. 49 S., R 42 E.:

Al- 0 to 4 inches; gray (10YR 511) fine sand; single grained; loose; few fine and medium roots; strongly acid; clear wavy boundary.

C1- 4 to 9 inches; white (10YR 811) fine sand; common medium distinct gray (10YR 511) and dark gray (10YR 411) streaks along root channels; single grained; loose; few coarse roots; strongly acid; gradual wavy boundary.

C2- 9 to 82 inches; white (10YR 811) fine sand; single grained; loose; few coarse roots; strongly acid; gradual wavy boundary.

C3- 82 to 94 inches; white (10YR 811) fine sand; few fine faint brown (10YR 413) and dark yellowish brown (10YR 414) mottles; single grained; loose; strongly acid.

St. Lucie soils are 80 or more inches deep. Reaction ranges from very strongly acid to strongly acid throughout. The Al horizon is gray or light gray and is 2 to 5 inches thick. The C horizon is white or light gray. This horizon has mottles in shades of gray, yellow, or brown below a depth of 40 inches in some places.

St. Lucie soils are associated with Paola and Pomello soils. They do not have the B horizon of Paola soils or the Bh horizon of Pomello soils. They are excessively drained, whereas Pomello soils are moderately well drained.

St-St. Lucie fine sand. This is a nearly level, deep, excessively drained, sandy soil on low knolls and ridges in the eastern part of the county. Included in mapping are small areas of Immokalee fine sand, Pomello fine sand, and Paola fine sand.

The natural vegetation consists of sand pine, scrub oak, a few palmetto, and cactus.

This soil has properties that make it unsuited to cultivated crops and citrus and very limited for use as improved pasture. Pasture grasses are hard to maintain and grow poorly because of droughtiness and infertility, fertilizers leach rapidly.

This soil is in capability subclass VIIIs.

### ***Native Plant Species***

This scrub site has a tree canopy dominated by sand pine (*Pinus clausa*). Cover is patchy ranging from 20 to 70 percent. Seedling and sapling sand pines are present where the canopy is not dense. Recruitment of sand pine was not observed in areas of dense canopy. The understory is dominated by myrtle oak (*Quercus myrtifolia*), saw palmetto (*Serenoa repens*) and tallow wood (*Ximenia americana*). Subcanopy cover is patchy ranging from zero to 100 percent. Litter cover is continuous in canopy-covered areas. The litter is primarily composed of pine needles and pine cones over sandy substrate. There are areas of open sandy pockets where canopy is absent, and the vegetation consists of graminoids (grasses and sedges) and acidophilic species. Several of the open canopy areas are dominated by rosemary (*Ceratiola ericoides*) and coastalplain staggerbush (*Lyonia fruticosa*). The edges of this vegetative association usually consist of dense stands of myrtle oak and Chapman's oak (*Quercus chapmanii*). Love vine (*Cassytha filiformis*) and muscadine grape (*Vitis rotundifolia*) are also present. Both vines are extremely prolific and completely cover the scrub in some areas.

### ***Endangered or Threatened Plant Species***

Listed plant species include scrub mint (*Conradina grandiflora*), nodding pinweed (*Lechea cernua*), inflated wild pine (*Tillandsia balbisiana*), common wild pine (*Tillandsia fasciculata* var. *densispica*), and the giant wild pine (*Tillandsia utriculata*). The scrub mint, an early successional scrub species endemic to scrub habitats in southeastern Florida, is a fragrant herb which discharges chemicals into the soil that prevent other plants from germinating around it. In many areas of Broward County populations of the giant wild pine and common wild pine are declining due to collection pressure and destruction by an exotic weevil, *Metamasius callizona* (Larson and Frank 2004). The *Tillandsia* species on this site are secure for now but are subject to damage if a weevil population becomes established. Monitoring for the weevil will be performed regularly.

Those species listed as endangered by the Department of Agriculture and Community Services under Rule 5B-40, F.A.C. According to Rule 5B-40(1) it is illegal to willfully

harvest, collect, pick, remove, injure or destroy any such plant listed as endangered growing on the private land of another or on any public land or water.

## **Exotic Plant Species**

The Florida Exotic Pest Plant Council (FLEPPC) publishes a list of invasive exotic species found in the State (See Attachment 1). Species are divided into two categories according to the level of invasiveness and perseverance. Category I species are altering native plant communities while Category II species are increasing in abundance but have yet to alter natural communities. Eight (8) Category I species exist on the site as well as two (2) Category II species (Exhibit 3).

### **Category I Species**

The project site contains eight species that are categorized as Category I by the FLEPPC including Brazilian pepper, earleaf acacia (*Acacia auriculiformis*) and umbrella tree (*Schefflera actinophylla*). These species are extremely disruptive to the maintenance of the structure and composition of natural vegetation types, and they must be controlled and eradicated as a very high priority.

### **Category II Species**

Two species are categorized as Category II by the FLEPPC: life plant (*Kalanchoe pinnata*) and twoleaf nightshade (*Solanum diphyllum*). These types of species are also disruptive to the vegetative structure and composition of the natural cover types, but are either more localized, or less numerous than those Category I species. The site should be checked seasonally for new incidence of these exotics, which can be removed manually.

### **Other Exotic Species of Note**

Other locally common exotics in the scrub and ruderal communities are present in varying, abundance throughout the site, some much more common than others. Such species include white cedar (*Tabebuia heterophylla*), wandering Jew (*Tradescantia zebrina*), oyster plant (*Tradescantia spathacea*), and purple queen (*Tradescantia pallida*).

## **Wildlife**

The site is suitable habitat for these listed species:

gopher tortoise, *Gopherus polyphemus*

Areas of gopher tortoise activity and some burrow locations have been documented, but the current status of the population is unknown. Potential habitat on site has been identified, but an evaluation must be conducted to determine the location and structure of burrows, the amount and quality of utilized habitat, the carrying capacity of the site, and the health status of the population. The availability of preferred foods such as graminoids (grasses and sedges), gopher apple, tallow wood, pricklypear cactus, and saw palmetto

enhances the suitability of this habitat for foraging. Restoration of a natural fire regime and maintenance of the scrub matrix and early successional sere will provide optimal breeding and foraging habitat, as well as continue to provide structured cover where they can construct burrows for refuge. The tortoise population should be censused to determine age structure and recruitment, and whether it is a viable population.

Many of the wildlife species observed on the site also utilize surrounding developed areas. Further investigations are necessary to determine which species are dependent upon this island of natural area. For instance, of the reptiles reported for the site, the six-lined racerunner (*Cnemidophorus sexlineatus sexlineatus*) is a scrub species and not likely to venture off the site. On the other hand, snake species observed including the rough green snake (*Ophedrys aestivus*) would make use of the residential areas surrounding the site. Other reptiles observed on site include several indigenous and non-indigenous lizards. Though the Southeastern five-lined skink (*Eumeces fasciatus*) was observed, notably absent from the survey were other lizard species common to scrub sites including the Florida scrub lizard (*Sceloporus woodi*).

One notable species of butterfly observed is the zebra swallowtail (*Eurytides marcellus*) whose larvae feed exclusively on pawpaw (*Asimina* spp.). Loss of scrub habitat to urban development has resulted in a noted population decline of this butterfly species.

A number of widely distributed mammals characteristically are found utilizing scrub habitat. The gray squirrel (*Sciurus griseus*) nests in the pine canopy and forages in the canopy and understory. The nocturnal gray fox (*Urocyon cinereoargenteus*) may hunt small mammals and forage on nuts and berries. Well-defined animal trails have been observed on site and are thought to be utilized by raccoons (*Procyon lotor*) and domestic cats (*Felis catus*). The presence of domestic animals, such as dogs (*Canis familiaris*) and cats, on-site is also a management consideration.

The structure and developmental stage of scrub vegetation greatly affects wildlife utilization, particularly for birds (Myers and Ewel, 1990). The smooth billed ani, a lesser seen species in south Florida, prefers scrub habitats for foraging and nesting. The sand pine canopy is also utilized by common species such as woodpeckers, blue jays (*Cyanocitta cristata*), wrens and warblers as well as the rarer American redstart (*Setophaga ruticilla*). Other species which would utilize the low, open vegetation include the killdeer (*Charadrius vociferus*), rufous-sided towhee (*Pipilo erythrophthalmus*), doves (*Zenaida* spp.), loggerhead shrike (*Lanius ludovicianus*), and palm warbler (*Dendroica palmarum*). The purple martin (*Progne subis*) was the only swallow observed on the site.

## Site Improvements

In evaluating vegetation restoration management goals at the Cypress Creek Scrub Preserve site, the primary objectives are (1) eradication and control of non-native and nuisance species and prevention of future invasion; (2) maintaining successional stability of the scrub habitat; (3) determining and monitoring the seed bank and seed sources on

site; and (4) optimizing wildlife habitat and restoring natural biological diversity through natural reseeding or habitat-appropriate plantings if necessary.

### ***Initial Exotic Vegetation Removal and Control***

Exotic vegetation has the potential to create enormous stresses within natural communities and in some cases can cause complete destruction of these habitats.

Recommendations for the removal and control of highly invasive species occurring on the site may be found at the University of Florida website: <http://edis.ifas.ufl.edu/WG209>. If the use of herbicides is deemed necessary, care should be taken to ensure that the application area and concentration are kept at the lowest levels necessary to ensure success.

### ***Replanting the Site***

This site contains an extensive seed bank of indigenous and exotic species. The seed bank will require careful monitoring to predict the contribution of desirable indigenous plants to the restoration efforts by natural revegetation, and reinfestation of undesirable exotics and nuisance species. Scenarios discussed below make the assumption that the removal of Category I and Category II exotic species have been completed successfully prior to the initiation of vegetation restoration.

Field observations confirm that active non-native species removal and control programs, and natural and active reseeding will be the most effective means of restoring the natural vegetation communities at the Cypress Creek Scrub Preserve.

Following the successful removal of Category I and II non-native and nuisance understory species in all blocks, natural reseeding may prove to be a successful and adequate management strategy on the majority of the site. The surrounding indigenous seed source should be adequate for recolonization; however, any canopy and understory gaps created by these treatments should be monitored for recolonization by exotics and native species. Careful assessment and monitoring of the seed bank will also be necessary as an adjunct to an exotic species control and management program. This will provide a means to determine which desirable indigenous plants species will revegetate naturally from the existing seed bank, as well as determine the distribution and reinfestation potential of undesirable exotics and nuisance species.

Otherwise, native plant species utilized for site replanting should be purchased from local sources whenever possible. Local sources include all nurseries located from the northern rim of Lake Okeechobee southward. Slight changes in genetic traits occur in the different regions of the state even though the plant species is the same. These changes can make the plant less able to adapt to conditions of South Florida and also alter the natural genetic evolution of local natural communities. If plant material is not available within the local zone then plants should be obtained from the closest location to the site that is feasible. Information about where to obtain native species can be found at [www.afnn.org](http://www.afnn.org) which is the web site for the Association of Florida Native Nurseries.

## Exhibit 3 – Exotic Plant Species List

Includes the 2005 Florida Exotic Pest Plant Council (FLEPPC) category designation where appropriate.

<u>Specific Epithet, FLEPPC Category</u>	<u>Common Name</u>
○ <i>Abrus precatorious, I</i>	rosary pea
○ <i>Acacia auriculiformis, I</i>	earleaf acacia
○ <i>Bischofia javanica, I</i>	bishop wood
○ <i>Cupaniopsis anacardioides, I</i>	carrotwood
○ <i>Eugenia uniflora</i>	Surinam cherry
○ <i>Jasminum dicotomum, I</i>	Gold Coast jasmine
○ <i>Kalanchoe pinnata, II</i>	life plant
○ <i>Momordica charantia,</i>	balsam pear
○ <i>Schefflera actinophylla, I</i>	umbrella tree
○ <i>Schinus terebinthifolius, I</i>	Brazilian pepper
○ <i>Solanum diphyllum, II</i>	twoleaf nightshade
○ <i>Tabebuia heterophylla</i>	white cedar
○ <i>Tradescantia zebrine</i>	wandering Jew
○ <i>Tradescantia pallida</i>	purplequeen
○ <i>Tradescantia spathacea, I</i>	oyster plant

## **Ecological Restoration Funding/ Reimbursement**

Site 78D is a Conservation Land in the Land Preservation Inventory and is eligible for up to 15% of the purchase price (up to \$405,450) for ecological restoration. Upon successful completion of ecological restoration tasks outlined in this document the entity conducting restoration efforts shall be eligible for reimbursement.

The Land Preservation Program will enhance the project site prior to transferring title to the City of Fort Lauderdale. Subsequently, remaining restoration funds may be available to the City for securing the site and directing access utilizing fences and walkways. The following criteria will be followed to determine those activities eligible for reimbursement:

### **Definition of Ecological Restoration**

*As defined from the Society for Ecological Restoration (SER 2002):*

“Ecological restoration is the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed.”

### ***List of Attributes***

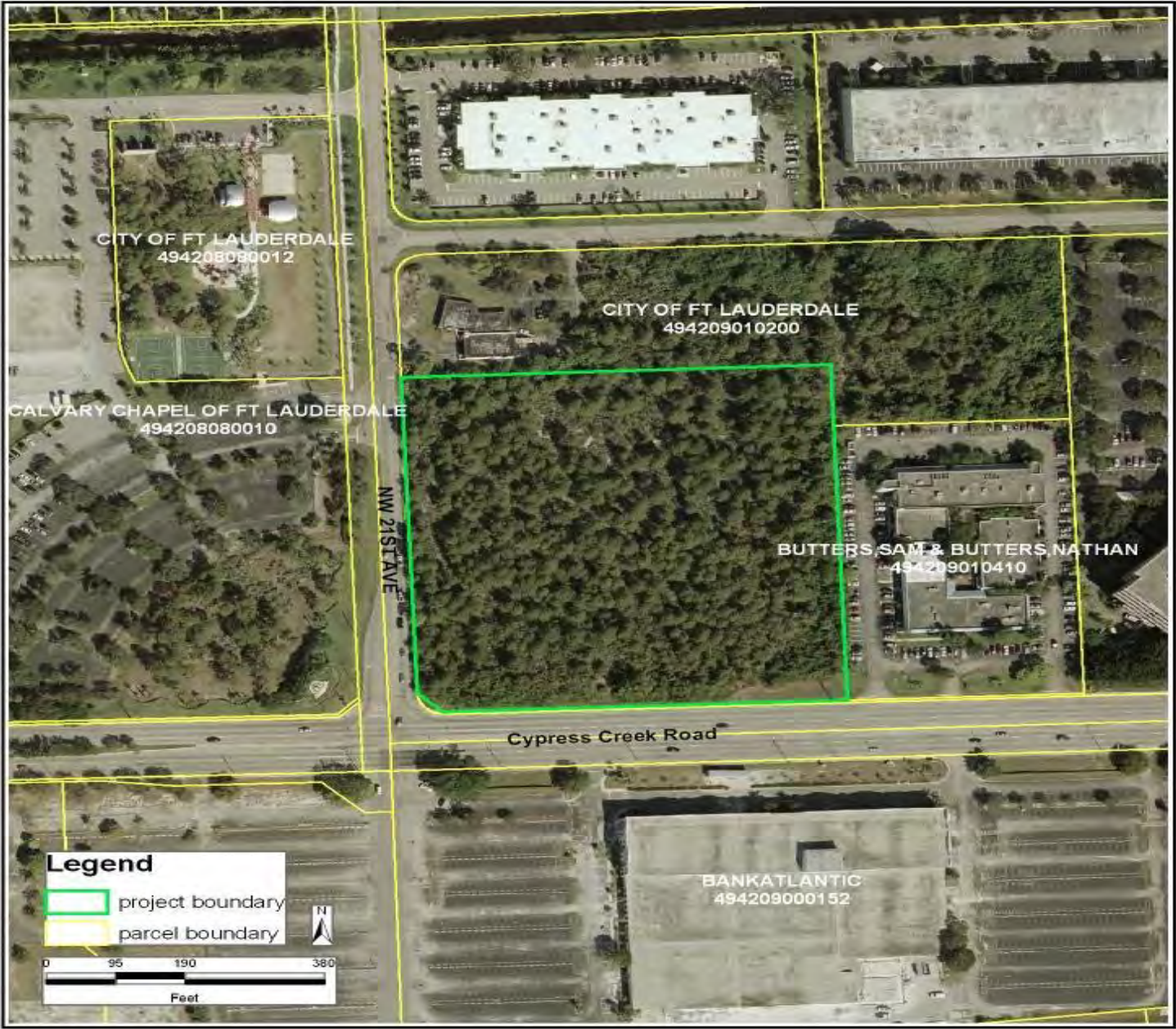
The Society for Ecological Restoration (SER 2002) has developed a list of attributes that are common to restored ecosystems. Therefore, to determine if a specific action is eligible for reimbursement, the action must bring the site closer to one or more of these attributes.

1. The restored ecosystem contains a characteristic assemblage of the species that occur in the reference ecosystem and that provide appropriate community structure.
2. The restored ecosystem consists of indigenous species to the greatest practicable extent. In restored cultural ecosystems, allowances can be made for exotic domesticated species and for non-invasive ruderal and segetal species that presumably co-evolved with them. Ruderals are plants that colonize disturbed sites, whereas segetals typically grow intermixed with crop species.
3. All functional groups necessary for the continued development and/or stability of the restored ecosystem are represented or, if they are not, the missing groups have the potential to colonize by natural means.
4. The physical environment of the restored ecosystem is capable of sustaining reproducing populations of the species necessary for its continued stability or development along the desired trajectory.
5. The restored ecosystem apparently functions normally for its ecological stage of development, and signs of dysfunction are absent.

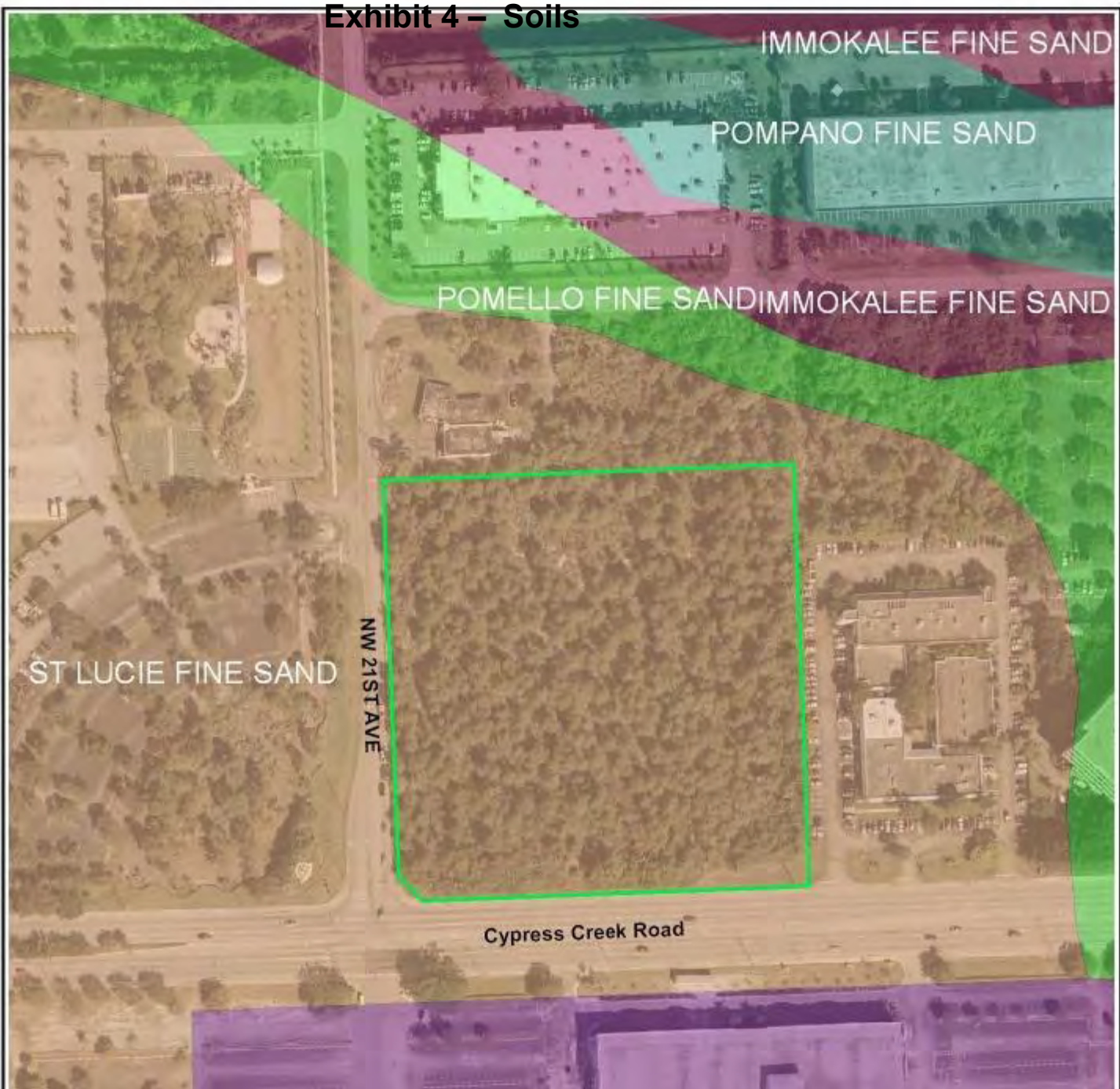
6. The restored ecosystem is suitably integrated into a larger ecological matrix or landscape, with which it interacts through abiotic and biotic flows and exchanges.
7. Potential threats to the health and integrity of the restored ecosystem from the surrounding landscape have been eliminated or reduced as much as possible.
8. The restored ecosystem is sufficiently resilient to endure the normal periodic stress events in the local environment that serve to maintain the integrity of the ecosystem.
9. The restored ecosystem is self-sustaining to the same degree as its reference ecosystem, and has the potential to persist indefinitely under existing environmental conditions. Nevertheless, aspects of its biodiversity, structure and functioning may change as part of normal ecosystem development, and may fluctuate in response to normal periodic stress and occasional disturbance events of greater consequence. As in any intact ecosystem, the species composition and other attributes of a restored ecosystem may evolve as environmental conditions change.



### Exhibit 1 – Aerial Photograph



**Exhibit 4 – Soils**





**Florida Natural Areas Inventory - Natural Community EOR Form** (pg 1 of 2) Page 36 of 41

Surveysite: \_\_\_\_\_ Surveyors: \_\_\_\_\_ Polygon # or ID: \_\_\_\_\_ date: \_\_\_\_\_  
 GPS file #: \_\_\_\_\_ lat: \_\_\_\_\_ long: \_\_\_\_\_ Photo #: \_\_\_\_\_ Comments: \_\_\_\_\_

Directions/locational comments: \_\_\_\_\_

**Community type:** \_\_\_\_\_ **Soil series:** \_\_\_\_\_ **Source:** \_\_\_\_\_

**DOMINANT VEGETATION WITHIN 20M RADIUS OF OBSERVATION POINT:**

STRATA	cov cl	ht cl	DOMINANT SPECIES COVER: Scientific name - Braun/Blanquet scale
emergent tree			
canopy			
sub-canopy			
tall shrub/ sapling			
short shrub/ sapl, seedl.			
herbaceous tot.			
graminoid			
forb			
fern			
non-vascular			
epiphyte			
vine / liana			

Cover Class - Use Braun/Blanquet scale: 1=0-1% 2=1-5% 3=5-25% 4=25-50% 5=50-75% 6=75-100%  
 Height Class - 1<0.5m 2=0.5-2m 3=2-5m 4=5-10m 5=10-15m 6=15-20m 7=20-35m 8>35m

**SUCCESSION COMMENTS**

**CANOPY AGE**

- 1 old growth
- 2 older mature
- 3 mature
- 4 younger mature
- 5 prereproductive trees
- 6 early successional

**SUCCESSION COMMENTS (tree size, structure, age, etc.):** \_\_\_\_\_

**NATURE OF DISTURBANCE**

- 1 firebreaks
- 2 ORV trails or roads
- 3 agriculture
- 4 wildlife food plots
- 5 forestry site prep.
- 6 logging activities
- 7 animal digging
- 8 ditching or hydrologic
- 9 shrub encroachment
- 10 exotics encroachment
- 11 natural disturbances

**SEVERITY OF DISTURBANCE**

- 1 light
- 2 moderate
- 3 heavy
- 4 severe

Describe: \_\_\_\_\_

**WEEDY SPECIES**

- 1 absent
- 2 occasional - <5%
- 3 common - >5%

List: \_\_\_\_\_

**EXOTIC SPECIES**

- 1 absent
- 2 occasional - <5%
- 3 common - >5%

List: \_\_\_\_\_

Disturbance Comments: \_\_\_\_\_

**HYDROLOGIC ALTERATION**

- 1 shrub encroachment
- 2 fire breaks
- 3 ditching
- 4 roads
- 5 impoundment
- 6 dams in watershed
- 7 canals
- 8 salt water intrusion
- 9 groundwater drawdown
- 10 cause unknown

**COMMENTS (Discuss severity for each type and give overall description):**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**PAST FIRE**

- 1 not suppressed
- 2 suppressed
- 3 not applicable
- 4 unknown

**Comments/evidence:** \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

**MANAGEMENT COMMENTS**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



Revised 9/23/2002



**FLORIDA NATURAL AREAS INVENTORY**

**Field Report Form for Occurrences of Rare Plants, Animals, and Natural Communities**

Report original field observations regarding a single species or community, at one location, and for (preferably) a single date. Use the back of the form or other sheets as necessary, and if you have any questions please call FNAI at 850-224-8207.

**Please send completed form to:** Florida Natural Areas Inventory, 1018 Thomasville Rd., Suite 200-C, Tallahassee, FL 32303  
**THANK YOU!**

**REQUIRED DATA**

Your name: \_\_\_\_\_ Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_  
 Address: \_\_\_\_\_ Date Submitted: \_\_\_\_\_  
 Name of observer(s): \_\_\_\_\_  
 Date of observation (m/d/yyyy): \_\_\_\_\_  
 Scientific name: \_\_\_\_\_ Common name: \_\_\_\_\_  
 Basis for identification: Personal knowledge  Reference key  Field guide  Museum specimen  Expert  Other method   
 Name of reference key/guide/museum/expert: \_\_\_\_\_ Other ID method: \_\_\_\_\_  
 County: \_\_\_\_\_  
 Latitude \_\_\_\_\_ N Longitude \_\_\_\_\_ W (if unknown, please attach a map or detailed description of the location)  
 Quantity seen (number of individuals, nests, burrows, or clumps, etc., or area occupied) \_\_\_\_\_

FNAI will include the location of this occurrence in publicly available data products unless you specifically request that we do not. If you want to make this request, please provide your reason for regarding the data "sensitive" (e.g. species subject to collection) \_\_\_\_\_

**OPTIONAL DATA (all of the information below is optional – enter as time and data resources permit)**

**IDENTIFICATION**

Photograph taken? Yes  No  (If possible, please attach a copy of the photo)  
 Specimen collected? Yes  No  Deposited at museum/herbarium? Yes  No  Repository \_\_\_\_\_ Collection # \_\_\_\_\_  
 Do you think your identification requires confirmation? Yes  No

**LOCATION**

Site or place name (if known): \_\_\_\_\_  
 Precise directions to the occurrence that use a readily locatable and relatively permanent landmark on or near the site (such as a road intersection, bridge, or natural landform) as the starting point. Include distances and directions from landmarks, as appropriate. Please note – neither the directions nor the coordinate information will be provided to the general public if the data are to be considered sensitive, as indicated above.

For latitude/longitude only: Datum: NAD27  WGS84/NAD83  Unknown   
 Source of latitude/longitude coordinates? GPS  Other  If other, describe \_\_\_\_\_  
 If GPS: Make \_\_\_\_\_ model \_\_\_\_\_ accuracy \_\_\_\_\_ m DGPS? Yes  No  Unknown  WAAS? Yes  No  Unknown

If possible, mark the site on a copy of a DOQQ photograph or a USGS 7.5' topographic map and attach to this form. Otherwise, using the back side of the form, please provide a sketch of the vicinity showing the occurrence in relation to towns, roads, landforms, water bodies, and other natural features, including ecological communities. Please include also an indication of scale and a North arrow.

**OBSERVATION INFORMATION**

Time of day \_\_\_\_\_ Estimate of total area observed \_\_\_\_\_ m<sup>2</sup> or \_\_\_\_\_ acres. Percent of this area actually occupied by the population or community: \_\_\_\_\_%. Approximate dimensions of the area occupied: length \_\_\_\_\_ m width \_\_\_\_\_ m  
How did you collect the data? (e. g., visually observed from road, trap or capture methods, walking a path through community, formal survey, etc.) \_\_\_\_\_

Is there other suitable habitat (unobserved) in the vicinity? Yes  No  Don't know  Extent? (e.g., acres, miles) \_\_\_\_\_

Have you been to this location before? Yes  No  If so, when? \_\_\_\_\_

Did you previously observe this species or community? Yes  No  Did not look for it  If you have previously seen the population or community, do you think there is now more?  less?  about the same amount as before?  or no way to compare .

General description. Please provide a description or "word picture" of the area where this occurrence is located (i.e., the physical setting and ecological context), including habitat, dominant plant species, topography, hydrology, soils, adjacent communities, and surrounding land use.  
\_\_\_\_\_  
\_\_\_\_\_

For animals: Estimated total no. of individuals in population: \_\_\_\_\_ Basis? \_\_\_\_\_ Age structure \_\_\_\_\_  
Ecological & behavioral notes (e.g. reproductive stage, activity type [feeding, flying, nesting, etc.]): \_\_\_\_\_  
\_\_\_\_\_

For plants: Flowering? Yes  No  Fruiting? Yes  No  In bud? Yes  No  In leaf? Yes  No  Dormant? Yes  No

For communities: For each of three strata (tree, shrub, and ground layers), please list the dominant species comprising the stratum, together with an estimate of the height and percent cover for each stratum. (use the back of this form or another sheet, if necessary, to list additional species)

Stratum	height	% cover	Species
Tree			
Shrub			
Ground			

Describe species dominance relationships, vegetation heterogeneity, succession stage/dynamics, and any other unique aspects of the community or additional noteworthy species (including animals).  
\_\_\_\_\_  
\_\_\_\_\_

**MANAGEMENT**

Owner of site (if known): \_\_\_\_\_

Is the owner or manager protecting or managing the property for this species or community? Yes  No  Don't know

Are there disturbances or threats (e. g., urban development, agriculture, vehicle use, forestry, logging, fire suppression, ditching/drainage, impoundment, exotic species, and natural disturbance) in the vicinity of the site? Yes  No  Don't know

If so, please describe type and severity: \_\_\_\_\_

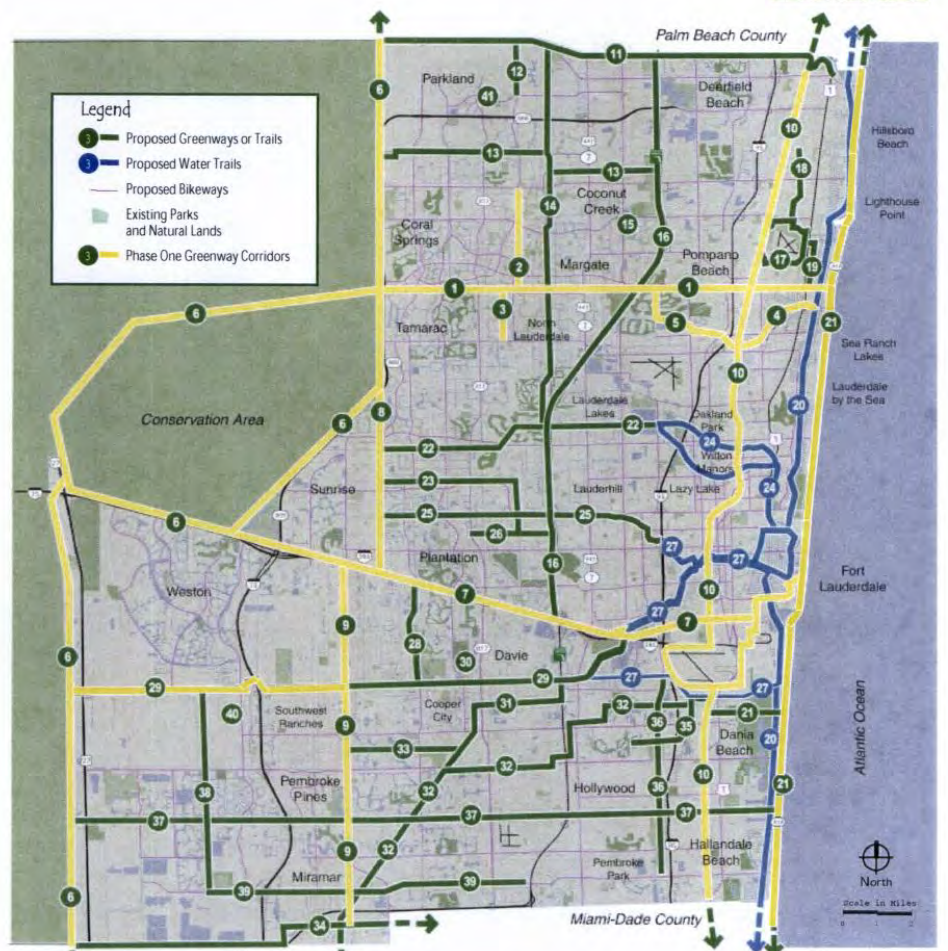
Is there evidence (e.g., fire breaks, scorching) of the use of fire at the site? Yes  No  Don't know  Describe and give dates of recent fires, if known \_\_\_\_\_

Comments on management history or needs: \_\_\_\_\_

**OTHER**

Additional comments concerning the population or community, its ecological conditions, contact information for other knowledgeable people, etc.:  
\_\_\_\_\_  
\_\_\_\_\_

# Broward County Potential Greenways System



Map Index	Name	Approx. Length Miles	Location	Type	Map Index	Name	Approx. Length Miles	Location	Type
1	C-14 Canal / Cypress Creek Greenway	12.9	C-14 Canal	Multipurpose Path	23	Sunrise/Plantation Trail	1.0	Canal	Multipurpose Path
2	Beverly Dr. Canal Trail	1.3	Beverly Dr. Canal	Multipurpose Path	24	Moore Blvd. Trail	0.2	Water Trail	Water Trail
3	A. Lauderdale South Trail	2.8	Canal	Multipurpose Path	25	C-10 Canal Trail	6.5	C-10 Canal	Multipurpose Path
4	Snook Creek	1.6	Snook Creek Canal	Water Trail	26	Snk. Ave. Trail	2.9	Canal	Multipurpose Path
5	Cypress Creek	2.8	Cypress Creek Canal	Multipurpose Path	27	Beachline Loop	25.0	Water Trail	Water Trail
6	Conservation Lanes	46.4	Lanes	Multipurpose Path	28	Bay Mt. Trail	1.0	Multipurpose Path	Multipurpose Path
7	New River / SE 9th Greenway	11.2	SE 9th / New River / SE 9th	Multipurpose Path	29	Griffin / Orange Dr. Greenway	11.6	C-11 Canal	Multipurpose Path
8	Hessley / C-10 Canal Trail	5.1	C-10 Canal	Multipurpose Path	30	Overseas Trail	0.8	City-wide	Multipurpose Path
9	Flamingo Blvd. Trail	16.9	Flamingo Blvd. / SE 9th	Multipurpose Path	31	Blue Trail / FL / SE 9th	4.9	Power Easement	Multipurpose Path
10	Deer Highway / FLC Trail	28.4	Deer Hwy. / FLC / C-10	M. Path, B. Line, Seaside	32	Center Trail / FL / SE 9th	54.2	Power Easement	Multipurpose Path
11	Hudson Canal Greenway	12.2	Hudson Canal	Multipurpose Path	33	Rock Creek / FL / SE 9th	3.8	Power Easement	Multipurpose Path
12	Parkland Trail	1.7	Canal	Multipurpose Path	34	C-6 Canal Trail	9.8	C-6 Canal	Multipurpose Path
13	Orange / Orange / FL / SE 9th Trail	7.6	Power Easement	Multipurpose Path	35	C-8 Canal Trail	5.2	C-8 Canal	Multipurpose Path
14	Rock Island Road / FL / SE 9th Trail	11.7	Power Easement	Multipurpose Path	36	The C-11 Trail	3.2	C-11 Canal	Multipurpose Path
15	Comet / Creek Trails	17.1	City-wide	M. Path, B. Line, Seaside	37	Pembroke Pines / Hollywood Trail	15.6	Power / Blvd. / SE 9th	M. Path, B. Line, Seaside
16	Tamiami Greenway	17.1	City-wide	M. Path, B. Line, Seaside	38	12th Ave. Trail	1.7	12th Ave. / SE 9th	M. Path, B. Line, Seaside
17	Pompano Air Park	4.4	Existing Path	Multipurpose Path	39	Miramar Parkway Trail	9.0	Miramar Parkway / SE 9th	M. Path, B. Line, Seaside
18	NE 15 Ave / SE 2 Ave Trail	2.5	NE 15th / SE 2nd Ave. / SE 9th	Multipurpose Path	40	Southeast Beaches Equatorial Trails	0.0	Equatorial Trails	Equatorial Trails
19	NE 5th Ave. Trail	1.9	NE 5th Ave. / SE 9th	Multipurpose Path	41	Parkland Trail	0.0	City-wide	M. Path, B. Line, Seaside
20	Intracoastal Waterway	19.7	Water Trail	Water Trail					
21	SW 8th St. Trail	25.7	SW 8th St. / SE 9th	M. Path, B. Line, Seaside					
22	C-13 Canal Trail	8.1	C-13 Canal	Multipurpose Path					



Broward County Board of County Commissioners

Josephus Eggelston Jr. Ben Graber Sue Gunzburger Kristin D. Jacobs Irene Lieberman Lori Nance Parrish John E. Rodstrom Jr. Jim Scott Diana Wasserman-Rubin



### CYPRESS CREEK SAND PINE PRESERVE PRIORITY SCHEDULE

MANAGEMENT ACTIVITY	2019												2020												2021												2022												2023												2024																							
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12												
Debris removal																																																																																				
Amend land use designation to Conservation- Natural Preservation-DRC, P&Z																																																																																				
Remove exotic/invasive plants																																																																																				
Perform exotic/invasive plant reatment																																																																																				
Include project in City's Capital Improvement Plan	Complete Project # P11056																																																																																			
Install County funding sign																																																																																				
Develop amenities design (conceptual)*																																																																																				
Develop landscaping and native planting plan																																																																																				
Submit plans and designs to County																																																																																				
County approval of plans and designs																																																																																				
Obtain necessary permits																																																																																				
Perform landscaping and native planting																																																																																				
Construct amenities**																																																																																				
Open site to public																																																																																				
Apply for National Wildlife Certification																																																																																				
Submit monitoring report to the County																																																																																				

\* The "develop amenities design" phase is where specifications for the amenities listed in the management plan are finalized so the job can go out for bid.

\*\* Other amenities include walking trail, informational signage at key park nature features, benches, picnic tables, trash cans etc.