

# Hickey Creek Mitigation Park & Hickey Creek Greenbriar Connector Preserve

Land Management Plan  
2016 - 2026

**Second  
Draft**



# Hickey Creek Mitigation Park Land Management Plan - Third Edition

17980 Palm Beach Blvd.

Alva, FL. 33920

# Hickey Creek Greenbriar Connector Preserve Land Management Plan - Second Edition



Lee County  
Department of  
Parks and  
Recreation



Lee County  
Department of  
Parks and  
Recreation's  
Conservation  
20/20 Lands  
Program



Florida Fish and  
Wildlife  
Conservation  
Commission



Florida  
Communities  
Trust

*Photo credits for cover page:  
Carolyn Babb (Florida Scrub-jay);  
Joseph Dodds (large tickseed);  
Annisa Karim (all other photos).*

Prepared by the Conservation Lands Section  
of the Lee County Department of Parks and Recreation  
in Cooperation with the Florida Fish and Wildlife Conservation Commission  
Approved by the Lee County Board of County Commissioners on **xxx**  
Appendix E Approved by the Florida Department of Environmental Protection -  
Division of State Lands - Office of Environmental Services on April 6, 2016

## **Acknowledgements**

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## List of Acronyms

BoCC	Lee County Board of County Commissioners
C20/20	Lee County Conservation 20/20 Lands Program
CISMA	Cooperative Invasive Management Area
FCT	Florida Communities Trust
FDACS	Florida Department of Agriculture and Consumer Services
FDEP	Florida Department of Environmental Protection
FFS	Florida Forest Service (formerly Division of Forestry)
FLEPPC	Florida Exotic Pest Plant Council
FNAI	Florida Natural Areas Inventory
FS	Florida Statutes
FWC	Florida Fish and Wildlife Conservation Commission (formerly Florida Game and Fish Commission)
GFC	Florida Game and Fish Commission (known today as the Florida Fish and Wildlife Conservation Commission)
<b>HCGCP</b>	<b>Hickey Creek Greenbriar Connector Preserve</b>
<b>HCMP</b>	<b>Hickey Creek Mitigation Park</b>
IRC	Institute for Regional Conservation
LAMSID	Lehigh Acres Municipal Services Improvement District (formerly East County Water Control District)
LCDCD	Lee County Department of Community Development
LCDNR	Lee County Division of Natural Resources
LCPR	Lee County Department of Parks and Recreation
LSOM	Land Stewardship Operations Manual
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
SFWMD	South Florida Water Management District
TIITF	State Board of Trustees of the Internal Improvement Trust Fund
USACOE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
WSWQI	watershed water quality index

## Vision Statement

*The vision of the Lee County Department of Parks and Recreation and the Florida Fish and Wildlife Conservation Commission is to maintain the overarching goal of natural and cultural resource protection at Hickey Creek Mitigation Park while offering and promoting appropriate, state-approved, resource-based, recreational activities. Safeguarding and enhancing the environmental integrity and biological diversity of the site will be the guiding principle for the stewardship and operation of this park. Exotic vegetation and feral hogs will be controlled; restoration will occur on altered areas and efforts will be made to create productive, functioning natural systems. Hickey Creek will be protected and maintained as a viable, natural flow way. Public use will be managed to minimize impacts to wildlife and native plant communities. Visitors will be encouraged to learn and understand the importance of preserving natural areas. Public use programs, including environmental education and interpretation, will emphasize the biological, historic, and archaeological resources of the Hickey Creek region. When the appropriate funding is available, ecological restoration work (prescribed fire, exotic control, hydrologic improvements) will be undertaken at Hickey Creek Greenbriar Connector Preserve.*



## I. EXECUTIVE SUMMARY

This document serves as the required update of the Hickey Creek Mitigation Park and Hickey Creek Greenbriar Connector Preserve Land Stewardship Plan dated 2003. The purpose of this document is to provide all the information needed to appropriately restore and maintain the natural resources of Hickey Creek Mitigation Park and Hickey Creek Greenbriar Connector Preserve while taking staffing and budgetary resources (and limitations) into consideration. The land management plans for these conservation areas have been combined into one document because of their proximity to each other. Due to funding sources, and budgetary constraints, they are managed as separate preserves. Both of these conservation areas are located in northeastern Lee County and, when combined with other conservation areas managed by Lee County and other agencies, form a wildlife corridor that is over 2,500 acres in size.

This plan is also intended for Board of Trustees leases and subleases of conservation properties that are 160 acres or less (7.13 acres of Hickey Creek Greenbriar Connector Preserve). The plan is intended to address the requirements of Chapter 253.034, 259.032 and rule 18-2.021 for these State-owned properties.

Hickey Creek Mitigation Park (also called Hickey's Creek Mitigation Park) consists a variety of plant communities including mesic flatwoods, scrubby flatwoods, upland hardwood forests, scrub, basin swamps, and blackwater streams. Lee County acquired 10 acres on Hickey Creek in 1945. In 1994, funds from Lee County's Environmentally Sensitive Lands Program and a grant from the Florida Communities Trust were used to purchase just under 770 additional acres to establish an off-site mitigation park for gopher tortoises (*Gopherus polyphemus*). Lee County then conveyed, by grant of a Perpetual Conservation Easement, these 770 acres to the Florida Fish and Wildlife Conservation Commission. Lee County (via the Department of Parks and Recreation) and the Florida Fish and Wildlife Conservation Commission manage the property in accordance with a Memorandum of Agreement. Starting in 1998, Lee County, through its Conservation 20/20 Lands Program, purchased an additional 82 acres. The Florida Department of Transportation quitclaimed 2 acres to Lee County in 2004. Today, the Hickey Creek Mitigation Park is an 863.5-acre day-use facility offering 5 miles of primitive hiking trails, a fishing pier, a canoe/ kayak landing, an amphitheater, and two picnic areas. The Tourist Development Council of Lee County assisted in the funding of waterfront facilities. Hickey Creek is part of the Great Calusa Blueway Paddling Trail and is a "Florida Designated Paddling Trail" through the Office of Greenways and Trails.

Hickey Creek Greenbriar Connector Preserve consists of 95.81 acres comprised of mesic flatwoods, wet flatwoods, mesic hammock, prairie hydric hammock, slough marsh, strand swamp, and dome swamp. This Preserve was established to create and maintain a wildlife corridor between Hickey Creek Mitigation Park and the 406-acre Greenbriar Swamp. The Greenbriar Swamp is owned and managed by the Lehigh Acres Municipal Services Improvement District (formerly known as East County Water Control District) and it provides water quality enhancements and ground water recharge for a significant part of the Hickey Creek Basin. In 1997, funds from Lee County's Environmentally Sensitive Lands Program were used to purchase 59.89 acres. The State of Florida's Board of Trustees of the Internal Improvement Trust Fund purchased 15 parcels totaling 7.13 acres in this area between the years of 1999 and 2001. The

State of Florida, through lease number 4764, transferred the management of these lands from the Florida Department of Environmental Protection to Lee County. The 50-year lease agreement (expiring May 4, 2050) directs Lee County to manage the leased premises only for the conservation and protection of natural and historical resources and resource based public outdoor recreation which is compatible with the conservation and protection of these public lands, as set forth in subsection 259.032(11) FS. In 2005, 2007, and 2008, the Conservation 20/20 Lands Program purchased an additional 28.79 acres. The acquisition of the parcels making up Hickey Creek Greenbriar Connector Preserve began after this section of Lehigh Acres was platted. As a result, the parcels are discontinuous. Economies of scale prevent the efficient management of this site. Therefore, there is currently no dedicated funding in the budget of the Lee County Department of Parks and Recreation to manage this Preserve. The lack of financial and personnel resources greatly limits the potential for nature-based recreation and infrastructure to be supported at within Hickey Creek Greenbriar Connector Preserve. Large scale recreational facilities or multi-use trail systems are not necessary as there are Preserves and Parks in close proximity that provide opportunities for hiking, mountain biking, camping, fishing and equestrian use; these Preserves and Parks have Board-approved stewardship (management) plans in place and the infrastructure to support these offerings.

## **II. Introduction**

Staff in the Conservation Lands Section of the Lee County Department of Parks and Recreation (LCPR) prepared this document in cooperation with the Florida Fish and Wildlife Conservation Commission (FWC). Once approved by the Lee County Board of County Commissioners (BoCC), this document will serve as a management guideline for Hickey Creek Mitigation Park (HCMP) and Hickey Creek Greenbriar Connector Preserve (HCGCP) for the next ten years (2016 – 2026).

Dennis O. Hickey, an Irish immigrant and the namesake of Hickey Creek, homesteaded the area after 1865. Dowling & Camp logged the pine flatwoods of the Hickey Creek and Lehigh Acres areas from 1932 to 1935 and 1940 to 1944 (Walker et al. 1996). Logging operations ceased in the 1940s. Land development increased dramatically in the following years.

HCMP was established in 1994 through the cooperative efforts of the BoCC, FWC, and the Florida Communities Trust (FCT). With the aid of a FCT grant, the BoCC added just under 770 acres to a 10-acre, County-owned parcel in Alva, FL. Lee County then conveyed these 770 acres to FWC in perpetuity in the form of a Perpetual Conservation Easement (Appendix A). A Memorandum of Agreement executed on May 12, 1994 between Lee County and FWC (Appendix B) details the terms relative to the establishment of a Mitigation Park. In addition, a “Grant Award Agreement” (Appendix C) and a “Conceptual Approval Agreement” were entered into with the FCT (Appendix D). FCT also requires that the HCMP Management Plan comply with “Management Plan Requirements”. Lee County and the FWC are currently in compliance with these agreements. Starting in 1998, Lee County, through its Conservation 20/20 Lands Program (also part of the Department of Parks and Recreation, hereafter C20/20),

purchased an additional 82 acres. The Florida Department of Transportation gave Lee County 2 acres via a quitclaim deed in 2004.

The FWC created off-site mitigation programs as an alternative to on-site protection that usually resulted in small, isolated preserves that lacked control and management capability. When developers eliminated habitat for listed species, they paid fees that were used to buy and manage high quality habitat elsewhere. The program consolidated mitigation within a geographical region by buying larger, more manageable tracts. Thus, these programs were able to compensate for impacts of land development on upland listed wildlife populations in a more efficient manner than traditional forms of mitigation. The Mitigation Park Program was intended to serve as a support function for FWC's Statewide Incidental Take permitting process. The Incidental Take permit option was used by land development projects to mitigate gopher tortoise impacts incurred by development. The monies collected from this permit option was then used to establish mitigation parks.

The FWC identified HCMP as a proposed regional mitigation park for the gopher tortoise. This site was selected from nine surveyed sites in the region under selection criteria, which included rare and unique habitat concerns, project location, project size, and project price per acre. HCMP offers additional habitat protection for the gopher tortoise and the Florida Scrub-jay (*Aphelocoma coerulescens*) both of which are in decline in the region.

The reported acreage in past literature (e.g., Land Management Plans, brochures, Annual FCT reports) associated with HCMP noted that the Park was 1,115 acres in size. As of this Land Management Plan, this is being adjusted to 863.5 acres. The adjusted acreage reflects, in large part, the removal of all parcels within the HCGCP and the Alva Scrub Preserve as these Preserves are managed separately. Of course, these Preserves are still part of the larger landscape of Conservation Areas but are not counted towards acreage for HCMP. This change in acreage does not reflect a change to the portion of HCMP associated with FCT funds nor with those lands governed by agreements with FWC. The Acquisition History section of this document provides a detailed description of the parcels comprising HCMP and HCGCP.

Today, the 863.5 acres of HCMP are comprised of eleven plant communities and sixteen different soil types. The Lee County Water Management Plan (JEI, 1992) indicates that there may be a significant lowering of the water table on at least portions of the Park. This is apparent from the obvious successional changes occurring in the forested wetland adjacent to the southern boundary of the park.

Twenty-six listed plant species and thirteen listed animal species have been recorded within HCMP. LCPR and FWC staff coordinate to retain this conservation area at a maintenance level for exotics (less than 5% coverage) and an active prescribed burn program is in progress. FWC staff monitors gopher tortoise population trends and is undertaking a Wildlife Conservation, Prioritization, and Recovery exercise to assess the progress and success of management activities. The goals for HCMP are to continue coordinating management activities.

LCPR staff is in charge of managing the public access portion of HCMP. Natural resource-based recreational activities must be approved by FWC and FCT. HCMP is a

day-use facility offering 5 miles of primitive hiking trails, a fishing pier, a canoe/ kayak landing, an amphitheater, and two picnic areas. The Tourist Development Council of Lee County assisted in the funding of waterfront facilities. Hickey Creek is part of the the Great Calusa Blueway Paddling Trail and is a “Florida Designated Paddling Trail” through the Office of Greenways and Trails.

Lehigh Acres is a Census-Designated Place (a statistical counterpart of and incorporated place, such as a city, town or village) in Lee County, Florida and was developed in the mid-1950s. Roads were built and land was platted for primarily residential development. The Lehigh Acres Municipal Services Improvement District (LAMSID, formerly known as the East County Water Control District) was formed for the purpose of preserving and protecting water resources by drainage, irrigation, reclamation, conservation, mitigation and water management in the eastern portion of Lee County (including Lehigh Acres) and the extreme western portion of Hendy County, Florida. LAMSID maintains 1,298 preserve acres including the 406-acre Greenbriar Swamp. The HCGCP consists of 95.81 acres (59.89 acres purchased by Lee County’s general fund, 28.79 acres purchased by C20/20 funds, and 7.13 acres purchased by the State of Florida). This conservation area is located south of HCMP and C20/20’s Alva Scrub Preserve and was acquired to create and maintain a wildlife corridor between HCMP, the Greenbriar Swamp, and Alva Scrub Preserve. Over 30 parcels of land consisting of wetland edges, irregular shapes and platted residential lots make up the County-managed portion of HCGCP. Just over seven acres (7.13 acres) were purchased by TIITF and provided to Lee County to manage under lease number 4764 (transferred from the Florida Department of Environmental Protection to Lee County). The lease ends on May 4, 2050. Appendix E is the management plan intended for the 7.13 acres of Stae-owned land managed by Lee County. The information contained within this appendix is required by the Board of Trustees for leases and subleases of conservation properties that are 160 acres or less. It is intended to address the requirements of Chapter 253.034, 259.032 and rule 18-2.021.

By 1997, nearly 90% of Lehigh Acres’ lots remained vacant. Many of these lots are in the Greenbriar area and some of these lots are in-holdings within the HCGCP. The roads within HCGCP are deteriorating. Economies of scale prevent the efficient management of this site. There is currently no dedicated funding in the budget of the LCPR to manage this Preserve. Large scale recreational facilities or multi-use trail systems are not necessary as there are Preserves and Parks in close proximity to that provide opportunities for hiking, mountain biking, camping, fishing and equestrian use; these Preserves and Parks have Board-approved stewardship (management) plans in place and the infrastructure to support these offerings.

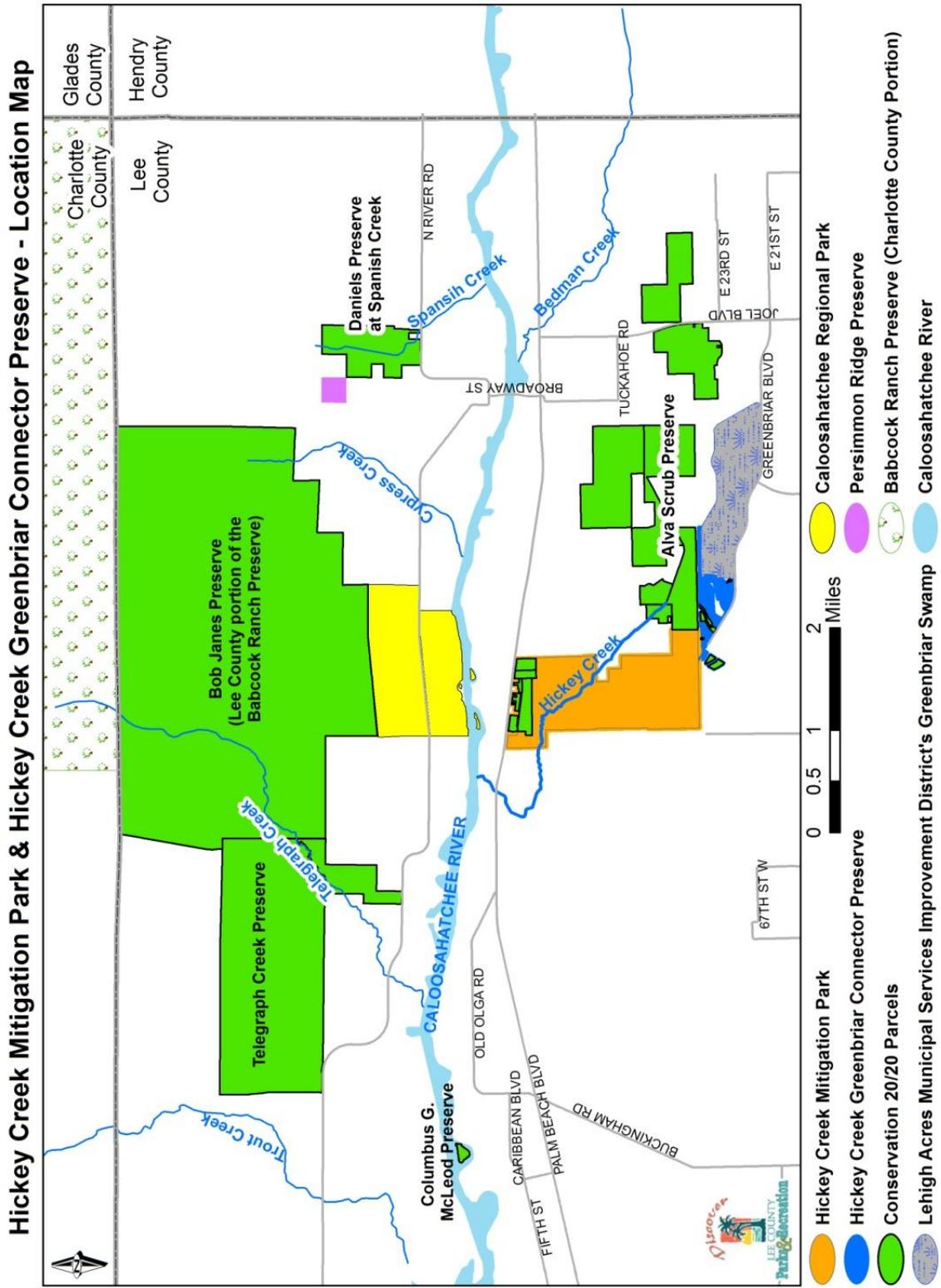
### **III. Location and Site Description**

HCMP is located at 17980 Palm Beach Boulevard in Alva, Florida in notheastern Lee County (Figure 1). It lies within Sections 25, 30, and 31, Township 43 South, and Ranges 26 and 27 East. Palm Beach Boulevard and some privately owned parcels border HCMP on the north. Bateman Road runs in a north/south direction along a majority of the eastern border of HCMP; the road then turns to an east-west direction at

the southern portion of the park and terminates at a private lot just north of Alva Scrub Preserve. Alva Scrub Preserve, managed by LCPR's C20/20 Program, borders a small part of the eastern portion of HCMP. Parcels owned and managed by the Lehigh Acres Municipal Services Improvement District (LAMSID – formerly East County Water Control District) are contiguous with the Park's southern border. Directly south of this narrow (~150') holding are portions of HCGCP and single-family lots. HCMP consists of approximately 863.5 acres comprised of eleven plant communities and sixteen different soil types.

HCGCP is located in the northern section of Lehigh Acres, Florida called Greenbriar. This part of Lehigh Acres is platted with single-family home lots and a majority of them remain (in 2015) undeveloped in the vicinity of HCGCP. This Preserve is just south of HCMP and LCPR's C20/20 Alva Scrub Preserve (Figure 1). Thirty-one parcels [individual STRAP (Section, Township, Range, Area, Parcel) numbers] make up HCGCP; the Preserve encompasses 95.81 acres and is located in Sections 5 and 6, Township 44 South, and Range 27 East. The Preserve is comprised of mesic flatwoods, wet flatwoods, mesic hammock, prairie hydric hammock, slough marsh, strand swamp, and dome swamp.

Figures 2 and 3 show aerial views of HCMP and HCGCP respectively.



Map created by Annisa Karim (AKarim@LeeGov.com) April 2014  
 H:\Hickey's Creek Mitigation Park\Maps\Maps for 2014 Management Plan\LOCATION.mxd

**This map is not a survey; it is intended for informational purposes only.**

Figure 1: Location of HCMP and HCGCP in northeastern Lee County, FL.

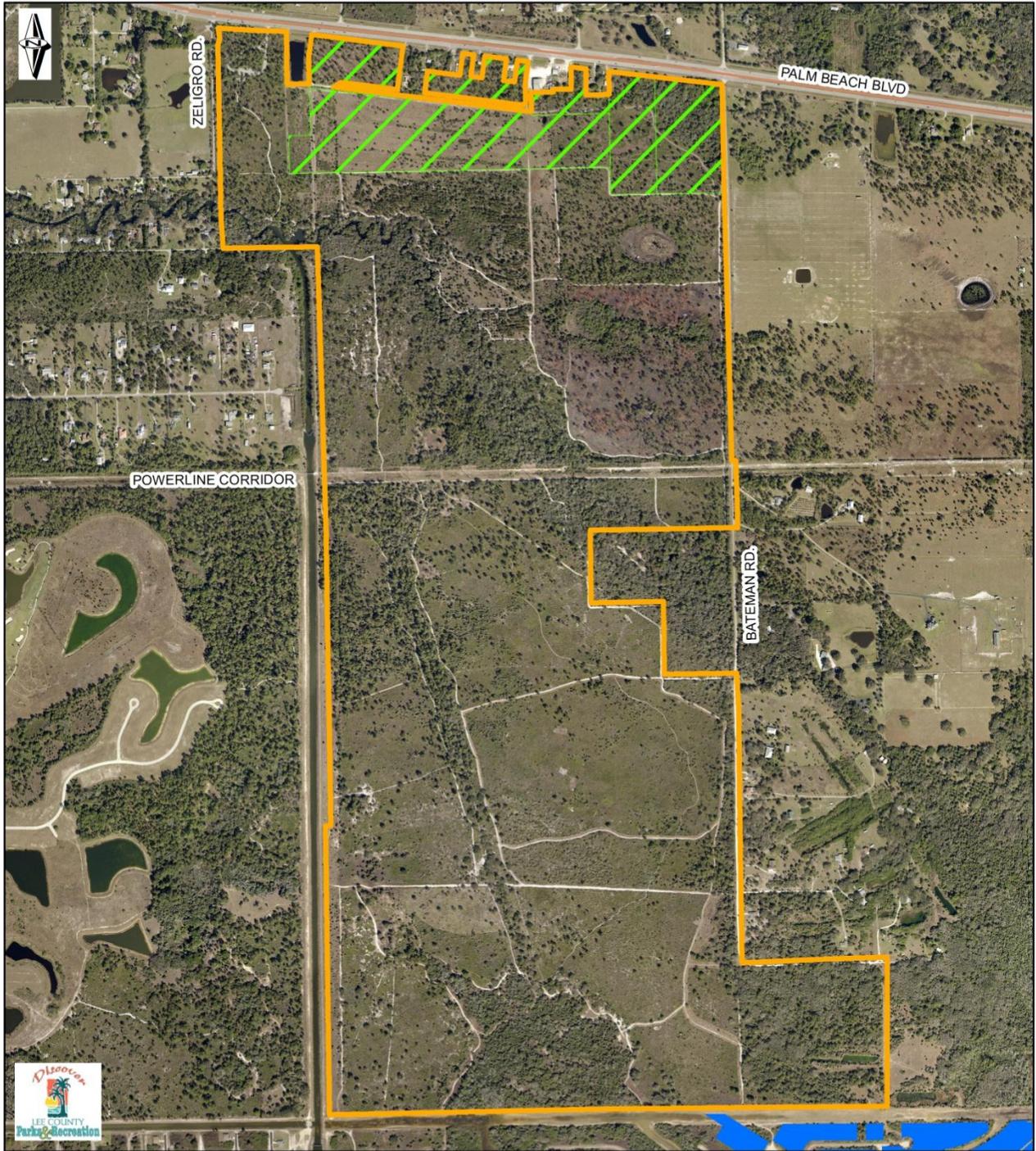
Table 1: STRAP Numbers associated with parcels making up HCMP and HCGCP

Location	Owner	STRAP	C20/20 Parcel(s) <sup>a</sup>	Size (ac)
HCMP	Lee County	25-43-26-00-00010.0010	N/A	29.20
HCMP	Lee County	30-43-27-00-00001.0220	N/A	2.00
HCMP	Lee County	30-43-27-00-00001.0200	4, 101, 326	76.76
HCMP	Lee County	30-43-27-02-00006.0000	101	6.03
HCMP	Lee County	30-43-27-00-00001.0020	N/A	283.37
HCMP	Lee County	31-43-27-00-00001.0020	N/A	466.71
HCGCP	Lee County	05-44-27-00-00000.0020	N/A	5.65
HCGCP	Lee County	05-44-27-00-00000.0060	N/A	16.71
HCGCP	Lee County	05-44-27-00-00000.0050	N/A	33.39
HCGCP <sup>b</sup>	Lee County <sup>b</sup>	05-44-27-00-00000.0080	243, 285, N/A	20.90
HCGCP	Lee County	05-44-27-00-00000.0100	331	0.46
HCGCP	Lee County	06-44-27-01-00222.0070	N/A	0.27
HCGCP	Lee County	06-44-27-01-00222.0080	250	0.28
HCGCP	Lee County	06-44-27-01-00223.0020	N/A	0.25
HCGCP	Lee County	06-44-27-01-00223.0030	N/A	0.24
HCGCP	Lee County	06-44-27-01-00223.0050	N/A	0.24
HCGCP	Lee County	06-44-27-01-00223.0060	N/A	0.28
HCGCP	Lee County	06-44-27-01-00223.0080	N/A	0.35
HCGCP	Lee County	06-44-27-13-00000.0660	328	4.65
HCGCP	Lee County	06-44-27-13-00000.0670	328	2.50
HCGCP	Lee County	06-44-27-13-00000.0680	N/A	1.20
HCGCP	Lee County	06-44-27-13-00000.0690	N/A	1.31
HCGCP	State of FL	06-44-27-01-00222.0130	N/A	0.28
HCGCP	State of FL	06-44-27-01-00223.0040	N/A	0.25
HCGCP	State of FL	06-44-27-01-00223.0100	N/A	0.27
HCGCP	State of FL	05-44-27-00-00000.0040	N/A	0.30
HCGCP	State of FL	05-44-27-00-00000.0090	N/A	2.50
HCGCP	State of FL	06-44-27-01-00222.0020	N/A	0.42
HCGCP	State of FL	06-44-27-01-00222.0030	N/A	0.38
HCGCP	State of FL	06-44-27-01-00222.0040	N/A	0.38
HCGCP	State of FL	06-44-27-01-00222.0050	N/A	0.45
HCGCP	State of FL	06-44-27-01-00222.0060	N/A	0.32
HCGCP	State of FL	06-44-27-01-00222.0090	N/A	0.28
HCGCP	State of FL	06-44-27-01-00222.0100	N/A	0.28
HCGCP	State of FL	06-44-27-01-00222.0120	N/A	0.28
HCGCP	State of FL	06-44-27-01-00223.0070	N/A	0.42
HCGCP	State of FL	06-44-27-01-00223.0090	N/A	0.32

<sup>a</sup> C20/20 parcel numbers reflect the order in which properties are nominated to the C20/20 land acquisition program. N/A denotes that a parcel was not acquired by the C20/20 program but by an alternate source of funds.

<sup>b</sup> when parcels and STRAP numbers were consolidated, STRAP 05-44-27-00-00000.0080 combined three parcels, 2 of which were purchased by the C20/20 program and the third purchased by monies in the County's General Fund.

# Hickey Creek Mitigation Park - Aerial View 2014



-  Hickey Creek Mitigation Park (HCMP)
-  C20/20 Portion of HCMP
-  Hickey Creek Greenbriar Connector Preserve (HCGCP)

0 0.25 0.5  
Miles

This map is not a survey; it is intended for informational purposes only.

Map created by Annisa Karim  
(AKarim@LeeGov.com) April 2014

Figure 2: Aerial Map of HCMP.

# Hickey Creek Greenbriar Connector Preserve - Aerial View 2014

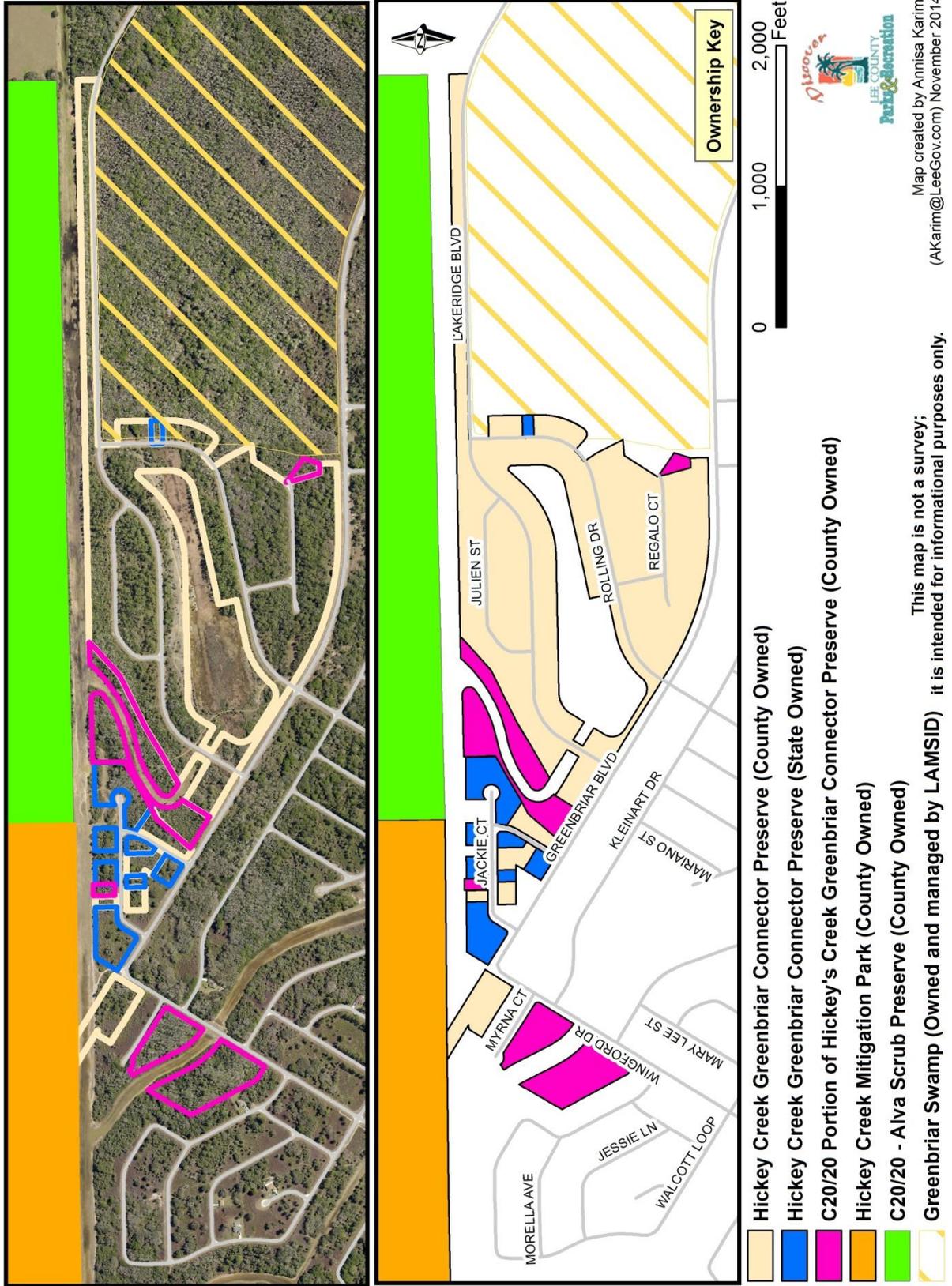


Figure 3: Aerial Map of HCGCP

## **IV. Natural Resources Description**

### **A. Physical Resources**

#### **i. Climate**

General information on the climate of southwest Florida may be found in the Land Stewardship Operations Manual's (LSOM) Land Stewardship Plan Development and Supplemental Information section.

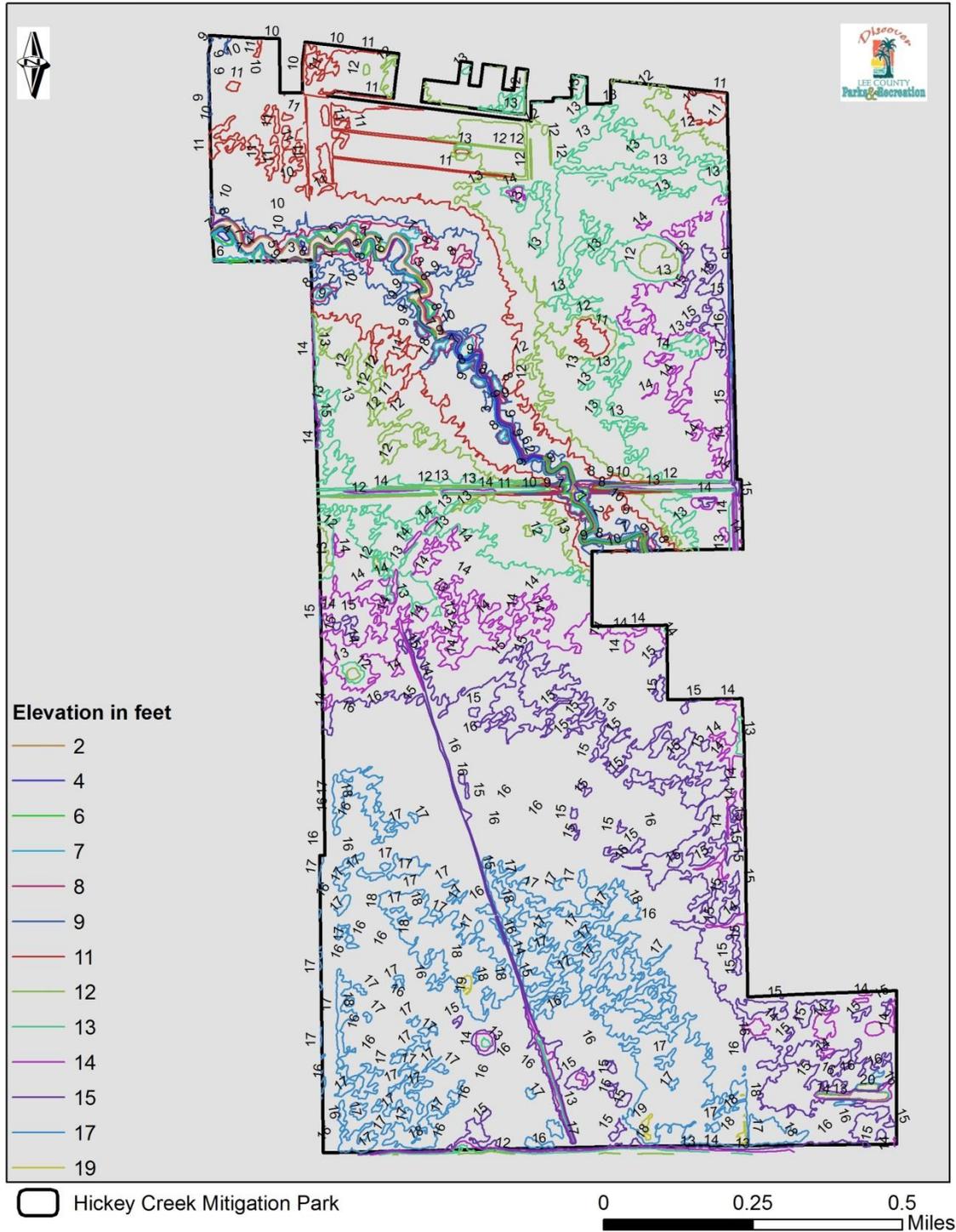
#### **ii. Geology**

Specific information on geologic features such as physiographic regions, formations and maps may be found in the LSOM's Land Stewardship Plan Development and Supplemental Information section.

#### **iii. Topography**

The topographical features of an area identify the "shape" of the land as determined by major natural or man-made components. The topography of both HCMP and HCGCP may be described as low relief. Elevations within HCMP range from a low of approximately two feet along the creek to a high of twenty feet on the tram road bed. The tram road bed, which runs for approximately one mile through the site, has elevations three to five feet higher than the natural topography (Figure 4). Elevations within HCGCP range from twelve feet to eighteen feet (Figure 5). A specified history of the land alteration is presented in the Land Use History section of this plan.

# Hickey Creek Mitigation Park -Topographical Map



This map is not a survey; it is intended for informational purposes only.

Map created by Annisa Karim  
(AKarim@LeeGov.com) November 2014

Figure 4: Topographical Map for HCMP.

# Hickey Creek Greenbriar Connector Preserve - Topographical Map

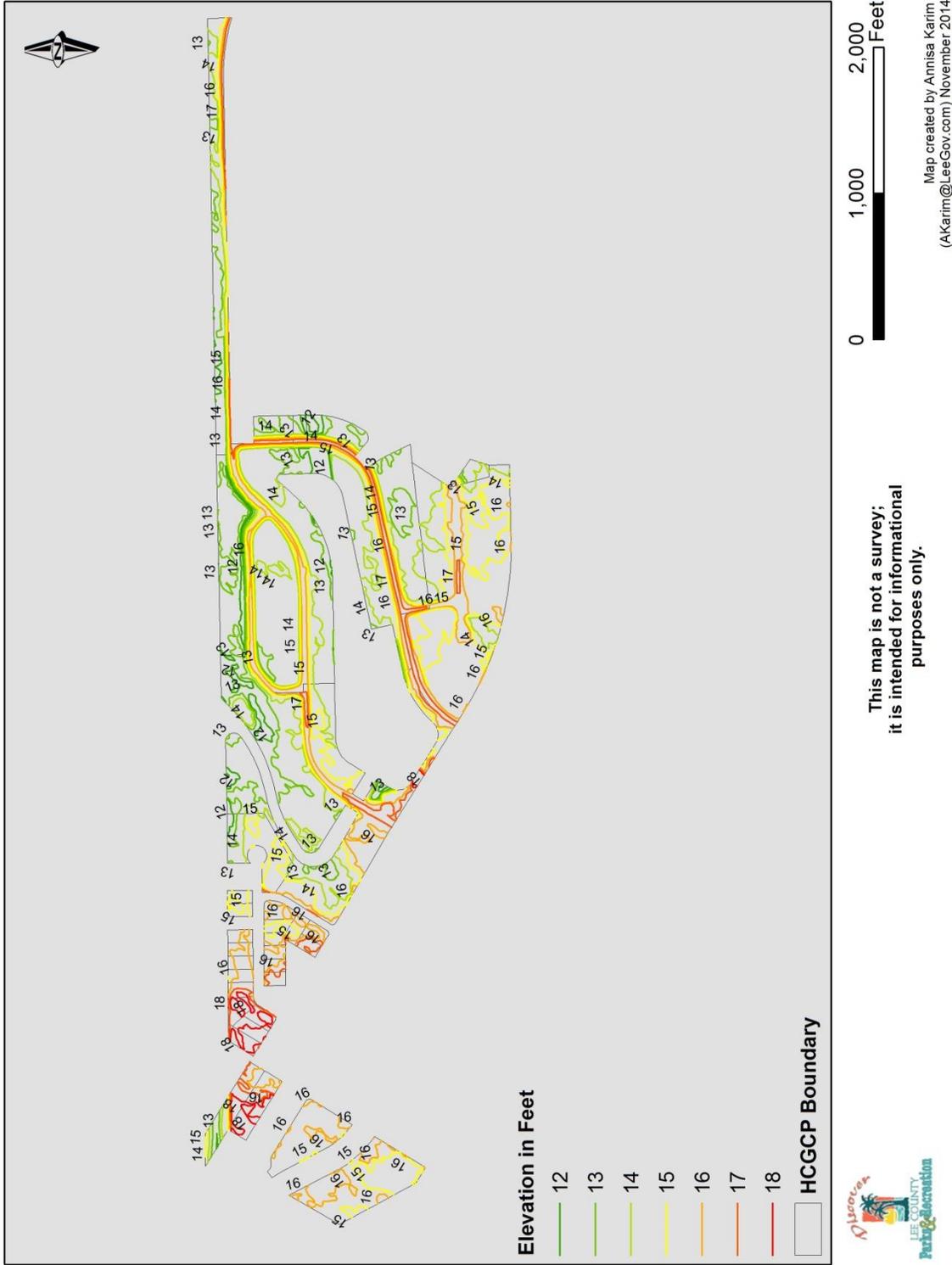


Figure 5: Topographical Map for HCGCP.

#### iv. Soils

Soils and their properties determine which plant communities they can support. The objective of soil mapping is to separate the landscape into landforms or landform segments that have similar use and management requirements (not to delineate pure map unit components). Because of slight errors associated with the mapping of soils and interpretations within the ArcGIS program, the acreages and percentages provided here are close approximations and communicate valuable information for stewardship and operations personnel.

The U. S. Department of Agriculture (via the Natural Resources Conservation Service) and the South Florida Water Management District (SFWMD) report sixteen different soil types for HCMP (Table 2, Figure 6). Table 2 provides the approximate acreages and percentages of HCMP that each of these soils cover, whether each soil is considered hydric or not, and each soil's general drainage class. Soils data indicate that nine of the sixteen soils found within HCMP are non-hydric and make-up approximately 88% of the site. Non-hydric soils are those that, in un-drained conditions, are not saturated or ponded; they do not develop anaerobic conditions that favor the growth of wetland plants.

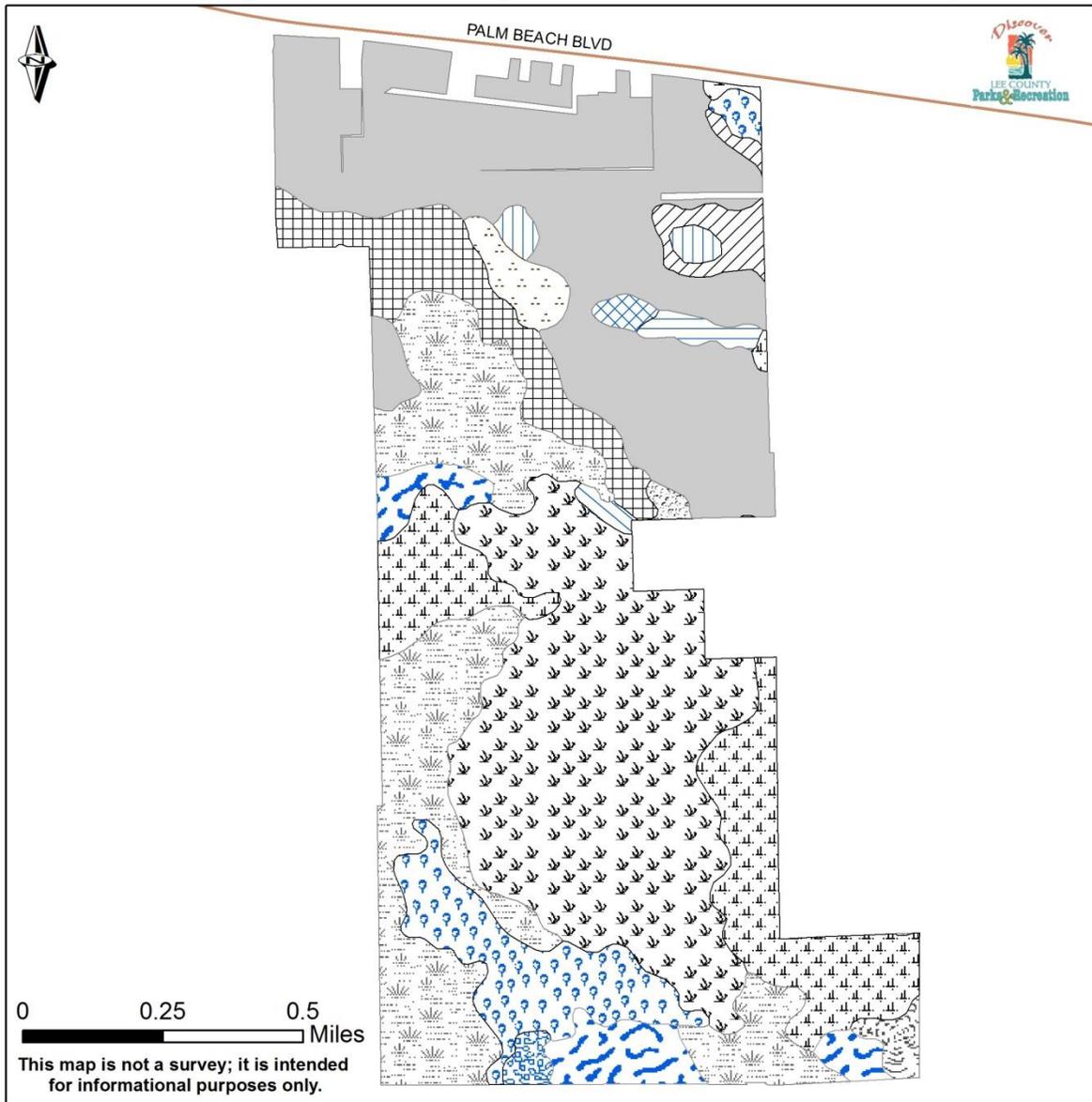
Six different soil types are reported for HCGCP (Table 3, Figure 7). Table 3 provides the approximate acreages and percentages of HCGCP that each of these soils cover, whether each soil is considered hydric or not, and each soil's general drainage class. Soils data indicate that three of the six soil types mapped within HCGCP are hydric and make-up approximately 86% of the site. Hydric soils are those those soils that are sufficiently wet in the upper part to develop anaerobic conditions during the growing season. These soil types are common for wetland communities.

In addition to the types of soil found in an area, environmental variables such as climate, topography, and hydrologic factors influence the types of plant communities found there. Further information on soils is located in the LSOM's Land Stewardship Plan Development and Supplemental Information section.

Table 2: Coverage, Hydric Designation and Drainage Class of Soils within HCMP.

<b>SOIL TYPE</b>	<b>HYDRIC?</b>	<b>DRAINAGE CLASS</b>	<b>Acres*</b>	<b>% of HCMP*</b>
IMMOKALEE SAND	NO	POORLY DRAINED	226.15	26.16
OLDSMAR SAND	NO	POORLY DRAINED	211.10	24.42
WABASSO SAND, LIMESTONE SUBSTRATUM	NO	POORLY DRAINED	153.00	17.70
BOCA FINE SAND	NO	POORLY DRAINED	86.87	10.05
BOCA FINE SAND, SLOUGH	YES	POORLY DRAINED	52.77	6.11
WABASSO SAND	NO	POORLY DRAINED	48.04	5.56
HALLANDALE FINE SAND	YES	POORLY DRAINED	31.69	3.67
MYAKKA FINE SAND	NO	POORLY DRAINED	13.00	1.50
DAYTONA SAND	NO	MODERATELY WELL DRAINED	11.00	1.27
MYAKKA FINE SAND, DEPRESSIONAL	YES	VERY POORLY DRAINED	6.37	0.74
MATLACHA GRAVELLY FINE SAND, LIMESTONE SUBSTRATUM	NO	SOMEWHAT POORLY DRAINED	6.13	0.71
PINEDA FINE SAND	YES	POORLY DRAINED	5.67	0.66
COPELAND SANDY LOAM, DEPRESSIONAL	YES	VERY POORLY DRAINED	4.26	0.49
PINEDA FINE SAND, DEPRESSIONAL	YES	VERY POORLY DRAINED	3.35	0.39
BRADENTON FINE SAND	YES	POORLY DRAINED	2.62	0.30
COCOA FINE SAND	NO	MODERATELY WELL DRAINED	2.31	0.27
<i>* Due to rounding values, total acreages (and therefore percentages) may not equal the true acreage of HCMP. These numbers are approximations.</i>				

# Hickey Creek Mitigation Park - Soils Map



**USDA/ NRCS SOILS DATA (2010; H = Hydric Soil)**

- |  |   |
|--|---|
|  IMMOKALEE SAND                     |  DAYTONA SAND                                      |
|  OLDSMAR SAND                       |  MYAKKA FINE SAND, DEPRESSIONAL (H)                |
|  WABASSO SAND, LIMESTONE SUBSTRATUM |  MATLACHA GRAVELLY FINE SAND, LIMESTONE SUBSTRATUM |
|  BOCA FINE SAND                     |  PINEDA FINE SAND (H)                              |
|  BOCA FINE SAND, SLOUGH (H)         |  COPELAND SANDY LOAM, DEPRESSIONAL (H)             |
|  WABASSO SAND                       |  PINEDA FINE SAND, DEPRESSIONAL (H)                |
|  HALLANDALE FINE SAND (H)           |  BRADENTON FINE SAND (H)                           |
|  MYAKKA FINE SAND                   |  COCOA FINE SAND                                   |

Map created by Annisa Karim  
(AKarim@LeeGov.com) April 2014

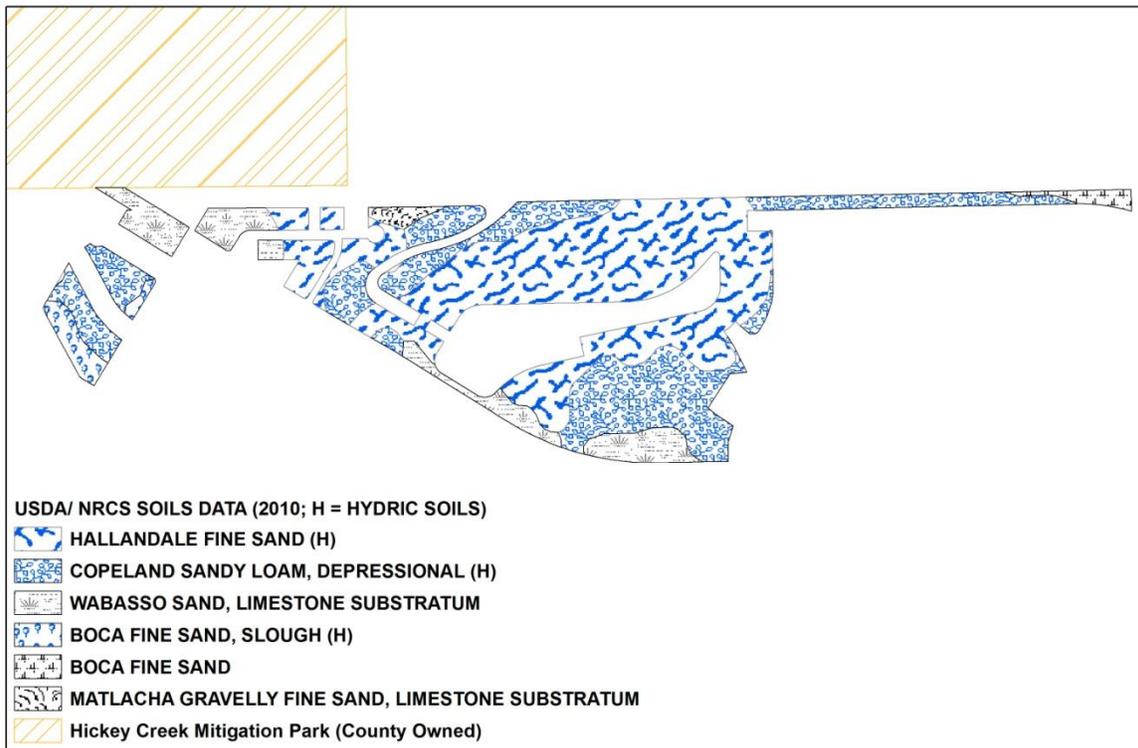
Figure 6: Soils Map for HCMP

Table 3: Coverage, Hydric Designation and Drainage Class of Soils within HCGCP.

SOIL TYPE	HYDRIC?	DRAINAGE CLASS	Acres*	% of HCGCP*
HALLANDALE FINE SAND	YES	POORLY DRAINED	47.79	49.57
COPELAND SANDY LOAM, DEPRESSIONAL	YES	VERY POORLY DRAINED	32.60	33.81
WABASSO SAND, LIMESTONE SUBSTRATUM	NO	POORLY DRAINED	11.09	11.50
BOCA FINE SAND, SLOUGH	YES	POORLY DRAINED	2.54	2.64
BOCA FINE SAND	NO	POORLY DRAINED	1.33	1.38
MATLACHA GRAVELLY FINE SAND, LIMESTONE SUBSTRATUM	NO	SOMEWHAT POORLY DRAINED	1.06	1.10

*\* Due to rounding values, total acreages (and therefore percentages) may not equal the true acreage of HCGCP. These numbers are approximations.*

**Hickey Creek Greenbriar Connector Preserve -Soils**



This map is not a survey;  
it is intended for informational  
purposes only.



Map created by Annisa Karim  
(AKarim@LeeGov.com) November 2014

Figure 7: Soils Map for HCGCP

## **v. Watershed and Hydrologic Components**

A watershed is a region draining into a specific body of water. Topography, geology, soils, biological communities and anthropogenic alterations to a landscape influence the rate and way in which water flows and/ or drains through a landscape. The SFWMD delineates watersheds within its boundaries. This agency further delineates basins within each of these watersheds. The Caloosahatchee River Watershed contains six (6) drainage basins. HCMP and HCGCP lie within the West Caloosahatchee Basin of the Caloosahatchee River Watershed. The Lee County Division of Natural Resources (LCDNR) divides Lee County into 48 different watersheds. These watersheds are based on a more refined scale compared to SFWMD's designations because LCDNR's area of monitoring and restoration is much smaller. According to LCDNR data, HCMP and HCGCP lie within the Hickey Creek Watershed that covers 29.3 square miles (Figure 8).

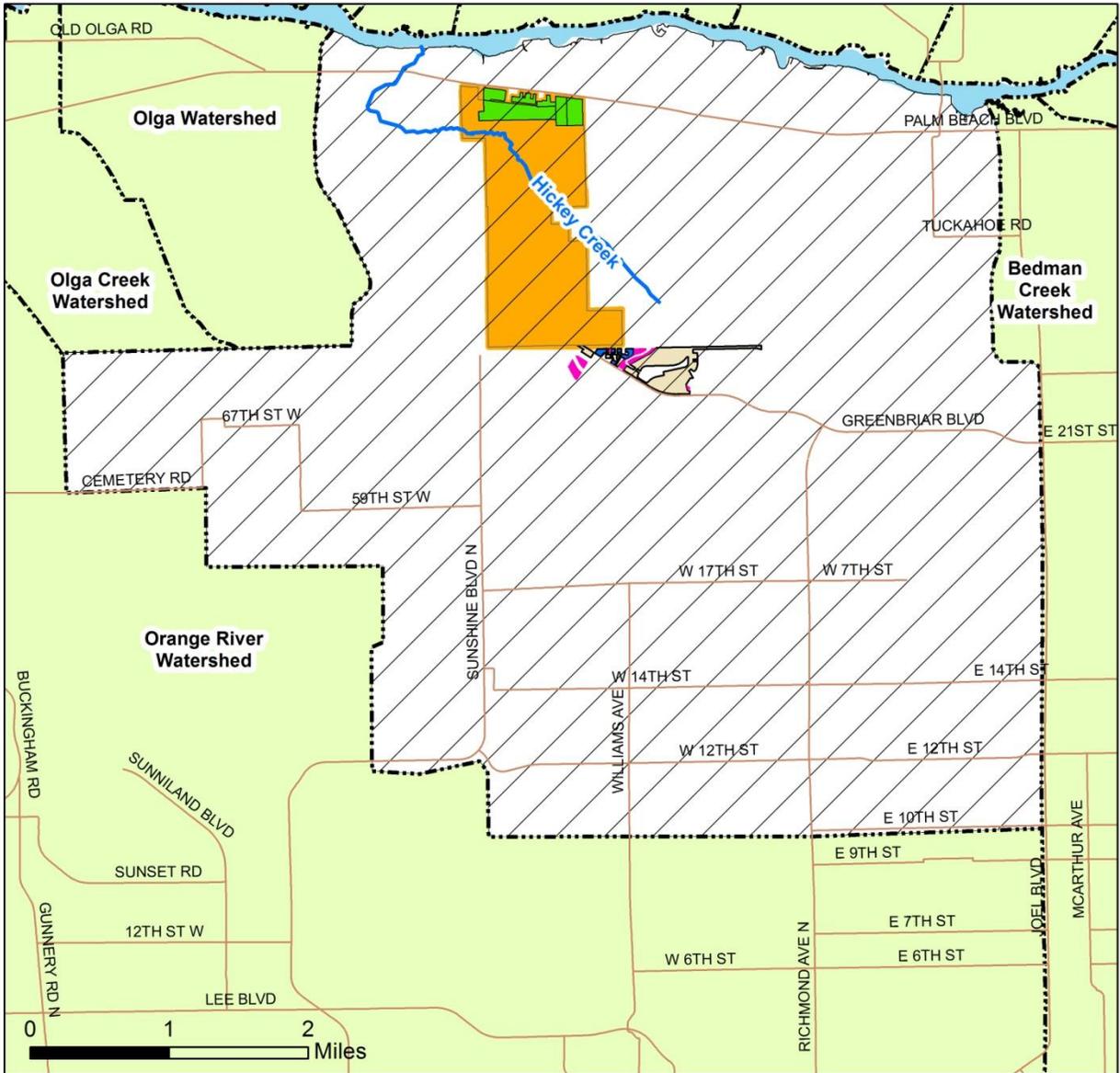
In 1974, the United States Fish and Wildlife Service (USFWS) directed its office of Biological Services to conduct an inventory of the nation's wetlands. This National Wetlands Inventory (NWI) became operational in 1977. Wetlands were identified on the photography by vegetation, visible hydrology and geography, and subsequently classified in general accordance with the Classification of Wetlands and Deep Water Habitats of the United States (Cowardin et al. 1979). Federal agencies, state agencies, local agencies, academic institutions and private industry use this information for management, research, policy development, education and planning activities. Palustrine wetlands are often called swamps, marshes, potholes, bogs, or fens. These types of wetlands also include the small, shallow, permanent or intermittent water bodies often called ponds. These systems are all non-tidal wetlands dominated by trees, shrubs, persistent emergent aquatic plants, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5%.

The NWI identifies three types of palustrine wetlands (Freshwater Forested/Shrub Wetland, Freshwater Emergent Wetland, and Freshwater Pond) and Riverine wetlands within HCMP (Figure 9). Two types of palustrine wetlands are identified within HCGCP (Freshwater Forested/Shrub Wetlands and Freshwater Emergent Wetlands). Not surprisingly, these wetlands comprise a majority of HCGCP (Figure 9).

Hydrology is the study of the distribution, movement, and quality of water of a given area. Underlying soils across a landscape, groundwater table variations, the rate of evapotranspiration, and the amount of precipitation determine the distribution of water across an area. The vegetated wetlands within HCMP and HCGCP are discussed in the "Natural Plant Communities" section of this document. However, it is important to note that geographically isolated wetlands are not necessarily hydrologically disconnected. Wetland-groundwater interactions can influence regional hydrology. The saturation level of buffering uplands and inundated, isolated wetlands influence water level responses and can cause isolated wetlands to act as both groundwater sinks and sources. Some of these wetlands are saturated during the summer rainy season and after periods of heavy rainfall in other seasons. This coupled with poorly drained soils underlying upland soils can cause vast differences in water distribution throughout the year.



### Hickey Creek Mitigation Park and Hickey Creek Greenbriar Connector Preserve: Watershed Map



- Other LCDNR Designated Watersheds
- Hickey Creek Watershed
- C20/20 Portion of HCGCP (County Owned)
- C20/20 Portion of HCMP (County Owned)
- Hickey Creek Mitigation Park (County Owned)
- Hickey Creek Greenbriar Connector Preserve (County Owned)
- Hickey Creek Greenbriar Connector Preserve (State Owned)
- Caloosahatchee River
- Major Roads

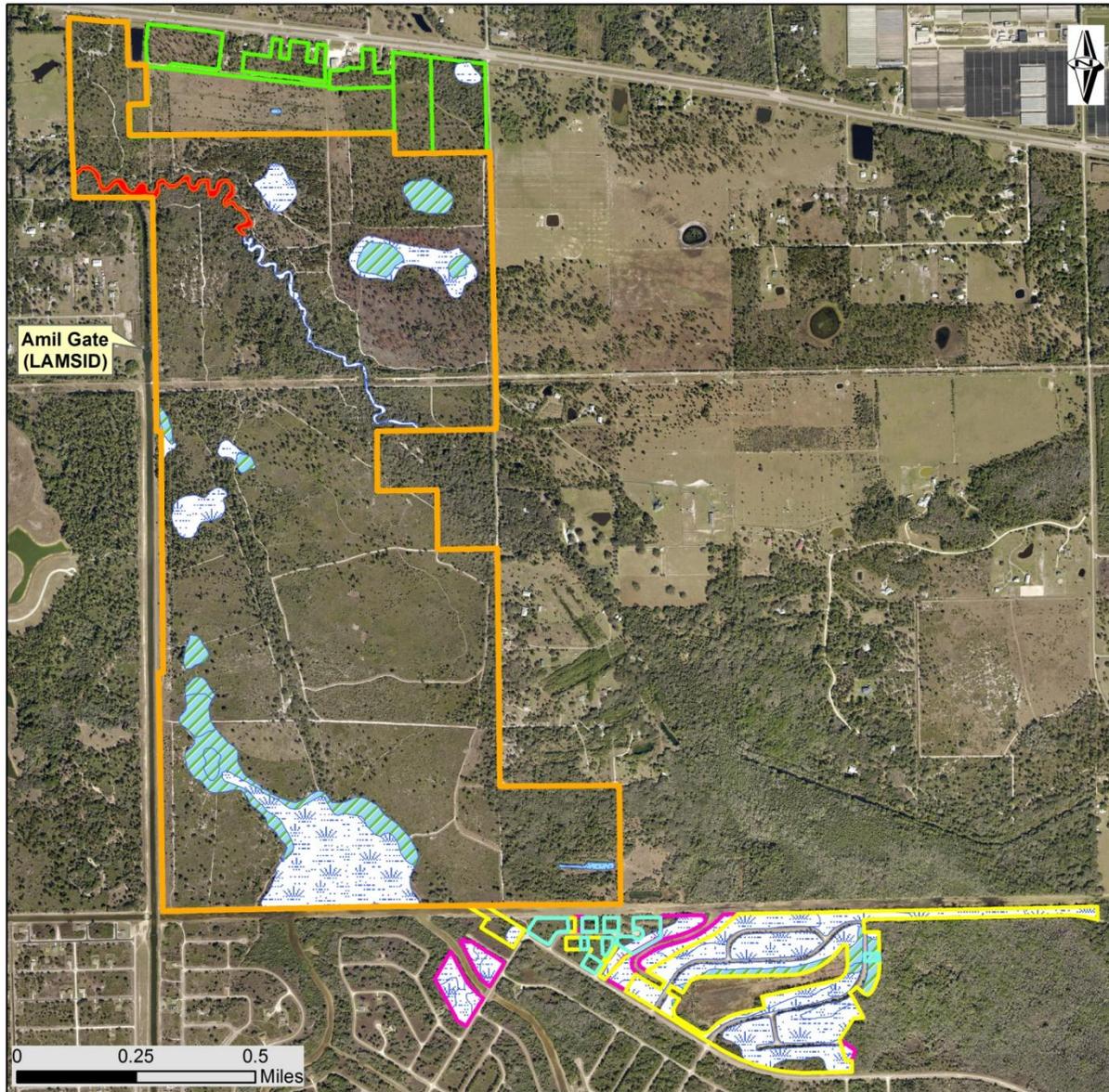
This map is not a survey; it is intended for informational purposes only.

Map created by Annisa Karim  
(AKarim@LeeGov.com) December 2014

Figure 8: Watershed Map.



### Hickey Creek Mitigation Park and Hickey Creek Greenbriar Connector Preserve: National Wetlands Inventory Map



NWI Wetland Designations	
	Freshwater Emergent Wetland
	Freshwater Forested/Shrub Wetland
	Freshwater Pond
	Riverine
	Hickey Creek Mitigation Park (County Owned)
	Hickey Creek Greenbriar Connector Preserve (County Owned)
	Hickey Creek Greenbriar Connector Preserve (State Owned)
	C20/20 Portion of HCGCP (County Owned)
	C20/20 Portion of HCMP (County Owned)

**This map is not a survey; it is intended for informational purposes only.**

Map created by Annisa Karim  
(AKarim@LeeGov.com) December 2014

Figure 9: National Wetlands Inventory Map.

Hickey Creek, a tributary of the Caloosahatchee River, runs in a southeast to northwest direction across HCMP. The water elevation of Hickey Creek is contingent upon several artificial water management structures. One is the Franklin Lock, which is the last lock in the Caloosahatchee River before it enters San Carlos Bay. It is located approximately 3 miles downstream and to the west of HCMP and is operated by the U.S. Army Corps of Engineers. The other structure is a counterbalance weir (Amil Gate – shown in Figure 9) operated LAMSID and located in Hickey Creek Canal north of the powerline corridor along the west park boundary. This weir was designed to provide continuous flow to Hickey Creek.

Hickey Creek is a natural conveyance, from its intersection with the Caloosahatchee River through and beyond the park boundaries. There are no water control structures along the length of Hickey Creek from its confluence with the Caloosahatchee River to its upper channelized end. The Hickey Creek canal is within the LAMSID management area.

The Lee County Environmental Laboratory, a part of the Lee County Division of Natural Resources, uses six water quality indicators (chlorophyll, dissolved oxygen, total nitrogen, total phosphorus, total suspended solids, and enterococcus bacteria) to calculate a watershed water quality index (WSWQI). The average value of each parameter is calculated for the watershed site every year. In order to calculate the WSWQI, a unitless value is assigned to each indicator concentration. A higher number indicates better water quality. This provides an efficient and standard method for the lab to make comparisons over all of the watershed sites. Figure 10 shows the overall condition of Hickey Creek from 2007 – 2014.

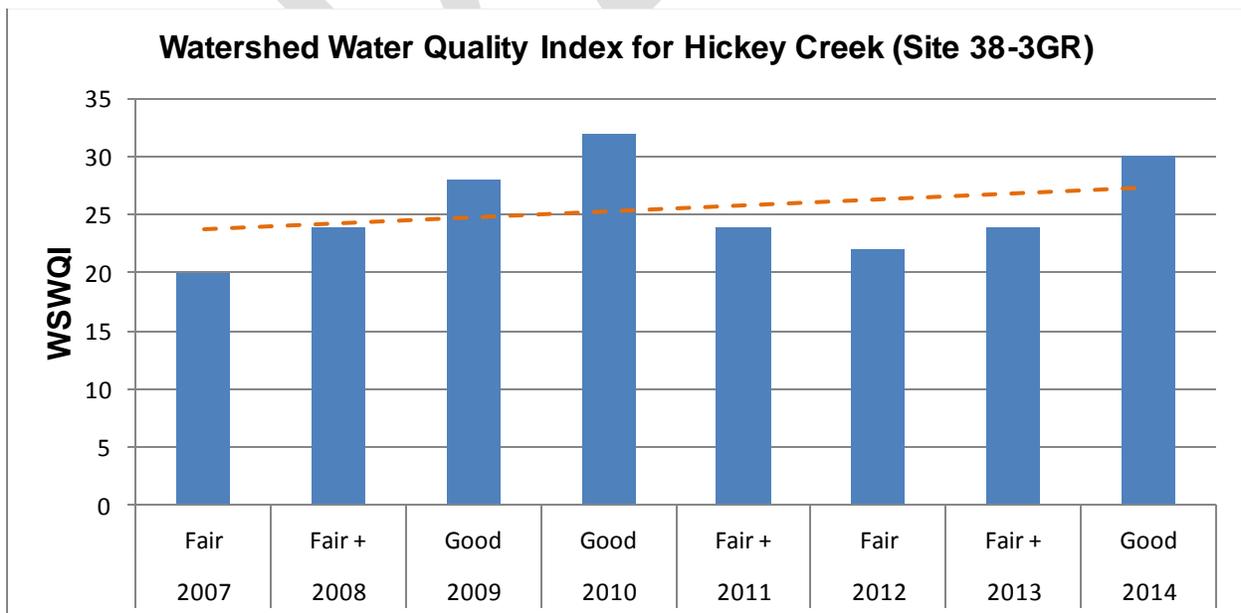


Figure 10: Watershed Water Quality Index Data from 2007 - 2014.

The HCMP Land Stewardship Plan from 2003 stated, “Evidence that at least portions of HCMP have been impacted by drainage is indicated by changes in plant species composition of the wetland areas near and adjacent to the southern boundary. As the hydroperiod was reduced, these formerly forested cypress systems are being replaced by transitional and upland species less tolerant of the historic hydroperiod characteristic of a cypress system.” Staff continues to see this transition occurring with the Cypress dome being quickly invaded by various oaks (commonly found in shorter hydroperiods and dry areas), hog plum (*Ximenia americana*), and cabbage palms (*Sabal palmetto*). While these trees and shrubs are native species, they are not typically found in healthy cypress systems.

General information on hydrologic components and watershed is located in the LSOM’s Land Stewardship Plan Development and Supplemental Information section.

## B. Biological Resources

### i. Ecosystem Function

Ecosystem services such as the protection of water resources, flood control, maintenance of nutrient cycles, preservation of biological diversity, carbon sequestration, and the availability of recreational lands are imperative for the well-being of the citizens of Lee County and may be achieved through the preservation and appropriate stewardship of natural areas.

Lee County’s preserves and some of its parks contain a diversity of plant communities that provide habitat for numerous plant and animal species. The majority of these preserves and parks are not islands of habitat; rather, they are pieces of a larger conservation effort striving to create or maintain healthy and viable ecosystems. Ecosystem function information is located in the LSOM’s Land Stewardship Plan Development and Supplemental Information section.

### ii. Natural Plant Communities

The term “plant community” refers to the suite of floristic (plant) species that form the natural (i.e., native) vegetation of any place. In addition to anthropogenic influences, the combination of factors such as geologic, topographic and hydrologic assemblages, underlying soils and climate determine the types of plants found in an area. These plants, in turn, determine the animal species that may be found there.

Various agencies and entities classify land use and land cover in different ways. Their alternative classification approaches and systems address their own particular needs. When compiling data from multiple entities, there arises a need to be able to appropriately and consistently compare the vegetation classifications. This method is called “crosswalking” and is dependent on understanding the hierarchical components of classifications being compared. Staff used the Cooperative Land Cover Map (version 2) to map the plant communities within HCMP and HCGCP. The data were then

crosswalked to match FNAI community types based on the Guide to the Natural Communities of Florida (2010) prepared by FNAI. Where the data indicated more of a land use (e.g., low intensity urban) rather than a land cover, staff relied on the classification of surrounding plant communities and firsthand knowledge of the parcels. Two communities (Improved Pasture and Artificial Lakes and Ponds) could not be crosswalked due to their current state.

Descriptions of the plant communities and characteristic animals found within each community, as well as management suggestions may be found in the LSOM. A complete list of plant species identified for HCMP and HCGCP may be found in Appendix F.

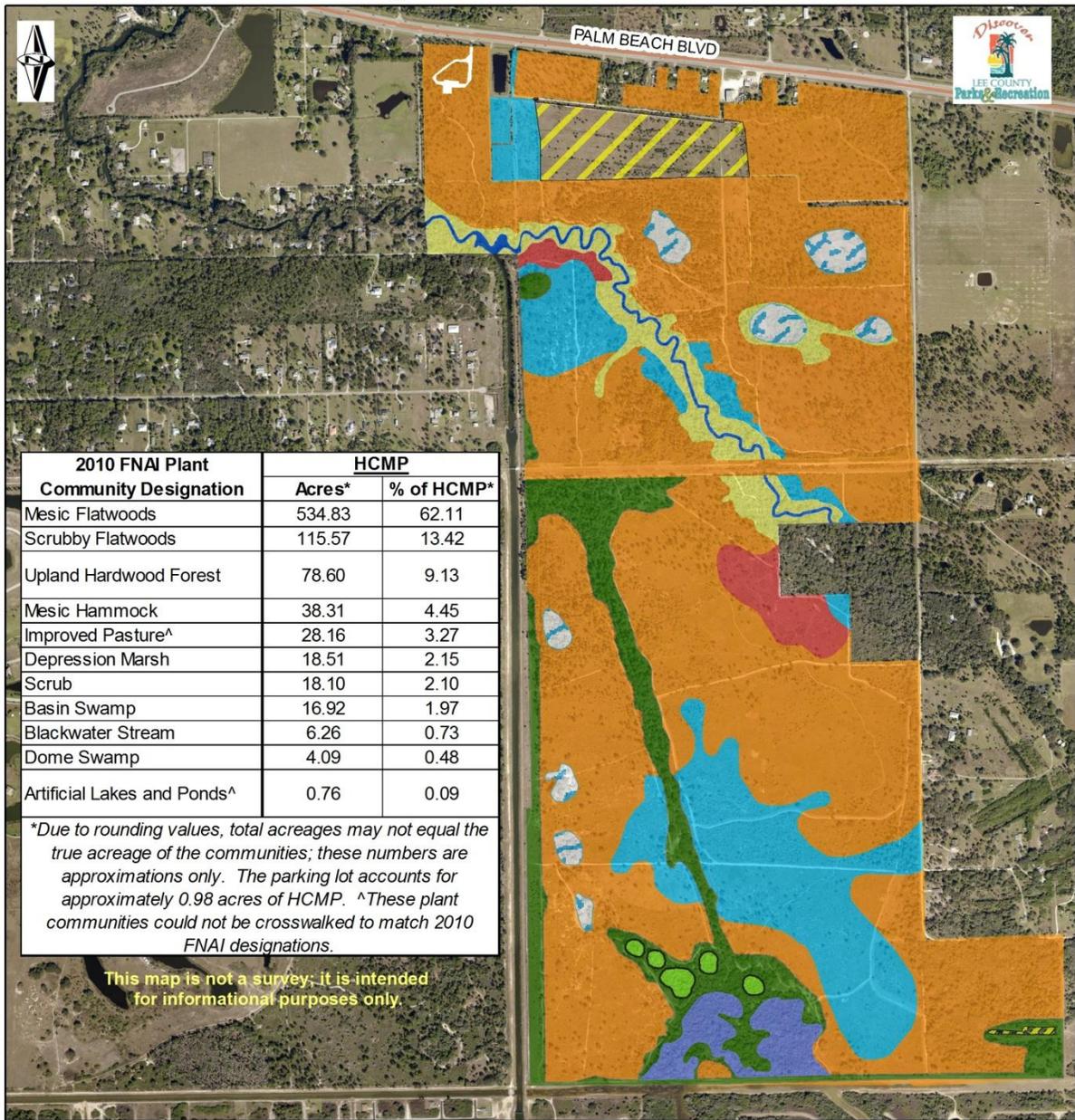
HCMP is comprised of eleven plant communities; HCGCP is comprised of seven plant communities. Table 4 lists these plant communities in order of decreasing abundance over both of the preserves and Figures 11 and 12 show their geographic distribution within each conservation area.

Table 4: Coverage of FNAI Designated Plant Communities within HCMP and HCGCP.

2010 FNAI Plant Community Designation	HCMP		HCGCP	
	Acres*	% of HCMP*	Acres*	% of HCGCP*
Mesic Flatwoods	534.83	62.11	10.05	10.48
Scrubby Flatwoods	115.57	13.42	---	---
Upland Hardwood Forest	78.60	9.13	---	---
Wet Flatwoods	---	---	45.64	47.61
Mesic Hammock	38.31	4.45	1.77	1.85
Improved Pasture <sup>^</sup>	28.16	3.27	---	---
Prairie Hydric Hammock	---	---	25.36	26.46
Depression Marsh	18.51	2.15	---	---
Scrub	18.10	2.10	---	---
Basin Swamp	16.92	1.97	---	---
Slough Marsh	---	---	7.49	7.81
Blackwater Stream	6.26	0.73	---	---
Strand Swamp	---	---	5.28	5.51
Dome Swamp	4.09	0.48	0.28	0.29
Artificial Lakes and Ponds <sup>^</sup>	0.76	0.09	---	---

*\*Due to rounding values, total acreages may not equal the true acreage of the communities found within HCMP and HCGCP. These numbers are approximations only.  
The parking lot accounts for approximately 0.98 acres of HCMP.  
<sup>^</sup> These plant communities could not be crosswalked to match 2010 FNAI designations.*

# Hickey Creek Mitigation Park - Plant Communities



Map created by Annisa Karim  
(AKarim@LeeGov.com) November 2014

0 0.25 0.5 Miles



Figure 11: HCMP Plant Community Map Based on FNAI Designations (FNAI, 2010).

# Hickey Creek Greenbriar Connector Preserve: Plant Communities

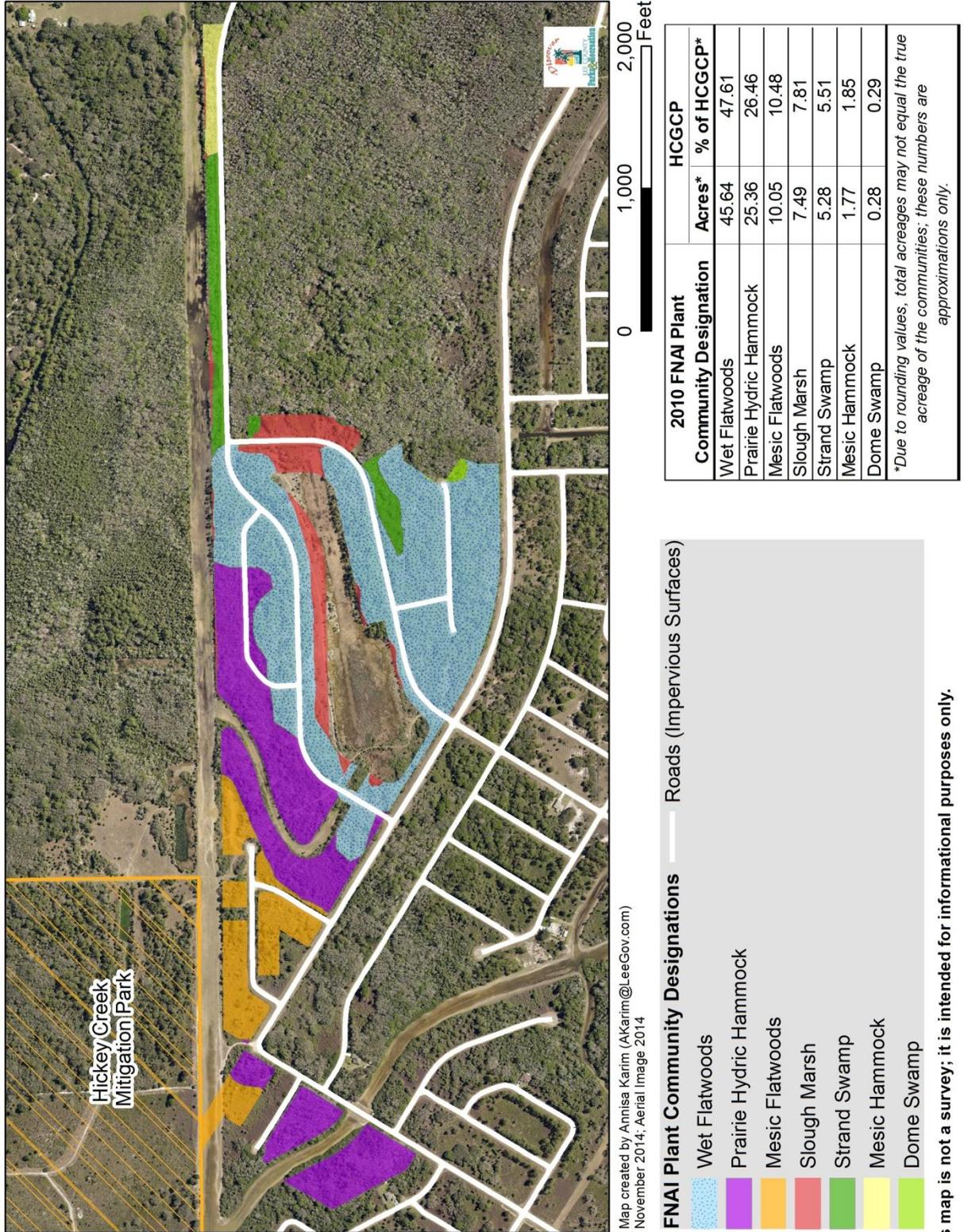


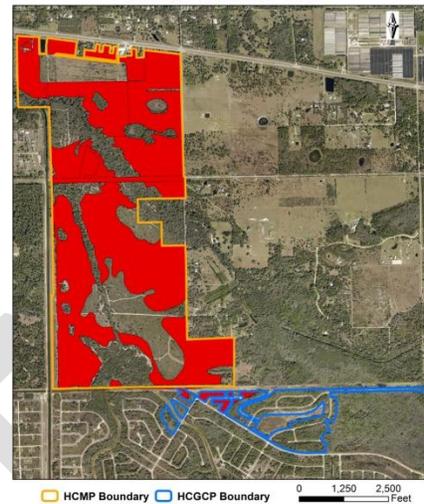
Figure 12: HCGCP Plant Community Map Based on FNAI Designations (FNAI, 2010).

### **Mesic Flatwoods**

**(534.83-acres and 62.11% of HCMP;  
10.05-acres and 10.48% of HCGCP)**

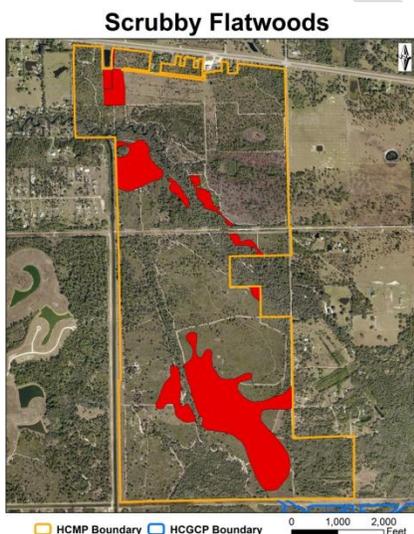
Mesic Flatwoods are the dominant plant community (62.11%) within HCMP but only cover approximately 10.48% of HCGCP. As would be expected, non-hydric soils underlie the majority of mesic flatwoods within HCMP. However, within HCMP, hydric soils underlie the majority of the mapped mesic flatwood area. Standing water is common for brief periods during the rainy season. Exotics present include Brazilian pepper (*Schinus terebinthifolia*), rosary pea (*Abrus precatorius*), natalgrass (*Melinis repens*, synonym *Rhynchelytrum repens*) and Guineagrass (*Panicum maximum*). Within the plant community is included the electrical transmission line that bisects HCMP in an east - west orientation. The Florida Power and Light Co. (FPL) manage the line and their management guidelines input controls to minimize the growth of potentially large trees. The powerline right-of-way is periodically mowed by FPL but flora on the edges of the cleared areas resemble the groundcover in mesic flatwoods and for that reason, this area is included within this plant community description.

Mesic Flatwoods



### **Scrubby Flatwoods**

**(115.57-acres and 13.42% of HCMP; does not occur within HCGCP)**



The majority of scrubby flatwoods within HCMP is found south of the powerline easement. Visitors may see representative scrubby flatwoods systems on the western part of the Hickey Creek Trail and the southeastern portion of the Palmetto Pines Trail.

Scrubby flatwoods and scrub communities are difficult to keep within a consistent fire regime due to the low humidity required to properly burn these areas. Low humidity days often coincide with fire bans in this part of Florida. One of the ways FWC staff has adapted to the challenge of burning scrubby flatwoods is my first mowing the fuels prior to burning. This transfers the vegetative biomass from the “air” to the ground. When this vegetation dries, it is likely to burn more readily under relatively higher humidity conditions thereby allowing the site to stay within a fire regime. While this is “mow first” method is not always employed, it is a tool used by land managers to accomplished desired goals under certain conditions.

**Upland Hardwood Forest**  
**(78.60-acres and 9.13% of HCMP; does not occur within HCGCP)**

The majority of the upland hardwood forest plant communities within HCMP is found south of the powerline easement. The powerline easement (corridor) that crosses HCMP in an east/ west direction was the location of a portion of the Seaboard Air Line Railway used to take raw lumber to the mills before the 1940s. The current location of the western portion of the Palmetto Pines hiking trail was the spur of the railroad built to gather logs off of the main railway. The construction of the “spur” required elevating the land to build a railway line. This resulted in an altered plant community designated, today, as upland hardwood forest. This is seen on the map as the “line” running from the western portion of the powerline in a southeastern direction. Similar to naturally occurring mixed hardwoods, this plant community is a well-developed, closed-canopy forest dominated by deciduous hardwood trees in areas sheltered from fire. It has a diverse assemblage of deciduous and evergreen tree species in the canopy and midstory, shade-tolerant shrubs, and a sparse groundcover.



**Wet Flatwoods**  
**(not mapped within HCMP; 45.64-acres and 47.61% of HCGCP)**



Wet flatwoods are the most abundant plant community mapped within HCGCP. This community surrounds the deeper marsh managed by the LAMSID. Exotics, particularly Brazilian pepper, are a management challenge in this portion of HCGCP.

**Mesic Hammock**  
**(38.31-acres and 4.45% of HCMP; 1.77-acres and 1.85% of HCGCP)**

While mesic hammocks account for less than 5% of HCMP, they are an important community. They provide essential buffer areas to Hickey Creek. Like the mixed hardwood forests, they are considered upland hardwood forests. Pyrogenic vegetation such as cabbage palms and saw palmetto are contained within this plant community. A large portion of the eastern arm of the Hickey Creek hiking trail and both named bridges provide visitors with good opportunities to see this plant community. The two unnamed bridges on the North Marsh hiking trail traverse mesic hammock communities.

Within HCGCP, the mesic hammock community is only present in the extreme eastern portion of the preserve (see white circle on map to the right). This provides a buffer to LAMSID’s Greenbriar Swamp to the south.



**Improved Pasture**  
**(28.16-acres and 3.27% of HCMP; does not occur within HCGCP)**



Improved pastures are not considered native or natural plant communities. Therefore, this plant community could not be crosswalked to match an FNAI Community. These altered landscapes have been cleared of their natural vegetation and are dominated by planted, non-native and domesticated forage species. Generally, they also undergo common agricultural practices such as mowing, grazing, burning and fertilizing (Agro-Ecology Grazing Issues Working Group, 2009). While these are not optimal communities, they do provide benefits to some species of wildlife, particularly when wetlands and other native communities are present. More than 400 species of birds have been documented in Florida, many of which utilize habitats found on ranchland (such as improved pastures) during part or all of the year (Main et al. 2000).

Approximately 28.16-acres of HCMP are designated as improved pasture. This part of HCMP represents one of the first acquisitions by the County’s C20/20 program. This land was purchased to protect the rest of the park from the effects of potential development. As exotics are treated, native species are slowly coming back.

### **Prairie Hydric Hammock**

**(does not occur within HCMP; 25.36-acres and 24.46% of HCGCP)**

Prairie hydric hammocks may also be thought of as mixed wetland hardwoods or mesic hammocks. The majority of the prairie hydric hammock community within HCGCP is underlain with hydric soils that are poorly drained or very poorly drained. As a result, the vegetation must be able to withstand some degree of ponding or inundation. Brazilian pepper tends to be a problem on the edges of this community.



### **Depression Marsh**

**(18.51-acres and 2.15% of HCMP; does not occur within HCGCP)**



The depression marshes found within HCMP are small, isolated wetlands. They are seasonally inundated with water and are surrounded by fire-maintained communities. The depression marsh located at the overlook of the North Marsh hiking trail provides visitors with the best view of this community. The once largely herbaceous vegetation is being invaded by native, woody species such as willow (*Salix caroliniana*) and wax myrtle (*Myrica cerifera*). The marsh just north of Hickey Creek and those south of the powerline are inundated with water for a shorter period than those along the North Marsh Hiking Trail. The marsh just north of Hickey Creek contains Brazilian pepper, Guineagrass, cogongrass (*Imperata cylindrica*), Caesarweed (*Urena lobata*), and bishopwood (*Bischofia javanica*). Staff is actively treating these exotics. In November 2012, an indigo snake (*Drymarchon corais couperi*) was seen just at the edge of the depression marsh at the North Marsh tail overlook. This sighting was reported to FNAI.

### Scrub

**(18.10-acres and 2.10% of HCMP; does not occur within HCGCP)**

While making up only 14.53% of HCMP, the scrub and scrubby flatwood communities within HCMP are important factors in the life histories of Florida scrub-jays and gopher tortoises in the park. Poorly drained, but very deep sandy soils underlie the scrub community. As would be expected, these soils are made up of marine sediments. Three species of “scrub oaks” (*Quercus myrtifolia*, *Q. geminata*, *Q. chapmanii*), may be found in these communities. Invasion by exotic vegetation in this community is minimal; the most challenging species are rosary pea and cogongrass.



### Basin Swamp

**(16.92-acres and 1.97% of HCMP; does not occur within HCGCP)**



The basin swamp community is located at the extreme southern portion of HCMP. This community is typically saturated during the summer rainy season and after periods of heavy rainfall. The HCMP Land Stewardship Plan from 2003 stated, “Evidence that at least portions of HCMP have been impacted by drainage is indicated by changes in plant species composition of the wetland areas near and adjacent to the southern boundary. As the hydroperiod was reduced, these formerly forested cypress systems are being replaced by transitional and upland species less tolerant of the historic hydroperiod characteristic of a cypress system.” Staff continues to see this transition occurring with the Cypress dome being quickly invaded by various oaks (commonly found in shorter hydroperiods and dry areas), hog plum, and

cabbage palms. While these trees and shrubs are native species, they are not typically found in healthy cypress systems. For instance, hog plum is a facultative upland plant (Lichvar et al. 2014) yet it is forming dense thickets within this basin swamp. Additionally, Brazilian pepper is invading this area.

**Slough Marsh**

**(does not occur within HCMP; 7.49-acres and 7.81% of HCGCP)**



Hallendale fine sand, a hydric, poorly drained soil underlies the Slough Marsh (freshwater marshes) community within HCGCP. These freshwater marshes are saturated during the summer rainy season and after periods of heavy rainfall in other seasons. Wading birds congregate in these marshes during dry down periods. Similar to the mixed wetland hardwood community, Brazilian pepper tends to be a problem on the edges of these marshes.

Brazilian pepper tends to be a problem on the edges of these marshes.

**Blackwater Stream**

**(6.26-acres and 0.73% of HCMP; does not occur within HCGCP)**

The blackwater stream (Hickey Creek) within HCMP flows from the southeast to the northwest out of the park, through residential areas, and into the Caloosahatchee River. The NWI database classifies approximately 0.67 miles of the northern portion of the creek (within HCMP) as riverine and the remaining 0.76 miles within HCMP as a freshwater/ forested shrub wetland. It is not uncommon to have a riverine system adjacent to a palustrine wetland in the same channel. During periods of heavy rainfall, water does overcome the banks of the creek but because the water is mostly slow moving, erosion is not an issue.



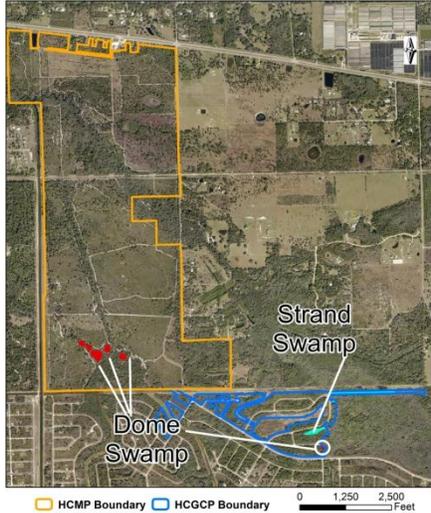
**Strand Swamp**

**(does not occur within HCMP; 5.28-acres and 5.51% of HCGCP)**

**Dome Swamp**

**(4.09-acres and 0.48% of HCMP; 0.28-acres and 0.29% of HCGCP)**

**Strand Swamp and Dome Swamp**



The strand swamp in HCGCP and the dome swamps in HCMP and HCGCP are grouped here together because of their small sizes and similarities (i.e., both are freshwater, forested wetlands). Strand swamps are generally elongated, trough-like systems whereas dome swamps are isolated, depressions (similar to depression marshes but forested). Both of these communities are dominated by cypress trees (*Taxodium* spp.). Typically, the understory of these swamps is limited due to their long hydroperiods. However, biomass of woody understory vegetation within the dome swamps in HCMP continues to increase due to the dry down of the area. During times of heavy rainfall, water flows south into the water conveyance area managed by LAMSID. Similar to the adjacent basin swamp area, staff

continues to see this community being quickly invaded by various oaks (commonly found in shorter hydroperiods and dry areas) and cabbage palms. Additionally, Brazilian pepper is invading this area.

**Artificial Lakes and Ponds**

**(0.76-acres and 0.09% of HCMP; does not occur within HCGCP)**

Artificial ponds are also described as watershed impoundments, water retention ponds, cattle ponds or borrow pits.

The borrow pit is characterized as such because of the depth of water and condition of the substrate after mining activities took place. This pit, near the south end of the park, was a part of a rock mining operation during the late 1950s to the late 1960s (see circled area on map to the right).

**Artificial Lakes and Ponds**



### **iii. Fauna**

The animal species detected within HCMP and HCGCP are, in part, a result of the Preserves' location in a rural portion of the county, and the various plant communities found within their boundaries.

The acquisition of lands to form HCMP started in 1994 and was focused, specifically, towards off-site mitigation for gopher tortoises. Co-managed by LCPR and FWC, HCMP is a part of FWC's Mitigation Park Program. In general, the plant communities found within HCMP and HCGCP provide habitat for migratory and resident birds including wading birds, mammals, freshwater fish, and reptiles. Appendix G has the complete list of vertebrates recorded to date within HCMP and HCGCP.

Additional general information about fauna on all preserves can be found in the LSOM's Land Stewardship Plan Development and Supplemental Information section.

### **iv. Designated Species**

Although all native plant and animal species found within HCMP and HCGCP have some protection due to the preservation of this property, certain species need additional attention. For stewardship purposes, all plants and animals listed by the USFWS, FWC and the Florida Department of Agriculture and Consumer Services (FDACS) will be given special consideration.

Typically, designated (i.e., those listed as endemic, rare, threatened, endangered, special concern, imperiled, critically imperiled) species will benefit from proper stewardship of the biological communities within which they occur. However, some species may require additional measures to ensure their protection. Practices likely to benefit the native flora and fauna within HCMP and HCGCP include exotic plant control, feral and exotic animal control, protecting and restoring water resources, prescribed fire applied in appropriate intervals, wildlife monitoring, roller-chopping (where appropriate) and trash removal. The enforcement of preserve rules including: no littering, no motorized vehicles and no collection of ANY natural or cultural resources (e.g., plants, animals, shells, artifacts, etc.) will also benefit the native plants and animals.

The FWC's Wildlife and Habitat Management Section takes a proactive, science-based approach to species management on lands in the Wildlife Management Area system (HCMP is within this system). They have created a Species Management Strategy as a product of the Wildlife Conservation Prioritization and Recovery Program. This approach uses information from statewide models, in conjunction with input from species experts and people knowledgeable about the area, to create site-specific assessments of a number of focal species. FWC staff combines these assessments with management considerations to develop a wildlife management strategy for the area. The FWC intends for this strategy to: 1) provide land managers with information on actions that should be taken provided the necessary resources are available, 2) promote the presence and ensure the persistence of focal wildlife species on the area, and 3) provide measurable species objectives that can be used to evaluate the success of wildlife management on the area.

The Species Management Strategy presents the results of a science-based process for evaluating focal species needs using an ecosystem management approach on the Hickey Creek Wildlife & Environmental Area (aka HCMP). Natural community management designed for a set of focal species benefits a host of species reliant upon the same natural communities. Monitoring select species verifies whether natural community management is having the desired effect on wildlife. To maximize the potential wildlife conservation benefit, FWC staff considered the role of Hickey Creek Wildlife & Environmental Area in regional and statewide conservation initiatives throughout the process.

Listed Plant Species: The Florida State Statute titled “Preservation of native flora of Florida” (Statute 581.185) provides the following definitions:

- ④ Endangered plants means species of plants native to the state that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the federal Endangered Species Act of 1973, as amended, Pub. L. No. 93-205 (87 Stat. 884).
- ④ Threatened plants means species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in such number as to cause them to be endangered.
- ④ Commercially exploited plants means species native to the state which are subject to being removed in significant numbers from native habitats in the state and sold or transported for sale.

There are 16 plant species within HCMP and HCGCP that are listed by Endangered Plant Advisory Council (Weaver and Anderson 2010): 5 as endangered, 11 as threatened. Additionally, 3 species are commercially exploited and 8 species are endemic to the state – 1 of which is endangered. (Table 5). A list of all plant species documented within HCMP and HCGCP may be found in Appendix F.

Table 5: Listed Plant Species Documented within HCMP and HCGCP

Scientific Name	Common Name	Status*
<i>Habenaria distans</i>	Hammock False Reinorchid	ES
<i>Lythrum flagellare</i>	Florida loosestrife	ES & endemic
<i>Ophioglossum palmatum</i>	Hand fern	ES
<i>Tillandsia fasciculata</i>	Cardinal airplant	ES
<i>Tillandsia utriculata</i>	Giant wild pine	ES
<i>Bletia purpurea</i>	Pinepink	TS
<i>Coelorachis tuberculosa</i>	Florida jointtailgrass	TS
<i>Lilium catesbaei</i>	Catesby's lily	TS
<i>Myrcianthes fragrans</i>	Twin berry; Simpson's stopper	TS
<i>Opuntia stricta</i>	Erect pricklypear	TS
<i>Pteroglossaspis ecristata</i>	Giant orchid	TS
<i>Sacoila lanceolata</i> var. <i>lanceolata</i>	Leafless beaked orchid	TS
<i>Spiranthes longilabris</i>	Longlip Ladiestresses	TS
<i>Tectaria heracleifolia</i>	Broad halberd fern	TS
<i>Tillandsia variabilis</i>	Leatherleaf airplant	TS
<i>Zephyranthes simpsonii</i>	Redmargin zepherlily	TS
<i>Encyclia tampensis</i>	Florida butterfly orchid	CE
<i>Osmunda cinnamomea</i>	Cinnamon fern	CE
<i>Osmunda regalis</i>	Royal fern	CE
<i>Campanula floridana</i>	Florida bellflower	END
<i>Croton glandulosus</i> var. <i>floridanus</i>	Vente conmigo	END
<i>Euphorbia polyphylla</i>	Lesser Florida spurge	END
<i>Nasturtium floridanum</i>	Florida watercress	END
<i>Pectis linearifolia</i>	Florida cinchweed	END
<i>Polygonella polygama</i> var. <i>brachystachya</i>	October flower	END
<i>Tephrosia rugelii</i>	Rugel's hoarypea	END
<i>Status: ES = Endangered - State; TS = Threatened-State; CE = Commercially Exploited</i>		

The USFWS and FWC maintain records of listed species on the federal and state level respectively. The designation “threatened” (likely to become endangered within the foreseeable future throughout all or a significant portion of its range) are utilized by both agencies. FWC includes a third designation, “species of special concern”, to denote a species which has not yet been listed as a threatened species but should be given special attention due to unusually vital or essential ecological niche filled by these species, past population numbers or general vulnerability.

Of the vertebrates observed at HCMP and HCGCP, the USFWS recognizes one as federally endangered and four as federally threatened. As of September 2015, FWC recognized eight listed species at HCMP and HCGCP (Table 6). A list of all vertebrate species documented within HCMP and HCGCP may be found in Appendix G

Table 6: Listed Vertebrate Species Documented Within HCMP and HCGCP (FWC 2015).

Scientific Name	Common Name	Protection Status (2015)*
<i>Puma concolor coryi</i>	Florida panther	FE
<i>Drymarchon corais couperi</i>	Eastern indigo snake	FT
<i>Aphelocoma coerulescens</i>	Florida Scrub-Jay	FT
<i>Alligator mississippiensis</i>	American alligator	FT(S/A)
<i>Mycteria americana</i>	Wood stork	FT
<i>Gopherus polyphemus</i>	Gopher tortoise	ST
<i>Aramus guarauna</i>	Limpkin	SSC
<i>Egretta caerulea</i>	Little blue heron	SSC
<i>Egretta thula</i>	Snowy Egret	SSC
<i>Egretta tricolor</i>	Tricolored heron	SSC
<i>Eudocimus albus</i>	White ibis	SSC
<i>Blarina brevicauda shermani</i>	Sherman's short-tailed shrew	SSC
<p><i>Protection Status (based on FWC list September 2015): FE = Federally-designated Endangered; FT = Federally-designated Threatened; FT(S/A) = Federally-designated Threatened species due to similarity of appearance; ST = State-designated Threatened; SSC = State Species of Special Concern</i></p>		

The natural plant communities within HCMP and HCGCP provide protection for upland and wetland species. HCMP was established as a gopher tortoise mitigation area by the FWC. Gopher tortoises are currently listed by the FWC as a threatened species. In southwest Florida, habitat destruction, degradation, and fragmentation are the primary reasons for the decline of this species. In addition to the shelter they provide, gopher tortoises are dependent upon the burrows they excavate for protection against fire, predators and climate extremes. These burrows have also been documented as important habitat for over 300 invertebrate and 60 vertebrate species (Diemer et al. 1989). Several of these species are considered “commensal” species, or species that depend intimately upon tortoise burrows in some parts of the tortoises range.

For stewardship purposes, all plants listed by FDACS and all animals listed by the USFWS and FWC will be given special consideration. Additional natural history on these species and stewardship measures to protect them may be found in the LSOM's Land Stewardship Plan Development and Supplemental Information section.

## **v. Biological Diversity**

Biological diversity (also called biodiversity) is "the variety of life and all the processes that keep life functioning" (Keystone Center 1991). Biodiversity includes 1] the variety of different species (plants, animals, microbes, etc.), 2] the genes they contain, and 3] the structural diversity in ecosystems. The wealth of biodiversity supports ecological processes that are essential to maintain ecosystems. Healthy and functioning ecosystems provide optimal habitat for the plants and animals that depend on them and provide ecosystem services such as the protection of water resources, appropriate flood control, the proper maintenance of nutrient cycles and carbon sequestration.

Many different types of mammals, birds, reptiles, and insects visit or reside in HCMP and HCGCP. They all rely on the diversity of the plants and the freshwater systems that these conservation areas offer. Land stewardship activities such as exotic plant and animal control and prescribed fire applied at appropriate intervals will help to maintain this diversity.

If appropriate funding becomes available, exotic plant control will be undertaken within HCGCP.

General information on biological diversity and measures used to help promote biological diversity is located in the LSOM.

### **C. Cultural Resources**

Cultural Resources are evidence of past human activity. These may include pioneer homes, buildings or old roads; structures with unique architecture; prehistoric village sites; historic or prehistoric artifacts or objects; human burial sites; prehistoric canals; mounds; etc. These nonrenewable resources often yield unique information about past societies and environments, and provide answers for modern day social and conservation problems.

In January of 1996, Gulf Archaeology Research Institute conducted an archaeological survey of the original 770-acres designated as HCMP (Walker et al. 1996); the Gulf Archaeology Research Institute was under subcontract with Self & Rost, Inc. Engineers of Fort Myers. Documentary research, oral history, and subsurface shovel testing on the property were performed during the survey.

#### **i. Archaeological Features**

During the survey conducted in 1996, 227 shovel tests were completed and 12 new archaeological sites were identified, documented, and evaluated. Additionally, one site (Longleaf Logging Camp II) was better defined and its Florida Site File Form (8LL780) was updated. Five of these 12 new sites were determined to be prehistoric. They were specifically categorized as American Indian archaeological sites. None of the prehistoric sites were deemed eligible for the National Register of Historic Places.

All of the newly discovered sites were registered with the Florida Department of State's Division of Historical Resources; Table 7 lists the Florida Site File numbers for all of the known Archaeological sites on HCMP.

Table 7: Archaeological Sites on HCMP (GARI 1996)

<b><u>Florida Site File Numbers</u></b>	
<u>Prehistoric Sites</u>	<u>Historic Sites</u>
8LL1889	8LL1896
8LL1890	8LL1900
8LL1891	8LL1899
8LL1892	8LL1898
8LL1893	8LL1894
	8LL1895
	8LL1897
	8LL780 - updated

Artifact collections included primarily a few pottery sherds, one bone pin, and one bone point; no other faunal remains or other dateable organic materials were found. HCMP includes the archaeological remains of a logging rail system, two logging camps, and associated refuse dumps, all dating to the 1930s and 1940s (Walker et al. 1996, Walker 2000).

General information on archaeological features in Lee County is located in the LSOM's Land Stewardship Plan Development and Supplemental Information section.

## **ii. Land Use History**

Lee County's recorded history is tied to the accessibility of the land by settlers. Settlement of inland areas by Europeans was delayed until the 19<sup>th</sup> century due to difficulty of access. The Caloosahatchee River provided limited navigability prior to its initial dredging in the 1880s. The Disston Land Purchase of 1881 marked the beginning of the large-scale development of Lee County. Hamilton Disston purchased 4 million acres from the State of Florida. These lands stretched from Tarpon Springs to Fort Myers to Lake Tohopekaliga. Mr. Disston was allowed to drain inland portions of this land in exchange for the drained land. In August 1883, the Caloosahatchee River was connected to Lake Okeechobee. By 1885, Ft. Myers was the 2<sup>nd</sup> largest town on Florida's Gulf Coast.

Dennis O. Hickey, an Irish immigrant, and the namesake of Hickey Creek, homesteaded in the area after 1865; his livelihood consisted of cattle ranching and timbering. Dennis Hickey died in 1897.

The Great Freeze of 1894/1895 (towards the end of Dennis Hickey life) prompted citrus growers in north and central Florida to move south. The population of Lee County continued to grow in the early 1900s due to improvements in the transportation industry.

The introduction of railroads contributed to a boom in the commercial fishing industry and the establishment of a timber industry in southwest Florida.

Dowling & Camp logged the pine flatwoods of the Hickey Creek and Lehigh Acres areas from 1932 to 1935 and 1940 to 1944 (Walker et al. 1996). The intervening years were spent logging an area in neighboring Hendry County also on the south side of the, Caloosahatchee River. Approximately 100,000 board-feet (800 – 1000 trees) of longleaf pine (*Pinus palustris*) and south Florida slash pine (*P. elliotii* var. *densa*) were logged each day.

HCMP and HCGCP were some of the last lands to be timbered in the area. The powerline easement (corridor) that crosses HCMP in an east - west direction was the location of a portion of the Seaboard Air Line Railway used to take raw lumber to the mills before the 1940s. A sawmill camp was located south of the creek and the powerline. Boxcars were placed on the HCMP property for rail crews and loggers to live in. Additionally, a commissary (store) was set up in HCMP where the rail crews and loggers could buy food, medicine, and household supplies. An abandoned logging tram, which was the elevated roadbed for the logging railroad, transects the site in a northwest to southeast orientation. A few rotted ties remain on the tram, which is vegetated with live oak and palmetto.

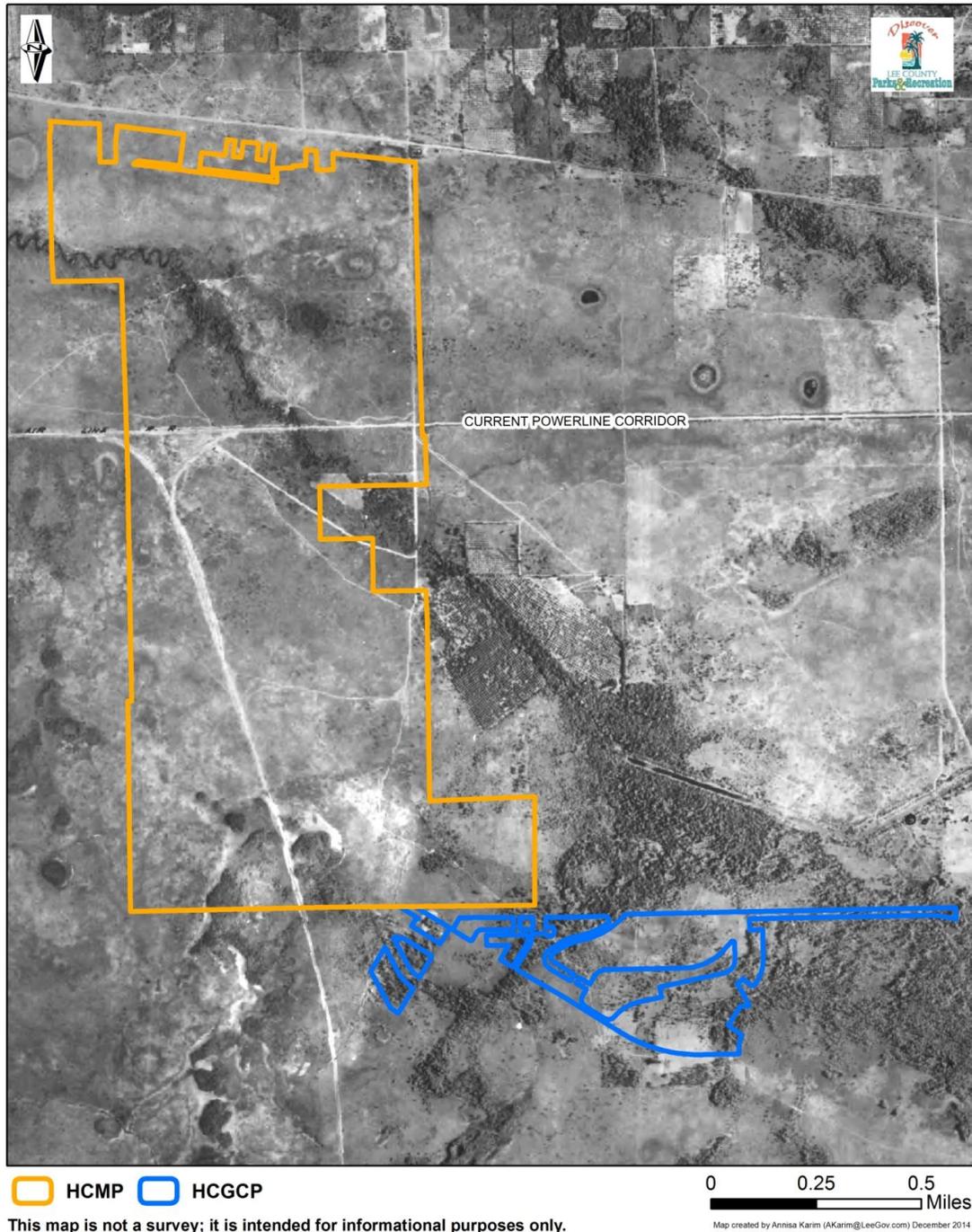
Dowling & Camp's Hickey Creek Railroad formerly occupied the site of the powerline right-of-way. Railroad bridge pilings can be seen where the creek crosses the right-of-way.

Logging operations ceased in the 1940s. The decimation of the longleaf pine forests combined with and partially attributed to the destructive feeding behavior of feral hogs (*Sus scrofa*), an exotic species, and the competitiveness of other fast-growing pines and oaks prevented the longleaf pine forests from regenerating (Walker et al. 1996, Walker 2000). Cattlemen, farmers, and citrus growers bought and converted properties within and around HCMP into cattle pastures, irrigated vegetable fields, and irrigated citrus groves. The Lewis Family converted the commissary into a ranch house; they raised cattle on the property and farmed vegetables.

Comparing historical aerials of HCMP and HCGCP to the most current aerials available may provide some insight as to the scale of landscape alteration by logging and agriculture. Unfortunately, there are no aerials available before the logging began in 1932 but oral histories of the area allude to a "high pine" overstory and an open understory (Walker et al. 1996, Walker 2000).

The 1944 aerial (Figure 13) shows the southwest corner of HCMP and parts of HCGCP denuded of vegetation. In fact, most of the areas except those that buffered the creek and other moving freshwater bodies were clear-cut. The areas left likely contained riparian species and not the pine and cypress species sought by the loggers. Note the degradation of the cypress areas at the extreme southern end of HCMP.

### HCMP & HCGCP Aerial View 1944



This map is not a survey; it is intended for informational purposes only.

Figure 13: 1944 Aerial View of HCMP and HCGCP

The 1953 aerial (Figure 14) shows that the railroad tracks are still a major component of the landscape (Recall that logging operations ceased in the 1940s). By 1953, more agriculture has moved into the area. Definitive rows can be seen by 1953. There are more trails in HCMP. The vegetation in HCGCP looks as though it is coming back.

### HCMP & HCGCP Aerial View 1953



Figure 14: 1953 Aerial View of HCMP and HCGCP

The 1986 aerial (Figure 15) shows that agriculture is becoming more widespread in this part of Lee County. The LAMSID, by 1986, has constructed the north - south water conveyance structure just outside of the western border of HCMP. The borrow pits in the southeast corner of HCMP and Alva Scrub Preserve had been excavated. Permanent roads are being built in the northern section of Lehigh Acres.

### HCMP & HCGCP Aerial View 1986

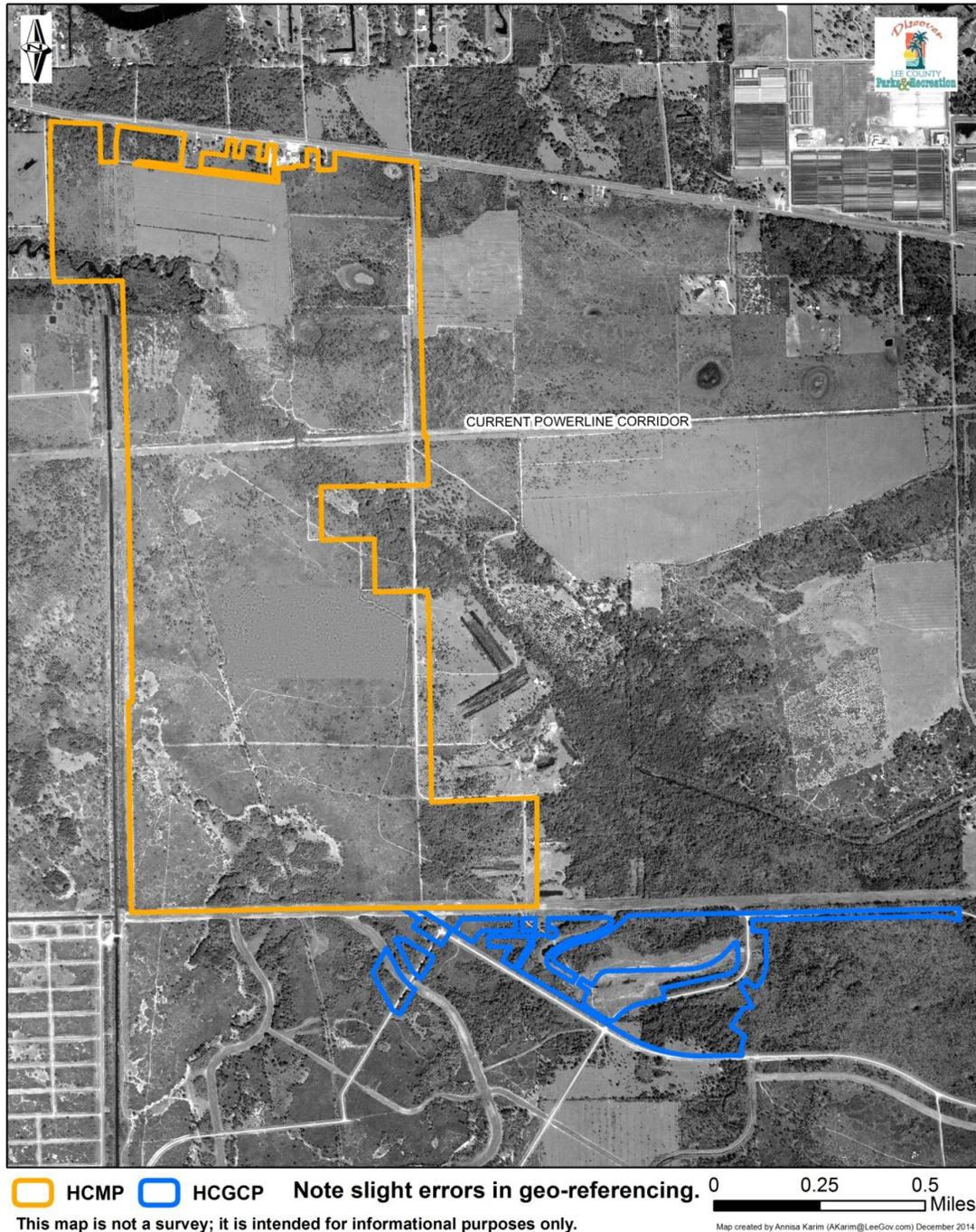


Figure 15: 1986 Aerial View of HCMP and HCGCP

By 1998, most of HCMP had been purchased by Lee County. The 1998 aerial (Figure 16) shows all of the current roads existing in the Greenbriar section of Lehigh Acres had been constructed. The basin swamp on the southern border of HCMP south into Lehigh had been fragmented. In February 1998, FWC planted pine trees in the abandoned pastures and citrus groves just north of the creek. Rows of planted trees are evident in the aerial.

### HCMP & HCGCP Aerial View 1998

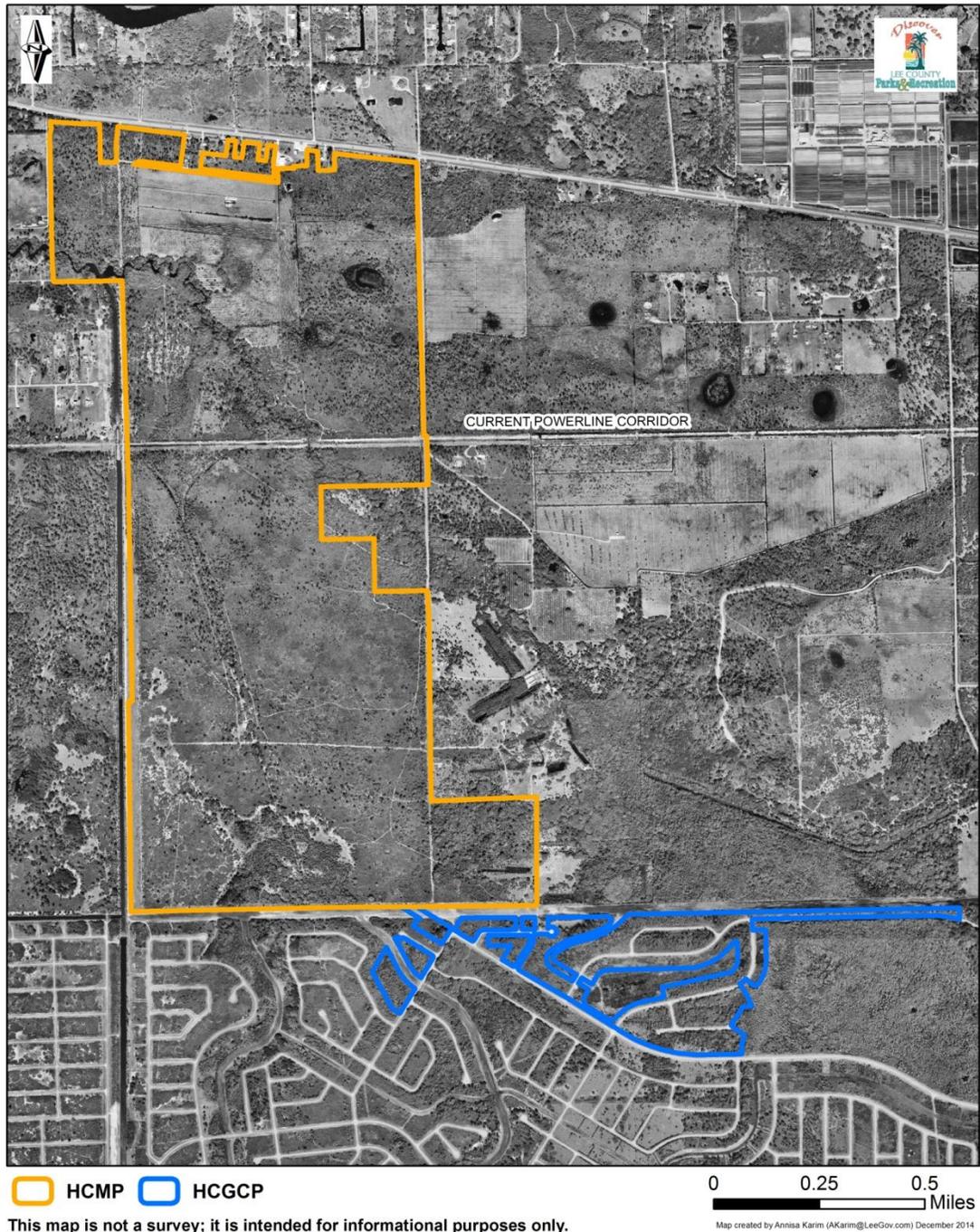


Figure 16: 1998 Aerial View of HCMP and HCGCP

### iii. Public Interest

A public meeting to discuss this land management plan will be held at the LOCATION? ADDRESS? DATE? TIME. All comments provided will become part of the public record and will be included in this plan (Appendix H).

## V. Factors Influencing Management

### A. Natural Trends and Disturbances

Natural trends and disturbances can include hurricanes, flooding, wildfires, occasional freezes, and the pattern of wet and dry seasons. Implementation of the Management Action Plan will take all of these factors and their influence on projects within HCMP and HCGCP into consideration. General information on natural trends and disturbances influencing native communities and stewardship is located in the LSOM's Land Stewardship Plan Development and Supplemental Information section.

### B. Internal Influences

Several anthropogenic activities have impacted HCMP and HCGCP. The design and construction of the HCMP public use facilities were intended to minimize impacts on natural habitats and protected species. Negative human influences from public use are monitored and efforts are made to minimize their effects. Past land uses include logging, grazing, citrus production, and minor agriculture impacts. Remnants of these uses are still evident, however, natural succession, along with the control of exotic vegetation and prescribed burning, has allowed these areas to resemble natural systems. Figure 17 provides a visual representation of the internal and external influences.

There are approximately 18.2 miles of firelines/ service roads within HCMP. These access routes are designed to allow staff access throughout the Park and, of course, provide fire breaks during prescribed fires. While these access roads are essential for the management of HCMP, they channelize water (to some degree depending on the underlying soils and topography) during the rainy season.

The berms (artificial ridges or embankments) along portions of the border also serve to channelize (concentrate) water. These berms are composed of vegetated soils and were created when Bateman Road and the LAMSID water conveyance systems were constructed. While artificial structures, these berms seem to be preferred areas for gopher tortoises to build burrows. There are no plans to remove them.

Old farm ditches run through the improved pasture within HCMP. These ditches no longer serve as good water conveyance structures because they are largely vegetated. Plants such as wax myrtle, Caesarweed, and Brazilian pepper tend to do well in these ditches. Staff concentrates on these ditches when exotic control activities are conducted in this area. Staff will investigate the cost of doing so on the C20/20 portion of HCMP as funds for that project may be available.

# HCMP & HCGCP Internal & External Management Influences

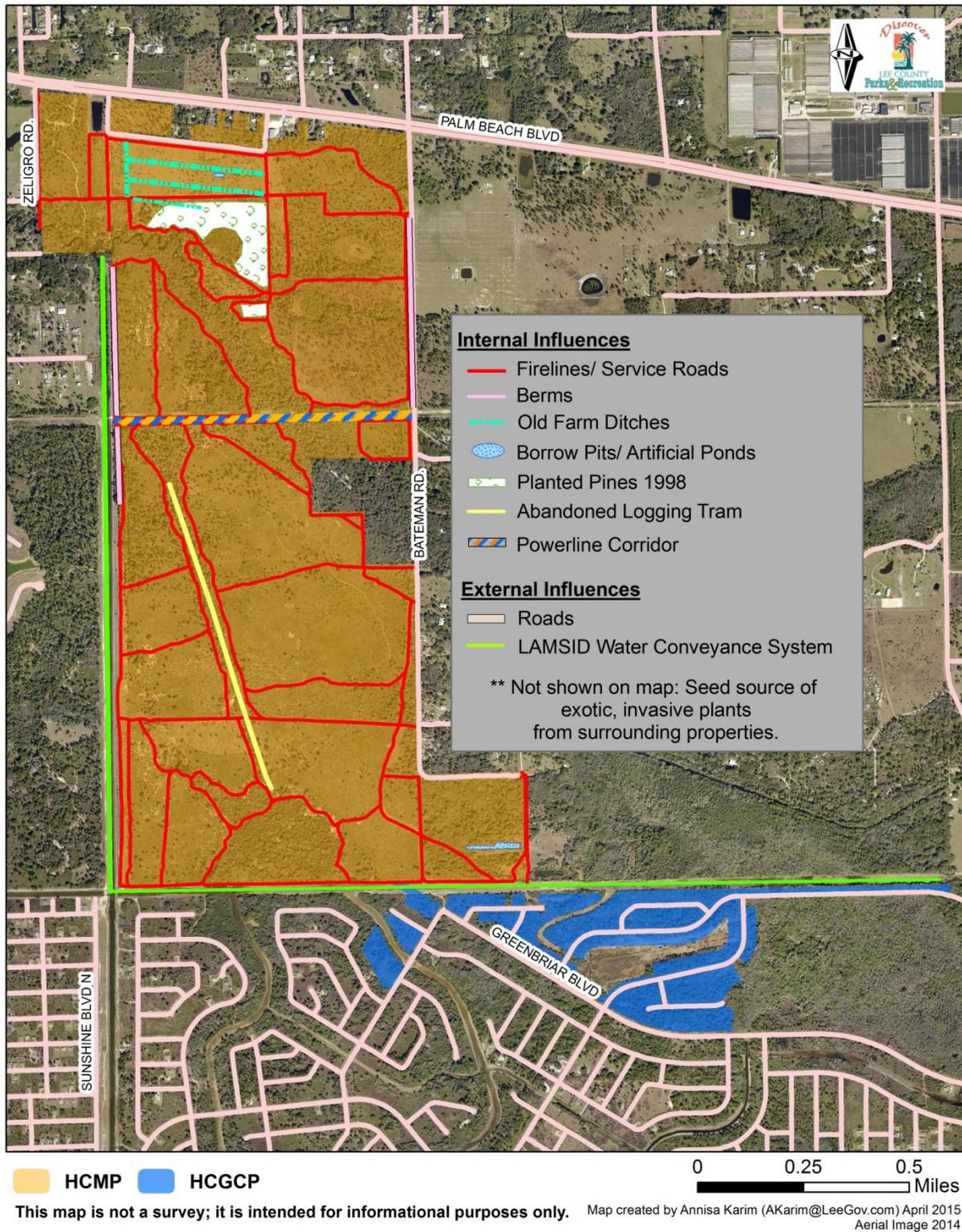


Figure 17: HCMP and HCGCP Internal and External Management Influences.

Between 1958 and 1966, mineral rights were sold to a man who excavated marl pits on the southeastern boundary of HCMP and the southwestern boundary of the adjacent conservation area (Alva Scrub Preserve). Also known as borrow pits or artificial ponds, these pits are filled with fresh water and provide a water source for those animals able to access the water. Cogongrass tends to do well around these pits and as a result, staff concentrates on these areas when cogongrass control activities are conducted. The marl pit within HCMP is a useful source of water when staff conducts prescribed fires.

In February 1998, slash pine and longleaf pine were planted on the 50 acres of abandoned pasture and citrus grove within HCMP. Approximately 350 seedlings per acre were planted with a target density (survival rate) of 50 – 150 stems per acre. Non-native grasses quickly outcompeted some of the pines resulting in a low survival rate of the pines. An herbicide pine release project was undertaken in March 1999 to kill back some of the exotic graminoids competing with the young pines. In 2001, the survival rate of the pines was estimated to be 5% and the surviving trees were, at that time, 3' – 4' in height. Today, fourteen years later, a heavy density of pines occurs on approximately 18 acres of the site. This area (Management Unit 2) was burned in April 2003, however, this densely vegetated coniferous area still has a thick duff layer. This is a high priority area for a prescribed fire. Fire will thin out the pine canopy over time.

The abandoned logging tram (old railroad spur) runs in a northwest to southeast direction for approximately 0.76 miles south of the powerline corridor. This was the old railroad spur of the Seaboard Air Line Railway that used to take raw lumber to the mills before the 1940s. Currently, this ridge is vegetated with a closed-canopy forest dominated by deciduous hardwood trees. It has a diverse assemblage of deciduous and evergreen tree species in the canopy and midstory, shade-tolerant shrubs, and a sparse groundcover. Kane et al. (2008) tell us that, "oaks common to southeastern United States ecosystems have litter properties, similar to pines, which vary in their ability to sustain fire." Fire-inhibiting species including southern live oak (*Quercus virginiana*) and laurel oak (*Q. laurifolia*) – both of which occur on this abandoned logging tram - create a fire shadow and disconnects the fire corridor between the lands to the east and west of this tram. The hardwoods along the ridge shade out herbaceous species needed to carry fire (Martin and Kirkman 2009). Inspection of the 1944 aerial (Figure 13) shows an already constructed logging tram running south out of the Park. There is no way to tell what the vegetative make-up of the area was before the tram was installed but there is no indication (by either the surrounding plant communities or the underlying soils) that a closed-canopy forest dominated by deciduous hardwood trees existed before the railroad spur was installed. This abandoned logging tram now serves as the western portion of the Palmetto Pines hiking trail. Prescribed burns within HCMP have been planned to create a mosaic pattern of plant community succession. The presence of this ridge does not hinder that goal. Furthermore, removal of the abandoned logging tram would be cost prohibitive.

The powerline corridor runs east west through HCMP for a distance of approximately 0.70 miles and encompasses 7.5 acres. The creek cuts through this corridor; it is not possible to traverse the entire length of the corridor from east to west. This utility easement was granted to FPL on December 21, 1953.

Trespass issues and poaching continues to be a sporadic issue. Park staff conducts routine boundary checks and repair fences and gates as needed.

### C. External Influences

As with all conservation areas, the condition and management of lands on the outside of the boundary influences species composition and management needs within the conservation area. The HCMP Land Stewardship Plan from 2003 stated, “Evidence that at least portions of HCMP have been impacted by drainage is indicated by changes in plant species composition of the wetland areas near and adjacent to the southern boundary. As the hydroperiod was reduced, these formerly forested cypress systems are being replaced by transitional and upland species less tolerant of the historic hydroperiod characteristic of a cypress system.” Staff continues to see this transition occurring with the cypress dome being quickly invaded by various oaks (commonly found in shorter hydroperiods and dry areas), hog plum, and cabbage palms. While these trees and shrubs are native species, they are not typically found in healthy cypress systems.



*Screen shot of YouTube video posted showing ORV use in Greenbriar. Video uploaded May 2011.*

Until May 2014, off-road vehicle (ORV) enthusiasts used the LAMSID water conveyance system along the southern boundary of HCMP and the northern boundary of HCGCP. ORV use of this conveyance area is not permitted. In addition to the noise pollution, discarded trash, and contamination by petroleum products associated with ORV use, soil and vegetation degradation and surface water channelization has been observed.

The roads running throughout the HCGCP allowed access for ORV use as well as access to this remote area where the dumping of horticultural waste, construction debris, and the remnants of grow-houses occurs. In May 2014, LCDNR’s Pollution Prevention Program, in coordination with the County’s Traffic and Operations division, installed boulders and gates to deter vehicular access to HCGCP with the objective of eliminating or reducing the frequency of these illegal activities.



*One of the gates installed to deter access by motorized vehicles into HCGCP.*

## D. Legal Obligations and Constraints

### i. Permitting

Land stewardship activities within HCMP and HCGCP may involve obtaining permits from regulatory agencies. Any proposed hydrologic improvements to the site may require obtaining permits from the Florida Department of Environmental Protection (FDEP), the U.S. Army Corps of Engineers (USACOE) and SFWMD. Hydrological and/or habitat restoration projects requiring heavy equipment or tree removal will require notification to the Lee County Department of Community Development (LCDCD). Burn authorization from the Florida Forest Service (FFS) is required for all prescribed burns conducted on the Preserve.

### ii. Other Legal Constraints and Considerations

HCMP was established in 1994 through the cooperative efforts of the BoCC, FWC, and FCT. With the aid of a FCT grant, the BoCC added just under 770 acres to a 10-acre, County-owned parcel in Alva, FL. Lee County then conveyed these 770 acres to FWC in perpetuity in the form of a Perpetual Conservation Easement (Appendix A). A Memorandum of Agreement executed on May 12, 1994 between Lee County and FWC (Appendix B) details the terms relative to the establishment of a Mitigation Park. In addition, a "Grant Award Agreement" (Appendix C) and a "Conceptual Approval Agreement" were entered into with the FCT (Appendix D). FCT also requires that the HCMP Management Plan comply with "Management Plan Requirements". Lee County and the FWC are currently in compliance with these agreements.

A Right-Of-Way Consent Agreement between Florida Power & Light Company and Lee County (Appendix I) provides for the routing of the Palmetto Pines Trail access the powerline. This agreement specifies requirements applicable to the right-of-way management and restricts uses which may jeopardize power transmission.

The LAMSID which is a special Chapter 298 taxing district setup to provide management and maintenance of the surface water within the Lehigh Acres development and an adjacent area, consists of over 70,000 acres containing 311 miles of canals plus water control structures within the Lehigh Acres western Hendry County. This entity also manages several preserves including Greenbriar Swamp and Harn's Marsh. Since 1995, Lee County has been assessed by the LAMSID for water conveyance and control structures planned for the site while it was part of the Lehigh Corporation Development Plan. Despite repeated efforts by Lee County Parks and Recreation staff, County Attorney's office, and consultants, the assessment issue to date has not been resolved. To date, over \$500,000 has been paid to the LAMSID for water control structures and the operation and maintenance of those structures. For the past 21 years, Lee County has paid LAMSID an average of \$76,165.13 per year in taxes (Table 8) for which no benefits has been received. For years, Lee County has tried to resolve this assessment. As of this writing, these efforts have met with limited success.

Table 8: History of LAMSID Tax Assessment

Tax Year	Fiscal Year Paid	Amount	Tax Year	Fiscal Year Paid	Amount
1994	FY 95	\$90,549.04	2005	FY 06	\$57,317.36
1995	FY 96	\$88,692.07	2006	FY 07	\$57,829.09
1996	FY 97	\$88,516.89	2007	FY 08	\$68,090.96
1997	FY 98	\$93,709.39	2008	FY 09	\$74,566.18
1998	FY 99	\$72,836.74	2009	FY 10	\$86,136.14
1999	FY 00	\$85,423.90	2010	FY 11	\$93,529.23
2000	FY 01	\$79,423.44	2011	FY 12	\$86,116.57
2001	FY 02	\$76,017.37	2012	FY 13	\$86,773.94
2002	FY 03	\$69,823.30	2013	FY 14	\$61,356.69
2003	FY 04	\$68,230.63	2014	FY 15	\$61,451.89
2004	FY 05	\$53,076.85	<b>21-year TOTAL</b>		<b>\$1,599,467.67</b>

Gideon Lane runs in an east - west direction between C20/20 parcels 4 and 101. Formally, it is within Unit 2 of the plats of Pine Creek Acres, recorded in plat book 10, page 74. While this “dirt” road is outside of the acreage managed for conservation, it is still within the Park. Lee County staff is looking into the feasibility of vacating a portion of Gideon Lane. Private land owners along Gideon Lane (north side of road) have expressed concerns over the maintenance of the road as well as potential security issues associated with rural, “out-of-the-way” properties. In addition to addressing security concerns (by potentially placing a barrier on the eastern portion of the road), the vacation would reduce road maintenance costs. In 1999, the County accepted all unvacated roads, boulevards, and/or lanes and parks set forth in the plat of Unit 2, Pine Creek Acres, which includes Gideon Lane. The County accepted the roads without the obligation to construct and maintain those roads. While the County does own conservation lands along this road, staff does not use it for land management purposes. County staff would like to officially vacate the eastern portion of the road adjacent to County property. The street vacation will allow the installation of a gate, which would reduce traffic on the road. Appendix J contains a letter to a neighbor agreeing that the County will fix the road one last time and provides documentation showing that the BoCC did not assume the construction or maintenance responsibility of Gideon Lane.

### iii. Relationship to Other Plans

The Lee Plan is designed to depict Lee County as it will appear in the year 2030. Given the projected increase in population (to 979,000 permanent residents with an additional 18% seasonal residents) and the probable rate of technological change between the present date and 2030, it is impossible to describe the future face of the county with any degree of certainty or precision. However, the following list of themes will be of great importance as Lee County approaches the planning horizon:

- The growth patterns of the county will continue to be dictated by a Future Land Use map that will not change dramatically during the time frame of this plan. With the exception of Cape Coral and Lehigh Acres, the county's urban areas will be essentially built out by 2030 (pending, in some cases, redevelopment). The county will attempt to maintain the clear distinction between urban and rural areas that characterizes this plan. Its success will depend on two things: the continuing viability of agricultural uses and the amount of publicly-owned land in outlying areas.
- The county will protect its natural resource base in order to maintain a high quality of life for its residents and visitors. This will be accomplished through an aggressive public land acquisition program and by maintaining and enforcing cost-effective land use and environmental regulations that supplement, where necessary, federal, state, and regional regulatory programs.
- The county's traditional economic base will be diversified in order to increase the percentage of high-paying jobs, reduce tax burdens on residents, and enhance the stability of the community. Traditional industries, such as agriculture, commercial fishing, tourism, and construction, will continue to play a significant role in the county's economy, but will become less important in relation to new business opportunities afforded by the expanded international airport and the new university.
- Cultural, educational and recreational opportunities will expand dramatically as the result of the county's increased urbanization.
- Increased urbanization will require a commensurate investment in the county's physical and social infrastructure. Public facilities will be maintained at adequate levels of service, partly by the construction of new facilities and partly by the use of new methods to conserve the capacity of existing facilities. Social problems, including, but not limited to, crime and illegal drug use, will be addressed primarily by early intervention and programs designed to eliminate their root causes.
- The Lee Plan's land use accommodation is based on an aggregation of allocations for 22 Planning Communities. These communities have been designed to capture the unique character of each of these areas of the county. Within each community, smaller neighborhood communities may exist; however, due to their geographic size, a planning community could not be created based on its boundaries.

The entire Lee Plan can be found on the internet at:

<http://www.leegov.com/dcd/Documents/Planning/LeePlan/Leeplan.pdf>

The sections of the Lee Plan which may pertain to Preserves areas have been identified in the LSOM.

### E. Management Constraints

Management responsibility for the HCMP is divided between FWC and Lee County. FWC controls natural resource management activities while Lee County assumes management control for exotic vegetation removal, boundary fencing, and public use activities. Both agencies coordinate and cooperate with all aspects of management and administration.

FWC has established HCMP as a Wildlife and Environmental Area pursuant to Rule 39-17.002 in the Florida Administrative Code and assumed primary management responsibility for the site. Specific regulations to control public use of the site have been provided by FWC pursuant to Rule 39-17.005 in the Florida Administrative Code.

FWC holds a perpetual conservation easement over 770 acres of the property purchased in 1994 (see Acquisition section of this document). Additionally, FPL holds a utility easement (powerline corridor) over approximately 7.5 acres of the site. This utility easement was granted to FPL on December 21, 1953 by Robert Frank and Faye Lewis of Alva, FL.

The goal at HCMP will be the protection and enhancement of habitat important to state and federally listed wildlife populations. Since the site's acquisition, a prescribed burn regime and exotic plant control program have been successful on the portions of the Park acquired via Lee County's general fund and the accompanying FCT grant. Exotic animal control is also a priority. Lee County currently contracts the trapping of feral hogs and is developing a hunting program to control this destructive exotic. Exotic control on the 82 acres purchased via LCPR's C20/20 program has been established and is resulting in good control of the target species. LCPR staff will coordinate with FWC and the Florida Forest Service (FFS) on initiating a burn program on these parcels. The proximity of some of the C20/20 parcels to Palm Beach Blvd and adjacent properties present a challenge when it comes to prescribed fire.

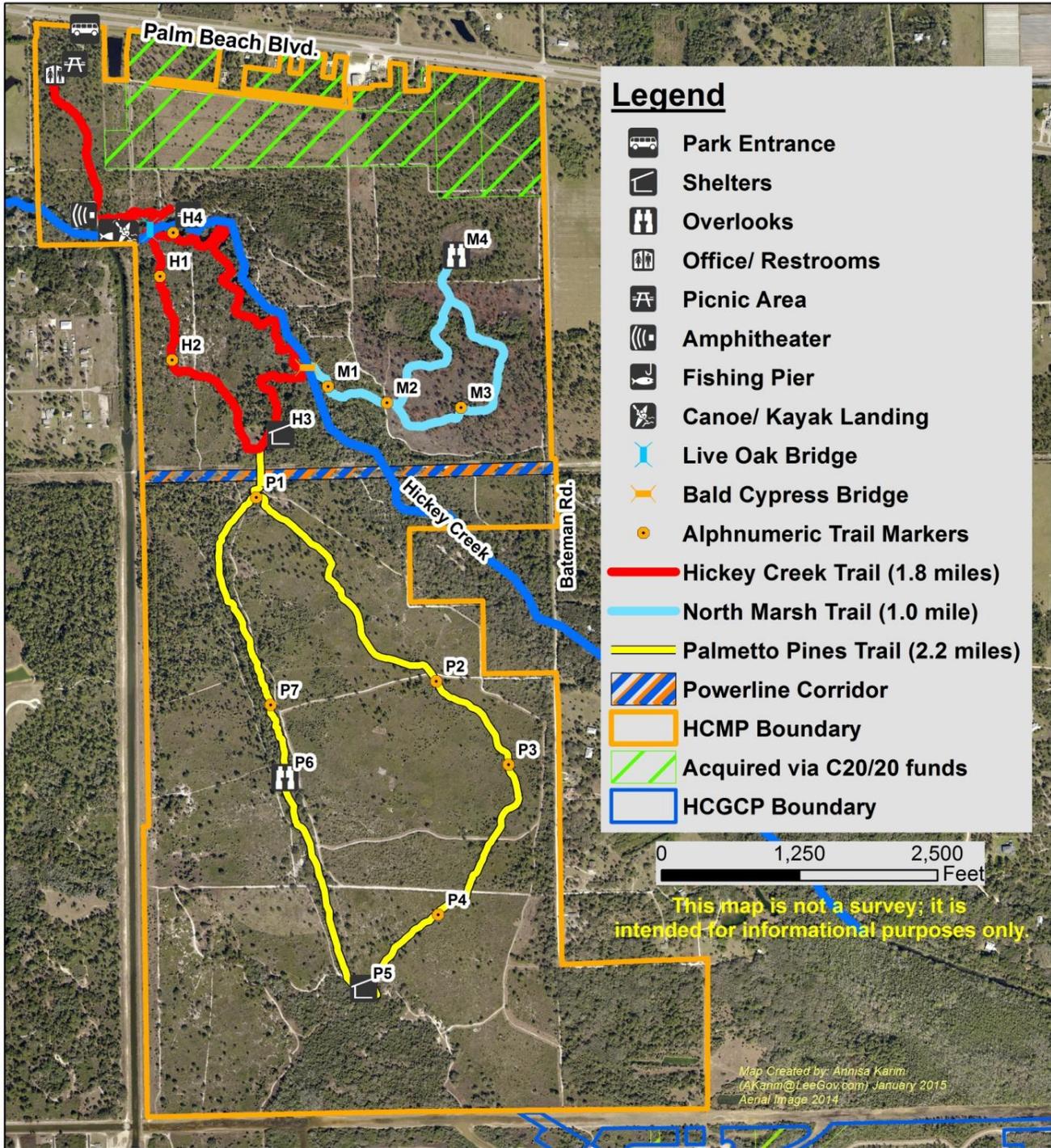
Coordinating with adjacent landowners and surrounding agricultural businesses will be an important part in management of the Preserve; neighbors will be considered and informed of any prescribed fires and/or large management practices that may be considered disruptive.

The core constraints on management of HCGCP are funding and staffing. Obtaining funds through grants and other financial sources will need to be explored and obtained when appropriate. Due to the private in-holdings and site security issues, economies of scale prevent the efficient land management of this Preserve. Coordinating with LAMSID will be an important part in management of the Preserve; neighbors will be considered and informed of any prescribed fires and/or large management practices that may be considered disruptive.

### F. Public Access and Resource-Based Recreation

The ground breaking ceremony for the HCMP public use facilities was conducted on August 26, 2001 and the ribbon cutting ceremony was held on April 20, 2002 with construction of all park facilities occurring between these dates. Figure 18 shows a trail map of HCMP as well as the locations of other amenities within the Park such as the

# Hickey Creek Mitigation Park Trail Map



All primitive, hiking trails are color-coded with posts that coordinate with the trail map. Alphanumeric markers that appear on the trail map correspond to markers on the trail system. The PRIMITIVE, hiking trails run perpendicular to service roads and fire lanes. Patrons are encouraged to stay on the marked trails at all times. During the rainy season, trails may be under water – especially the North Marsh Trail. The following are prohibited: alcohol, pets, bicycles, camping and the collection of ANY natural or cultural resources. Fishing is allowed from the fishing pier with the proper license. Lee County Ordinance 06-26 as amended is strictly enforced.

Figure 18: HCMP Trail Map.

amphitheater, fishing pier, canoe/ kayak landing, picnic areas, shelter, and overlooks. HCMP offers three, looped hiking trails totaling five miles. Accessibility for disabled patrons is available from the parking area to the amphitheater and forward to the fishing pier/ creek overlook. All primitive, hiking trails are color-coded with posts that coordinate with the trail map. Alphanumeric markers that appear on the trail map correspond to markers on the trail system. The primitive hiking trails run perpendicular to service roads and fire lanes. Patrons are encouraged to stay on the marked trails at all times. During the rainy season, trails may be under water – especially the North Marsh Trail. Lee County is developing a hunting program to aid in the control of exotic invasive feral hogs; this will also provide another recreational opportunity to the public. FWC staff will be consulted through this process. The following are prohibited: alcohol, pets, bicycles, camping and the collection of any natural or cultural resources. This includes (but is not limited to) any plants, animals, shells or artifacts. Fishing is allowed from the fishing pier with the proper license. A kayak/ canoe landing is available for patrons paddling Hickey Creek. While launching paddle craft from this location is allowed, it is not easy because paddle craft must be portaged approximately one half mile from the parking lot to the landing area.

HCMP is a designated Great Florida Birding and Wildlife Trail site. Hickey Creek (the waterbody) is part of the the Great Calusa Blueway Paddling Trail and is a “Florida Designated Paddling Trail” through the Office of Greenways and Trails.

Geocaching is an outdoor recreational activity growing quickly in popularity. This is an endeavor in which participants use a Global Positioning System (GPS) receiver or mobile device and other navigational techniques to hide and seek containers, called "geocaches" or "caches", anywhere in the world. A typical cache is a small waterproof container containing a logbook (with a pen or pencil). The geocacher enters the date they found it and signs it with their established code name. After signing the log, the cache must be placed back exactly where the person found it. Larger containers such as plastic storage containers can also contain items for trading, such as toys or trinkets, usually of more sentimental worth than financial. Geocaching shares many aspects with benchmarking, trigpointing, orienteering, treasure-hunting, letterboxing, and waymarking. Geocaching websites classify individual caches two difficulty levels: one for how easily a cache may be found and for the difficulty of the terrain that must be traversed to find the cache.

While geocaching is not an activity specifically offered by LCPR, the Department has a geocaching policy whereby any visitor desiring to place a Geocache / Letterbox in a Lee County Park or Preserve is required to complete a Geocaching/ Letterbox Placement Permit. This policy details who has the authority to approve or deny permits, what happens to non-permitted caches, the consequences of violating the permit, the size and content of cache containers, and the placement of these containers. If a non-permitted cache is discovered, staff will remove the cache, and if possible, attempt to notify the owner. In the event that the Park staff are unable to contact the cache owner within 30 days, the cache will be treated as abandoned property. Geocaching activities are facilitated through the LCPR's Ranger Unit. All visitors of the Parks and Preserves within Lee County must abide by the posted rules of the facility including using

approved access points and geocaching during the approved hours of operation. Lee County Ordinance 06-26 as amended is strictly enforced.

The Caloosa Saddle Club, in cooperation with LCPR staff, received a grant from the Office of Greenways and Trails (Florida Department of Environmental Protection) in February of 2001 to fund a multiuse trail within the Greenbriar area of Lehigh Acres, Greenbriar Swamp Preserve, HCGCP, and C20/20 parcel #57 (part of Alva Scrub Preserve). Since the routing had the potential of impacting the headwaters of Hickey Creek, concerns were raised by neighbors and some user groups. After multiple meetings, the consensus was that the multiuse trail should not be located within #57 and the money was returned. Private property owners and LAMSID expressed concern with trails running next to or through their properties.

Due to staff and budgetary constraints, there are no designated public access areas within HCGCP. Illegal ORV use and dumping issues have led to blocking this area off to vehicular access. Access by foot is permitted but there are no marked trails maintained for the public. There are Preserves and Parks in close proximity that provide opportunities for hiking, mountain biking, camping, fishing and equestrian use; these Preserves and Parks have Board-approved stewardship (management) plans in place and the infrastructure to support these offerings.

#### G. Acquisition

Hickey Creek Mitigation Park: Lee County has a long history of acquiring lands for conservation purposes. The acquisition of all of the parcels that make up HCMP (Table 9; Figure 19) started in September 1945. Hickey Creek ran through the original 10-acre parcel. It is unclear why the parcel was acquired by Lee County. At the time, there was no terrestrial passage to this parcel. Forty-seven years later, Lee County staff coordinated with FWC (known then as the Florida Game and Fish Commission – GFC) and FCT to recommend the establishment of a regional mitigation park within the Southwest Florida Regional Planning Council boundary. On November 20, 1992, GFC approved the recommendation to start acquiring lands for this purpose. On December 16, 1992, the BoCC approved \$1,687,000 in the Capital Improvement Fund (to be withdrawn from Lee County's Environmentally Sensitive Lands Program) for the acquisition of HCMP. In 1993, FCT approved a matching grant in the amount of \$1,113,000 through the Preservation 2000 program. In June 1994, Lee County was able to purchase just under 770 acres to add to the original 10-acre parcel.

In 1996, a majority of voters in Lee County voted to increase property taxes by up to 0.5 mills to fund the purchase and protection of environmentally critical lands. This willing-seller land acquisition program became known as the Lee County Conservation 20/20 Lands Program. The inception of this funding program meant that Lee County could continue acquiring lands for conservation. In 1998, 2000, and 2007, the BoCC used funds from the C20/20 program to purchase an additional 82 acres to buffer HCMP from Palm Beach Blvd. In 2004, the Florida Department of Transportation determined that it no longer needed a 2-acre section of land for highway purposes and this land was given to Lee County (via a quitclaim deed) and added to HCMP.

Table 9: HCMP Acquisition History

Year of Acquisition	Description	Size (Acres)	Cost
1945	Original Parcel	10.00	?
1994	FCT Funds - Parcel containing Park Entrance	19.20	\$2,480,000
1994	FCT Funds - North of FWC Mitigation Area	283.37	
1994	Lee County Funds - FWC Mitigation Area	466.71	
1998	Lee County Funds - C20/20 Parcel #4	39.50	\$157,000
2000	Lee County Funds - C20/20 Parcel #101	32.11	\$171,343
2004	"DOT" Parcel	2.00	\$0
2007	Lee County Funds - C20/20 Parcel #326	10.61	\$1,207,500
<b>Totals</b>		<b>863.50</b>	<b>\$4,015,843</b>

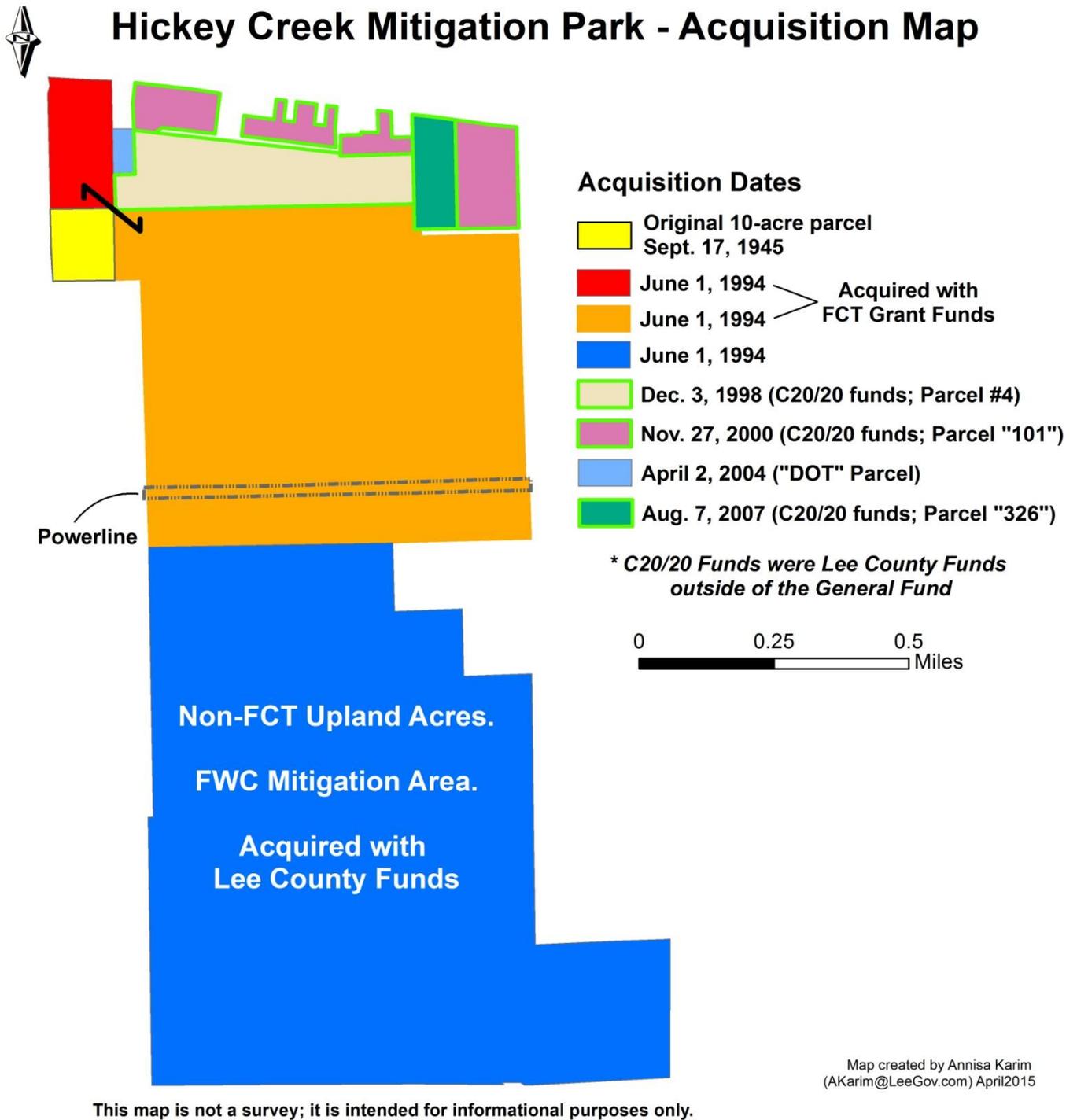


Figure 19: HCMP Acquisition Map

Hickey Creek Greenbriar Connector Preserve: The LAMSID owns and manages several preserves within their boundary. The 406-acre Greenbriar Swamp is the centerpiece of a project that involves modifications within the Swamp and to the connecting canal/swale system to increase surface water connectivity and storage within the swamp, thereby reducing freshwater discharge to the Caloosahatchee River via Hickey Creek. The overall goal is to increase water quality and habitat connectivity. The BoCC acquired 59.89 acres in this area in 1997 (Figure 20). Preservation 2000 Acquisition Funds through the Florida Department of Environmental Protection (FDEP) Greenways Program were used to purchase additional 7.13 acres. These properties are under lease number 4764 (through FDEP) to Lee County. The lease expires on May 4, 2050. The BoCC, via the C20/20 program, acquired an additional 28.79 acres from 2005 – 2008. The LCPR-managed 95.81 acres combined with the 406 acres managed by LAMSID offers 501.81 acres of conservation.

DRAFT



**VI. Management Action Plan**

**A. Management Unit Descriptions**

HCMP has been divided into 29 management units (MU) to better organize and achieve stewardship goals (Table 10). Acreages were calculated within ArcMap ArcView 10.2.1. Due to rounding values up or down, these numbers are close approximations. These management (stewardship) units were created based on existing trails, roads, ditches, berms, stewardship needs and plant communities. Units 1a – 1e were acquired after the original management units were demarcated. For consistency’s sake, the original management units were not re-numbered. The funding to acquire these units was provided via Lee County’s C20/20 program. As such, funds required to manage these units also come from the C20/20 program. Figure 21 shows the layout of all of the MUs within HCMP while Figure 22 shows a close-up of MUs 1a – 1e. Figure 23 shows all 29 units superimposed on the plant communities found within HCMP (refer to “Natural Plant Community” section for descriptions of these land cover types).

HCGCP will be treated as one management unit totaling 95.81 acres.

Table 10: HCMP Management Units

Unit Name	Size (acres)		Unit Name	Size (acres)		Unit Name	Size (acres)
1	34.4		6	23.7		14	15.4
1a	31.1		7	29.2		15	27.6
1b	7.3		8	27.7		16	20.0
1c	6.3		8a	26.0		17	43.8
1d	16.2		9	62.1		18	18.5
1e	21.2		10	10.6		19	28.4
2	41.9		11	9.3		20	31.3
3	36.7		12	20.1		21	36.7
4	43.7		13	70.7		22	39.3
5	62.4		13a	3.7			

Management activities on all of these units will focus on the control of invasive, exotic plants and animals, prescribed fires where appropriate and restoration (planting of native flora) when needed. The protection of listed plants and animals and the habitats in which they live will be the guiding principle of these activities.

Exotic vegetation control is on-going on all units. At this time, HCMP is considered to be at a maintenance level (less than 5% exotic plant cover). A cogongrass treatment was contracted in November 2014 (as part of a grant from the FWC’s Upland Invasive Plant Management Section) to treat within 50 feet of every service road (fireline) and hiking trail within HCMP.

The following paragraphs describe each MU within HCMP and HCGCP.

# HCMP & HCGCP Management Units

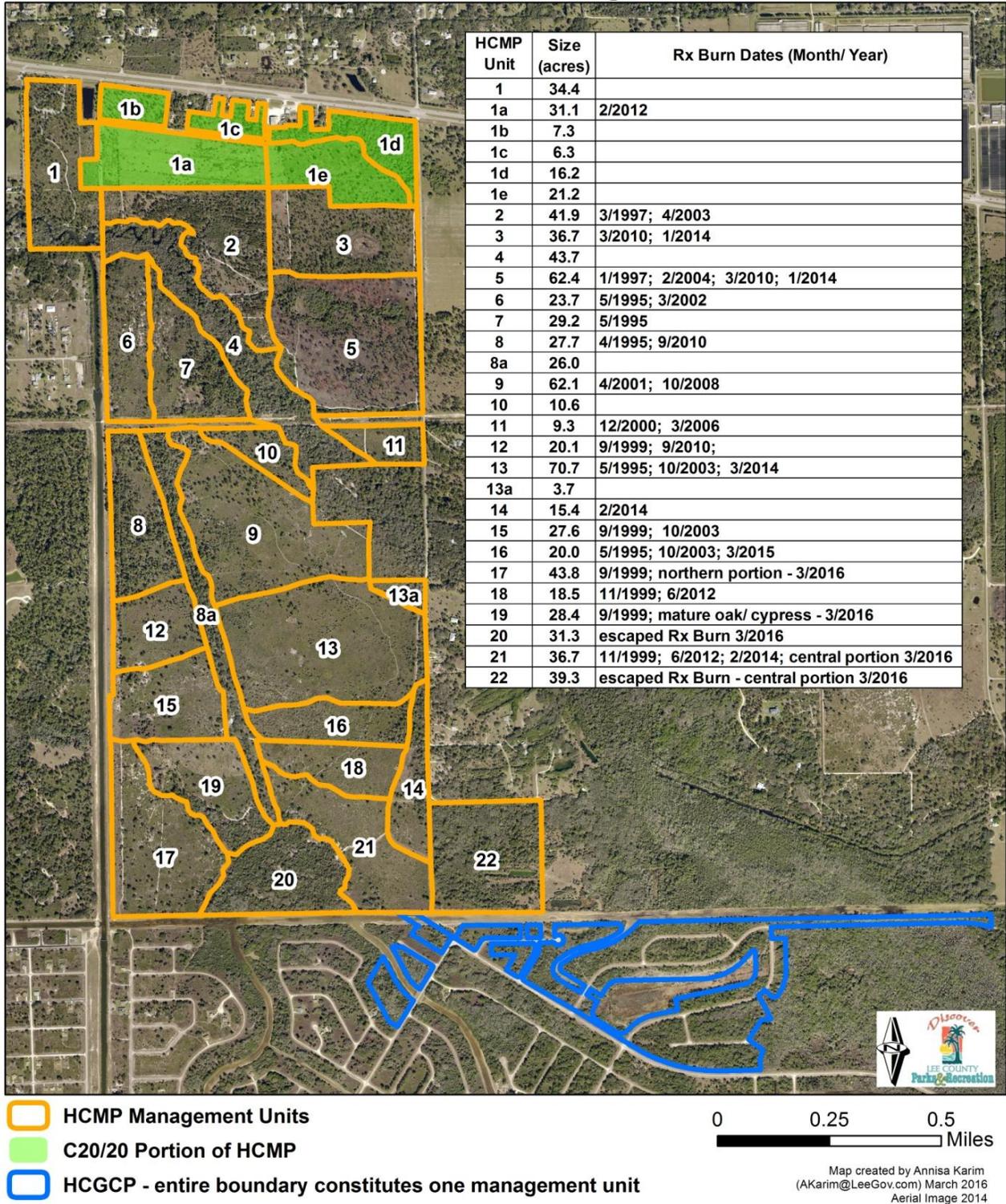


Figure 21: HCMP and HCGCP Management Units

## HCMP - Management Units 1a - 1e (Conservation 20/20)

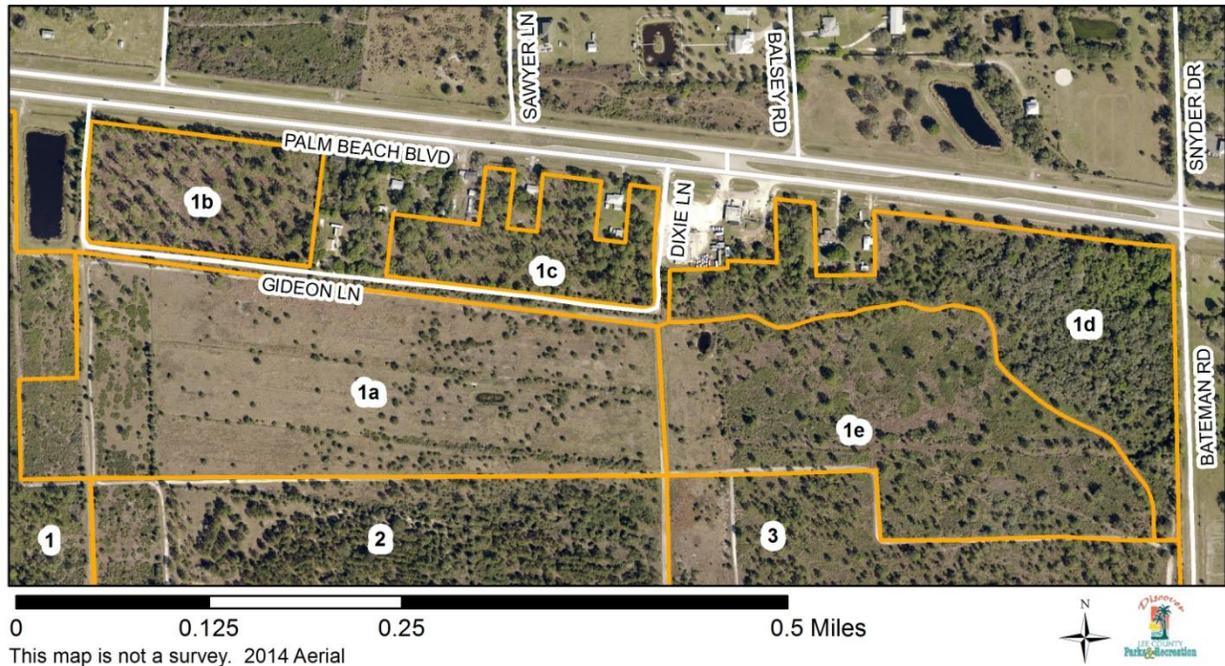


Figure 22: HCMP Management Units 1a – 1e (Conservation 20/20 Funded Acquisitions)

- MU 1 (34.4 acres):** The Park entrance, parking lot, one of two picnic areas, restrooms, office, water system structure, maintenance building, main trailhead, entire ADA trail (a portion of the Hickey Creek Trail), amphitheater, fishing pier/creek overlook, and canoe / kayak landing are contained within MU 1. This unit also encompasses the “DOT” parcel acquired in 2004. The DOT parcel was not part of the originally delineated MU 1. However, because this parcel is so small, it was logical to simply absorb it into the MU 1 boundary. The FNAI plant communities found within this unit include mesic flatwoods, scrubby flatwoods, mesic hammock, and blackwater stream (Hickey Creek).

In 2008, the County contracted a pine tree thinning (fuel reduction) project between the parking lot and Palm Beach Blvd.

- MU 1a (31.1 acres):** No public access trails or amenities are located within MU 1a. This unit is bordered on all sides by firelines and on the north by Gideon Lane. The eastern 80% of the unit contains improved pasture and the remainder of the unit is scrubby flatwoods. All of the improved pasture and the eastern 4.7 acres of scrubby flatwoods was burned in February 2012. Exotic vegetation control was contracted out in October 2014.

Lee County staff is looking into the feasibility of vacating a portion of Gideon Lane. See the “Other Legal Constraints and Considerations” section of this document.

# HCMP - Plant Communities & Management Units

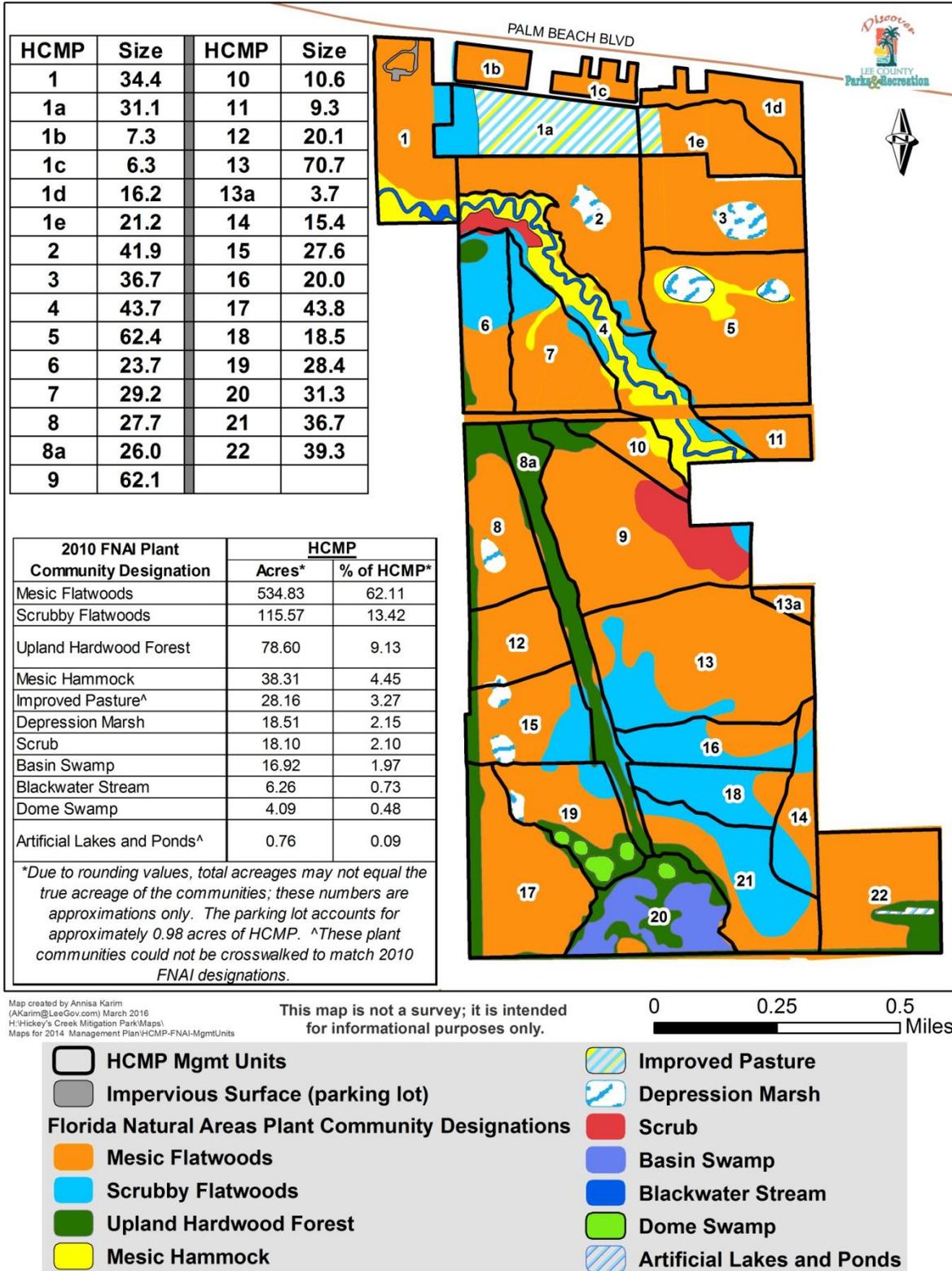


Figure 23: HCMP Plant Communities and Management Units

- MU 1b (7.3 acres): No public access trails or amenities are located within MU 1b. This unit is bordered on the north by Palm Beach Boulevard, the west and south by Gideon Lane, and on the east by private property. There is no fencing around the unit but the County maintains a mowed path on the eastern border. The entire unit is comprised of mesic flatwoods. Exotic vegetation control was contracted out in October 2014. Prescribed burning of this portion of the Park will be difficult due to its proximity to Palm Beach Blvd. LCPR staff will coordinate with LCPR's Burn Crew, FWC and FFS on initiating a burn program on this MU.

Lee County staff is looking into the feasibility of vacating a portion of Gideon Lane. See the "Other Legal Constraints and Considerations" section of this document.

- MU 1c (6.3 acres): No public access trails or amenities are located within MU 1c. The northern boundary of this jigsaw-shaped unit is bordered alternately by private property and Palm Beach Blvd. The unit is bordered on the west by private property, the south by Gideon Lane and on the east by Dixie Lane. Commercial properties (an auto garage and a convenience store) are located east of Dixie Lane. Just like MU 1b, there is no fencing around the unit. The entire unit is comprised of mesic flatwoods. Exotic vegetation control was contracted out in June 2011 and October 2014. Prescribed burning of this portion of the Park will be difficult due to its proximity to Palm Beach Blvd. LCPR staff will coordinate with LCPR's Burn Crew, FWC and FFS on initiating a burn program on this MU.

Lee County staff is looking into the feasibility of vacating a portion of Gideon Lane. See the "Other Legal Constraints and Considerations" section of this document.

- MU 1d (16.2 acres): No public access trails or amenities are located within MU 1d. The northern boundary of this jigsaw-shaped unit is bordered alternately by private property and Palm Beach Blvd. The unit is bordered on the west by Dixie Lane and on the east by Bateman Road. The sinuous southern border follows a fireline and touches MU 1e and 3. The entire unit is comprised of mesic flatwoods but the north east corner is transitioning into a hardwood area. There is no fire history for this unit. Exotic vegetation control was contracted out in June 2011 and October 2014. Prescribed burning of this portion of the Park will be difficult due to its proximity to Palm Beach Blvd. LCPR staff will coordinate with LCPR's Burn Crew, FWC and FFS on initiating a burn program on this MU.

- MU 1e (21.2 acres): No public access trails or amenities are located within MU 1e. The northern / eastern boundary of this unit is the same sinuous southern boundary of MU 1d. MU 1e is bordered on the west by unit 1a and to the south by MU 3. Approximately 85% of this unit is comprised of mesic flatwoods and the western 15% is improved pasture. Exotic vegetation control was contracted out in October 2014. Prescribed burning of this portion of the Park will be difficult due to its proximity to Palm Beach Blvd and private parcels. LCPR staff will coordinate with LCPR's Burn Crew, FWC and FFS on initiating a burn program on this MU.

- MU 2 (41.9 acres): At the time of acquisition, this unit was comprised of abandoned pasture and citrus grove. No public access trails or amenities are located within MU 2. This unit is bordered on the north by MU 1a, on the east by MU 3 and MU 5, and on the west by MU 1. The southern boundary of the unit loosely follows the transition of mesic hammock, in MU 4, to mesic flatwoods within the unit. A majority (90%) of MU 2 is comprised of mesic flatwoods. A small depression marsh exists in the center. Exotic control in this area has been difficult due to the limited staff assigned to this Park; of particular concern is bishopwood but progress is being made.

A prescribed fire was conducted within this unit in January 1997. Then, in February 1998, slash pine and longleaf pine were planted on the 50 acres of abandoned pasture and citrus grove within MU 2. Approximately 350 seedlings per acre were planted with a target density (survival rate) of 50 – 150 stems per acre. Non-native grasses quickly outcompeted some of the pines resulting in a low survival rate of the pines. An herbicide pine release project was undertaken in March 1999 to kill back some of the exotic graminoids competing with the young pines. In 2001, the survival rate of the pines was estimated to be 5% and the surviving trees were, at that time, 3' – 4' in height. Today, fourteen years later, a heavy density of pines occurs on approximately 18 acres of the site. This area was burned again in April 2003, however, this densely vegetated coniferous area still has a thick duff layer. This is a high priority area for a prescribed fire and County staff are coordinating with FWC personnel to apply fire here.

- MU 3 (36.7 acres): A small portion of the North Marsh Trail and the Marsh Overlook are located within MU 3. This unit is bordered on the north by MU 1e, on the east by Bateman Road, on the south by MU 5 and on the west by MU 2. A majority (88%) of MU 2 is comprised of mesic flatwoods. The small depression marsh in the center is composed mainly of herbaceous vegetation but coastal willow and wax myrtle are invading the marsh. A cogongrass treatment within the entire unit was contracted in November 2014 (as part of a grant from the FWC's Upland Invasive Plant Management Section).

In November 2012, an indigo snake was seen just at the edge of the depression marsh at the North Marsh tail overlook. This sighting was reported to FNAI. Prescribed fires were conducted within this unit in March 2010 and January 2014.

- MU 4 (43.7 acres): A large portion of the Hickey Creek Trail, the entrance to the North Marsh hiking trail, both named foot bridges over the creek, and one of two picnic areas are located within MU 4. Units 1, 2, 5, 6, 7, 10, and 11 border this serpentine-shaped unit; this is the only MU that traverses the powerline corridor. This unit contains a majority of the blackwater stream (Hickey Creek) on site and is dominated by mesic hammock. This unit also contains small portions of overgrown scrub and scrubby flatwoods. The tiny proportions of pyric plant communities contained within this unit will not be burned. Mechanical reduction will be conducted if needed.

- MU 5 (62.4 acres): A majority of the North Marsh Trail and two unnamed bridges are contained within MU 5. This unit is bordered on the north by MU 3, on the east by a berm and then Bateman Road, on the south by the powerline corridor, and on the west by MU 2 and MU 4. A majority (84%) of MU 5 is comprised of mesic flatwoods. A mesic hammock and two small depression marshes are also situated within this unit. The two unnamed bridges are located within the wettest portion of the mesic hammock. Just as with the depression marsh in MU 3, the two marshes within MU 5 are being invaded by woody species. This is likely due to the years of drainage the site has seen. A cogongrass treatment within the entire unit was contracted in November 2014 (as part of a grant from the FWC's Upland Invasive Plant Management Section).

Prescribed fires were conducted within this unit in January 1997, February 2004, March 2010, and January 2014.

- MU 6 (23.7 acres): A portion of the Hickey Creek hiking trail is contained within MU 6. This unit is bordered on the north by MU 4, on the east by MU 7, on the south by the powerline corridor, and to the west by a fence and then the water conveyance structure called Hickey Creek canal managed by the LAMSID. Roughly, 47% of the unit is scrubby flatwoods and 47% is mesic flatwoods. Approximately 6% of this unit is upland hardwood forest. The western 3 acres (a long rectangle running from north to south and about 40 feet wide) is a berm where gopher tortoises tend to create their burrows.

Prescribed fires were conducted within this unit in May 1995 and March 2002.

- MU 7 (29.2 acres): A portion of the Hickey Creek hiking trail, a trail shelter, and the entrance to the Palmetto Pines hiking trail are contained within MU 7. This triangle-shaped unit is bordered on the east by MU 4, on the south by the powerline corridor, and on the west by MU 6. Roughly, 20% of the unit is scrubby flatwoods and 74% is mesic flatwoods. Approximately 6% of the site is mapped as mesic hammock.

A prescribed fire was conducted within this unit in May 1995.

- MU 8 (27.7 acres): No public access trails or amenities are located within MU 8. This unit is bordered on the east by MU 8a, on the south by MU 12, on the west by a fence and then the water conveyance structure called Hickey Creek canal managed by the LAMSID, and on the north by the powerline corridor. Seventy-five percent of this unit is mapped as mesic hammock. A 1.7-acre depression marsh is mapped in this unit; it is highly degraded and restoration to a healthy marsh is unrealistic given the continued drainage of the site over the years. Upland hardwoods are found on the edges of this unit.

Prescribed fires were conducted within this unit in April 1995 and March 2002.

- MU 8a (26.0 acres): The area encompassed by MU 8a was not assigned an MU number in previous editions of the HCMP LMP because this portion of the park contains very few pyric communities and has never been burned. Previous units assigned within the Park were “burn units”. However, to provide a comprehensive assessment of the Park within this document, staff felt it was warranted to “create” this MU. For consistency’s sake, the original management units were not re-numbered.

The elongated shape of MU 8a lends itself to be bordered by 11 MUs and the powerline easement (Figure 22; in a clockwise direction starting in the north: MU 9, 13, 16, 18, 21, 20, 19, 15, 12, 8, and the powerline corridor to the north).

Historically, the powerline easement (corridor) that crosses HCMP in an east - west direction was the location of a portion of the Seaboard Air Line Railway. The western portion of the Palmetto Pines hiking trail and an overlook are located on what was the spur of the railroad built to gather logs off of the main railway. The construction of the “spur” required elevating the land to build a railway line. This resulted in an altered plant community designated, today, as upland hardwood forest. Similar to naturally occurring mixed hardwoods, this plant community is a well-developed, closed-canopy forest dominated by deciduous hardwood trees in areas sheltered from fire.

Elevating a portion of the substrate required excavating other portions. As a result, the eastern and western portions of the spur are gullies. The challenging portions of this unit occur within the “gullies” where feral hogs tend to disturb the soils disproportionately to other areas of the Park. This disturbance lends to the need to be tenacious in the control of exotic vegetation - especially Caesarweed and cogongrass.

A lighting strike occurred on the northern end of this unit (just north of the “Y”) in June 2015. When FFS responded, they cut dozer lines around the fire to suppress it. FWC and LCPR staff are considering keeping some of these dozer line open for easier access from the western part of this unit to the eastern part. The rest of the lines will be rehabilitated and monitored for exotics. An escaped prescribed burn conducted by a contractor also resulted in plow lines disrupting the southern-most portion of the unit. The lines will be rehabilitated and monitored for exotics.

- MU 9 (62.1 acres): A portion of the Palmetto Pines hiking trail is located within unit 9. MU 9 is bordered on the north by the powerline corridor, the east by MU 10 and private property, the south by MU 13 and the west by MU 8a. Seventy-seven percent of the unit is composed of mesic flatwoods, 21% is composed of scrub and 2 % is composed of scrubby flatwoods. The private property to the east of this unit has a conservation easement over it but it is overgrown scrub, scrubby flatwoods and mesic flatwoods.

Prescribed fires were conducted within this unit in April 2001 and October 2008.

- MU 10 (10.6 acres): No public access trails or amenities are located within this unit. A majority of the unit is comprised of mesic flatwoods. Some hardwoods associated with mesic hammocks and upland hardwood forests are also found within this unit. As a result of the mixture of communities within this unit, MU 10 contains an abundance of epiphytes – perhaps more than would be anticipated by looking at an aerial of the property. MU 10 is bordered on the north by the powerline easement, to the east by MU 4 and private property, and to the west by MU 9.

Due to the proximity of the private property and size and configuration of this unit, the application of prescribed fire has been a challenge. This unit has no burn history.

- MU 11 (9.3 acres): No public access trails or amenities are located within this unit. MU11 is comprised of mesic flatwoods. This unit is bordered on the north by the powerline corridor, the east by Bateman road, the south by private property, and the west by MU 4. There is a berm between the eastern-most fireline and the property boundary fence.

Prescribed fires were conducted within this unit in December 2000 and March 2006.

- MU 12 (20.1 acres): No public access trails or amenities are located within this unit. This unit is bordered on the east by MU 8a, on the south by MU 15, on the west by a fence and then the water conveyance structure called Hickey Creek canal managed by the LAMSID, and on the north by MU 8. A majority of this unit is mapped as mesic hammock. A 0.5-acre depression marsh is mapped in this unit; it is highly degraded and restoration to a healthy marsh is unrealistic given the continued drainage of the site over the years. Upland hardwoods are found on the western edge of this unit. MU 8 to the north has a similar plant community composition to this unit but this unit has very little tree canopy compared to MU 8.

Prescribed fires were conducted within this unit in September 1999 and September 2010.

- MU 13 (70.7 acres): MU 13 is the largest of all of the MUs within HCMP. A portion of the Palmetto Pines hiking trail is located within this unit. MU 13 is bordered to the north by MU 9, to the east by MU 13a and Bateman Road, to the south by MUs 14 and 16, and to the west by MU 8a. Approximately 81% of the unit is mesic flatwoods and 19% scrubby flatwoods. The endemic Florida cinchweed (*Pectis linearifolia*) was discovered on the eastern fireline.

Prescribed fires were conducted within this unit in May 1995, October 2003, and March 2014.

- MU 13a (3.7 acres): This small, triangle-shaped unit is bordered on the north by private property, the east by Bateman Road, and the west by unit 13. There are no public access trails or amenities located within this unit. Due to the small size and

location of is unit, no fire have been conducted here to date. The entire unit is comprised of mesic flatwoods and gopher tortoises burrow within the berm on the eastern border of this unit.

- MU 14 (15.4 acres): There are no public access trails or amenities located within this unit. This unit is bordered on the north by MU 13, on the east by Bateman Road, and on the south by MU 21, and on the west by MUs 16, 18, and 21. About 58% of this unit is mesic flatwoods and 42% is scrubby flatwoods. While the entire unit is composed of pyric plant communities, burning this unit has not been a top priority because of the size of the unit and the benefit of the vegetative buffer it provides on the border of HCMP. However, a prescribed fire was conducted in this unit in February 2014.
- MU 15 (27.6 acres): No public access trails or amenities are located within this unit. This unit is bordered on the east by MU 8a, on the south by MUs 17 and 19, on the west by a fence and then the water conveyance structure called Hickey Creek canal managed by the LAMSID, and on the north by MU 12. A majority of this unit is mapped as mesic hammock. The depression marshes mapped in this unit are highly degraded and restoration to a healthy marsh is unrealistic given the continued drainage of the site over the years and the small size of the marshes. Upland hardwoods are found on the western edge of this unit. Like MU 12 to the north, MU 15 has very little tree canopy compared to MU 8.

Prescribed fires were conducted within this unit in September 1999 and October 2003.

- MU 16 (20.0 acres): A portion of the Palmetto Pines hiking trail is located within this unit. MU 16 is bordered to the north by MU 13, to the east by MU 14, to the south by MU 18, and to the west by MU 8a. Approximately 34% of the unit is mesic flatwoods and 66% scrubby flatwoods.

Prescribed fires were conducted within this unit in May 1995, October 2003, and March 2015.

- MU 17 (43.8 acres): No public access trails or amenities are located within this unit. This unit is located on the southwest corner of the Park and is bordered to the north by MU 15, to the east MU 19, the south by a fence and MU 20, and to the west by a fence and then the water conveyance structure called Hickey Creek canal managed by the LAMSID. A majority of this unit is mapped as mesic hammock. A highly degraded depression marsh exists on-site but restoration to a healthy marsh is unrealistic given the continued drainage of the site over the years and the small size of this marsh. Upland hardwoods are found on the western edge of this unit. Like MU 15 to the north, MU 17 has very little tree canopy compared to MU 8. The substrate is extremely rocky.

A prescribed fire was conducted within this unit in September 1999. MU 17 and 19 were slated to be burned in March 2016. The prescribed burn escaped and burned

a total of 82 acres within HCMP and 2 acres within Alva Scrub Preserve to the east; as a result, only a portion of MU 17 was burned (Figure 24).

- MU 18 (18.5 acres): A portion of the Palmetto Pines hiking trail is located within this unit. MU 18 is bordered to the north by MU 16, to the east by MU 14, to the south by MU 21, and to the west by MU 8a. Approximately 17% of the unit is mesic flatwoods and 83% scrubby flatwoods.

Prescribed fires were conducted within this unit in November 1999 and June 2012.

- MU 19 (28.4 acres): No public access trails or amenities are located within this unit. This unit is bordered on the north by MU 15, the west by MU 17, the south by MU 20, and the east by MU 8a. Approximately 71% of the site is mesic flatwoods, 17% is upland hardwood hammock, and 12% of the unit is mapped as dome swamps. Like most of the Park, the water table in this area has been dropping contributing to the dry-down of the soils and the plant communities are responding to this change in hydroperiod. Staff continues to see the dome swamps and portions of the upland hardwood communities being quickly invaded by various oaks (commonly found in shorter hydroperiods and dry areas) and cabbage palms.

A prescribed fire was conducted within this unit in September 1999. MU 17 and 19 were slated to be burned in March 2016. The prescribed burn escaped and burned a total of 82 acres within HCMP and 2 acres within Alva Scrub Preserve to the east; as a result, only a portion of MU 19 was burned (Figure 24).

- MU 20 (31.3 acres): No public access trails or amenities are located within this unit. This dome-shaped unit is bordered on the south by LAMSID's swale system and around the "dome" by MUs 19, 8a, and 21. This unit contains the only basin swamp community found within HCMP. The earliest aerials available to staff (Figure 13) show that the spur of the Seaboard Air Line Railway ran through this MU. The basin swamp, dome swamp, and upland hardwood forest were highly altered by this tram. Since then, the continued drainage of the site has negatively altered the plant communities found within this unit. Staff continues to see this transition occurring with the basin swamp and being quickly invaded by various oaks (commonly found in shorter hydroperiods and dry areas), hog plum, and cabbage palms. While these trees and shrubs are native species, they are not typically found in healthy cypress systems. For instance, hog plum is a facultative upland plant (Lichvar et al. 2014) yet it is



*Rotten base of a cypress tree in management unit 20. Note presence of cabbage palm fronds.*

forming dense thickets within this basin swamp. Additionally, Brazilian pepper is invading this area.

While no prescribed fires were scheduled for this unit, a majority of it burned during an escaped fire in March 2016 underscoring the dry conditions of this hydrologically altered “basin swamp” (Figure 24).

- **MU 21 (36.7 acres):** A portion of the Palmetto Pines hiking trail is located within this unit as is the southern-most shelter. This unit is bordered on the north by MU 18, the east by MUs 14 and 22, the south by LAMSID’s swale system, and the west by MU 20 and 8a. Just over half of the unit is comprised of scrubby flatwoods. There are upland hardwood trees on the western border and the remainder of the unit is mesic flatwoods.

Prescribed fires were conducted within this unit in November 1999, June 2012, and February 2014. An escaped fire in March 2016 burned through the middle of this unit (Figure 24).

- **MU 22 (39.3 acres):** No public access trails or amenities are located within this unit. MU 22 is located in the southeast corner of HCMP. MU 22 is bordered on the north by Bateman Road and private property, on the east by the Alva Scrub Preserve, on the south by LAMSID’s swale system, and the west by MUs 14 and 21. This unit contains a 0.75-acre borrow pit that contains water year-round. The edges of this pit are cogongrass “hotspots” and staff is diligent in its treatment. The lack of fire within this unit is resulting in its transition to a hardwood system.

While no prescribed fires were scheduled for this unit, an escaped fire in March 2016 burned through the middle of this unit (Figure 24).

Hickey Creek Mitigation Park: Rx Burn and Escape (March 2016)

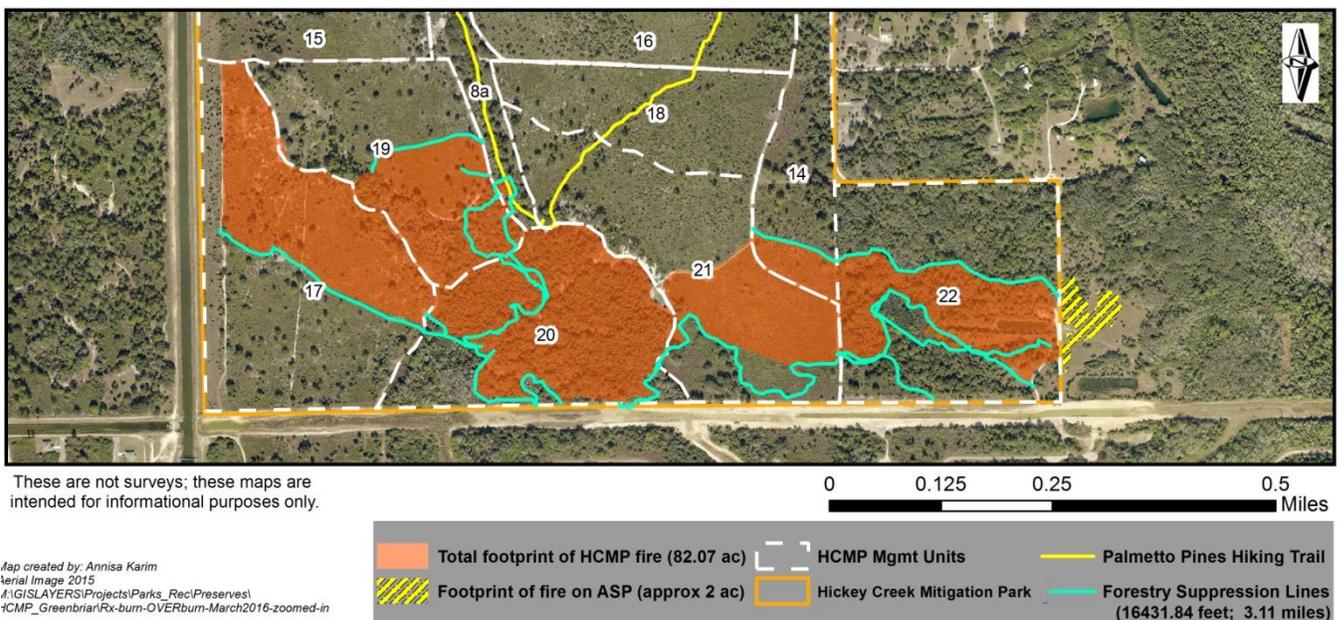


Figure 24: Escaped Rx Burn at HCMP March 2016

- HCGCP (95.81 acres):** No public access trails or amenities are located within this unit. The roads running throughout the HCGCP made ORV use possible and they provided (unintentional) access to this remote area where the dumping of horticultural waste, construction debris, and the remnants of grow-houses occurs. In May 2014, LCDNR’s Pollution Prevention Program in coordination with the County’s Traffic and Operations division installed boulders and gates (Figure 25) to deter vehicular access to HCGCP with the objective of eliminating or reducing the frequency of these illegal activities. HCGCP is bordered on the north by a water conveyance system managed by LAMSID. HCGCP is surrounded by undeveloped, platted private property and contains several in holdings. The eastern portion of the Preserve is bordered by the Greenbriar Swamp managed by LAMSID. Figure 12 shows the seven plant communities that make up the Preserve and Figure 7 shows the underlying soils. Interior portions of the Preserve and lightly or moderately infested with Brazilian pepper but the edges (along the roadways) are heavily infested. Due to the private in-holdings and site security issues, economies of scale prevent the efficient land management of this Preserve. Public use is not encouraged at this time. There is currently no dedicated funding in the budget of the LCPR to manage this Preserve. The lack of financial and personnel resources greatly limits the potential for nature-based recreation and infrastructure to be supported at within HCGCP. Large scale recreational facilities or multi-use trail systems are not necessary as there are Preserves and Parks in close proximity that provide opportunities for hiking, mountain biking, camping, fishing and equestrian use; these Preserves and Parks have Board-approved stewardship (management) plans in place and the infrastructure to support these offerings.

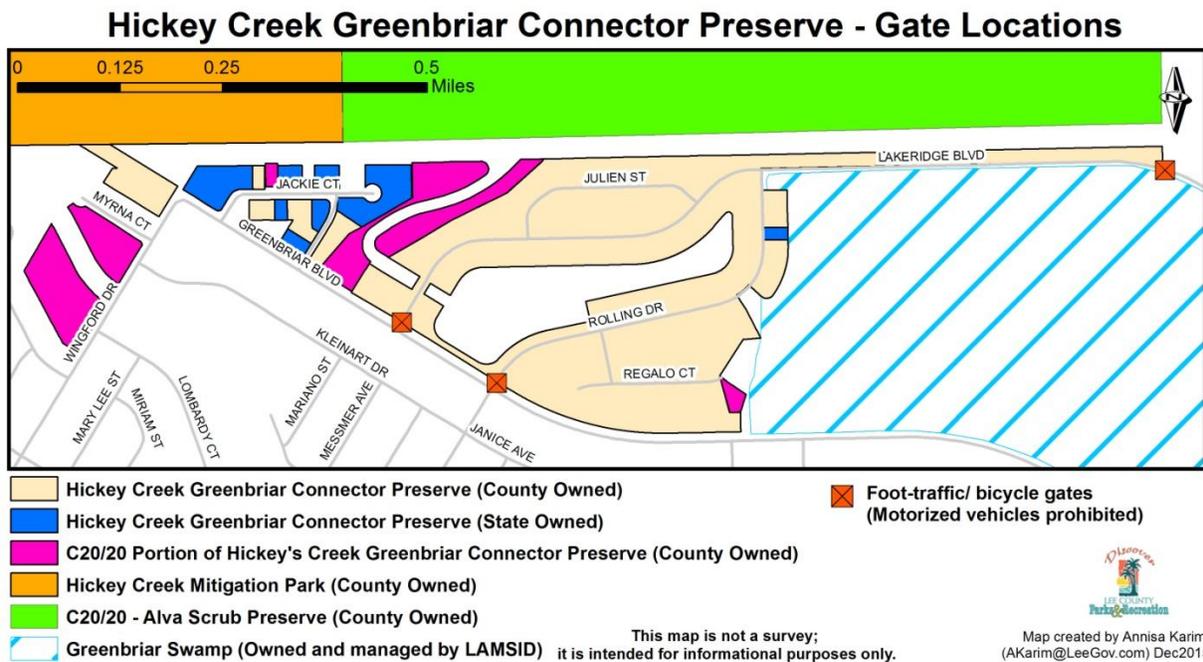


Figure 25: HCGCP Gate Locations

## B. Goals and Strategies

The primary management objectives for HCMP are natural community improvements, removal and continued treatment of invasive exotic plants, the removal of exotic animals, and prescribed burning. Per the MOA with FWC, LCPR is responsible for public access, exotic (plant and animal) control and site security. While HCMP is at a maintenance level for exotics (less than 5% exotic cover), staff will remain diligent in the continued treatment of exotics. Prescribed burning of the portion of HCMP acquired with LCPR's C20/20 funds will be difficult due to their proximity to Palm Beach Blvd. and private homes and businesses. LCPR staff will coordinate with the LCPR Burn Crew, FWC and FFS on initiating a burn program on these 82 acres.

The following will be the focus of the coordination between FWC and LCPR staff on the management on HCMP.

### Natural Resource Management

- Listed species monitoring
- Exotic plant control and maintenance
- Exotic animal control
- Prescribed fire management
- Monitor and protect listed species
- Brush/fuel reduction

### Overall Protection

- Maintain firebreaks
- Maintain Boundary signs
- Change Zoning designation to Environmentally Critical

The core constraints on management of HCGCP are funding and staffing. Obtaining funds through grants and other financial sources will need to be explored and obtained when appropriate. Due to the private in-holdings and site security issues, economies of scale prevent the efficient land management of this Preserve. Coordinating with LAMSID will be an important part in management of the Preserve; neighbors will be considered and informed of any prescribed fires and/or large management practices that may be considered disruptive.

**VII. Projected Timetable for Implementation**

Table 11: Projected Timetable for Implementation

<b>Management Activity**</b>	January (2016-2026)	April (2016-2026)	July (2016-2026)	October (2016-2026)
Exotic Plant Control	x	x	x	x
Prescribed fire	x	x	x	x
Mowing and/or trail trimming		x		x

\*\*The management activities above will occur quarterly as indicated from 2016-2026 based on staffing and funding resources. Stewardship activities are projected to remain consistent every year for the next ten years.

**VIII. Financial Considerations**

There is no dedicated funding in the LCPR budget to manage HCMP or HCGCP. The MOA with FWC will be adhered to. Funding sources will be researched and applications for appropriate grants will be made. Examples include the FWC Bureau of Invasive Plant Management for exotic plant control projects, and sources that provide assistance for plant community maintenance.

LCPR staff is involved in the local (Southwest Florida) Cooperative Invasive Management Area (CISMA) and may be able to acquire assistance from the CISMA. The goal of the SWFL CISMA is “to reduce the impact of or eliminate invasive, non-native plants and non-native animals by combining programs and resources to address invasive species on a landscape level to achieve common goals and objectives.”

Projected costs for resource management and protection of HCMP and HCGCP are presented in Appendix K.

**IX. Literature Cited**

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[http://ecos.fws.gov/tess\\_public/pub/stateListingAndOccurrenceIndividual.jsp?state=FL&s8fid=112761032792&s8fid=112762573902](http://ecos.fws.gov/tess_public/pub/stateListingAndOccurrenceIndividual.jsp?state=FL&s8fid=112761032792&s8fid=112762573902)
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X. APPENDICES

APPENDIX A: Deed of Conservation Easement Between Lee County and Florida Game and Fresh Water Fish Commission

OFFICE OF COUNTY CLERK  
Post Office Box 398  
Fort Myers, Florida 33902-0398

DEED OF CONSERVATION EASEMENT

THIS DEED OF CONSERVATION EASEMENT is given this 14 day of July, 1994, by Lee County a political subdivision of the State of Florida, whose mailing address is P.O. Box 398, Fort Myers, Florida 33902-0398 ("Grantor"), to the Florida Game and Fresh Water Fish Commission (GFC), an agency of the State of Florida, with its principal office at 620 S. Meridian Street, Tallahassee, Florida 32399-1600, an agency of the State of Florida, ("Grantee").

W I T N E S S E T H:

WHEREAS, the above named parties submitted an application to the Florida Communities Trust program for acquisition of certain lands situated in Lee County, hereinafter referred to as the "Property", more specifically described in Exhibit "A" attached hereto and incorporated herein by this reference; and

WHEREAS, the FCT Governing Board pursuant to Sections 259.101 and 380.502, Florida Statutes, and Rule 9K-4, Florida Administrative Code awarded Conceptual Approval to the Project partnership application on 9-29-93; and

WHEREAS, as part and condition of the FCT Project Approval, all parties have approved the Hickey Creek Mitigation Park Management Plan and the Memorandum of Understanding, and together with the Conceptual Approval Agreement and Grant Award Agreement are collectively referred to as "Governing Documents", attached hereto, the terms of which are hereby incorporated herein by reference; and

WHEREAS, on May 5, 1994, the Board of the Florida Communities Trust approved the Hickey Creek Mitigation Park Management Plan which provides for the conveyance of a conservation easement to GFC for lands it uses as mitigation for impacts to listed wildlife populations; and

WHEREAS, the Grantor owns the Property described in Exhibit "A"; and

NOW THEREFORE, Grantor hereby grants, creates, and establishes a perpetual conservation easement upon the Property described in Exhibit "A", which shall run with the land and be binding upon the Grantor, its successors and assigns, and remain in full force and effect forever.

C7b  
4-20-94

1. The scope, nature, and character of this conservation easement is to ensure that the area described in Exhibit "A" shall be used and managed as a GFC Mitigation Park. Except as otherwise provided for herein, or in the Governing Documents, the Property will be retained forever in its natural condition pursuant to Section 704.06, Florida Statutes. To carry out this purpose the following rights are conveyed to Grantee by this easement:

(a) To enter upon the Property to control and regulate use, to perform habitat management activities and to enforce the rights herein granted by Grantor, its heirs, successors or assigns;

(b) To enjoin any activity on or use of the Property that is inconsistent with the purpose of this conservation easement and to enforce the restoration of such areas or features of the Property that may be damaged by any inconsistent activity or use; and

(c) To preserve and protect and, consistent with the Governing Documents, enhance the natural and ecological features of the Property including, without limitation, topography, soil, hydrology, vegetation and wildlife.

2. Except for specific activities authorized by the Governing Documents, or as may be amended by mutual agreement in writing by Grantee and Grantor, and as more specifically referenced herein, including, without limitation, creation, restoration, enhancement and preservation of wetlands and upland habitat areas, this Deed of Conservation Easement prohibits the following activities in, on or under the Property:

(a) Construction or placing of buildings, roads, billboards, surface water management facilities, utilities, or other structures on or above the ground not specified in the Governing Documents;

(b) Dumping or placing of soil or other substance or material as landfill or dumping or placing of trash, waste, or unsightly or offensive materials;

(c) Removal or destruction of trees, shrubs, or other vegetation, except for the removal of nuisance or exotic plant species or other vegetation where necessary for management and restoration;

(d) Excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substance in such manner as to affect the surface;

(e) Surface use, except for purposes that permit the land or water area to remain predominantly in its natural condition;

- (f) Activities detrimental to water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation;
- (g) Acts or uses detrimental to such retention of land or water areas;
- (h) Acts or uses detrimental to the preservation of the structural integrity or physical appearance of sites or properties of historical, architectural, archaeological, or cultural significance;
- (i) Acts or uses inconsistent with the purpose of this conservation easement as set forth in Section 704.061, Florida Statutes, as it may be amended from time to time, and any successor law, rule or statute.

3. Grantor intends that enforcement of the terms and provisions of the conservation easement and the Governing Documents shall be at the discretion of Grantee and that any forbearance on behalf of Grantee to exercise their rights hereunder in the event of any breach hereof by Grantor, their successors, personal representatives or assigns shall not be deemed or construed to be a waiver of Grantees' rights hereunder in the event of a subsequent breach.

4. Notwithstanding the prohibitions specified in Subparagraphs a. through i. of Paragraph 2 above, Grantor expressly reserves the right to construct, operate and maintain recreational facilities and necessary ancillary facilities on the property in a manner consistent with the Governing Documents.

5. Grantee agrees it will hold this conservation easement exclusively for conservation purposes and that they will not assign their rights and obligations under this conservation easement except to another organization qualified to hold such interests under the applicable state and federal laws and committed to holding this conservation easement exclusively for conservation purposes. Grantee may also amend this conservation easement to remove from the easement areas where the Grantees management responsibility has been terminated pursuant to Section 3(H) of the Memorandum of Agreement.

6. If any provision of this conservation easement or the application thereof to any person or circumstance is found to be invalid, the remainder of the provisions of this conservation easement, and the applications of such provision to persons or circumstances other than those as to which it is found to be invalid, shall not be affected thereby.

7. All notices, consents, approvals or other communications hereunder

shall be in writing and shall be deemed properly given if sent by United States certified mail, return receipt requested, addressed to the appropriate party or successor-in-interest, at the addresses above set forth or such new addresses as either party may in writing deliver to the other.

TO HAVE AND TO HOLD unto Grantee, their respective successors and assigns forever. The covenants, terms, conditions, restrictions and purposes imposed with this easement shall not only be binding upon Grantor but also its agents, personal representatives, heirs, assigns and all other successors to it in interest, and shall continue as a servitude running in perpetuity with the Property.

IN WITNESS WHEREOF Grantor has set their hand on the day and year first above written.

ATTEST:                       
                    *Shirley Green, Ex - Office Clerk*  
                    Board of County Commissioners

BOARD OF COUNTY COMMISSIONERS, LEE  
COUNTY, FLORIDA

By: *Ruth Freyner*  
Deputy Clerk

By: *Ray Jacobs*  
Chairman.

APPROVED AS TO FORM  
*Jack N. Pate*  
OFFICE OF COUNTY ATTORNEY



GRANTEES ACCEPTANCE

The Florida Game and Fresh Water Fish Commission hereby approves the foregoing Conservation Easement and agrees to all the terms and provisions.

Signed, sealed and Delivered in our presence and witnesses:

FLORIDA GAME AND FRESH WATER FISH COMMISSION

Jimmie C. Bevis  
WITNESS

By: [Signature]

Jimmie C. Bevis  
(Print Name of Witness)

Allan H. Egbert  
Executive Director  
(Print Name and Title)

Dale J. Cook  
WITNESS

Address: 620 South Meridian Street  
Tallahassee, Florida 32399-1600

GALE F Cook  
(Print Name of Witness)

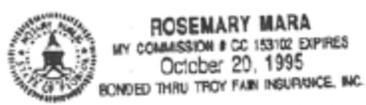
APPROVED AS TO FORM AND LEGAL SUFFICIENCY  
[Signature]  
Commission Attorney

STATE OF FLORIDA  
COUNTY OF Leon

The foregoing instrument was acknowledged before me this 17 day of May, 1994 by Allan H. Egbert the Executive Director of the Florida game and Fresh Water Fish Commission, a Department of the State of Florida, on behalf of the department. He/she is personally known to me. \_\_\_\_\_

(Affix Notary Seal)

Rosemary Mara  
(Signature of Notary Public)



\_\_\_\_\_  
(Print Name of Notary Public)  
NOTARY PUBLIC  
Serial/Commission No. \_\_\_\_\_  
My Commission expires: \_\_\_\_\_

hcconeas  
3-1-94



EXHIBIT A  
LEGAL DESCRIPTION

PARCEL A

COMMENCING AT THE SOUTHWEST CORNER OF SECTION 30, TOWNSHIP 43 SOUTH, RANGE 27 EAST, LEE COUNTY, FLORIDA; THENCE NORTH  $89^{\circ}-32'-13''$  EAST, ALONG THE SOUTH SECTION LINE OF SAID SECTION 30, A DISTANCE OF 200.01 FEET TO THE EASTERLY RIGHT-OF-WAY LINE OF A 200 FOOT DRAINAGE CANAL, AND THE POINT OF BEGINNING OF A TRACT OF LAND HEREIN DESCRIBED; THENCE NORTH  $00^{\circ}-53'-00''$  WEST, ALONG SAID DRAINAGE CANAL, A DISTANCE OF 2,656.32 FEET; THENCE NORTH  $89^{\circ}-50'-34''$  WEST A DISTANCE OF 200.00 FEET TO THE WEST QUARTER SECTION CORNER; THENCE NORTH  $00^{\circ}-56'-00''$  WEST, ALONG THE WEST SECTION LINE OF SAID SECTION 30, A DISTANCE OF 557.13 FEET; THENCE NORTH  $89^{\circ}-35'-20''$  EAST, A DISTANCE OF 2,924.63 FEET; THENCE SOUTH  $00^{\circ}-24'-40''$  EAST, A DISTANCE OF 254.78 FEET; THENCE NORTH  $89^{\circ}-35'-20''$  EAST, A DISTANCE OF 1,056.52 FEET, TO THE CENTERLINE OF BATEMAN ROAD; THENCE SOUTH  $00^{\circ}-24'-40''$  EAST, ALONG THE CENTERLINE OF BATEMAN ROAD, A DISTANCE OF 3,089.79 FEET, TO THE INTERSECTION OF THE SOUTH SECTION LINE OF SAID SECTION 30; THENCE SOUTH  $89^{\circ}-58'-04''$  WEST, ALONG THE SOUTH SECTION LINE, A DISTANCE OF 1,309.66 FEET, TO THE SOUTH QUARTER CORNER; THENCE SOUTH  $89^{\circ}-32'-13''$  WEST, ALONG THE SOUTH SECTION LINE, A DISTANCE OF 2,443.03 FEET, TO THE EASTERLY RIGHT-OF-WAY LINE OF AFORESAID DRAINAGE CANAL, AND THE POINT OF BEGINNING.

03/03/94 10:58am  
ACQAGOPT.GH

## EXHIBIT A (continued)

## PARCEL A (continued)

COMMENCING AT THE SOUTHWEST CORNER OF SECTION 31, TOWNSHIP 63 SOUTH, RANGE 27 EAST, LEE COUNTY, FLORIDA; THENCE NORTH 88°-58'-59" EAST, ALONG THE SOUTH SECTION LINE OF SAID SECTION 31; A DISTANCE OF 200.01 FEET, TO THE EASTERLY RIGHT-OF-WAY LINE OF A 200 FOOT DRAINAGE CANAL, AND THE POINT OF BEGINNING OF A TRACT OF LAND HEREIN DESCRIBED; THENCE NORTH 00°-20'-17" WEST, ALONG SAID DRAINAGE CANAL, A DISTANCE OF 2,646.17 FEET; THENCE NORTH 89°-39'-43" EAST, A DISTANCE OF 50.00 FEET; THENCE NORTH 00°-20'-17" WEST, A DISTANCE OF 2,646.18 FEET, TO THE INTERSECTION OF THE NORTH SECTION LINE OF SAID SECTION 31; THENCE NORTH 89°-32'-13" EAST, ALONG THE NORTH SECTION LINE, A DISTANCE OF 2,393.03 FEET, TO THE NORTH QUARTER CORNER OF SAID SECTION 31; THENCE SOUTH 00°-22'-10" EAST, A DISTANCE OF 660.16 FEET; THENCE NORTH 89°-23'-05" EAST, A DISTANCE OF 659.63 FEET; THENCE SOUTH 00°-23'-29" EAST, A DISTANCE OF 660.12 FEET; THENCE NORTH 89°-22'-55" EAST, A DISTANCE OF 659.88 FEET, TO THE CENTERLINE OF BATEMAN ROAD; THENCE SOUTH 00°-24'-47" EAST, ALONG THE CENTERLINE OF BATEMAN ROAD, A DISTANCE OF 2,637.21 FEET; THENCE NORTH 89°-30'-31" EAST, A DISTANCE OF 1,321.76 FEET, TO THE

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EXHIBIT A (continued)

PARCEL A (continued)

INTERSECTION WITH THE EAST SECTION LINE OF SAID SECTION 31;  
THENCE SOUTH  $00^{\circ}-27'-24''$  EAST, ALONG THE EAST SECTION LINE A  
DISTANCE OF 1,320.06 FEET, TO THE SOUTHEAST SECTION CORNER;  
THENCE SOUTH  $89^{\circ}-38'-25''$  WEST, ALONG THE SOUTH SECTION LINE,  
A DISTANCE OF 2,645.54 FEET, TO THE SOUTH QUARTER CORNER;  
THENCE SOUTH  $88^{\circ}-58'-59''$  WEST, A DISTANCE OF 2,446.09 FEET,  
TO THE EASTERLY RIGHT-OF-WAY LINE OF AFORESAID DRAINAGE  
CANAL, AND THE POINT OF BEGINNING.

AND

PARCEL B

THE EAST ONE HALF ( $E1/2$ ) OF THE NORTHEAST QUARTER ( $NE1/4$ ) OF  
THE NORTHEAST QUARTER ( $NE1/4$ ), LYING SOUTH OF STATE ROAD 80,  
AND THE NORTHEAST QUARTER ( $NE1/4$ ) OF THE SOUTHEAST QUARTER  
( $SE1/4$ ) OF THE NORTHEAST QUARTER ( $NE1/4$ ) OF SECTION 25,  
TOWNSHIP 43 SOUTH, RANGE 26 EAST, LEE COUNTY, FLORIDA.

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APPENDIX B: Memorandum of Agreement Between Florida Game and Fresh Water Fish Commission Lee County

LEE CO. CONTRACT NO. C940431

MEMORANDUM OF AGREEMENT  
MITIGATION PARK PROGRAM

This Memorandum of Agreement between the Florida Game and Fresh Water Fish Commission (GFC), and Lee County, dated May 12, 1994, is intended as a framework for the acquisition and implementation of a Mitigation Park program.

This Memorandum of Agreement is entered into with reference to the following facts:

Whereas, GFC has an interest in the establishment of a Mitigation Park program to accommodate upland wildlife mitigation efforts within the Southwest Florida Regional Planning Council (SWFRPC) boundary, and

Whereas, GFC is authorized under Section 372.074 (Florida Statutes), as amended by CS/HE 161, to assist other agencies and local governments in acquiring or managing lands important to the conservation of fish and wildlife, and

Whereas, Lee County has a concurrent interest in acquiring and protecting lands that could be used for mitigation of environmental damage caused by existing and proposed development, and

Whereas, a site, which is located in Lee County and which is referred to as Hickey Creek Mitigation Park (hereinafter referred to as "HCMP") is the preferred site for the establishment of a mitigation park facility. HCMP is described in Exhibit "A" and graphically depicted in Figure "A" herein attached and made a part of this agreement, and

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Whereas, the HCMP site contains environmentally sensitive lands including rare and unique uplands, wetlands, and important habitat for several listed species, and

Whereas, the interest of both parties are best served by obtaining funding from the Florida Communities Trust (hereinafter referred to as the "FCT") for the acquisition of the Project site, and

Whereas, on November 20, 1992, GFC approved a staff recommendation to proceed with the establishment of a regional mitigation park for the SWFRPC region at HCMP in Lee County, and

Whereas, on December 16, 1992, the Lee County Board of County Commissioners approved \$1,687,000 in the Capital Improvement Fund for the acquisition of HCMP (see Area "A" on Exhibit A) and approved the submittal of an application to the FCT P-2000 Program for a matching grant to acquire additional land within HCMP (see Area "B" on Exhibit A), and

NOW, THEREFORE, in consideration of the foregoing, and of the terms and conditions stated below, Lee and GFC agree to be legally bound as follows:

1. FISCAL RESPONSIBILITIES. All monies that are collected by GFC for wildlife mitigation satisfied by using HCMP shall comply with the following subsections.

(A) Each party agrees to establish the fees charged for participation in HCMP as follows:

i. Total Project Acquisition Cost shall mean the total purchase price of HCMP including costs of any property appraisals, boundary surveys, environmental audits, title insurance, closing costs and other direct and incidental costs

required for purchase of HCMP, minus the \$1,113,000 matching grant from Florida Communities Trust.

ii. The Upland Acquisition Cost shall equal the Total Project Acquisition Cost divided by the total number of non-FCT upland acres in Area "A". Area "A" is hereafter referred to as the "Mitigation Area" and is depicted in Exhibit A.

iii. The Management Fee shall be a sum equal to fifteen percent (15%) of the Upland Acquisition Cost. GFC reserves the right to modify this fee according to management needs.

iv. The Service Charge shall equal seven percent (7%) of the sum of the Upland Acquisition Cost and Management Fee and shall be assessed in accordance with Section 215.20, Florida Statutes.

v. The cost of an upland mitigation credit shall be the sum of the Upland Acquisition Cost, Management Fee, and Service Charge.

(B) In accordance with Section 372.074, F.S., GFC agrees to assist Lee County with acquisition of the Project. GFC will pay Lee County for its share of the Project acquisition cost by forwarding to Lee County the land acquisition portion of all mitigation fees it receives from the sale of the upland mitigation credits identified in Section 2(A). In exchange for these payments, GFC will acquire a Conservation Easement over HCMP.

(C) Subject to legislative appropriation approval and laws governing state trust funds, GFC shall make a payment of \$395,000 from the land acquisition principal account of the GFC Southwest Florida account to Lee County within six months of acquisition of HCMP. The number of upland mitigation credits encumbered by this

payment shall equal the payment amount divided by the upland acquisition cost. Additional payments equaling the amount on deposit within the land acquisition principal account of the GFC Southwest Florida account shall be made by GFC to Lee County each successive year on or before September 30. Any interest that accrues within the land acquisition principal account shall be added to the management fund principal account and used by GFC to supplement management activities within HCMP.

(D) GFC reserves the right not to direct gopher tortoise mitigation that results from transportation projects sponsored by the Florida Department of Transportation, to HCMP. GFC agrees that all other funds received by that agency for gopher tortoise mitigation within the boundaries of the Southwest Florida Regional Planning Council shall be administered solely in accordance with Section 1 of this agreement.

(E) Only the non-FCT portion of HCMP located in Section 31, Township 43 South, Range 27 East, shall be made available for sale as mitigation credits.

## 2. MITIGATION ADMINISTRATION.

(A) HCMP shall contain 435 (estimate pending verification) non-FCT upland mitigation credits. One upland mitigation credit shall equal one acre of habitat suitable for gopher tortoise mitigation. GFC shall administer the sale of upland wildlife mitigation credits. Under no circumstance shall the number of mitigation credits sold exceed the number of credits established above for the Project. Records regarding the sale and status of mitigation credits within the mitigation area shall be maintained by GFC.

(B) With each annual payment from the land acquisition principal account to Lee County, GFC will include a map depicting the portion of the mitigation area encumbered by the sale of upland

mitigation credits during that payment period.

(C) Upland mitigation within HCMP shall be deemed complete when all upland mitigation credits are sold and, when the total amount of mitigation funds received by Lee County, after adjusting for the management fee and service charge pursuant to Section 1(A)(iii) and (iv) above, equals the total project acquisition cost as defined in Section 1(A)i above.

(D) Pursuant to Section 1(B) above, a Deed of Conservation Easement to last in perpetuity over HCMP, presented as Exhibit "B", shall be granted by Lee County to GFC. Said easement shall be conveyed to GFC prior to any payment from GFC to Lee County, shall be consistent with Section 704.06, Florida Statutes, and shall protect the ability of GFC to access, manage and control use within HCMP.

### 3. MANAGEMENT RESPONSIBILITIES

(A) GFC will assume full responsibility for resource management of all lands within HCMP. All uses, improvements, structures, and management practices within HCMP must be approved by GFC. Public access and passive, resource-based recreation within the mitigation area will be controlled by GFC in order to minimize disturbance and other adverse impacts to habitat quality or wildlife populations. The principal management goal for the mitigation area will be the protection and enhancement of listed wildlife populations, even to the exclusion of other uses and activities.

(B) Lee County shall assume full responsibility for the funding, development, and management of public access and passive, resource-based recreational activities of HCMP. Lee County shall secure funding and assume management responsibility for fencing and exotic plant removal within HCMP.

(C) GFC will establish HCMP as a Wildlife and Environmental Area pursuant to Rule 39-17.002, F.A.C. GFC will post HCMP with signage stating the designation of the project along with applicable regulations. Contingent upon formal approval by the Florida Game and Fresh Water Fish Commission, the following rules will be adopted for HCMP pursuant to Rule 39-17.005 F.A.C.:

1. Hunting or possession of firearms is prohibited;
2. Fires are prohibited;
3. Disturbance or removal of any plants or trees is prohibited;
4. Possession of dogs or trapping devices is prohibited;
5. Access shall be at designated entrance areas, and is restricted to foot traffic only.
6. No motorized vehicles, bicycles, or horseback riding is allowed.
7. Camping is prohibited.

(D) Within 18 months of Project acquisition, GFC may adopt a strategic management plan for HCMP. This plan will be consistent with the Conceptual Management Plan (Exhibit "C") dated April 20, 1994. The strategic management plan shall identify actions necessary to implement listed species management activities and will include plans for habitat restoration and monitoring.

(E) Management fees collected pursuant to subsection 1(A)(iii) of this agreement will be administered by GFC. GFC agrees to deposit all management fees into a management fund principal account, and to fund management activities, pursuant to Section 7 of this agreement, with the interest that accrues on behalf of the management fund principal account.

(F) In the event GFC determines that it can no longer perform its management function over HCMP, due to limited funding or some other constraining circumstance, it shall delegate management responsibility for the mitigation area to another agency or

private conservation foundation, after review and approval by FCT. Lee County may at its discretion elect to either manage the FCT portion of the project, or delegate this responsibility to another agency or private conservation foundation, consistent with the FCT Conceptual Approval Agreement 92-015-P2A.

(G) The assignment of management responsibility to GFC shall not preclude Lee County from funding recreational or habitat related improvements within the mitigation area provided said activities are approved by GFC, do not conflict with specific regulations promulgated by GFC pursuant to 39-17.005, F.A.C., are consistent with the Conceptual Management Plan and GFC's Strategic Management Plan, and do not unreasonably interfere with the protection of wildlife and vegetation.

(H) GFC may terminate its management responsibility for specific areas outside the Mitigation Area where natural resources may be adversely affected by clearing, mining, excavating, or any other activity or use not identified in the Conceptual Management Plan dated April 20, 1994. Upon mutual agreement between GFC and Lee County, the Conservation Easement referenced in 2(D) above may be amended to remove areas from the easement where GFC management responsibility has been terminated.

4. REPORTS. In the event Lee County receives an FCT matching grant for the acquisition of HCMP, Lee County agrees to prepare the annual report required by FCT. GFC agrees to prepare and submit to Lee County an annual report of GFC management activities two months prior to the FCT annual report deadline. The GFC annual report shall detail GFC management activities and shall report on the status of mitigation credits sold within the previous twelve-month period. In the event that Lee County acquires the site without a FCT grant, GFC shall submit the annual report to Lee County for the twelve-month period which coincides with the Lee County fiscal year.

5. TERMINATION OF AGREEMENT. This agreement shall terminate upon either (1) the inability of Lee County to acquire HCMP for use as a Mitigation Park, (2) the inability of GFC to obtain spending approval from the Florida Legislature to effect the transfer of funds from the Southwest Florida Gopher Tortoise account of the Fish and Wildlife Habitat Trust Fund to Lee County, or (3) failure of Lee County to execute or comply with Addendum #1 to the Option Agreement for Sale and Purchase, shown as Exhibit "D", with respect to the termination or deannexation of drainage rights held by East County Water Control District. Sections 1, 2, and 4 of this agreement shall terminate upon completion of HCMP pursuant to Section 2(C) of this agreement. The management of lands encumbered under Section 2 shall continue to be the responsibility of GFC in accordance with Section 3 of this agreement.

6. SEVERABILITY. If any provisions of this agreement or the application thereof to any person or circumstance is held by a court of competent jurisdiction to be partially or wholly invalid or unenforceable for any reason whatsoever, any such invalidity, illegality, or unenforceability shall not affect other provisions or applications of this agreement which can be given effect without the invalid provision or application and to this end the provisions of this agreement are declared severable.

7. COMMITMENT OF FUNDS. GFC's performance and obligation to pay under this agreement is contingent upon an annual appropriation by the Legislature, and conformance with State laws regarding use of trust funds.

11. PUBLIC RECORDS. GFC reserves the right to unilaterally cancel this agreement for refusal by Lee County to allow public access to all documents, papers, letters, or other material subject to the provisions of Chapter 119 (F.S.) and made or received by Lee County in conjunction with this contract.

12. EFFECTIVE DATE. This agreement shall take effect on the later of the dates stated below.

This Memorandum of Agreement is made and entered on the date executed by the last signatory hereto:

By: Ray J. Juchas  
Lee County

By: [Signature]  
Florida Game and Fresh Water  
Fish Commission

[Signature]  
Approved as to Legal  
Sufficiency on behalf of Florida  
Game and Fresh Water Fish Commission

[Signature]  
Approved as to Legal  
Sufficiency for Lee County

APPROVED AS FISCALLY  
AND BUDGETARILY SOUND

[Signature]  
DIVISION SERV.  
GRWFC

DRAFT

APPENDIX C: Grant Award Agreement Between the Florida Communities Trust and Lee County

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EXHIBIT "B"

This instrument prepared by:  
Ann J. Wild  
Florida Communities Trust  
Department of Community Affairs  
2740 Centerview Drive  
Tallahassee, FL 32399-2100

COPY

CONTRACT # 92-015-02-14-3-018 FLORIDA COMMUNITIES TRUST  
P2A AWARD# 92-015-P2A

GRANT AWARD AGREEMENT

THIS AGREEMENT is entered into this 29 day of June, 1994, by and between the FLORIDA COMMUNITIES TRUST ("FCT"), a nonregulatory agency within the State of Florida Department of Community Affairs, and LEE COUNTY, a political subdivision of the State of Florida ("FCT Recipient"), in order to impose terms, conditions, and restrictions on the use of the proceeds of certain bonds, hereinafter described, and the lands acquired with such proceeds and as described in Exhibit "A" attached hereto and made a part hereof ("Project Site"), as shall be necessary to ensure compliance with applicable Florida Law and federal income tax law and to otherwise implement provisions of Chapters 253, 259, and 380, Florida Statutes.

WHEREAS, Part III Chapter 380, Florida Statutes, the Florida Communities Trust Act, creates a nonregulatory agency within the Department of Community Affairs, which will assist local governments in bringing into compliance and implementing the conservation, recreation and open space, and coastal elements of their comprehensive plans and in otherwise conserving natural resources and resolving land use conflicts by providing financial assistance to local governments to carry out projects and activities authorized by the Florida Communities Trust Act;

WHEREAS, Section 259.101(3)(c), Florida Statutes, provides for the distribution of ten percent (10%) of the net Preservation 2000 Revenue Bond proceeds to the Department of Community Affairs to provide land acquisition grants and loans to local governments through the FCT;

WHEREAS, the Governor and Cabinet authorized the sale and issuance of State of Florida Department of Natural Resources Preservation 2000 Revenue Bonds (Bonds);

WHEREAS, the Bonds were issued as tax-exempt bonds, meaning that the interest on the Bonds is excluded from the gross income of Bondholders for federal income tax purposes;

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WHEREAS, Rule 9K-4.010(2)(e), F.A.C., authorizes FCT to impose conditions for funding on those FCT applicants whose projects have been selected for funding in accordance with Rule Chapter 9K-4, F.A.C.;

WHEREAS, the FCT has approved the terms under which the Project Site is acquired and the deed whereby the FCT Recipient acquires title to the Project Site shall contain such covenants and restrictions as are sufficient to ensure that the use of the Project Site at all times complies with Section 375.051, Florida Statutes and Section 9, Article XII of the State Constitution and shall contain clauses providing for the conveyance of title to the Project Site to the Board of Trustees of the Internal Improvement Trust Fund upon the failure of the FCT Recipient to use the Project Site acquired thereby for such purposes; and

WHEREAS, such covenants and restrictions shall be imposed by an agreement which shall describe with particularity the real property which is subject to the agreement and shall be recorded in the county in which the real property is located; and

WHEREAS, the purpose of this Agreement is to set forth the covenants and restrictions that are imposed on the Project Site subsequent to its acquisition with the FCT Preservation 2000 Bond Proceeds.

NOW THEREFORE, in consideration of the mutual covenants and undertakings set forth herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, FCT and FCT Recipient do hereby contract and agree as follows:

#### I. GENERAL CONDITIONS.

1. Upon execution and delivery by the parties hereto, the FCT Recipient shall cause this Agreement to be recorded and filed in the official public records of Lee County, Florida, as Exhibit "B" of the warranty deed vesting fee simple title to the Project Site in the FCT Recipient, and in such manner and in such other places as FCT may reasonably request, and shall pay all fees and charges incurred in connection therewith.

2. The FCT Recipient and FCT agree that the State of Florida Department of Environmental Protection will forward this Agreement to Department of Environmental Protection Bond Counsel for review. In the event Bond Counsel opines that an amendment is required to this Agreement so that the tax exempt status of the Preservation 2000 Revenue Bonds is not jeopardized, FCT and FCT Recipient shall amend the Agreement accordingly.

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3. This Agreement may be amended at any time. Any amendment must be set forth in a written instrument and agreed to by both the FCT Recipient and FCT.

4. This Agreement and the covenants and restrictions contained herein shall run with the Property herein described and shall bind, and the benefits shall inure to, respectively, the FCT and the FCT Recipient and their respective successors and assigns.

5. This Agreement shall be governed by and construed in accordance with the laws of the State of Florida, with respect to both substantive rights and with respect to procedures and remedies.

6. Any notice required to be given hereunder shall be given by personal delivery, by registered mail or by registered expedited service at the addresses specified below or at such other addresses as may be specified in writing by the parties hereto, and any such notice shall be deemed received on the date of delivery if by personal delivery or expedited delivery service, or upon actual receipt if sent by registered mail.

FCT:

Florida Communities Trust  
Department of Community Affairs  
2740 Centerview Drive  
Tallahassee, FL 32399-2100  
ATTN: Executive Director

FCT Recipient:

Lee County, a political  
subdivision of the State of Florida  
Post Office Box 398  
Ft. Myers, FL 33902  
ATTN: Board of County Commissioners

7. If any provision of the Agreement shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired.

**II. PROJECT SITE REQUIREMENTS IMPOSED BY CHAPTER 259, CHAPTER 375, AND CHAPTER 380, PART III, FLORIDA STATUTES.**

1. If any essential term or condition of this grant agreement is violated by the FCT Recipient or by some third party with the knowledge of the FCT Recipient and the FCT Recipient does not correct the violation within 30 days of notice of the violation, fee simple title to all interest in the Project Site

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shall be conveyed to the Board of Trustees of the Internal Improvement Trust Fund. The FCT shall treat such property in accordance with Section 380.508(4)(e), Florida Statutes.

FCT shall investigate any violation of terms and conditions to determine if both FCT Recipients have knowledge of or are a party to the violation. If it is determined that one of the FCT Recipients has no knowledge of, has notified FCT of, or is not a party to the violation, the FCT Recipient not in violation shall not be required to convey fee simple title to its interest in the Project Site to the Board of Trustees of the Internal Improvement Trust Fund.

2. Any transfer of the Project Site shall be subject to the approval of FCT and FCT shall enter into a new agreement with the transferee, containing such covenants, clauses, or other restrictions as are sufficient to protect the interest of the people of Florida.

3. The interest, if any, acquired by the FCT Recipient in the Project Site will not serve as security for any debt of the FCT Recipient unless FCT approves the transaction.

4. If the existence of the FCT Recipient terminates for any reason, title to all interest in real property it has acquired with the FCT award shall be conveyed to the Board of Trustees of the Internal Improvement Trust Fund, unless FCT negotiates an agreement with another local government or nonprofit organization which agrees to accept title to all interest in and to manage the Project Site.

5. In the event that the Project Site is damaged or destroyed or title to the Project Site, or any part thereof, is taken by any governmental body through the exercise or the threat of the exercise of the power of eminent domain, the FCT Recipient shall deposit with the FCT any insurance proceeds or any condemnation award, and shall promptly commence to rebuild, replace, repair or restore the Project Site in such manner as is consistent with the Agreement. The FCT shall make any such insurance proceeds or condemnation award moneys available to provide funds for such restoration work. In the event that the FCT Recipient fails to commence or to complete the rebuilding, repair, replacement or restoration of the Project Site after notice from the FCT, the FCT shall have the right, in addition to any other remedies at law or in equity, to repair, restore, rebuild or replace the Project Site so as to prevent the occurrence of a default hereunder.

Notwithstanding any of the foregoing, FCT will have the right to seek specific performance of any of the covenants and

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restrictions of this Agreement concerning the construction and operation of the Project Site.

**III. PROJECT SITE OBLIGATIONS IMPOSED BY FCT ON THE FCT RECIPIENT.**

1. The Project Site shall be managed only for the conservation, protection and enhancement of natural and historical resources and for passive, natural resource-based public outdoor recreation which is compatible with the conservation, protection and enhancement of the Project Site, along with other related uses necessary for the accomplishment of this purpose. The proposed uses for the Project Site are specifically designated in the Project Plan as approved by FCT.

2. The FCT Recipient shall prepare and submit to FCT an annual report as required by Rule 9K-4.013, F.A.C.

3. The FCT Recipient shall ensure that the future land use designation assigned to the Project Site is for a category dedicated to open space, conservation, or outdoor recreation uses as appropriate. If an amendment to the FCT Recipient's comprehensive plan is required to comply with this paragraph, the amendment shall be proposed at the next comprehensive plan amendment cycle available to the FCT Recipient.

4. FCT Recipient shall ensure, and provide evidence thereof to FCT, that all activities under this Agreement comply with all applicable local, state, regional and federal laws and regulations, including zoning ordinances and the adopted and approved comprehensive plan for the jurisdiction as applicable. Evidence shall be provided to FCT that all required licenses and permits have been obtained prior to the commencement of any construction.

5. The FCT Recipient shall, through its agents and employees, prevent the unauthorized use of the Project Site or any use thereof not in conformity with the FCT approved project plan.

6. FCT staff or its duly authorized representatives shall have the right at any time to inspect the Project Site and the operations of the FCT Recipient at the Project Site.

7. All buildings, structures, improvements, and signs shall require the prior written approval of FCT as to purpose. Further, tree removal, other than non-native species, and/or major land alterations shall require the written approval of FCT. The approvals required from FCT shall not be unreasonably withheld by FCT upon sufficient demonstration that the proposed structures, buildings, improvements, signs, vegetation removal or

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land alterations will not adversely impact the natural resources of the Project Site. The approval by FCT of the FCT Recipient's management plan addressing the items mentioned herein shall be considered written approval from FCT.

8. If archaeological and historic sites are located on the Project Site, the FCT Recipient shall comply with Chapter 267, Florida Statutes. The collection of artifacts from the Project Site or the disturbance of archaeological and historic sites on the Project Site will be prohibited unless prior written authorization has been obtained from the Department of State, Division of Historical Resources.

9. The FCT Recipient shall ensure that the Project Site is identified as being publicly owned and operated as a natural resource-based public outdoor recreational site in all signs, literature and advertising regarding the Project Site. The FCT Recipient shall erect a sign(s) identifying the Project Site as being open to the public and as having been purchased with funds from FCT and FCT Recipient.

#### IV. OBLIGATIONS INCURRED BY FCT RECIPIENT AS A RESULT OF BOND PROCEEDS BEING UTILIZED TO PURCHASE THE PROJECT SITE.

1. If the Project Site is to remain subject, after its acquisition by the State and the FCT Recipient, to any of the below listed activities or interests, the FCT Recipient shall provide at least 60 days written notice of any such activity or interest to FCT prior to the activity taking place, and shall provide to FCT such information with respect thereto as FCT reasonably requests in order to evaluate the legal and tax consequences of such activity or interest:

a. any lease of any interest in the Project Site to a non-governmental person or organization;

b. the operation of any concession on the Project Site to a non-governmental person or organization;

c. any sales contract or option to buy things attached to the Project Site to be severed from the Project Site, with a non-governmental person or organization;

d. any use of the Project Site by non-governmental persons other than in such person's capacity as a member of the general public;

e. a management contract of the Project Site with a non-governmental person or organization; and

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f. such other activity or interest as may be specified from time to time in writing by FCT to the FCT Recipient.

2. FCT Recipient agrees and acknowledges that the following transaction, events, and circumstances may not be permitted on the Project Site as they may have negative legal and tax consequences under Florida law and federal income tax law:

a. a sale of the Project Site or a lease of the Project Site to a non-governmental person or organization;

b. the operation of a concession on the Project Site by a non-governmental person or organization;

c. a sale of things attached to the Project Site to be severed from the Project Site to a non-governmental person or organization;

d. any change in the character or use of the Project site from that use expected at the date of the issuance of any series of bonds from which the disbursement is to be made;

e. any use of the Project Site by non-governmental persons other than in such person's capacity as a member of the general public;

f. a management contract of the Project Site with a non-governmental person or organization; and

g. such other activity or interest as may be specified from time to time in writing by FCT to the FCT Recipient.

DELEGATIONS AND CONTRACTUAL ARRANGEMENTS BETWEEN THE FCT RECIPIENT AND OTHER GOVERNMENTAL BODIES, NOT FOR PROFIT ENTITIES, OR NON GOVERNMENTAL PERSONS FOR USE OR MANAGEMENT OF THE PROJECT SITE WILL IN NO WAY RELIEVE THE FCT RECIPIENT OF THE RESPONSIBILITY TO ENSURE THAT THE CONDITIONS IMPOSED HEREIN ON THE PROJECT SITE AS A RESULT OF UTILIZING BOND PROCEEDS TO ACQUIRE THE PROJECT SITE ARE FULLY COMPLIED WITH BY THE CONTRACTING PARTY.

V. CONDITIONS THAT ARE PARTICULAR TO THE PROJECT SITE AS A RESULT OF THE FCT APPROVED MANAGEMENT PLAN.

1. Outdoor recreational facilities including nature trails, observation areas, interpretive displays, and canoe trails on the Project Site. The facilities shall be developed in a manner that allows the public reasonable access for observation

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and appreciation of the natural resources on the Project Site without causing harm to those resources.

2. The FCT Recipient shall provide educational programs at the Project Site. The programs shall include guided walks, special programs such as night walks and seasonal celebrations, and programs for school groups.

3. The timing and extent of a vegetative survey of vegetative communities and plant species on the Project Site shall be as specified in the management plan. The FCT Recipient shall detail how the survey shall be used during development of the site to insure the protection, restoration, and preservation of the natural resources on the Project Site.

4. The palmetto prairie, pine flatwood, scrub oak, freshwater marsh, and cypress swamp communities that occur on the Project Site shall be preserved and appropriately managed to ensure the long-term viability of these vegetative communities.

5. The Project Site shall be managed in a manner that will optimize habitat conditions for the listed wildlife species that utilize or could potentially utilize the Project Site, particularly gopher tortoises and scrub jays. The FCT Recipient shall coordinate with the Game and Fresh Water Fish Commission on the management of the Project Site for the protection of listed species and listed species habitat. The FCT Recipient shall conduct periodic surveys of listed species using the Project Site.

6. The water quality of Hickey Creek shall be protected and the natural hydrology of the Project Site shall be preserved and restored to a more natural function and shall include the restoration of areas impacted by roads and drainage ditches. The FCT Recipient shall coordinate with the South Florida Water Management District on the restoration of the hydrology and management of the Project Site. The Recipient shall also coordinate with the East County Water Control District to minimize any potential negative impacts to the site of the proposed drainage project.

7. A vegetation analysis of the Project Site shall be performed to determine which areas of the Project Site need a prescribed burning regime implemented to maintain natural fire-dependent vegetative communities. The FCT Recipient shall coordinate with Division of Forestry and Game and Fresh Water Fish Commission on the development of a prescribed burn plan for the Project Site.

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8. Invasive exotic vegetation that occurs on the Project Site shall be eradicated and shall be replaced with native species.

9. The FCT Recipient shall develop and implement a feral animal removal program for the Project Site.

10. The FCT Recipient shall restore approximately 57 acres of upland to scrub and pine flatwood communities in terms of biological composition and ecological function.

11. The FCT Recipient shall coordinate security, access, and resource management issues with the with power line easement or right-of-way holder. The FCT Recipient in cooperation with the easement or right-of-way holder shall pursue the restoration of a more natural vegetative community within the utility corridor.

12. The FCT Recipient shall coordinate with the Caloosahatchee State Park on the management of the Project Site.

13. The FCT Recipient shall perform an archaeological survey of any area within the Project Site proposed for development prior to the commencement of proposed development activities in that area. All planned activities involving known archaeological sites or identified site areas shall be closely coordinated with the Department of State, Division of Historic Resources in order to prevent the disturbance of significant sites. The FCT Recipient shall develop and implement a protection plan in conjunction with the Division of Historic Resources for the protection of the known historic site located on the project site.

14. The Project Site shall be incorporated into the county greenway system.

*Only*  
15. That portion of the Project Site located in Section 31, Township 43 South, Range 27 East, Lee County, Florida, shall ~~not~~ be subject to collection of environmental mitigation fees under the terms of the Memorandum of Agreement, Mitigation Park Program, between Lee County and the Florida Game and Fresh Water Fish Commission.

THIS GRANT AWARD AGREEMENT embodies the entire Agreement between the parties.

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement.

OR2515 PG1636

Witness:

Lee County, a political  
subdivision of the  
State of Florida,  
BY ITS BOARD OF COUNTY  
COMMISSIONERS

Robert J. Clouse  
Witness Name:

BY: [Signature]  
Its: Chairman

Mary B. Montross  
Witness Name:

Date: 6/23/94

Attest: [Signature] Deputy  
Clerk Clerk

COPY

Accepted as to Legal Form and  
Sufficiency:

[Signature]  
Date: 6-23-94

FLORIDA COMMUNITIES TRUST

[Signature]  
Witness Name: ANN J. WILD  
Howard Douglas  
Witness Name:  
HOWARD DOUGLAS

[Signature]  
Linda Loomis Shelley, Chair  
Date: June 29, 1994

Accepted as to Legal Form and  
Sufficiency:

[Signature]  
Ann J. Wild, Trust Counsel  
6/29/94

OR2515 PG1637

STATE OF FLORIDA  
COUNTY OF LEON

*Ann J. Wild for*

*29* The foregoing instrument was acknowledged before me this day of *June*, 1994, by LINDA LOOMIS SHELLEY, as Chair of the Florida Communities Trust. She is personally known to me.

*Ann J. Wild*

Notary Public  
Print Name: \_\_\_\_\_  
Commission No. \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_



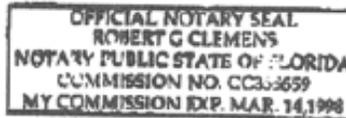
ANN J. WILD  
MY COMMISSION # CC 224224 EXPIRES  
August 30, 1998  
BOURD THRU TRUY FARM INSURANCE, INC

STATE OF FLORIDA  
COUNTY OF LEE

The foregoing instrument was acknowledged before me this *23* day of *June*, 1994, by *Ray J. Sadek* as *Chairman*. He/She is personally known to me.

*Robert G. Clemens*

Notary Public  
Print Name: \_\_\_\_\_  
Commission No. \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_



CHARLE GRIFFIN  
94 JUN 30 PM 4:30

GAA/015/P1A  
FIN/05-04-94

APPENDIX D: Conceptual Approval Agreement Between the Florida Communities Trust and Lee County

CONTRACT # 94-CT-36-92-2A-A1-015 2930515 FLORIDA COMMUNITIES TRUST  
P2A AWARD # 92-015-P2A

ADDENDUM I TO CONCEPTUAL APPROVAL AGREEMENT

THIS ADDENDUM I to the Conceptual Approval Agreement is entered into by and between the FLORIDA COMMUNITIES TRUST ("FCT"), a nonregulatory agency within the State of Florida Department of Community Affairs, and LEE COUNTY ("FCT Recipient"), this 24<sup>th</sup> day of April, 1994.

WHEREAS, the parties hereto entered into a Conceptual Approval Agreement which sets forth the conditions of conceptual approval that must be satisfied by FCT Recipient prior to the receipt of the FCT Preservation 2000 Series 1992A award and the restrictions that are imposed on the Project Site subsequent to its acquisition with the FCT Preservation 2000 Series 1992A award;

I. WHEREAS, the initial term of the Conceptual Approval Agreement expires April 8, 1994;

WHEREAS, the FCT Recipient in accordance with GENERAL CONDITIONS paragraph 2 of the Conceptual Approval Agreement and in compliance with Rule 9K-4.010(2)(h), F.A.C. (1992), has timely submitted to FCT a written request for extension of the April 8, 1994, deadline;

WHEREAS, the parties hereto desire to extend the term of the Conceptual Approval Agreement as provided by Rule 9K-4.010(2)(k), F.A.C. (1992); and

II. WHEREAS, Section IV. of the Conceptual Approval Agreement requires that title to the Project Site be first transferred to the Board of Trustees of the Internal Improvement Trust Fund prior to conveyance to the FCT Recipient;

WHEREAS, Section 259.101(3), Florida Statutes was amended, effective October 1, 1993, to delete the requirement that title to lands purchased pursuant to that statute shall be vested in the Board of Trustees of the Internal Improvement Trust Fund;

WHEREAS, Sections 380.510(3) and (4), Florida Statutes enumerate certain requirements for a grant agreement;

WHEREAS, the parties hereto desire to amend the Conceptual Approval Agreement to comply with these statutory requirements; and

WHEREAS, GENERAL CONDITIONS paragraph 10 of the Conceptual Approval Agreement states that the agreement may be amended at any time prior to FCT giving final project plan approval to the FCT Recipient. Any agreement must be set forth in a written instrument and agreed to by both the FCT Recipient and FCT;

NOW THEREFORE, the FCT and FCT RECIPIENT mutually agree as follows:

1. Notwithstanding the language of Section I. GENERAL CONDITIONS, paragraph 2. and paragraph 10., the parties hereby

agree to revive it *in* pro tunc as though it had not lapsed in accordance with paragraph 2.

2. In every respect, this amendment is to be construed and applied as though the parties had both signed it before April 8, 1994.

3. The Conceptual Approval Agreement by and between FCT and FCT Recipient is hereby extended until October 7, 1994.

4. Section IV. is hereby replaced, revised and superseded by the following:

**IV. PROJECT SITE ACQUISITION REQUIREMENTS IMPOSED BY CHAPTER 259, CHAPTER 375, AND CHAPTER 380, PART III, FLORIDA STATUTES.**

FCT RECIPIENT AGREES AS FOLLOWS:

1. FCT shall approve the terms under which the interest in land is acquired.

2. Title to the Project Site shall be titled in the FCT Recipient.

3. Any deed whereby the FCT Recipient acquires title to the Project Site shall contain such covenants and restrictions as are sufficient to ensure that the use of the Project Site at all times complies with Section 375.051, Florida Statutes and Section 9, Article XII of the State Constitution and shall contain clauses providing for the conveyance of title to the Project Site in the Board of Trustees of the Internal Improvement Trust Fund upon failure to use the Project Site conveyed thereby for such purposes.

4. A Grant Award Agreement containing such covenants and restrictions as are sufficient to ensure that the use of the Project Site at all times complies with Section 375.051, Florida Statutes and Section 9, Article XII of the State Constitution, containing clauses providing for the conveyance of title to the Project Site in the Board of Trustees of the Internal Improvement Trust Fund upon failure to use the Project Site for such purposes and describing the real property subject to the Agreement shall be executed by the FCT and FCT Recipient at the time of the conveyance of the Project Site and shall be recorded in the county in which the Project Site is located.

5. If any essential term or condition of the grant is violated, and the FCT Recipient does not correct the violation within 30 days of written notice of violation, title to all interest in the Project Site shall be conveyed to the Board of Trustees of the Internal Improvement Trust Fund. The deed transferring title to the Project Site to the FCT Recipient shall set forth the executory interest of the Board of Trustees of the Internal Improvement Trust Fund.

6. The interest, if any, acquired by the Recipient in the Project Site will not serve as security for any debt of the FCT Recipient.

7. If the existence of the FCT Recipient terminates for any reason, title to all interest in real property it has acquired with the FCT award shall be conveyed to the Board of Trustees of the Internal Improvement Trust Fund, unless FCT negotiates an agreement with another local government or nonprofit organization.

The date of execution of this addendum shall be the date that the last party signs this addendum.

THIS ADDENDUM I to the CONCEPTUAL APPROVAL AGREEMENT and the CONCEPTUAL APPROVAL AGREEMENT and its Exhibit "A" embody the entire Agreement between the parties.

IN WITNESS WHEREOF, the parties hereto have duly executed this ADDENDUM I TO CONCEPTUAL APPROVAL AGREEMENT.

LEE COUNTY

FLORIDA COMMUNITIES TRUST

BY: *Donald D. Stowell*  
Name: Donald D. Stowell  
Its: County Administrator  
Date: 4-7-94

*Linda Loomis Shelley*  
Linda Loomis Shelley, Chair  
Date: April 26, 1994

Accepted as to Form and  
Legality:  
*John W. P. [Signature]*  
Date: 4/7/94

Accepted as to Form and  
Legality:  
*Ann J. Wild*  
Date: 4-21-94



APPENDIX E: Approval Letter for Conservation Management Plan for the 7.13 acres of State-owned land in HCGCP and Conservation Management Plan.



**Florida Department of  
Environmental Protection**

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

Rick Scott  
Governor

Carlos Lopez-Cantera  
Lt. Governor

Jonathan P. Steverson  
Secretary

April 6, 2016

Ms. Annisa Karim  
Lee County Department of Parks and Recreation  
7791 Penzance Blvd.  
Ft. Myers, Florida 33966

**RE: Hickey Creek Greenbriar Connector Preserve- Lease No. 4764**

Dear Ms. Karim:

The Division of State Lands, Office of Environmental Services has received and reviewed the above mentioned Land Use Plan Amendment and find that it complies with the applicable statutes and rules. The plan amendment does not change the due date for an updated land use plan which will be due by April 6, 2026.

Acceptance of this Land Use plan does not waive the authority or jurisdiction of any governmental entity that may have an interest in this project. Implementation of any activities proposed by this plan may require a permit or other authorization from federal and state agencies having regulatory jurisdiction over those particular activities.

Sincerely,

A handwritten signature in black ink that reads "Paula L. Allen".

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

PA/cb



# Conservation Management Plan

This management plan form is intended for Board of Trustees leases and subleases of conservation properties that are 160 acres or less. It is intended to address the requirements of Chapter 253.034, 259.032 and rule 18-2.021. Attachments to, or expansion of this form are welcome, if the space provided below is not sufficient. Please answer all of the items below and number all attachments and reference them in the appropriate location below. You are under no obligation to use this form. Any plan format is acceptable, provided it includes all of the appropriate items from the above mentioned statutes and rule. This form is available in electronic format upon request. For additional information pertaining to management plans, please visit the Division of State Lands Stewardship page on the web at <http://www.dep.state.fl.us/lands/stewardship.htm>

## **A. General Information**

1. **Common Name of the Property:** Hickey Creek Greenbriar Connector Preserve
2. **Lease Number:** 4764
3. **Acres:** 7.13
4. **Managing Agency:** Lee County Board of County Commissioners via the Lee County Department of Parks and Recreation
5. **Provide an executive summary/description of this property that includes a brief description of the resources, uses and proposed uses, outstanding features etc.**

Hickey Creek Greenbriar Connector Preserve (HCGCP) consists of 95.81 acres comprised of mesic flatwoods, wet flatwoods, mesic hammock, prairie hydric hammock, slough marsh, strand swamp, and dome swamp. This Preserve was established to create and maintain a wildlife corridor between Hickey Creek Mitigation Park and the 406-acre Greenbriar Swamp. The Greenbriar Swamp is owned and managed by the Lehigh Acres Municipal Services Improvement District (formerly known as East County Water Control District) and it provides water quality enhancements and ground water recharge for a significant part of the Hickey Creek Basin. In 1997, funds from Lee County's Environmentally Sensitive Lands Program were used to purchase 59.89 acres. The State of Florida's Board of Trustees of the Internal Improvement Trust Fund purchased 15 parcels totaling 7.13 acres in this area between the years of 1999 and 2001. State of Florida through lease number 4764 transferred these lands from the Florida Department of Environmental Protection to Lee County. The lease expires on May 4, 2050. In 2005, 2007, and 2008, the Conservation 20/20 Lands Program purchased an additional 28.79 acres. The acquisition of the parcels making up Hickey Creek Greenbriar Connector Preserve began after this section of Lehigh Acres was platted. As a result, the parcels are fragmented and discontinuous. There is currently no dedicated funding in the budget of the Lee County Department of Parks and Recreation to manage

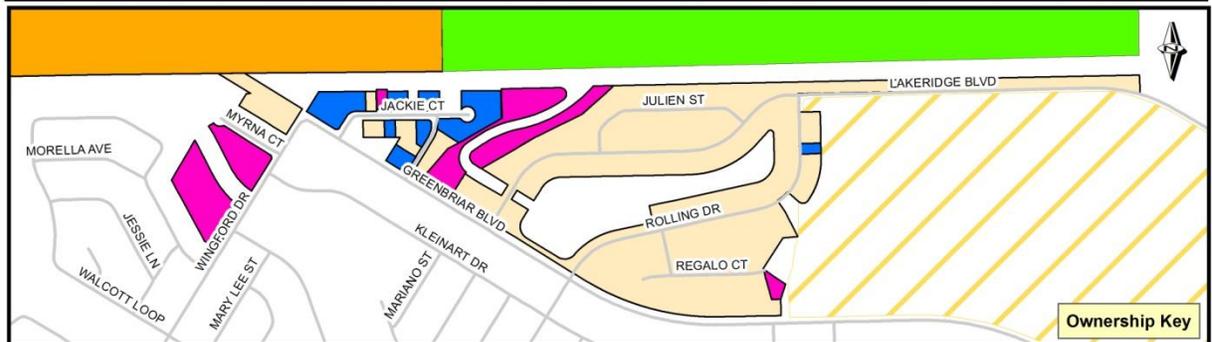
this Preserve. The lack of financial and personnel resources greatly limits the potential for nature-based recreation and infrastructure to be supported at within Hickey Creek Greenbriar Connector Preserve. Large scale recreational facilities or multi-use trail systems are not necessary as there are Preserves and Parks in close proximity that provide opportunities for hiking, mountain biking, camping, fishing and equestrian use; these Preserves and Parks have Board-approved stewardship (management) plans in place and the infrastructure to support these offerings.

**6. Attach a map showing the location and boundaries of the property including:**

- a) The location and type of structures or improvements currently on the property.
- b) The location and type of proposed improvements.

No structures on are located on the property and there are no proposed improvements for the next ten years. State-owned property outlined in blue.

**Hickey Creek Greenbriar Connector Preserve - Aerial View 2014**



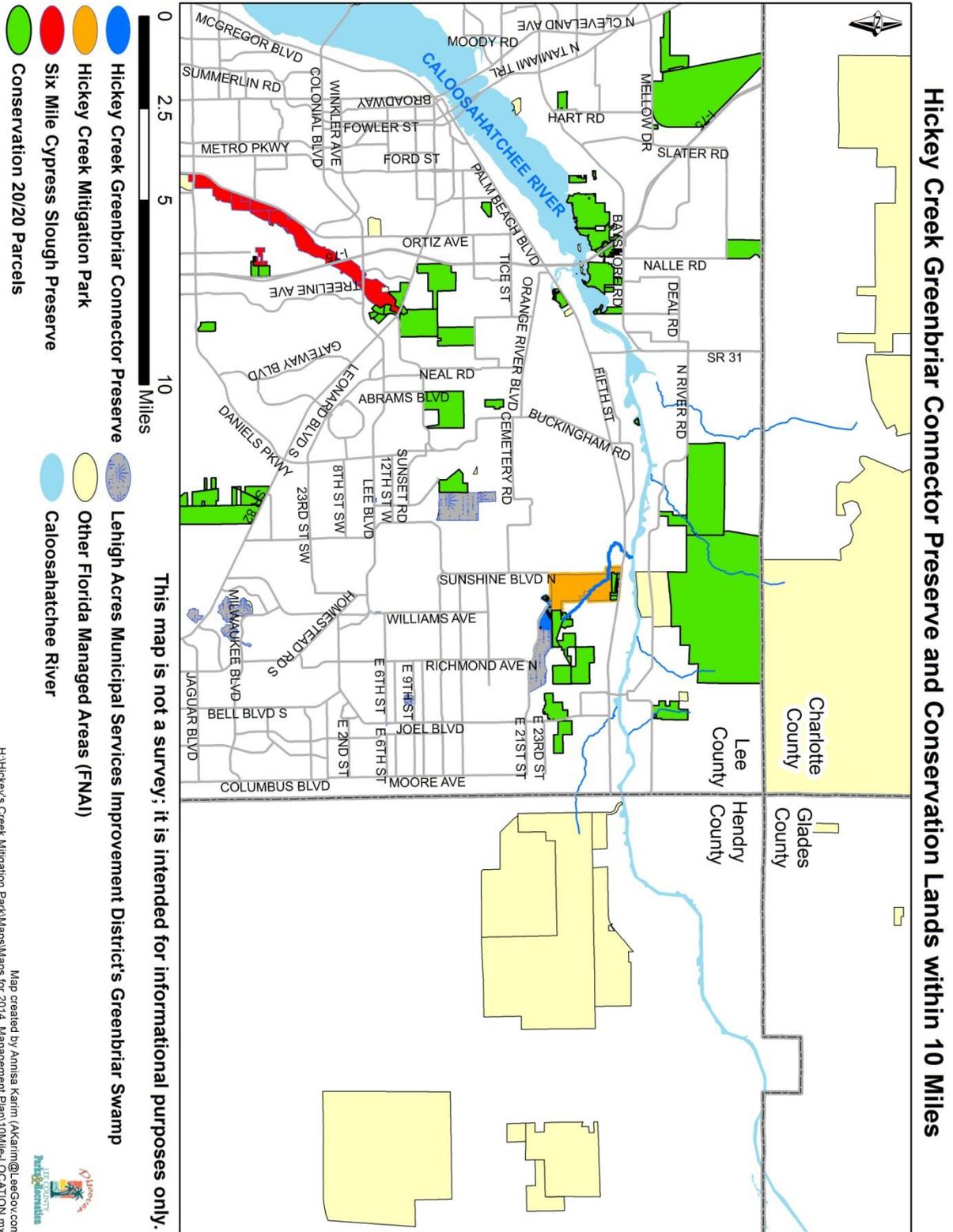
- Hickey Creek Greenbriar Connector Preserve (County Owned)
- Hickey Creek Greenbriar Connector Preserve (State Owned)
- C20/20 Portion of Hickey's Creek Greenbriar Connector Preserve (County Owned)
- Hickey Creek Mitigation Park (County Owned)
- C20/20 - Alva Scrub Preserve (County Owned)
- Greenbriar Swamp (Owned and managed by LAMSID)



This map is not a survey; it is intended for informational purposes only.

  
 Map created by Annisa Karim  
 (AKarim@LeeGov.com) November 2014

7. Attach a map showing the proximity of this managed area to other conservation areas within 10 miles.



**8. Please attach a legal description of the property.**

**Lot 2, Block 222, Unit 34, GREENBRIAR A SUBDIVISION OF LEHIGH ACRES, according to the plat recorded in Plat Book 27, Page 54, of the Public Records of Lee County, Florida.**

**Lot 3, Block 221, Unit 33, GREENBRIAR A SUBDIVISION OF LEHIGH ACRES, according to the plat recorded in Plat Book 27, Page 53, of the Public Records of Lee County, Florida.**

**Lot 3, Block 222, Unit 34, GREENBRIAR A SUBDIVISION OF LEHIGH ACRES, according to the plat recorded in Plat Book 27, Page 54, of the Public Records of Lee County, Florida.**

**Lot 4, Block 223, Unit 34, GREENBRIAR A SUBDIVISION OF LEHIGH ACRES, according to the plat recorded in Plat Book 27, Page 54, of the Public Records of Lee County, Florida.**

**Lot 4, Block 222, Unit 34, GREENBRIAR A SUBDIVISION OF LEHIGH ACRES, according to the plat recorded in Plat Book 27, Page 54, of the Public Records of Lee County, Florida.**

**Lots 4 and 5, Block 221, Unit 33, GREENBRIAR A SUBDIVISION OF LEHIGH ACRES, according to the plat recorded in Plat Book 27, Page 53, of the Public Records of Lee County, Florida.**

**Lot 5, Block 163, Unit 26, GREENBRIAR A SUBDIVISION OF LEHIGH ACRES, according to the plat recorded in Plat Book 27, Page 42, of the Public Records of Lee County, Florida.**

**Lot 6, Block 221, Unit 33, GREENBRIAR A SUBDIVISION OF LEHIGH ACRES, according to the plat recorded in Plat Book 27, Page 53, of the Public Records of Lee County, Florida.**

**Lot 6, Block 222, Unit 34, GREENBRIAR A SUBDIVISION OF LEHIGH ACRES, according to the plat recorded in Plat Book 27, Page 54, of the Public Records of Lee County, Florida.**

**Lot 7, Block 221, Unit 33, GREENBRIAR A SUBDIVISION OF LEHIGH ACRES, according to the plat recorded in Plat Book 27, Page 53, of the Public Records of Lee County, Florida.**

**Lot 7, Block 223, Unit 34, GREENBRIAR A SUBDIVISION OF LEHIGH ACRES, according to the plat recorded in Plat Book 27, Page 54, of the Public Records of Lee County, Florida.**

**Lot 9, Block 222, Unit 34, GREENBRIAR, Sections 5 and 6, Township 44 South, Range 27 East, Lehigh Acres, Florida, according to the map or plat thereof on file in the office of the Clerk of the Circuit Court, recorded in Plat Book 27, Page 54, Public Records, Lee County, Florida**

**Lot 9, Block 223, Unit 34, GREENBRIAR A SUBDIVISION OF LEHIGH ACRES, according to the plat recorded in Plat Book 27, Page 54, of the Public Records of Lee County, Florida.**

**Lot 10, Block 222, Unit 34, GREENBRIAR A SUBDIVISION OF LEHIGH ACRES, according to the plat recorded in Plat Book 27, Page 54, of the Public Records of Lee County, Florida.**

**Lot 10, Block 223, Unit 34, GREENBRIAR A SUBDIVISION OF LEHIGH ACRES, according to the plat recorded in Plat Book 27, Page 54, of the Public Records of Lee County, Florida.**

**Lot 12, Block 222, Unit 34, GREENBRIAR A SUBDIVISION OF LEHIGH ACRES, according to the plat recorded in Plat Book 27, Page 54, of the Public Records of Lee County, Florida.**

**Lot 13, Block 222, Unit 34, GREENBRIAR, Sections 5 and 6, Township 44 South, Range 27 East, Lehigh Acres, Florida, according to the map or plat thereof on file in the office of the Clerk of the Circuit Court, recorded in Plat Book 27, Page 54, Public Records, Lee County, Florida.**

9. **Provide a physical description of the land including a quantitative data description of the land which includes an inventory of forest and other natural resource, exotic and invasive plants, hydrologic features, infrastructure including recreational facilities, and other significant land, cultural or historical features.**

No public access trails or amenities are located within this unit. The roads running throughout the HCGCP made ORV use possible and they provided (unintentional) access to this remote area where the dumping of horticultural waste, construction debris, and the remnants of grow-houses occurs. In May 2014, Lee County's Division of Natural Resources Pollution Prevention Program in coordination with the County's Traffic and Operations division installed boulders and gates to deter vehicular access to HCGCP with the objective of eliminating or reducing the frequency of these illegal activities.

HCGCP is bordered on the north by a water conveyance system managed by the Lehigh Acres Municipal Services Improvement District (LAMSID). HCGCP is surrounded by undeveloped, platted private property and contains several in holdings. The eastern portion of the Preserve is bordered by the Greenbriar Swamp managed by LAMSID.

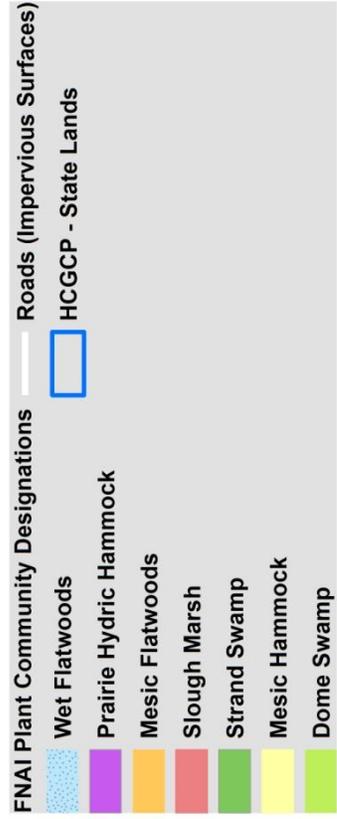
While seven plant communities that make up the entire Preserve, three of these communities (mesic flatwoods, prairie hydric hammock, and slough marsh) make up the state-owned portions of HCGCP. The mesic flatwoods community is pyric but because management in this area is difficult at this time, prescribed fires are not planned. The interior of the Preserve is lightly to moderately infested with Brazilian pepper but the edges (along the roadways) are heavily infested. No known cultural or historic resources exist on-site.

Due to the private in-holdings and site security issues, economies of scale prevent the efficient land management of this Preserve. Public use is not encouraged at this time. There is currently no dedicated funding in the budget of the LCPR to manage this Preserve. The lack of financial and personnel resources greatly limits the potential for nature-based recreation and infrastructure to be supported at within HCGCP. Large scale recreational facilities or multi-use trail systems are not necessary as there are Preserves and Parks in close proximity that provide opportunities for hiking, mountain biking, camping, fishing and equestrian use; these Preserves and Parks have Board-approved stewardship (management) plans in place and the infrastructure to support these offerings.

# Hickey Creek Greenbriar Connector Preserve: Plant Communities



Map created by Annisa Karim (AKarim@LeeGov.com)  
November 2014; Aerial Image 2014



2010 FNAI Plant Community Designation	HCGCP	
	Acres*	% of HCGCP*
Wet Flatwoods	45.64	47.61
Prairie Hydric Hammock	25.36	26.46
Mesic Flatwoods	10.05	10.48
Slough Marsh	7.49	7.81
Strand Swamp	5.28	5.51
Mesic Hammock	1.77	1.85
Dome Swamp	0.28	0.29

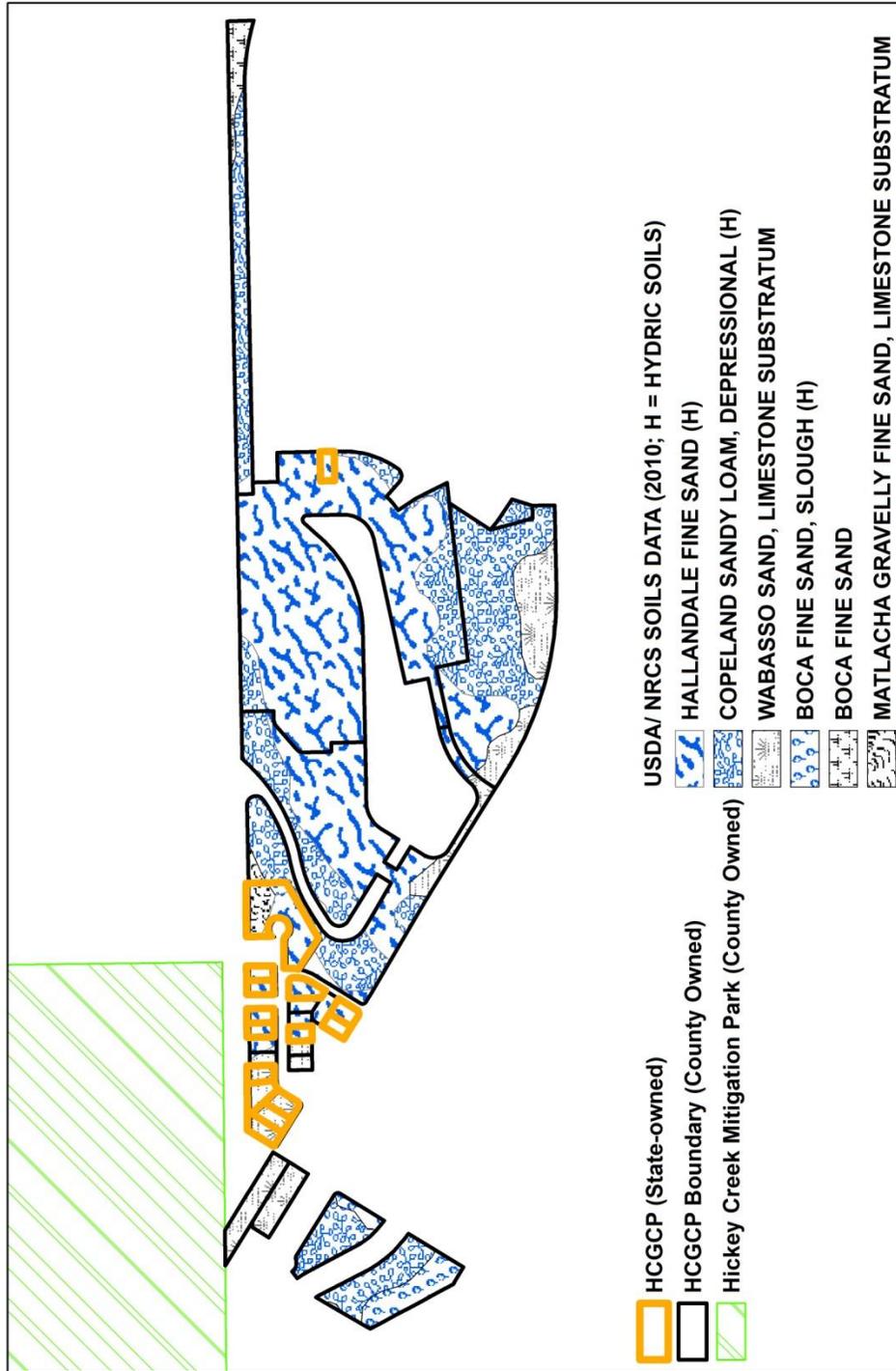
\*Due to rounding values, total acres may not equal the true acreage of the communities; these numbers are approximations only.

This map is not a survey; it is intended for informational purposes only.

10. A brief description of soil types, attaching USDA maps when available.

Six soils underlie the entire Preserve but only four of these soils (Wabasso Sand with Limestone Substratum, Matlacha Gravelly Fine Sand with Limestone Substratum, Hallandale Fine Sand, and Copeland Sandy Loam – Depressional) underlie the State-owned portion.

Hickey Creek Greenbriar Connector Preserve -Soils



11. **Is the property adjacent to an aquatic preserve or designated area of critical state concern? NO**

12. **Was the property acquired by a conservation land acquisition program? If YES, please identify.**

There is no indication that these lands were acquired by a conservation lands program.

13. **Do any agency-specific statute requirements or legislative/executive directives constrain the use of the property? (These restrictions can frequently be found in the lease).**

Yes, the 50-year lease agreement with the BoCC directs the BoCC (via LCPR) to “manage the leased premises only for the conservation and protection of natural and historical resources and resource based public outdoor recreation which is compatible with the conservation and protection of these public lands, as set forth in subsection 259.032(11) FS”.

14. **Are there any reservations or encumbrances on the property? No**

## **B. Natural and Cultural Resources**

15. **Are there any archeological or historical sites on this property? No**

**A) How do you plan to locate, protect and preserve these resources?**

Currently there are no plans for work with heavy machinery. If the use of Heavy machinery becomes an option, the biologist for the preserve will walk the area to look for potential historic sites. There are no funds to do a comprehensive survey of the area.

**B) Please describe the actions the agency plans to take to locate and identify unknown Resources such as surveys of unknown archeological or historical sites.**

There are no funds to do a comprehensive survey of the area.

16. **Are there any buildings on the property that are fifty or more years old? No**

17. Please identify natural resources on the property that are listed in the Florida Natural Areas Inventory. The 7.13 acres of State-owned lands are located within FNAI's Biodiversity Matrices 41685 and 42057. These are the documented elements for those matrices.

**Matrix Unit ID: 41685**

5 Documented Elements Found

Scientific and Common Names
<a href="#"><i>Aphelocoma coerulescens</i></a> Florida Scrub-Jay
<a href="#"><i>Drymarchon couperi</i></a> Eastern Indigo Snake
<a href="#"><i>Gopherus polyphemus</i></a> Gopher Tortoise
<a href="#"><i>Puma concolor coryi</i></a> Florida Panther
<a href="#"><i>Rostrhamus sociabilis</i></a> Snail Kite

**Matrix Unit ID: 42057**

3 Documented Elements Found

Scientific and Common Names
<a href="#"><i>Drymarchon couperi</i></a> Eastern Indigo Snake
<a href="#"><i>Puma concolor coryi</i></a> Florida Panther
<a href="#"><i>Tillandsia flexuosa</i></a> Banded Wild-pine

18. Are any imperiled natural communities, unique natural features, or any State and federally listed endangered or threatened plant or animal species, on site? Yes

The listed plants and animals recorded for Hickey Creek Mitigation Park and the Hickey Creek Greenbriar Connector Preserve are located within the state-owned portions of HCGCP as well.

Scientific Name	Common Name	Status
<i>Lythrum flagellare</i>	Florida loosestrife	E
<i>Ophioglossum palmatum</i>	hand fern	E
<i>Tillandsia fasciculata</i>	cardinal airplant	E
<i>Tillandsia utriculata</i>	giant wild pine	E
<i>Bletia purpurea</i>	pinelink	T
<i>Lilium catesbaei</i>	Catesby's lily	T
<i>Opuntia stricta</i>	erect pricklypear	T
<i>Pteroglossaspis ecristata</i>	giant orchid	T
<i>Sacoila lanceolata var. lanceolata</i>	leafless beaked orchid	T
<i>Tectaria heracleifolia</i>	broad halberd fern	T
<i>Tillandsia variabilis</i>	leatherleaf airplant	T
<i>Zephyranthes simpsonii</i>	redmargin zepherlily	T
<i>Encyclia tampensis</i>	Florida butterfly orchid	CE
<i>Osmunda cinnamomea</i>	cinnamon fern	CE
<i>Osmunda regalis</i>	royal fern	CE

E = Endangered; T = Threatened; CE = Commercially Exploited

Scientific Name	Common Name	Protection Status (2015)*
<i>Puma concolor coryi</i>	Florida panther	FE
<i>Drymarchon corais couperi</i>	Eastern indigo snake	FT
<i>Aphelocoma coerulescens</i>	Florida Scrub-Jay	FT
<i>Alligator mississippiensis</i>	American alligator	FT(S/A)
<i>Mycteria americana</i>	Wood stork	FT
<i>Gopherus polyphemus</i>	Gopher tortoise	ST
<i>Aramus guarauna</i>	Limpkin	SSC
<i>Egretta caerulea</i>	Little blue heron	SSC
<i>Egretta thula</i>	Snowy Egret	SSC
<i>Egretta tricolor</i>	Tricolored heron	SSC
<i>Eudocimus albus</i>	White ibis	SSC
<i>Blarina brevicauda shermani</i>	Sherman's short-tailed shrew	SSC

*Protection Status* (based on FWC list September 2015): FE = Federally-designated Endangered; FT = Federally-designated Threatened; FT(S/A) = Federally-designated Threatened species due to similarity of appearance; ST = State-designated Threatened; SSC = State Species of Special Concern

**If YES, please provide a specific description of how you plan to identify, locate, protect and preserve these species.**

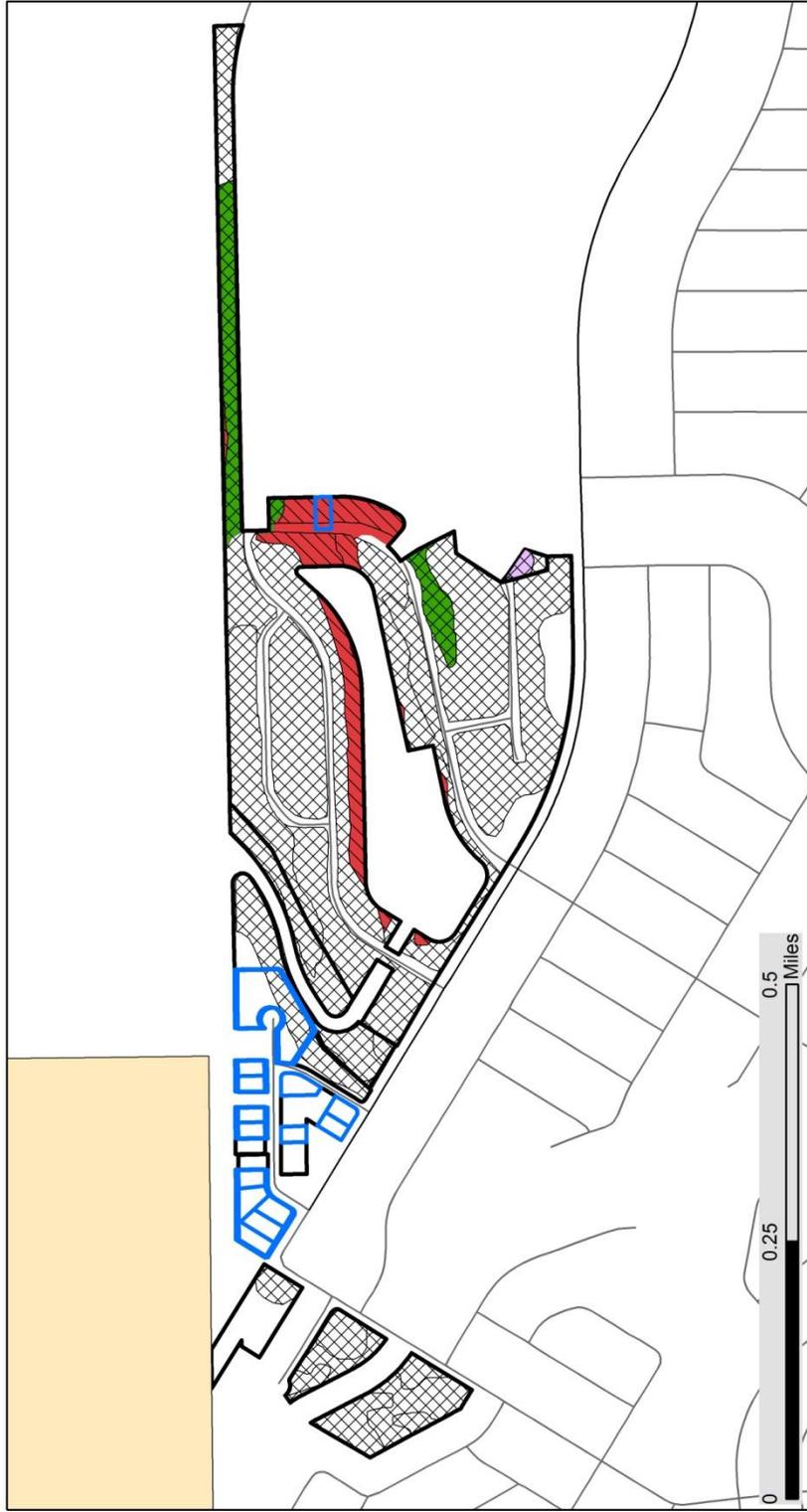
Currently there are no funds for land management activities. As funds become available, exotic removal activities will be conducted in such a way as to protect listed species.

**19. Please identify the water resources including swamps, marshes or other wetlands, on the property including the water quality classification for each water body and if the water body has been designated “Outstanding Florida Waters”.**

The National Wetlands Inventory identifies freshwater emergent wetlands and freshwater forested shrub wetlands on State-owned property. Additionally, a slough marsh is mapped on the property – see map on next page.



## Hickey Creek Greenbriar Connector Preserve: Wetlands and Defined by FNAI and the National Wetlands Inventory



Hickey Creek Mitigation Park (County Owned)		NWI Wetland Designations		FNAI Plant Community	
	Hickey Creek Mitigation Park (County Owned)		Freshwater Emergent Wetland		Slough Marsh
	Hickey Creek Greenbriar Connector Preserve (County Owned)		Freshwater Forested/Shrub Wetland		Strand Swamp
	Hickey Creek Greenbriar Connector Preserve (State Owned)				Dome Swamp

Map created by Annisa Karim  
(AKarim@LeeGov.com) March 2016

This map is not a survey; it is intended for informational purposes only.

**20. Are any known mineral resources, such as oil, gas and phosphates, or any unique natural features, such as coral reefs, beaches, dunes, natural springs, caverns, large sinkholes, virgin timber stands, scenic vistas, and natural rivers and streams, and outstanding native landscapes containing relatively unaltered flora, fauna, and geological features on site? No**

**21. Are there fish or wildlife resources (both game and non-game) on the property?**

There are flora and fauna associated with these lands. wild hogs (*Sus scrofa*) have been seen from time to time. Wading birds and passerines use property as well.

### **C. Use of the Property**

**22. Please provide a statement of the purpose for which the lands were acquired, the projected use or uses as defined in Chapter 253.034, Florida Statutes, and the statutory authority you have for such uses.**

The 50-year lease agreement with the BoCC directs the BoCC (via LCPR) to “manage the leased premises only for the conservation and protection of natural and historical resources and resource based public outdoor recreation which is compatible with the conservation and protection of these public lands, as set forth in subsection 259.032(11) FS”.

**23. Please state the desired outcome for this property, and key management activities necessary to achieve the desired outcome, including public access.**

The desired outcome of this property is to remove all FLEPPC listed exotic, invasive species of plants and return the parcels to healthy, functioning systems. Prescribed fire may not be possible due to the checkered pattern of ownership. Public access would include allowing bicycles along the roadways. These goals will not be achieved in the next ten years due to lack of management funding.

**24. Please state the single or multiple uses currently made of the property and if the property is single use, please provide an analysis of its potential for multiple-use.**

No single or multiple uses currently made of the property. Please refer to table on the next page.

Analysis of multiple use for HCGCP

Approved Specific Uses	Rejected Specific Uses
Ecosystem maintenance	Canoeing/ Kayaking
Ecotourism	Horseback Riding
Environmental Education	Primitive Camping
Fishing	Cattle Grazing/ Livestock Grazing
Hiking	Timber Harvest
Preservation of Historic and Cultural Sites	Agriculture
Protection of listed species	Collection of Cultural or Historic Artifacts
Soil and water conservation	Collection of Plants or Animals (Dead or Alive)
Wildlife Observation/ Nature Study	Hunting
Bicycling (along roads)	Motorized Off Road Vehicle (ORV) Use

**25. Were multiple uses considered but not adopted?**

Yes. Please refer to the table above. Due to the small size of the property and the the checkered pattenen of ownership many uses are precluded – specifically livestock grazing, timber harvest, agriculture, hunting, and ORV use. The Collection of natural, cultural and historic resources is prohibited by Lee County Ordinance 06-26 as amended.

**26. Please provide an analysis of the potential use of private land managers to facilitate the restoration or management of these lands.**

Private land managers such as exotic removal companies many be used to facilitate the restoration or management of these lands if funds were available to employ their services. The lack of personel to manage these lands would be greatly overcome with funds to hire such companies.

**27. Please provide an analysis of the potential of the property to generate revenues to enhance the management of the property .**

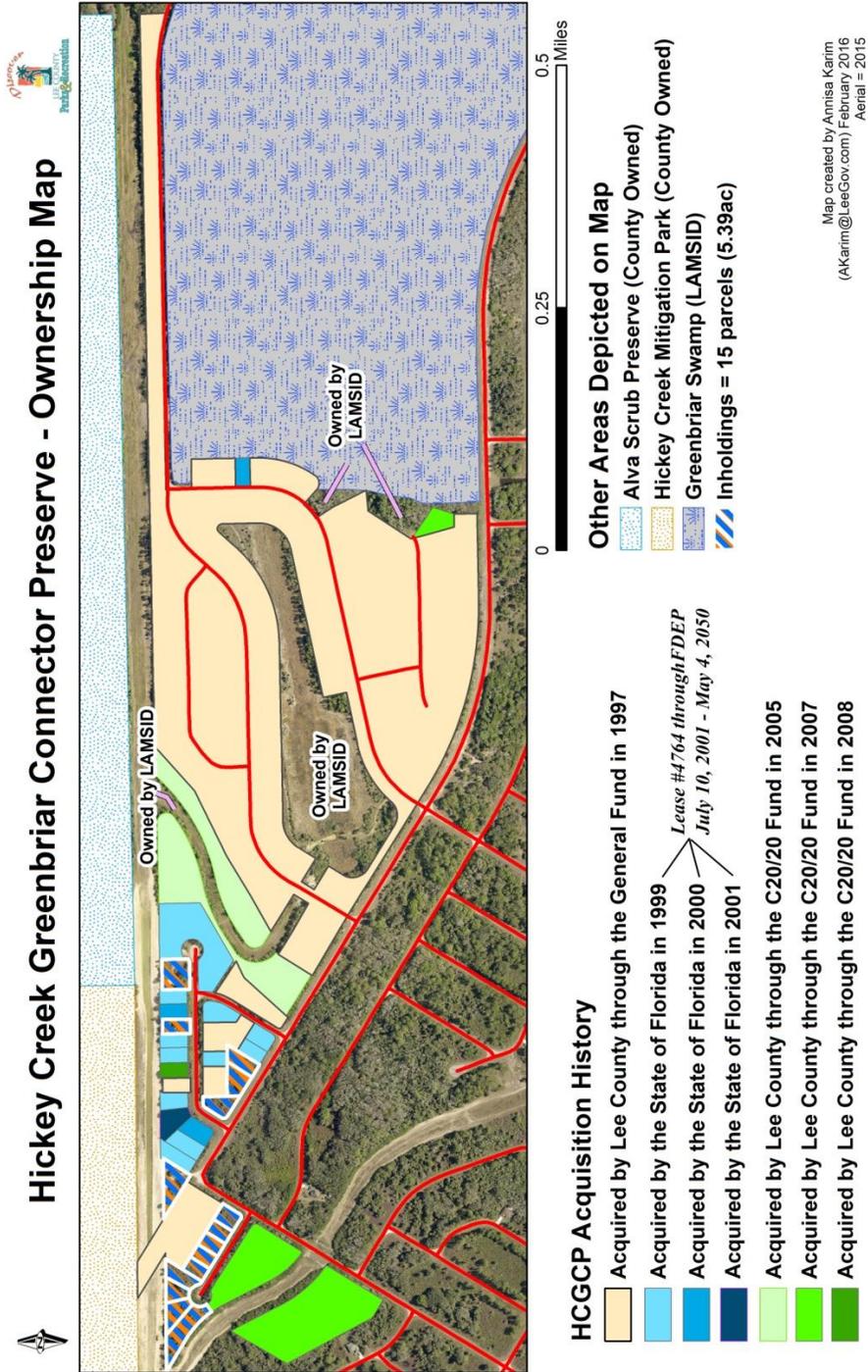
Due to the checkered pattenen of ownership and the small number of acres involved in this lease, the potential for this property to generate revenue is null.

**28. Describe the projected, current and recent past uses of the property, and any unauthorized uses, if known.**

These 7.13 acres are located in Lehigh Acres. Lehigh Acres is a Census-Designated Place in Lee County, Florida and was developed in the mid-1950s. Roads were built and land was platted for primarily residential development. The Ste-owned lots are mixed with County-owned lots – all of which are undeveloped, platted lots that contain degraded native plant communities. Past unauthorized uses include dumping and ORV use. Walk-through gates that thwart motorized vehicles have been installed to prevent these activities.

29. Do the planned uses impact renewable and non-renewable resources on the property? No

30. Should any parcels of land within or adjacent to the property be purchased because they are essential to management of the property? Yes, 15 privately owned parcels totaling approximately 5.39 acres would make resource management activities and protection from unapproved uses much easier.



**31. Are there any portions of this property no longer needed for your use? No**

**32. Please describe what public uses and public access that would be consistent with the purpose for which this property was acquired.**

Fishing, Hiking, Wildlife Observation/ Nature Study, and Bicycling (along roads)

**D. Management Activities**

**33. If more than one agency manages this property, describe the management responsibilities of each agency and how such responsibilities will be coordinated. N/A**

**34. Please discuss management needs and problems on the property including conservation of soil and water resources and control and prevention of soil erosion and water and soil contamination.**

There is currently no dedicated funding in the budget of the Lee County Department of Parks and Recreation to manage this Preserve. The lack of financial and personnel resources greatly limits the potential for nature-based recreation and infrastructure to be supported at within Hickey Creek Greenbriar Connector Preserve. Large scale recreational facilities or multi-use trail systems are not necessary as there are Preserves and Parks in close proximity that provide opportunities for hiking, mountain biking, camping, fishing and equestrian use; these Preserves and Parks have Board-approved stewardship (management) plans in place and the infrastructure to support these offerings.

Dumping of horticultural waste and construction debris in this sparsely populated, yet platted section of Lehigh Acres was a problem. ORV use also became a problem but most of this activity took place off of the State-owned 7.13 acres. In May 2014, Lee County's Division of Natural Resources' Pollution Prevention Program, in coordination with the County's Traffic and Operations division, installed boulders and gates to deter vehicular access to HCGCP with the objective of eliminating or reducing the frequency of these illegal activities. These illegal activities could have potentially contaminated the soil and water but soil erosion was not highly likely.

**35. Identify adjacent land uses that will conflict with the planned use of this property, if any.**

Currently, the properties to the north of HCGCP are owned and managed by Lee County for conservation. The platted parcels surrounding the HCGCP may be developed. While the development of these parcels may not directly conflict with the planned use of this property, there is a chance that new seed sources for invasive plants will be introduced and any likelihood of conducting prescribed fires would be hindered.

**36. Please describe measures used to prevent/control invasive, non-native plants.**

Currently, biannual site-visits are conducted by Lee County staff and if climbing fern (*Lygodium* spp.) is detected, it is treated immediately. Otherwise, there is no control of non-native plants at this time. Economies of scale prevent the efficient land management of this Preserve.

**37. Was there any public or local government involvement / participation in the development of this plan?**

Yes, these 7.13 acres are managed by a local government (Lee County) and this plan was discussed during a public meeting that took place on xxx. Furthermore, the Lee County Board of County Commissioners approved this plan during a public meeting where the public was permitted to speak on this item if they elected to do so.

**38. If an arthropod control plan has been established for this property, please include it as an attachment. If one does not exist, provide a statement as to what arrangement exists between the local mosquito control district and the managing agency.**

While an a specific arthropod control plan has not been established for this property, the Lee County Mosquito Control District performs the task of arthropod control within HCGCP. They target nuisance and disease vectoring mosquitoes. No specific arrangement exists between Lee County and the Lee County Mosquito Control district but as this area of Lehigh Acres is populated (although sparsely), Mosquito control does spray.

**39. Management Goals:** The core constraints on management of HCGCP are funding and staffing. Obtaining funds through grants and other financial sources will need to be explored and obtained when appropriate. Due to the private in-holdings and site security issues, economies of scale prevent the efficient land management of this Preserve. See table on next page.

Core Objectives	Measure (N/A)	Time Frame (N/A)	Expenses and Manpower Budget (N/A)
		2yrs = Short Term	
		10 yrs = Long Term	
<p>1) <b><u>Habitat restoration and Improvement (Description):</u></b> A majority of the state-owned lands contain mesic flatwoods. The core constraints on management of HCGCP are funding and staffing. Obtaining funds through grants and other financial sources will need to be explored and obtained when appropriate. Due to the private in-holdings and site security issues, economies of scale prevent the efficient land management of this Preserve. Coordinating with LAMSID will be an important part in management of the Preserve; neighbors will be considered and informed of any prescribed fires and/or large management practices that may be considered disruptive. If funds become available, exotic treatments would have to be conducted and then either prescribed burns or mechanical treatments. Due to the small size of this Preserve, silvicultural practices (including timber harvest) would be cost prohibitive.</p>			
<p>2) <b><u>Public access and recreational opportunities:</u></b> Large scale recreational facilities or multi-use trail systems are not necessary as there are Preserves and Parks in close proximity that provide opportunities for hiking, mountain biking, camping, fishing and equestrian use; these Preserves and Parks have Board-approved stewardship (management) plans in place and the infrastructure to support these offerings.</p>			
<p>3) <b><u>Hydrological Preservation and restoration (Description):</u></b> N/A</p>			
<p>4) <b><u>Sustainable forest management (Description):</u></b> N/A</p>			
<p>5) <b><u>Exotic and invasive species maintenance and control (Description):</u></b> The core constraints on management of HCGCP are funding and staffing. Obtaining funds through grants and other financial sources will need to be explored and obtained when appropriate. Due to the private in-holdings and site security issues, economies of scale prevent the efficient land management of this Preserve. Currently, biologists visit the Preserve twice a year. If <i>Lygodium</i> is discovered, it is treated immediately. Other exotic treatment is not possible at this time.</p>			
<p>6) <b><u>Capital facilities and infrastructure (Description):</u></b> N/A</p>			
<p>7) <b><u>Cultural and historical resources (Description):</u></b> There are no known cultural or historic resources.</p>			
<p>8) <b><u>Imperiled species habitat maintenance, enhancement, restoration, or population restoration (Description):</u></b> The core constraints on management of HCGCP are funding and staffing. Obtaining funds through grants and other financial sources will need to be explored and obtained when appropriate.</p>			

**This plan (Appendix for 7.13 acres of State-owned lands in HCGCP – Lease 4764) conforms to the State Lands Management Plan**

(<http://www.dep.state.fl.us/lands/oes/slmp.pdf> )

Name:	Annisa Karim
Managing Agency:	Lee County Board of County Commissioners via the Lee County Department of Parks and Recreation
Address:	3410 Palm Beach Blvd. Ft. Myers, FL 33916.
Phone:	239.229.7247
Email Address:	AKarim@LeeGov.com

DRAFT

## APPENDIX F: Floristic Species Documented Within HCMP and HCGCP

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Azollaceae (mosquito fern)</b>					
<i>Azolla caroliniana</i>	Carolina mosquito fern	native			R
<b>Family: Blechnaceae (mid-sorus fern)</b>					
<i>Blechnum serrulatum</i>	swamp fern	native			
<i>Woodwardia virginica</i>	Virginia chain fern	native			R
<b>Family: Dennstaedtiaceae (cuplet fern)</b>					
<i>Pteridium aquilinum</i>	tailed bracken fern	native			R
<b>Family: Dryopteridaceae</b>					
<i>Tectaria heracleifolia</i>	broad halberd fern	native		T	I
<b>Family: Nephrolepidaceae (sword fern)</b>					
<i>Nephrolepis cordifolia</i>	tuberous sword fern	exotic	I		
<i>Nephrolepis exaltata</i>	sword fern	native			
<b>Family: Ophioglossaceae (adder's-tongue)</b>					
<i>Botrychium biternatum</i>	southern grape-fern	native			PE
<i>Ophioglossum palmatum</i>	hand fern	native			I
<b>Family: Osmundaceae</b>					
<i>Osmunda cinnamomea</i>	cinnamon fern	native		CE	R
<i>Osmunda regalis</i>	royal fern	native		CE	R
<b>Family: Polypodiaceae (polypody)</b>					
<i>Campyloneurum phyllitidis</i>	long strap fern	native			R
<i>Phlebodium aureum</i>	golden polypody	native			
<i>Pleopeltis polypodioides</i>	resurrection fern	native			
<b>Family: Psilotaceae (whisk-fern)</b>					
<i>Psilotum nudum</i>	whisk-fern	native			
<b>Family: Pteridaceae (brake fern)</b>					
<i>Acrostichum danaeifolium</i>	giant leather fern	native			
<i>Pteris vittata</i>	Chinese ladder brake	exotic			
<b>Family: Salviniaceae (floating fern)</b>					
<i>Salvinia minima</i>	water spangles	exotic			
<b>Family: Schizaeaceae (curly-grass)</b>					
<i>Anemia adiantifolia</i>	maidenhair pineland fern	native			
<i>Lygodium japonicum</i>	Japenese climbing fern	exotic	I		
<i>Lygodium microphyllum</i>	old world climbing fern	exotic	I		

## APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Thelypteridaceae (marsh fern)</b>					
<i>Macrothelypteris torresiana</i>	Mariana maiden fern	exotic			
<i>Thelypteris hispidula</i>	hairy maiden fern	native			CI
<i>Thelypteris dentata</i>	downy maiden fern	exotic			
<i>Thelypteris interrupta</i>	hottentot fern	native			R
<i>Thelypteris kunthii</i>	southern shield fern	native			
<i>Thelypteris palustris</i>	marsh fern	native			R
<b>Family: Vittariaceae (shoestring fern)</b>					
<i>Vittaria lineata</i>	shoestring fern	native			
<b>Family: Cupressaceae (cedar)</b>					
<i>Juniperus virginiana</i>	red cedar	native			
<i>Taxodium distichum sensu lato</i>	bald cypress	native			
<b>Family: Pinaceae (pine)</b>					
<i>Pinus elliotii</i> var. <i>densa</i>	south Florida slash pine	native			
<b>Family: Agavaceae (agave)</b>					
<i>Yucca filamentosa sensu lato</i>	Adam's needle	native			I
<b>Family: Alismataceae (water plantain)</b>					
<i>Sagittaria graminea</i>	grassy arrowhead	native			R
<i>Sagittaria lancifolia</i>	bulltongue arrowhead	native			
<b>Family: Amaryllidaceae (amaryllis)</b>					
<i>Crinum americanum</i>	string lily; swamp lily	native			
<i>Zephyranthes simpsonii</i>	redmargin zepherlily	native		T	I
<b>Family: Araceae (arum)</b>					
<i>Colocasia esculenta</i>	wild taro	exotic	I		
<i>Lemna aequinoctialis</i>	lesser duckweed	native			I
<i>Lemna valdiviana</i>	valdivia duckweed	native			I
<b>Family: Arecaceae (palm)</b>					
<i>Sabal palmetto</i>	cabbage palm	native			
<i>Serenoa repens</i>	saw palmetto	native			
<b>Family: Bromeliaceae (pineapple)</b>					
<i>Tillandsia fasciculata</i>	cardinal airplant	native		E	PE
<i>Tillandsia recurvata</i>	ballmoss	native			
<i>Tillandsia setacea</i>	southern needleleaf	native			
<i>Tillandsia usneoides</i>	spanish moss	native			
<i>Tillandsia utriculata</i>	giant wild pine	native		E	
<i>Tillandsia variabilis</i>	leatherleaf airplant	native		T	R

**APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)**

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Commelinaceae (spiderwort)</b>					
<i>Callisia ornata</i>	Florida scrub roseling	native			I
<i>Commelina diffusa</i>	common dayflower	native			
<i>Commelina erecta</i>	whitemouth dayflower	native			
<i>Murdannia spirata</i>	Asiatic dewflower	exotic			
<b>Family: Cyperaceae (sedge)</b>					
<i>Bulbostylis barbata</i>	watergrass	exotic			
<i>Bulbostylis ciliatifolia</i> var. <i>coarctata</i>	capillary hairsedge	native			
<i>Bulbostylis stenophylla</i>	sandyfield hairsedge	native			I
<i>Carex lupuliformis</i>	false hop sedge	native			I
<i>Carex gigantea</i>	giant sedge	native			CI
<i>Carex vexans</i>	Florida hammock sedge	native			I
<i>Cladium jamaicense</i>	Jamaica swamp sawgrass	native			
<i>Cyperus compressus</i>	poorland flatsedge	native			
<i>Cyperus croceus</i>	Baldwin's flatsedge	native			
<i>Cyperus filiculmis</i>	wiry flatsedge	native			I
<i>Cyperus flavescens</i>	yellow flatsedge	native			R
<i>Cyperus haspan</i>	haspan flatsedge	native			
<i>Cyperus lanceolatus</i>	epiphytic flatsedge	exotic			
<i>Cyperus ligularis</i>	swamp flatsedge	native			
<i>Cyperus odoratus</i>	fragrant flatsedge	native			
<i>Cyperus polystachyos</i>	manyspike flatsedge	native			
<i>Cyperus pumilus</i>	low flatsedge	exotic			
<i>Cyperus retrorsus</i>	pinebarren flatsedge	native			R
<i>Cyperus surinamensis</i>	tropical flatsedge	native			
<i>Dichromena colorata</i>	starrush whitetop	native			
<i>Eleocharis baldwinii</i>	Baldwin's spikerush	native			R
<i>Eleocharis cellulosa</i>	gulf coast spikerush	native			
<i>Eleocharis flavescens</i>	yellow spikerush	native			I
<i>Eleocharis interstincta</i>	knotted spikerush	native			
<i>Fimbristylis autumnalis</i>	slender fimbry	native			R
<i>Fimbristylis caroliniana</i>	Carolina fimbry	native			I
<i>Fimbristylis cymosa</i>	hurricanegrass	native			
<i>Fimbristylis dichotoma</i>	forked fimbry	native			R
<i>Fimbristylis puberula</i>	hairy fimbry	native			I

**APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)**

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Cyperaceae (sedge) - continued</b>					
<i>Fimbristylis schoenoides</i>	ditch fimbry	exotic			
<i>Fuirena breviseta</i>	saltmarsh umbrellasedge	native			R
<i>Fuirena pumila</i>	dwarf umbrellasedge	native			I
<i>Fuirena scirpoidea</i>	southern umbrellasedge	native			R
<i>Kyllinga brevifolia</i>	shortleaf spikesedge	exotic			
<i>Kyllinga squamulata</i>	asian spikesedge	exotic			
<i>Lipocarpha aristulata</i>	awned halfchaff sedge	exotic			
<i>Lipocarpha maculata</i>	American halfchaff sedge	native			CI
<i>Lipocarpha micrantha</i>	smallflower halfchaff sedge	native			I
<i>Psilocarya nitens</i>	shortbeak beaksedge	native			
<i>Rhynchospora baldwinii</i>	Baldwin's beaksedge	native			CI
<i>Rhynchospora divergens</i>	spreading beaksedge	native			
<i>Rhynchospora fascicularis</i>	fascicled beaksedge	native			R
<i>Rhynchospora fernaldii</i>	Fernald's beaksedge	native			CI
<i>Rhynchospora filifolia</i>	threadleaf beaksedge	native			I
<i>Rhynchospora globularis</i>	globe beaksedge	native			I
<i>Rhynchospora intermedia</i>	pinebarren beaksedge	native			I
<i>Rhynchospora inundata</i>	narrowfruit horned beaksedge	native			R
<i>Rhynchospora microcarpa sensu lato</i>	southern beaksedge	native			R
<i>Rhynchospora miliacea</i>	millet beaksedge	native			R
<i>Rhynchospora odorata</i>	fragrant beaksedge	native			R
<i>Rhynchospora plumosa</i>	plumed beaksedge	native			R
<i>Rhynchospora tracyi</i>	Tracy's beaksedge	native			R
<i>Scirpus tabernaemontani</i>	softstem bulrush	native			R
<i>Scleria baldwinii</i>	Baldwin's nutrush	depends on sp.			I
<i>Scleria ciliata</i> var. <i>ciliata</i>	fringed nutrush	native			R

**APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)**

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Cyperaceae (sedge) - continued</b>					
<i>Scleria ciliata</i> var. <i>curtissii</i>	fringed nutrush	native			R
<i>Scleria distans</i>	riverswamp nutrush	native			
<i>Scleria reticularis</i>	netted nutrush	native			R
<i>Scleria triglomerata</i>	tall nutgrass	native			R
<i>Scleria verticillata</i>	low nutrush	native			R
<b>Family: Dioscoreaceae (yam)</b>					
<i>Dioscorea bulbifera</i>	air-potato	exotic	I		
<b>Family: Eriocaulaceae (pipewort)</b>					
<i>Eriocaulon compressum</i>	flattened pipewort	native			R
<i>Eriocaulon decangulare</i>	tenangle pipewort	native			R
<i>Eriocaulon ravenelii</i>	Ravenel's pipewort	native			I
<i>Lachnocaulon anceps</i>	whitehead bogbutton	native			R
<i>Lachnocaulon beyrichianum</i>	southern bogbutton	native			I
<i>Syngonanthus flavidulus</i>	yellow hatpins	native			R
<b>Family: Haemodoraceae (bloodwort)</b>					
<i>Lachnanthes carolina</i>	Carolina redroot	native			
<b>Family: Hypoxidaceae (yellow stargrass)</b>					
<i>Hypoxis curtissii</i>	common yellow stargrass	native			I
<i>Hypoxis juncea</i>	fringed yellow stargrass	native			R
<b>Family: Iridaceae (iris)</b>					
<i>Iris hexagona</i>	dixie iris	native			I
<i>Iris virginica</i>	Virginia iris	native			
<b>Family: Juncaceae (rush)</b>					
<i>Juncus effusus</i>	soft rush	native			
<i>Juncus marginatus</i>	shore rush	native			R
<i>Juncus megacephalus</i>	bighead rush	native			R
<i>Juncus scirpoides</i>	needlepod rush	native			I
<b>Family: Liliaceae (lily)</b>					
<i>Lilium catesbaei</i>	Catesby's lily	native		T	I
<b>Family: Orchidaceae (orchid)</b>					
<i>Bletia purpurea</i>	pinepink	native		T	R
<i>Encyclia tampensis</i>	Florida butterfly orchid	native		CE	
<i>Eulophia alta</i>	wild coco	native			
<i>Habenaria floribunda</i>	toothpetal false reinorchid	native			

**APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)**

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Orchidaceae (orchid) - continued</b>					
<i>Habenaria quinqueseta</i>	longhorn false reinorchid	native			R
<i>Oeceoclades maculata</i>	monk orchid	exotic			
<i>Pteroglossaspis ecristata</i>	giant orchid	native		T	I
<i>Sacoila lanceolata</i> var. <i>lanceolata</i>	leafless beaked orchid	native		T	I
<b>Family: Poaceae (grass)</b>					
<i>Andropogon brachystachyus</i>	shortspike bluestem	native			I
<i>Andropogon glomeratus</i> var. <i>pumilus</i>	common bushy bluestem	native			
<i>Andropogon ternarius</i> var. <i>ternarius</i>	splitbeard bluestem	native			
<i>Andropogon virginicus</i> var. <i>glaucus</i>	chalky bluestem	native			R
<i>Aristida palustris</i>	longleaf threeawn	native			I
<i>Aristida patula</i>	tall threeawn	native			R
<i>Aristida purpurascens</i>	arrowfeather threeawn	native			
<i>Aristida spiciformis</i>	bottlebrush threeawn	native			R
<i>Aristida stricta</i>	wiregrass	native			
<i>Axonopus fissifolius</i>	common carpetgrass	native			R
<i>Axonopus furcatus</i>	big carpetgrass	native			
<i>Bothriochloa ischaemum</i>	king ranch bluestem	exotic			
<i>Bothriochloa pertusa</i>	pitted beardgrass	exotic			
<i>Cenchrus spinifex</i>	coastal sandbur	native			
<i>Chrysopogon pauciflorus</i>	Florida false beardgrass	native			I
<i>Coelorachis rugosa</i>	wrinkled jointtailgrass	native			R
<i>Coelorachis tuberculosa</i>	Florida jointtailgrass	native			CI
<i>Cynodon dactylon</i>	bermudagrass	exotic			
<i>Dactyloctenium aegyptium</i>	durban crowfootgrass	exotic			
<i>Dichantherium aciculare</i> subsp. <i>angustifolium</i>	needleleaf witchgrass	native			
<i>Dichantherium aciculare</i> subsp. <i>fusiforme</i>	needleleaf witchgrass	native			

**APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)**

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Poaceae (grass) - continued</b>					
<i>Dichanthelium commutatum</i>	variable witchgrass	native			R
<i>Dichanthelium ensifolium</i> var. <i>unciphyllum</i>	cypress witchgrass	native			R
<i>Dichanthelium ensifolium</i>	cypress witchgrass	native			I
<i>Dichanthelium erectifolium</i>	erectleaf witchgrass	native			R
<i>Dichanthelium laxiflorum</i>	openflower witchgrass	native			I
<i>Dichanthelium portoricense</i> subsp. <i>patulum</i>	hemlock witchgrass	native			
<i>Dichanthelium sphaerocarpon</i>	roundseed witchgrass	native			
<i>Dichanthelium strigosum</i>	roughhair witchgrass	native			
<i>Digitaria ciliaris</i>	southern crabgrass	native			
<i>Digitaria filiformis</i> var. <i>villosa</i>	slender crabgrass	native			
<i>Digitaria longiflora</i>	Indian crabgrass	exotic			
<i>Echinochloa</i> sp	cockspur	native			
<i>Echinochloa walteri</i>	coast cockspur	native			
<i>Elionurus tripsacoides</i>	pan-american balsamscale	native			I
<i>Eragrostis amabilis</i>	feather lovegrass	exotic			
<i>Eragrostis atrovirens</i>	thalia lovegrass	exotic			
<i>Eragrostis ciliaris</i>	gophertail lovegrass	exotic			
<i>Eragrostis elliotii</i>	Elliott's lovegrass	native			
<i>Eragrostis hypnoides</i>	teal lovegrass	native			CI
<i>Eragrostis spectabilis</i>	purple lovegrass	native			I
<i>Eragrostis virginica</i>	coastal lovegrass	native			I
<i>Eremochloa ophiuroides</i>	centipedegrass	exotic			
<i>Eustachys glauca</i>	saltmarsh fingergrass	native			
<i>Eustachys neglecta</i>	fourspike fingergrass	native			
<i>Eustachys petraea</i>	pinewoods fingergrass	native			
<i>Hemarthria altissima</i>	limpograss	exotic	II		
<i>Hymenachne amplexicaulis</i>	trompetilla	exotic			
<i>Imperata cylindrica</i>	cogongrass	exotic	I		

**APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)**

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Poaceae (grass) - continued</b>					
<i>Leersia hexandra</i>	southern cutgrass	native			R
<i>Muhlenbergia capillaris</i>	hairawn muhly	native			
<i>Oplismenus hirtellus</i>	woodsgrass	native			
<i>Panicum anceps</i>	beaked panicum	native			I
<i>Panicum dichotomiflorum</i> var. <i>bartowense</i>	fall panicgrass	native			
<i>Panicum hemitomon</i>	maidencane	native			
<i>Panicum hians</i>	gaping panicum	native			R
<i>Panicum maximum</i>	Guinea grass	exotic	II		
<i>Panicum repens</i>	torpedograss	exotic	I		
<i>Panicum rigidulum</i>	redtop panicum	native			
<i>Panicum rigidulum</i> subsp. <i>pubescens</i>	redtop panicum	native			
<i>Panicum tenerum</i>	bluejoint panicum	native			R
<i>Panicum virgatum</i>	switchgrass	native			
<i>Paspalum caespitosum</i>	blue crowngrass	native			
<i>Paspalum conjugatum</i>	hilograss	native			
<i>Paspalum distichum</i>	knotgrass	native			R
<i>Paspalum floridanum</i>	Florida paspalum	native			I
<i>Paspalum monostachyum</i>	gulfdune paspalum	native			R
<i>Paspalum notatum</i> var. <i>notatum</i>	bahiagrass	exotic			
<i>Paspalum notatum</i> var. <i>saurae</i>	bahiagrass	exotic			
<i>Paspalum plicatulum</i>	brownseed paspalum	native			
<i>Paspalum praecox</i>	early paspalum	native			I
<i>Paspalum setaceum</i> var. <i>ciliatifolium</i>	thin paspalum	native			
<i>Paspalum setaceum</i> var. <i>longipedunculatum</i>	thin paspalum	native			
<i>Paspalum setaceum</i> var. <i>stramineum</i>	thin paspalum	native			
<i>Paspalum setaceum</i> var. <i>villosissimum</i>	thin paspalum	native			
<i>Paspalum urvillei</i>	vaseygrass	exotic			
<i>Rhynchelytrum repens</i>	rose natalgrass	exotic	I		

**APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)**

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Poaceae (grass) - continued</b>					
<i>Saccharum giganteum</i>	sugarcane plumegrass	native			
<i>Sacciolepis indica</i>	Indian cupscale	exotic			
<i>Sacciolepis striata</i>	American cupscale	native			R
<i>Schizachyrium sanguineum</i> var. <i>hirtiflorum</i>	crimson bluestem	native			
<i>Shizachyrium sanguineum</i> var. <i>sanguineum</i>	crimson bluestem	native			
<i>Schizachyrium scoparium</i>	little bluestem	native			I
<i>Setaria parviflora</i>	knotroot foxtail	native			
<i>Sorghastrum secundum</i>	lopsided Indiangrass	native			
<i>Spartina</i> sp	cordgrass	native			
<i>Sporobolus indicus</i>	smutgrass	exotic			
<i>Sporobolus jacquemontii</i>	west Indian dropseed	exotic			
<i>Stenotaphrum secundatum</i>	st. augustinegrass	native			
<i>Triplasis purpurea</i>	purple sandgrass	native			R
<i>Tripsacum dactyloides</i>	fakahatchee grass	native			R
<b>Family: Pontederiaceae (pickerelweed)</b>					
<i>Pontederia cordata</i>	pickerelweed	native			
<b>Family: Smilacaceae (smilax)</b>					
<i>Smilax auriculata</i>	earleaf greenbrier	native			
<i>Smilax bona-nox</i>	saw greenbrier	native			R
<i>Smilax laurifolia</i>	laurel greenbrier	native			
<i>Smilax tamnoides</i>	bristly greenbrier	native			I
<b>Family: Typhaceae (cattail)</b>					
<i>Typha domingensis</i>	southern cattail	native			
<b>Family: Xyridaceae (yelloweyed grass)</b>					
<i>Xyris ambigua</i>	coastalplain yelloweyed grass	native			R
<i>Xyris caroliniana</i>	Carolina yelloweyed grass	native			R
<i>Xyris jupicai</i>	Richard's yelloweyed grass	native			

## APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Acanthaceae (acanthus)</b>					
<i>Blechum pyramidatum</i>	brown's blechum	exotic	II		
<i>Elytraria caroliniensis</i> <i>var. angustifolia</i>	Carolina scalystem				I
<i>Justicia angusta</i>	pineland waterwillow	native			R
<i>Ruellia caroliniensis</i>	Carolina wild petunia	native			I
<i>Stenandrium dulce</i>	sweet shaggytuft	native			R
<b>Family: Amaranthaceae (amaranthaceae)</b>					
<i>Alternanthera philoxeroides</i>	alligatorweed	exotic			
<i>Amaranthus australis</i>	southern amaranth	native			R
<i>Amaranthus spinosus</i>	spiny amaranth	exotic			
<i>Froelichia floridana</i>	cottonweed	native			R
<i>Gomphrena serrata</i>	arrasa con todo	exotic			
<i>Iresine diffusa</i>	Juba's bush	native			
<b>Family: Anacardiaceae (cashew)</b>					
<i>Rhus copallinum</i>	winged sumac	native			
<i>Schinus terebinthifolius</i>	Brazilian pepper	exotic	I		
<i>Toxicodendron radicans</i>	eastern poison ivy	native			
<b>Family: Annonaceae (custard-apple)</b>					
<i>Asimina reticulata</i>	netted pawpaw	native			
<b>Family: Apiaceae (carrot)</b>					
<i>Cicuta maculata</i>	spotted water hemlock	native			I
<i>Eryngium aromaticum</i>	fragrant eryngo	native			R
<i>Eryngium baldwinii</i>	Baldwin's eryngo	native			R
<i>Eryngium yuccifolium</i>	button rattlesnakemaster	native			
<i>Oxypolis filiformis</i>	water cowbane	native			
<i>Ptilimnium capillaceum</i>	mock bishopweed	native			
<b>Family: Aquifoliaceae (holly)</b>					
<i>Ilex cassine</i>	dahoon	native			
<i>Ilex glabra</i>	gallberry	native			
<b>Family: Araliaceae (ginseng)</b>					
<i>Centella asiatica</i>	spadeleaf	native			
<i>Hydrocotyle umbellata</i>	marshpennywort	native			R

**APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)**

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Apocynaceae (dogbane)</b>					
<i>Asclepias curassavica</i>	scarlet milkweed	exotic			
<i>Asclepias feayi</i>	Florida milkweed	native			PE
<i>Asclepias tuberosa</i>	butterflyweed	native			R
<i>Cynanchum scoparium</i>	leafless swallowwort	native			R
<i>Sarcostemma clausum</i>	white twinvine	native			
<b>Family: Asteraceae (aster)</b>					
<i>Acmella oppositifolia</i>	oppositeleaf spotflower	native			I
<i>Ambrosia artemisiifolia</i>	common ragweed	native			
<i>Baccharis glomeruliflora</i>	silverling	native			
<i>Baccharis halimifolia</i>	groundsel tree	native			
<i>Bidens alba</i>	beggarticks	native			
<i>Bidens laevis</i>	smooth beggarticks	native			I
<i>Bigelovia nudata</i>	pineland rayless goldenrod	native			R
<i>Boltonia diffusa</i>	smallhead doll's daisy	native			I
<i>Carphephorus corymbosus</i>	Florida paintbrush	native			R
<i>Carphephorus odoratissimus</i>	vanillaleaf	native			
<i>Chaptalia tomentosa</i>	pineland daisy	native			R
<i>Chrysopsis mariana</i>	Maryland goldenaster	native			CI
<i>Cirsium horridulum</i>	purple thistle	native			
<i>Cirsium nuttallii</i>	Nuttall's thistle	native			I
<i>Conoclinium coelestinum</i>	blue mistflower	native			
<i>Conyza canadensis</i>	Canadian horseweed	native			
<i>Coreopsis floridana</i>	Florida tickseed	native			I
<i>Coreopsis leavenworthii</i>	leavenworth's tickseed	native			
<i>Cyanthillium cinereum</i>	little ironweed	exotic			
<i>Eclipta prostrata</i>	false daisy	native			
<i>Elephantopus elatus</i>	tall elephant's foot	native			R
<i>Emilia fosbergii</i>	Florida tasselflower	exotic			
<i>Emilia sonchifolia</i>	lilac tasselflower	exotic			
<i>Erechtites hieraciifolius</i>	fireweed	native			
<i>Erigeron quercifolius</i>	oakleaf fleabane	native			

**APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)**

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Asteraceae (aster) - continued</b>					
<i>Erigeron vernus</i>	early whitetop fleabane	native			R
<i>Eupatorium capillifolium</i>	dogfennel	native			
<i>Eupatorium compositifolium</i>	yankeeweed	native			CI
<i>Eupatorium leptophyllum</i>	falsefennel	native			R
<i>Eupatorium mohrii</i>	Mohr's thoroughwort	native			R
<i>Eupatorium serotinum</i>	lateflowering thoroughwort	native			R
<i>Euthamia minor</i>	slender flattop goldenrod	native			
<i>Flaveria linearis</i>	narrowleaf yellowtops	native			
<i>Gamochaeta falcata</i>	narrowleaf purple everlasting	native			
<i>Gamochaeta pennsylvanica</i>	Pennsylvania everlasting	exotic			
<i>Gamochaeta purpurea</i>	spoonleaf purple everlasting	native			
<i>Gnaphalium obtusifolium</i>	sweet everlasting	native			R
<i>Helenium amarum</i>	spanish daisy	native			I
<i>Helenium pinnatifidum</i>	southeastern sneezeweed	native			R
<i>Helianthus angustifolius</i>	narrowleaf sunflower	native			I
<i>Heterotheca subaxillaris</i>	camphorweed	native			
<i>Hieracium megacephalon</i>	coastalplain hawkweed	native			
<i>Iva microcephala</i>	Piedmont marshelder	native			
<i>Lactuca graminifolia</i>	grassleaf lettuce	native			R
<i>Liatris garberi</i>	Garber's gayfeather	native			I
<i>Liatris tenuifolia</i>	shortleaf gayfeather	native			R
<i>Lygodesmia aphylla</i>	rose-rush	native			R
<i>Melanthera nivea</i>	snow squarestem	native			
<i>Mikania cordifolia</i>	Florida Keys hempvine	native			R
<i>Mikania scandens</i>	climbing hempvine	native			
<i>Pectis glaucescens</i>	sanddune cinchweed	native			
<i>Pectis linearifolia</i>	Florida cinchweed	native			I
<i>Pectis prostrata</i>	spreading cinchweed	native			
<i>Pluchea foetida</i>	stinking camphorweed	native			R
<i>Pluchea odorata</i>	sweetscent	native			

**APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)**

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Asteraceae (aster) - continued</b>					
<i>Pityopsis graminifolia</i>	narrowleaf silkgrass	native			
<i>Pluchea rosea</i>	rosy camphorweed	native			
<i>Pseudognaphalium obtusifolium</i>	sweet everlasting	native			
<i>Pseudelephantopus spicatus</i>	dogstongue	exotic			
<i>Pterocaulon pycnostachyum</i>	blackroot	native			
<i>Rudbeckia hirta</i>	blackeyed Susan	native			R
<i>Sericocarpus tortifolius</i>	whitetop aster	native			
<i>Solidago canadensis</i>	Canada goldenrod	native			
<i>Solidago fistulosa</i>	pinebarren goldenrod	native			R
<i>Solidago leavenworthii</i>	Leavenworth's goldenrod	native			
<i>Solidago odora</i>	anisescented goldenrod	native			
<i>Solidago stricta</i>	wand goldenrod	native			
<i>Sonchus oleraceus</i>	common sowthistle	exotic			
<i>Symphyotrichum adnatum</i>	scaleleaf aster	native			
<i>Symphyotrichum carolinianum</i>	climbing aster	native			R
<i>Symphyotrichum dumosum</i>	rice button aster	native			
<i>Symphyotrichum simmondsii</i>	simmond's aster	native			
<i>Symphyotrichum subulatum</i>	annual saltmarsh aster	native			
<i>Tridax procumbens</i>	coatbuttons	exotic			
<i>Verbesina virginica</i>	white crownbeard	native			
<i>Vernonia blodgettii</i>	Florida ironweed	native			R
<i>Wedelia triloba</i>	creeping oxeye	exotic	II		
<i>Youngia japonica</i>	oriental false hawksbeard	exotic			
<b>Family: Bignoniaceae (trumpet creeper)</b>					
<i>Campsis radicans</i>	trumpet creeper	native			CI
<b>Family: Boraginaceae (borage)</b>					
<i>Heliotropium polyphyllum</i>	pineland heliotrope	native			
<b>Family: Brassicaceae (mustard)</b>					
<i>Nasturtium floridanum</i>	Florida watercress	native			
<i>Rorippa teres</i>	southern marsh yellowcress	native			I

## APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Buddlejaceae (butterflybush)</b>					
<i>Polypremum procumbens</i>	rustweed	native			
<b>Family: Cactaceae (cactus)</b>					
<i>Opuntia humifusa</i>	pricklypear	native			
<i>Opuntia stricta</i>	erect pricklypear	native		T	R
<i>Selenicereus pteranthus</i>	princess-of-the-night	exotic			
<b>Family: Campanulaceae (bellflower)</b>					
<i>Campanula floridana</i>	Florida bellflower	native			I
<b>Family: Caprifoliaceae (honeysuckle)</b>					
<i>Viburnum obovatum</i>	walter's viburnum	native			I
<b>Family: Caricaceae (papaya)</b>					
<i>Carica papaya</i>	papaya	exotic			
<b>Family: Caryophyllaceae (pink)</b>					
<i>Drymaria cordata</i>	drymary	native			
<i>Paronychia americana</i>	American nailwort	native			I
<i>Stipulicida setacea</i> var. <i>lacerata</i>	pineland scalypink	native			I
<b>Family: Clusiaceae (mangosteen)</b>					
<i>Hypericum crux-andreae</i>	st. peter's-wort	native			CI
<i>Hypericum hypericoides</i>	st. andrew's-cross	native			
<i>Hypericum myrtifolium</i>	myrtleleaf st. john's-wort	native			CI
<i>Hypericum reductum</i>	atlantic st. john's-wort	native			R
<i>Hypericum tetrapetalum</i>	fourpetal st. john's-wort	native			
<b>Family: Convolvulaceae (morningglory)</b>					
<i>Cuscuta pentagona</i>	fiveangled dodder	native			R
<i>Dichondra carolinensis</i>	Carolina ponysfoot	native			
<i>Ipomoea sagittata</i>	saltmarsh morningglory	native			
<b>Family: Cucurbitaceae (gourd)</b>					
<i>Melothria pendula</i>	creeping cucumber	native			
<i>Momordica charantia</i>	balsampear	exotic			
<b>Family: Droseraceae (sundew)</b>					
<i>Drosera capillaris</i>	pink sundew	native			R

## APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Ericaceae (heath)</b>					
<i>Bejaria racemosa</i>	tarflower	native			R
<i>Gaylussacia dumosa</i>	dwarf huckleberry	native			R
<i>Lyonia fruticosa</i>	coastalplain staggerbush	native			
<i>Lyonia lucida</i>	fetterbush	native			
<i>Vaccinium arboreum</i>	sparkleberry; farkleberry	native			CI
<i>Vaccinium darrowii</i>	darrow's blueberry	native			I
<i>Vaccinium myrsinites</i>	shiny blueberry	native			
<b>Family: Euphorbiaceae (spurge)</b>					
<i>Acalypha gracilens</i>	slender threeseed mercury	native			I
<i>Bischofia javanica</i>	javanese bishopwood	exotic	I		
<i>Chamaesyce blodgettii</i>	limestone sandmat	native			
<i>Chamaesyce hirta</i>	pillpod sandmat	native			
<i>Chamaesyce hyssopifolia</i>	hyssopleaf sandmat	native			
<i>Chamaesyce maculata</i>	spotted sandmat	native			R
<i>Cnidocolus stimulosus</i>	tread-softly	native			
<i>Croton glandulosus</i> var. <i>glandulosus</i>	vente conmigo	native			
<i>Croton michauxii</i>	rushfoil	native			CI
<i>Euphorbia polyphylla</i>	lesser Florida spurge	native			
<i>Euphorbia graminea</i>	grassleaf spurge	exotic			
<i>Phyllanthus caroliniensis</i> subsp. <i>caroliniensis</i>	Carolina leafflower	native			
<i>Phyllanthus tenellus</i>	mascarene island leafflower	exotic			
<i>Phyllanthus urinaria</i>	chamber bitter	exotic			
<i>Stillingia aquatica</i>	corkwood	native			R
<i>Stillingia sylvatica</i>	queens delight	native			R
<i>Tragia urens</i>	wavyleaf noseburn	native			R
<b>Family: Fabaceae (pea)</b>					
<i>Abrus precatorius</i>	rosary pea	exotic	I		
<i>Aeschynomene americana</i>	shyleaf	native			
<i>Amopha fruticosa</i>	bastard false indigobush	native			
<i>Amphicarpum muhlenbergianum</i>	blue maidencane	native			
<i>Apios americana</i>	groundnut	native			

**APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)**

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Fabaceae (pea) - continued</b>					
<i>Centrosema virginianum</i>	spurred butterfly pea	native			
<i>Chamaecrista nictitans</i> var. <i>aspera</i>	sensitive pea	native			
<i>Chamaecrista nictitans</i> var. <i>nictitans</i>	sensitive pea	native			
<i>Crotalaria lanceolata</i>	lanceleaf rattlebox	exotic			
<i>Crotalaria pallinda</i>	smooth rattlebox	exotic			
<i>Crotalaria rotundifolia</i>	rabbitbells	native			
<i>Crotalaria spectabilis</i>	showy rattlebox	exotic			
<i>Dalea carnea</i>	whitetassles	native			
<i>Desmodium floridanum</i>	Florida ticktrefoil	native			
<i>Desmodium incanum</i>	zarzabacoa comun	exotic			
<i>Desmodium paniculatum</i>	panicled ticktrefoil	native			
<i>Desmodium triflorum</i>	threeflower ticktrefoil	exotic			
<i>Erythrina herbacea</i>	coralbean	native			
<i>Galactia elliotii</i>	Elliott's milkpea	native			
<i>Galactia regularis</i>	eastern milkpea	native			
<i>Galactia volubilis</i>	downy milkpea	native			
<i>Indigofera caroliniana</i>	Carolina indigo	native			
<i>Indigofera hirsuta</i>	hairy indigo	exotic			
<i>Rhynchosia minima</i>	least snoutbean	native			
<i>Tephrosia rugelii</i>	Rugel's hoarypea	native			
<i>Vicia acutifolia</i>	fourleaf vetch	native			
<i>Vigna luteola</i>	hairypod cowpea	native			
<b>Family: Fagaceae (beech)</b>					
<i>Quercus chapmanii</i>	Chapman's oak	native			
<i>Quercus elliotii</i>	running oak	native			R
<i>Quercus laurifolia</i>	laurel oak	native			
<i>Quercus minima</i>	dwarf live oak	native			R
<i>Quercus myrtifolia</i>	myrtle oak	native			
<i>Quercus virginiana</i>	Virginia live oak	native			
<b>Family: Gentianaceae</b>					
<i>Nymphoides aquatica</i>	big floatingheart	native			
<i>Sabatia brevifolia</i>	shortleaf rosegentian	native			
<i>Sabatia calycina</i>	coastal rosegentian	native			
<i>Sabatia grandiflora</i>	largeflower rosegentian	native			

**APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)**

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Haloragaceae (watermilfoil)</b>					
<i>Proserpinaca palustris</i>	marsh mermaidweed	native			R
<i>Proserpinaca pectinata</i>	combleaf mermaidweed	native			R
<b>Family: Lamiaceae (mint)</b>					
<i>Callicarpa americana</i>	American beautyberry	native			
<i>Hyptis alata</i>	musky mint	native			
<i>Piloblephis rigida</i>	wild pennyroyal	native			R
<b>Family: Lauraceae (laurel)</b>					
<i>Cassytha filiformis</i>	love vine; devil's gut	native			
<i>Persea palustris</i>	swamp bay	native			
<b>Family: Lythraceae (loosestrife)</b>					
<i>Ammannia latifolia</i>	pink redstem	native			R
<i>Cuphea carthagenensis</i>	colombian waxweed	exotic			
<i>Lythrum alatum</i>	winged loosestrife	native			R
<i>Lythrum flagellare</i>	Florida loosestrife	native		E	I
<b>Family: Malvaceae (mallow)</b>					
<i>Hibiscus grandiflorus</i>	swamp hibiscus	native			R
<i>Kosteletzkya virginica</i>	Virginia saltmarsh mallow	native			
<i>Sida acuta</i>	common wireweed	native			
<i>Sida cordifolia</i>	llima	exotic			
<i>Sida rhombifolia</i>	Cuban jute; Indian hemp	native			
<i>Urena lobata</i>	Caesarweed	native	II		
<b>Family: Melastomataceae (melastome)</b>					
<i>Rhexia cubensis</i>	west indian meadowbeauty	native			I
<i>Rhexia mariana</i>	pale meadowbeauty	native			R
<b>Family: Moraceae (mulberry)</b>					
<i>Ficus aurea</i>	strangler fig	native			
<i>Morus rubra</i>	red mulberry				R
<b>Family: Myricaceae (bayberry)</b>					
<i>Myrica cerifera</i>	wax myrtle	native			
<b>Family: Myrsinaceae (myrsine)</b>					
<i>Ardisia escallonioides</i>	marlberry	native			
<i>Rapanea punctata</i>	colicwood	native			

## APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Myrtaceae (myrtle)</b>					
<i>Callistemon viminalis</i>	bottlebrush	exotic			
<i>Eucalyptus torelliana</i>	Torell's eucalyptus; cadaga	exotic			
<i>Eugenia uniflora</i>	Surinam cherry	exotic	I		
<i>Melaleuca quinquenervia</i>	punktree	exotic	I		
<i>Psidium guajava</i>	guava	exotic	I		
<i>Syzygium cumini</i>	java plum	exotic	I		
<b>Family: Nymphaeaceae (waterlily)</b>					
<i>Nuphar advena</i>	spadderdock; yellow pond lily	native			
<b>Family: Olacaceae (olax)</b>					
<i>Ximenesia americana</i>	hog plum	native			
<b>Family: Oleaceae (olive)</b>					
<i>Fraxinus caroliniana</i>	pop ash	native			R
<b>Family: Onagraceae (eveningprimrose)</b>					
<i>Ludwigia erecta</i>	yerba de jicotea	native			I
<i>Ludwigia octovalvis</i>	mexican primrosewillow	native			
<i>Ludwigia repens</i>	creeping primrosewillow	native			
<b>Family: Orobanchaceae (broomrape)</b>					
<i>Agalinis linifolia</i>	flaxleaf false foxglove	native			R
<i>Buchnera americana</i>	American bluehearts	native			
<b>Family: Oxalidaceae</b>					
<i>Oxalis corniculata</i>	common yellow woodsorrel	native			
<b>Family: Phytolaccaceae (pokeweed)</b>					
<i>Phytolacca americana</i>	American pokeweed	native			
<b>Family: Polygalaceae (milkwort)</b>					
<i>Polygala lutea</i>	orange milkwort	native			I
<i>Polygala nana</i>	candyroot	native			R
<b>Family: Polygonaceae (buckwheat)</b>					
<i>Polygonella polygama</i> var. <i>brachystachya</i>	October flower	native			I
<i>Polygonum glabrum</i>	denseflower knotweed	native			R
<i>Polygonum hydropiperoides</i>	swamp smartweed	native			R
<i>Polygonum punctatum</i>	dotted smartweed	native			
<b>Family: Rosaceae (rose)</b>					
<i>Rubus cuneifolius</i>	sand blackberry	native			I
<i>Rubus trivialis</i>	southern dewberry	native			R

**APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)**

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: Rubiaceae (madder)</b>					
<i>Cephalanthus occidentalis</i>	common buttonbush	native			
<i>Diodia virginiana</i>	Virginia buttonweed	native			R
<i>Psychotria nervosa</i>	wild coffee	native			
<i>Psychotria sulzneri</i>	shortleaf wild coffee	native			
<i>Spermacoce assurgens</i>	woodland false buttonweed	native			
<b>Family: Salicaceae (willow)</b>					
<i>Salix caroliniana</i>	Carolina willow	native			
<b>Family: Sapindaceae (soapberry)</b>					
<i>Acer rubrum</i>	red maple	native			
<i>Koelreuteria elegans</i>	flamegold	exotic	II		
<b>Family: Saururaceae (lizard's tail)</b>					
<i>Saururus cernuus</i>	lizard's tail	native			R
<b>Family: Turneraceae (turnera)</b>					
<i>Piriqueta cistoides</i>	pitted stripeseed	native			
<b>Family: Ulmaceae (elm)</b>					
<i>Ulmus americana</i>	American elm	native			CI
<b>Family: Urticaceae (nettle)</b>					
<i>Boehmeria cylindrica</i>	false nettle	native			
<i>Parietaria floridana</i>	Florida pellitory	native			
<i>Pilea microphylla</i>	artillery plant	native			
<b>Family: Verbenaceae (vervain)</b>					
<i>Lantana camara</i>	shrubverbena	exotic	I		
<i>Phyla nodiflora</i>	capweed	native			
<i>Verbena scabra</i>	harsh vervain	native			R
<b>Family: Veronicaceae (speed well)</b>					
<i>Bacopa monnieri</i>	herb-of-grace	native			
<i>Gratiola hispida</i>	rough hedgehyssop	native			I
<i>Gratiola ramosa</i>	branched hedgehyssop	native			R
<i>Gratiola pilosa</i>	shaggy hedgehyssop	native			CI
<i>Linaria canadensis</i>	Canadian toadflax	native			R
<i>Lindernia crustacea</i>	Malaysian false pimpernel	exotic			
<i>Lindernia grandiflora</i>	savannah false pimpernel	native			I
<i>Mecardonia acuminata subsp. peninsularis</i>	axilflower	native			
<i>Micranthemum glomeratum</i>	manatee mudflower	native			I
<i>Penstemon multiflorus</i>	manyflower beardtongue	native			I
<i>Scoparia dulcis</i>	sweetbroom	native			

**APPENDIX F: Floristic Species Documented Within HCMP and HCGCP (continued)**

Scientific names in accord with Wunderlin and Hansen 2008 (see key at the end of list)

Scientific Name	Common Name	Native Status	EPPC	FDACS	IRC
<b>Family: <i>Violaceae</i> (violet)</b>					
<i>Viola lanceolata</i>	bog white violet	native			I
<i>Viola sororia</i>	common blue violet	native			I
<b>Family: <i>Vitaceae</i> (grape)</b>					
<i>Ampelopsis arborea</i>	peppervine	native			
<i>Parthenocissus quinquefolia</i>	Virginia creeper	native			
<i>Vitis cinerea</i>	Florida grape	native			
<i>Vitis rotundifolia</i>	muscadine	native			
<i>Vitis shuttleworthii</i>	calloose grape	native			R

**Key****Florida EPPC Status (2015)**

I = species that are invading and disrupting native plant communities

II = species that have shown a potential to disrupt native plant communities

**FDACS (Florida Department of Agriculture and Consumer Services) 2003 Designations**

E = Endangered

T = Threatened

CE = Commercially Exploited

**IRC (Institute for Regional Conservation) Designations**

CI = Critically Imperiled

I = Imperiled

R = Rare

S = Secure

PE = Possibly Extirpated

AS = Apparently Secure

APPENDIX G: Vertebrate Species Documented Within HCMP and HCGCP

See key at the end of list

Amphibians				
Order	Family	Scientific Name	Common Name	Status
Anura	Bufonidae	<i>Bufo quercicus</i>	Oak toad	
		<i>Anaxyrus terrestris</i>	Southern toad	
	Eleutherodactylidae	<i>Eleutherodactylus planirostris</i>	Greenhouse frog	exotic
	Hylidae	<i>Hyla cinerea</i>	Green treefrog	
		<i>Hyla squirella</i>	Squirrel treefrog	
		<i>Hyla gratiosa</i>	Barking treefrog	
		<i>Osteopilus septentrionalis</i>	Cuban treefrog	exotic
	Microhylidae	<i>Gastrophryne carolinensis</i>	Eastern narrowmouth toad	
Ranidae	<i>Rana grylio</i>	Pig frog		
	<i>Rana sphenoccephala</i>	Southern leopard frog		
Reptiles				
Crocodylia	Alligatoridae	<i>Alligator mississippiensis</i>	American alligator	FT(S/A)
Squamata	Colubridae	<i>Elaphe guttata guttata</i>	Corn snake/Red rat snake	
		<i>Masticophis flagellum flagellum</i>	Eastern coachwhip snake	
		<i>Thamnophis sirtalis sirtalis</i>	Eastern garter snake	
		<i>Drymarchon corais couperi</i>	Eastern indigo snake	FT
		<i>Thamnophis sauritus sauritus</i>	Eastern ribbon snake	
		<i>Opheodrys aestivus aestivus</i>	Rough green snake	
		<i>Coluber constrictor priapus</i>	Southern black racer	
		<i>Diadophis punctatus punctatus</i>	Southern ring neck snake	
		<i>Elaphe obsoleta quadrivittata</i>	Yellow rat snake	
	<i>Nerodia fasciata</i>	Florida banded water snake		
	Dactyloidae	<i>Anolis carolinensis</i>	Green anole	
Polychrotidae	<i>Anolis sagrei</i>	Brown anole	exotic	
Scincidae	<i>Plestiodon fasciatus</i>	Five-lined skink		

**APPENDIX G: Vertebrate Species Documented Within HCMP and HCGCP (continued)**

See key at the end of list

<b>Reptiles (contined)</b>				
<b>Order</b>	<b>Family</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Status</b>
Squamata (continued)	Scincidae	<i>Scincella lateralis</i>	Ground skink	
	Teiidae	<i>Cnemidophorus sexlineatus</i>	Six-lined racerunner	
	Viperidae	<i>Crotalus adamanteus</i>	Eastern diamondback rattlesnake	
	Elapidae	<i>Micrurus fulvius fulvius</i>	Eastern coral snake	
Testudines	Emydidae	<i>Deirochelys reticularia</i>	Chicken turtle	
		<i>Terrapene carolina bauri</i>	Florida box turtle	
		<i>Pseudemys nelsoni</i>	Florida red-bellied turtle	
		<i>Pseudemys peninsularis</i>	Peninsula cooter	
	Testudinidae	<i>Gopherus polyphemus</i>	Gopher tortoise	ST
<b>Birds</b>				
<b>Order</b>	<b>Family</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Status</b>
Accipitriformes	Accipitridae	<i>Accipiter cooperii</i>	Cooper's hawk	
Accipitriformes	Accipitridae	<i>Circus cyaneus</i>	Northern harrier	
Accipitriformes	Accipitridae	<i>Buteo lineatus</i>	Red-shouldered hawk	
Accipitriformes	Accipitridae	<i>Buteo jamaicensis</i>	Red-tailed hawk	
Accipitriformes	Accipitridae	<i>Accipiter striatus</i>	Sharp-shinned Hawk	
Accipitriformes	Accipitridae	<i>Rostrhamus sociabilis</i>	Snail kite	
Accipitriformes	Accipitridae	<i>Elanoides forficatus</i>	Swallow-tailed kite	
Accipitriformes	Cathartidae	<i>Cathartes aura</i>	Turkey vulture	
Accipitriformes	Pandionidae	<i>Pandion haliaetus</i>	Osprey	
Anseriformes	Anatidae	<i>Anas fulvigula</i>	Mottled Duck	
Anseriformes	Anatidae	<i>Cairina moschata</i>	Muscovy Duck (Domestic type)	exotic
Anseriformes	Anatidae	<i>Aix sponsa</i>	Wood Duck	
Apodiformes	Trochilidae	<i>Archilochus colubris</i>	Ruby-throated Hummingbird	
Charadriiformes	Charadriidae	<i>Charadrius vociferus</i>	Killdeer	

**APPENDIX G: Vertebrate Species Documented Within HCMP and HCGCP (continued)**

See key at the end of list

<b>Birds</b>				
<b>Order</b>	<b>Family</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Status</b>
Charadriiformes (continued)	Laridae	<i>Larus delawarensis</i>	Ring-billed Gull	
	Scolopacidae	<i>Tringa melanoleuca</i>	Greater Yellowlegs	
		<i>Calidris minutilla</i>	Least Sandpiper	
		<i>Tringa flavipes</i>	Lesser Yellowlegs	
		<i>Calidris melanotos</i>	Pectoral Sandpiper	
		<i>Tringa solitaria</i>	Solitary Sandpiper	
		<i>Gallinago delicata</i>	Wilson's Snipe	
Ciconiiformes	Ciconiidae	<i>Mycteria americana</i>	Wood stork	FT
Columbiformes	Columbidae	<i>Streptopelia decaocto</i>	Eurasian Collared-Dove	exotic
		<i>Zenaida macroura</i>	Mourning dove	
		<i>Columba livia</i>	Rock Pigeon	exotic
		<i>Zenaida asiatica</i>	White-winged Dove	
Falconiformes	Falconidae	<i>Caracara cheriway</i>	Crested caracara	
		<i>Falco columbarius</i>	Merlin	
Galliformes	Odontophoridae	<i>Colinus virginianus</i>	Northern Bobwhite	
		<i>Colinus virginianus</i>	Northern Bobwhite	
	Phasianidae	<i>Meleagris gallopavo</i>	Wild turkey	
Gruiformes	Aramidae	<i>Aramus guarana</i>	Limpkin	SSC
	Ardeidae	<i>Egretta caerulea</i>	Little blue heron	SSC
	Gruidae	<i>Grus canadensis</i>	Sandhill crane	
Passeriformes	Cardinalidae	<i>Passerina cyanea</i>	Indigo Bunting	
		<i>Cardinalis cardinalis</i>	Northern cardinal	
		<i>Passerina ciris</i>	Painted bunting	
		<i>Pheucticus ludovicianus</i>	Rose-breasted Grosbeak	
	Corvidae	<i>Corvus brachyrhynchos</i>	American crow	

**APPENDIX G: Vertebrate Species Documented Within HCMP and HCGCP (continued)**

See key at the end of list

Birds (Continued)				
Order	Family	Scientific Name	Common Name	Status
Passeriformes (continued)	Corvidae (continued)	<i>Cyanocitta cristata</i>	Blue jay	
		<i>Corvus ossifragus</i>	Fish Crow	
		<i>Apelocoma coerulescens</i>	Florida Scrub-Jay	FT
	Emberizidae	<i>Pipilo erythrophthalmus</i>	Eastern towhee	
		<i>Passerculus sandwichensis</i>	Savannah Sparrow	
	Hirundinidae	<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow	
		<i>Progne subis</i>	Purple Martin	
		<i>Iridoprocne bicolor</i>	Tree swallow	
	Icteridae	<i>Sturnella magna</i>	Eastern meadowlark	
		<i>Agelaius phoeniceus</i>	Red-winged blackbird	
	Laniidae	<i>Lanius ludovicianus</i>	Loggerhead shrike	
	Mimidae	<i>Dumetella carolinensis</i>	Gray catbird	
		<i>Mimus polyglottos</i>	Northern mockingbird	
	Parulidae	<i>Geothlypis trichas</i>	Common yellowthroat	
		<i>Setophaga americana</i>	Northern Parula	
		<i>Setophaga palmarum</i>	Palm warbler	
		<i>Setophaga pinus</i>	Pine warbler	
		<i>Setophaga discolor</i>	Prairie Warbler	
		<i>Setophaga petechia</i>	Yellow Warbler	
		<i>Setophaga coronata</i>	Yellow-rumped warbler	
<i>Setophaga dominica</i>	Yellow-throated Warbler			
Regulidae	<i>Regulus calendula</i>	Ruby-crowned Kinglet		
Sturnidae	<i>Sturnus vulgaris</i>	European Starling	exotic	
Troglodytidae	<i>Troglodytes aedon</i>	House Wren		
Turdidae	<i>Sialia sialis</i>	Eastern Bluebird		

**APPENDIX G: Vertebrate Species Documented Within HCMP and HCGCP (continued)**

See key at the end of list

<b>Birds (Continued)</b>				
<b>Order</b>	<b>Family</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Status</b>
Passeriformes (continued)	Tyrannidae	<i>Tyrannus tyrannus</i>	Eastern Kingbird	
		<i>Sayornis phoebe</i>	Eastern Phoebe	
		<i>Myiarchus crinitus</i>	Great Crested Flycatcher	
	Vireonidae	<i>Vireo olivaceus</i>	Red-eyed Vireo	
		<i>Vireo griseus</i>	White-eyed vireo	
Pelecaniformes	Ardeidae	<i>Ardea herodias</i>	Great blue heron	
		<i>Ardea alba</i>	Great egret	
		<i>Butorides virescens</i>	Green Heron	
		<i>Egretta thula</i>	Snowy Egret	SSC
		<i>Egretta tricolor</i>	Tricolored heron	SSC
		<i>Nyctanassa violacea</i>	Yellow-crowned Night-Heron	
	Threskiornithidae	<i>Plegadis falcinellus</i>	Glossy Ibis	
		<i>Eudocimus albus</i>	White ibis	SSC
Piciformes	Picidae	<i>Picoides pubescens</i>	Downy woodpecker	
		<i>Colaptes auratus</i>	Northern flicker	
		<i>Dryocopus pileatus</i>	Pileated woodpecker	
		<i>Melanerpes carolinus</i>	Red-bellied woodpecker	
		<i>Melanerpes erythrocephalus</i>	Red-headed Woodpecker	
		<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	
Strigiformes	Strigidae	<i>Megascops asio</i>	Eastern Screech-Owl	
		<i>Bubo virginianus</i>	Great horned owl	
Suliformes	Phalacrocoracidae	<i>Phalacrocorax auritus</i>	Double-crested Cormorant	

**APPENDIX G: Vertebrate Species Documented Within HCMP and HCGCP (continued)**

See key at the end of list

<b>Mammals</b>				
<b>Order</b>	<b>Family</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Status</b>
Artiodactyla	Suidae	<i>Sus scrofa</i>	Wild hog	exotic
Carnivora	Canidae	<i>Urocyon cinereoargenteus</i>	Gray fox	
	Felidae	<i>Lynx rufus</i>	Bobcat	
		<i>Puma concolor coryi</i>	Florida panther	FE
	Procyonidae	<i>Procyon lotor</i>	Raccoon	
	Ursidae	<i>Ursus amercanus floridanus</i>	Florida black bear	
Cingulata	Dasypodidae	<i>Dasyus novemcinctus</i>	Nine-banded armadillo	
Didelphimorphia	Didelphidae	<i>Didelphis virginiana</i>	Virginia opossum	
Lagomorpha	Leporidae	<i>Sylvilagus floridanus</i>	Eastern cottontail	
		<i>Sylvilagus palustris</i>	Marsh rabbit	
Rodentia	Cricetidae	<i>Peromyscus gossypinus</i>	Cotton mouse	
		<i>Oryzomys palustris</i>	marsh rice rat	
	Muridae	<i>Sigmodon hispidus</i>	Hispid cotton rat	
	Sciuridae	<i>Sciurus carolinensis</i>	Eastern gray squirrel	
Soricomorpha	Soricidae	<i>Scalopus aquaticus</i>	Eastern mole	
		<i>Blarina brevicauda shermani</i>	Sherman's short-tailed shrew	SSC
Chordata	Lepisosteidae	<i>Lepisosteus platyrhincus</i>	Florida gar	
Cypriniformes	Cyprinidae	<i>Ctenopharyngodon idella</i>	Grass Carp	
Cyprinodontiformes	Poeciliidae	<i>Gambusia affinis</i>	Mosquitofish	
Perciformes	Centrarchidae	<i>Micropterus salmoides</i>	Largemouth Bass	
Siluriformes	Loricariidae	<i>Pterygoplichthys</i> sp.	Suckermouth Armored Catfish	exotic

**Protection Status (based on FWC list September 2015):** FE = Federally-designated Endangered; FT = Federally-designated Threatened; FT(S/A) = Federally-designated Threatened species due to similarity of appearance; ST = State-designated Threatened; SSC = State Species of Special Concern ; exotic = not indigenous to the State of Florida

APPENDIX H: Documents Relating to Public Hearings / Meetings  
xxx

DRAFT

APPENDIX I: Right-of-Way Consent Agreement



**LEE COUNTY**  
PARKS AND RECREATION

**Right-of-Way Consent Agreement**

BOARD OF COUNTY COMMISSIONERS

Writer's Direct Dial Number: \_\_\_\_\_

John E. Manning  
District One

Douglas R. St. Comy  
District Two

Ray Judah  
District Three

Andrew W. Coy  
District Four

John E. Ablon  
District Five

Donald D. Stilwell  
County Manager

James G. Yeager  
County Attorney

Lena M. Parker  
County Hearing Examiner

July 24, 2000

Mr. Mark Byers, Senior ROW Representative  
Florida Power & Light Co.  
P.O. Box 1119  
Sarasota, Florida 34230-1119

Dear Mr. Byers:

Please find attached the two signed originals of the Right-Of-Way Consent Agreement to allow a hiking trail to cross the ROW at Hickey Creek Mitigation Park. If you have any question, please give me a call at (941) 338-3291. Thank you very much for your cooperation in this matter.

Sincerely

Jerry Cutlip, Manager/ Biologist

**RIGHT-OF-WAY CONSENT AGREEMENT**

FLORIDA POWER & LIGHT COMPANY, a Florida corporation, whose mailing address is P.O. Box 14000, Juno Beach, Florida 33408-0420, Attn: Corporate Real Estate Department, hereinafter referred to as "Company", hereby consents to the **Board of Lee County Commissioners**, whose mailing address is **3410 Palm Beach Blvd., Fort Myers, FL 33916**, hereinafter referred to as "Licensee", using an area within Company's right-of-way granted by that certain agreement recorded in Deed Book 230, at Page 106, and in Deed Book 233, at Page 26, Public Records of Lee County, Florida. The said area within Company's right-of-way, is hereinafter referred to as the "Lands". The use of the Lands by Licensee, shall be solely for the purpose of **construction, maintenance and use of a walking trail within the Hickey Creek Mitigation Park**, as shown on the plans and specifications submitted by Licensee, attached hereto as Exhibit "B".

In consideration for Company's consent and for the other mutual covenants set forth below, and for Ten Dollars and No Cents (\$10.00) and other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the parties hereto agree as follows:

1. Licensee agrees to obtain all necessary rights from the owners of the Lands in the event Licensee does not own said Lands; to obtain any and all applicable federal, state, and local permits required in connection with Licensee's use of the Lands; and at all times, to comply with all requirements of all federal, state, and local laws, ordinances, rules and regulations applicable or pertaining to the use of the Lands by Licensee pursuant to this Agreement.

2. Licensee understands and agrees that the use of the Lands pursuant to this Agreement is subordinate to the rights and interest of Company in and to the Lands and agrees to notify its employees, agents, and contractors accordingly. Company specifically reserves the right to maintain its facilities located on the Lands; to make improvements; add additional facilities; maintain, construct or alter roads; maintain any facilities, devices, or improvements on the Lands which aid in or are necessary to Company's business or operations; and the right to enter upon the Lands at all times for such purposes. Licensee understands that in the exercise of such rights and interest, Company from time-to-time may require Licensee, to relocate, alter, or remove its facilities and equipment, including parking spaces and areas, and other improvements made by Licensee pursuant to this Agreement which interfere with or prevent Company, in its opinion, from properly and safely constructing, improving, and maintaining its facilities. Licensee agrees to relocate, alter, or remove said facilities, equipment, parking spaces and areas, and other improvements within thirty (30) days of receiving notice from Company to do so. Such relocation, alteration, or removal will be made at the sole cost and expense of Licensee and at no cost and expense to Company; provided however, should Licensee, for any reason, fail to make such relocation, alteration, or removal, Company retains the right to enter upon the Lands and make said relocation, alteration, or removal of Licensee's facilities, equipment, parking spaces and areas, and other improvements and Licensee hereby agrees to reimburse Company for all of its costs and expense incurred in connection therewith upon demand.

3. Licensee agrees that it will not use the Lands in any manner which, in the opinion of Company, may tend to interfere with Company's use of the Lands or may tend to cause a hazardous condition to exist. Licensee agrees that no hazardous substance, as the term is defined in Section 101 (14) of the Comprehensive Environmental Response Compensation and Liability Act ("CERCLA") (42 USC Section 9601 [14]), petroleum products, liquids or flammables shall be placed on, under, transported across, or stored on the Lands, which restricts, impairs, interferes with, or hinders the use of the Lands by Company or the exercise by Company of any of its rights thereto. Licensee agrees further that in the event it should create a hazardous condition, then upon notification by Company, Licensee shall, within seventy-two (72) hours, at its sole cost and expense, correct such condition or situation; provided however that the Company retains the right to enter upon the Lands and correct any such condition or situation at any time and, by its execution hereof, Licensee hereby agrees to indemnify and hold harmless Company from all loss, damage or injury resulting from Licensee's failure to comply with the provisions of this Agreement.

4. Licensee hereby agrees and covenants to prohibit its agents, employees, and contractors from using any tools, equipment, or machinery on the Lands capable of extending greater than fourteen (14) feet above existing grade and further agrees that no dynamite or other explosives shall be used within the Lands and that no alteration of the existing terrain, including the use of the Lands by Licensee as provided herein, shall be made which will result in preventing Company access to its facilities located within said Lands. Unless otherwise provided herein, Licensee agrees to maintain a forty (40) foot wide setback, twenty (20) feet on each side, from Company's facilities.

5. Trees, shrubs, and other foliage planted or to be planted upon the Lands by Licensee are not to exceed a height of fourteen (14) feet above existing grade.

6. Outdoor lighting installed or to be installed upon the Lands by Licensee are not to exceed a height of fourteen (14) feet above existing grade and all poles or standards supporting light fixtures are to be of a non-metallic material.

7. Sprinkler systems installed or to be installed by Licensee upon the Lands are to be constructed of a non-metallic material and sprinkler heads are to be set so the spray height does not exceed fourteen (14) feet above existing grade and does not make contact with any Company's facilities. Aboveground systems shall not be installed within or across Company patrol or finger roads and underground systems crossing said patrol and finger roads are to be buried at a minimum depth of one (1) foot below existing road grade.

8. Licensee agrees to warn its employees, agents, contractors and invitees of the fact that the electrical facilities and appurtenances installed or to be installed by Company within the Lands are of high voltage electricity and agrees to use all safety and precautionary measures when working under or near Company's facilities.

9. Licensee agrees, at all times, to maintain and keep the Lands clean and free of debris. Except as provided herein, Licensee further understands and agrees that certain uses of the Lands are specifically prohibited; such uses include but are not limited to recreational purposes,

hunting and camping, and Licensee agrees to notify its employees, agents, contractors, and invitees accordingly.

10. The use of the Lands by Licensee shall be at the sole risk and expense of Licensee, and Company is specifically relieved of any responsibility for damage or loss to Licensee or other persons resulting from Company's use of the Lands for its purposes.

11. Notwithstanding any provision contained herein, Licensee agrees to reimburse Company for all cost and expense for any damage to Company's facilities resulting from Licensee's use of the Lands and agrees that if, in the opinion of Company, it becomes necessary as a result of Licensee's use of the Lands for Company to relocate, rearrange or change any of its facilities, to promptly reimburse Company for all cost and expense involved with such relocation, rearrangement or change.

12. Each party hereto agrees that it shall be responsible for its own negligent acts or omissions. Nothing contained in the Section shall be construed to be a waiver or any protections under sovereign immunity, Section 768.28, Florida Statutes, or any other similar provision of law. Nothing contained herein shall be construed to be a consent by either party to be sued by third parties in any matter arising out of this Agreement.

13. The Board of Lee County Commissioners is self insured for all liability claims and related expenses pursuant to the provisions of Florida Statute 768.28.

14. This Agreement will become effective upon execution by Company and Licensee and will remain in full force and effect until completion of Licensee's use of the Lands pursuant to this Agreement, unless earlier terminated upon ninety (90) days written notice by Company to Licensee, or at the option of Company, immediately upon Licensee failing to comply with or to abide by any or all of the provisions contained herein.

15. The use granted herein as shown on Exhibit "B" shall be under construction by Licensee within one (1) year of the effective date of this Agreement and the construction shall be diligently pursued to completion. Licensee shall give Company ten (10) days prior written notice of its commencement of construction. "Under construction" is the continuous physical activity of placing the foundation or continuation of construction above the foundation of any structure or improvement permitted hereunder. Under construction does not include application for or obtaining a building permit, a site plan approval or zoning approval from the appropriate local government agency having jurisdiction over the activity, purchasing construction materials, placing such construction materials on the site, clearing or grading the site (if permitted) in anticipation of construction, site surveying, landscaping work or reactivating construction after substantially all construction activity has remained stopped for a period of two (2) months or more. Licensee acknowledges that failure to have the use under construction within the one (1) year time period will result in immediate termination of this Agreement in accordance with Paragraph 14 herein for failing to comply with the provisions contained herein unless Licensor grants a written extension for a mutually agreed upon time. Any request for an extension of time shall be submitted in writing by Licensee no later than thirty (30) days prior to the expiration of the one (1) year period for the project to be under construction.

16. The term "Licensee" shall be construed as embracing such number and gender as the character of the party or parties require(s) and the obligations contained herein shall be absolute and primary and shall be complete and binding as to each, including its successors and assigns, upon this Agreement being executed by Licensee and subject to no conditions precedent or otherwise.

17. Should any provision of this Agreement be determined by a court of competent jurisdiction to be illegal or in conflict with any applicable law, the validity of the remaining provisions shall not be impaired. In the event of any litigation arising out of enforcement of this Consent Agreement, the prevailing party in such litigation shall be entitled to recovery of all costs, including reasonable attorneys' fees.

18. Licensee may assign its rights and obligations under this Agreement to a solvent party upon prior written consent of the company, which consent shall not be unreasonably withheld.

The parties have executed this Agreement this 18th day of July, 2000.

Witnesses:

[Signature]  
Signature:  
Print Name: MARK L. BYERS

[Signature]  
Signature:  
Print Name: KELLY LOPEZ

FLORIDA POWER & LIGHT COMPANY

By: [Signature]  
Its: West Area Real Estate Manager  
Print Name: C. W. Mathys

Witnesses:

[Signature]  
Signature:  
Print Name: Michele G. Leismer

[Signature]  
Signature:  
Print Name: WILMA C. PAPE  
CCCDGE

LICENSEE:  
Board of Lee County Commissioners

By: [Signature]  
Its: Chairman  
Print Name: John E. Albion

APPROVED AS TO FORM  
[Signature]  
OFFICE OF COUNTY ATTORNEY

APPENDIX J: Final County-funded Fill and Grade of Gideon Lane / First Notice of Road Vacation



John E. Manning  
*District One*

Cecil Pendergrass  
*District Two*

Larry Kiker  
*District Three*

Mike Hamman  
*District Four*

Frank Mann  
*District Five*

Roger Desjarlais  
*County Manager*

Richard Wm. Wesch  
*County Attorney*

Donna Marie Collins  
*County Hearing Examiner*

February 20, 2014

Alva, FL 33920

Re. Gideon Lane

Dear [REDACTED]

Thank you for your correspondence and patience while I have been working on a solution to the potholes on Gideon Lane (River Road). As discussed, this letter will define the solutions that we can offer. Some are temporary since the road is a county owned, but not maintained road. The more permanent solution will help keep the road in good shape as long as possible and decrease future maintenance costs.

As a short term solution, the County will fill and regrade the western portion of Gideon Lane from Palm Beach Boulevard to your driveway one final time. This is being offered since you were incorrectly promised many things in the past by former employees. Please understand that this is a onetime maintenance event to correct past errors and will not continue into the future, in keeping with standard Board of County Commissioners road policies. I have attached the resolution showing that the road maintenance has not been accepted by the County.

The longer term solution will involve a street vacation of the majority of Gideon Lane. A perpetual easement from Palm Beach Boulevard along the western portion of Gideon Lane will be granted to you in order to maintain access your property. The street vacation will allow the County to install gates at strategic locations to keep the general public from using the road, thus keeping the road in better shape.

Staff will continue to utilize both existing gates (shown as turquoise diamonds on the attached map) but will be asked to use the eastern gate preferentially. Once the street vacation is complete, gates will be placed on the eastern portion of Gideon Lane to prevent vehicles from traveling the unmaintained portion of the road.

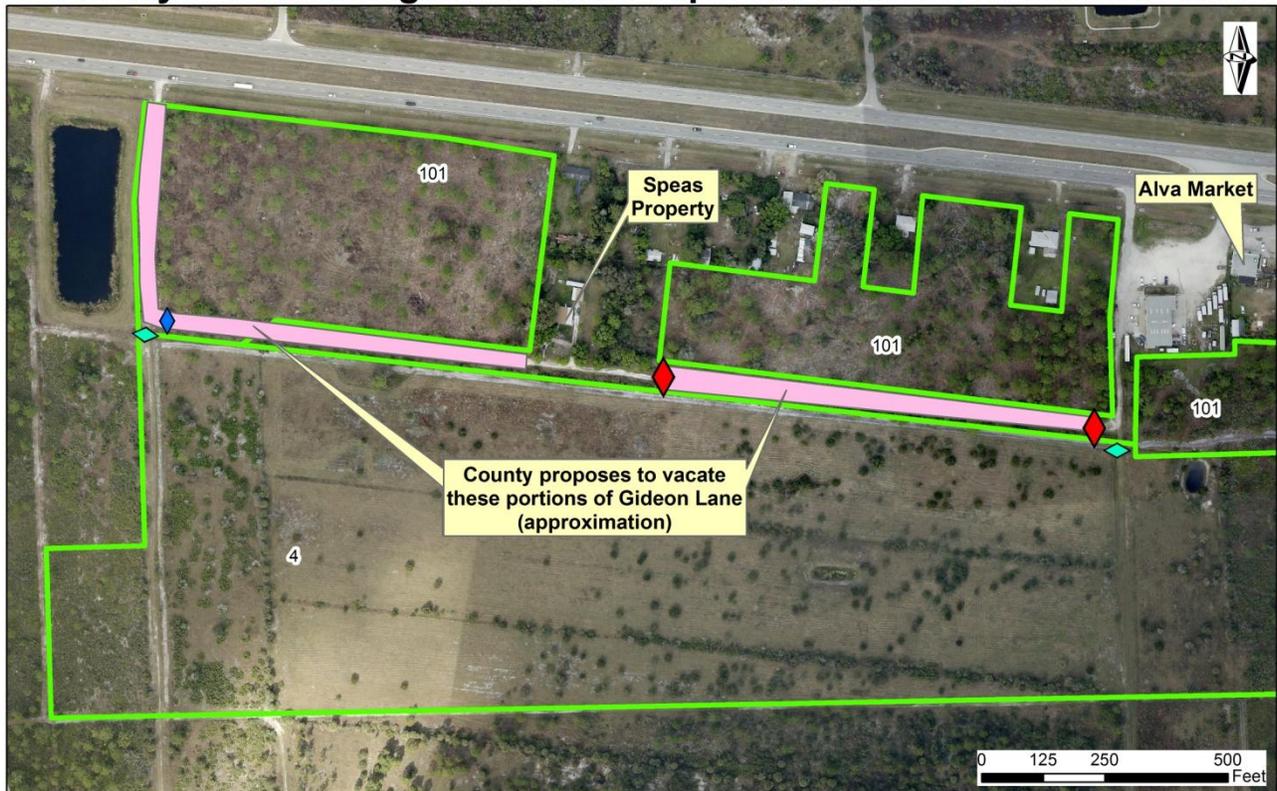
Staff in County Lands has begun to work on the street vacation. I will keep you apprised of the progress.

Please contact me if you have any questions.

Cathy Olson  
Conservation Lands Manager  
239 533-7455

cc: Dave Harner, Director Parks and Recreation  
Dana Kasler, Deputy Director Parks and Recreation  
Annisa Karim, Conservation Lands Senior Supervisor  
Teresa Mann, Senior Property Acquisition Agent

### Hickey's Creek Mitigation Park: Proposed Vacation of Gideon Lane



- Conservation 20/20 Parcels
- Hickey's Creek Mitigation Park Boundary
- Road Centerline
- Gates for staff access only
- Gate for neighbor access and LIMITED staff access
- Proposed gates for LIMITED staff access

Map created by Annisa Karim (AKarim@LeeGov.com)  
Aerial Image: 2013

February 2014

RESOLUTION NO. 99-01-22

4560825

RESOLUTION OF ACCEPTANCE OF DEDICATION BY THE  
BOARD OF COUNTY COMMISSIONERS OF  
LEE COUNTY, FLORIDA

19.50R

083072 P61444

WHEREAS, the Board of County Commissioners approved the plats of Pine Creek Acres, Units 1 and 2, on April 4, 1956 and February 6, 1957, respectively; and

WHEREAS, the plats included an offer to dedicate all roads, boulevards, and/or lanes and parks shown on the face of the plat to the perpetual use of the public; and

WHEREAS, on June 21, 1961, the Board granted a petition to vacate a portion of the plats of Units 1 and 2, including the park, all of River Road, and a portion of Pine Boulevard (County Commission Book 19, Pages 22-I and 22-N); and

WHEREAS, the County desires the right to use the remaining roads in Unit 2 of Pine Creek Acres as access to a recently acquired parcel of the Conservation 2020 Acquisition Program; and

WHEREAS, the County desires to formally accept the dedication of the unvacated roads, boulevards, and/or lanes and parks set forth in the plats of Pine Creek Acres, Unit 2, recorded in Plat Book 10, Page 74; and

WHEREAS, the Board desires to accept the dedication without assuming the obligation to construct and maintain those roads to County specifications.

NOW, THEREFORE, BE IT RESOLVED by the Board of County Commissioners of Lee County, Florida, that:

1. The Board formally accepts the dedication of all unvacated roads, boulevards, and/or lanes and parks set forth in the plat of Unit 2, Pine Creek Acres, recorded in Plat Book 10, Page 74, thereby designating such roads as County roads.

RECORDED BY  
TRUDY SHERWOOD, D.C.

2. The Board does not assume the construction or maintenance responsibility for those roads by acceptance of the dedication.

3. By this action, the Board intends the County to obtain access from State Route 80 to Parcel #4 of the Conservation 2020 Land Acquisition Program.

The foregoing resolution was adopted by the Lee County Board of Commissioners by a motion by Commissioner Manning, and seconded by Commissioner Coy and, upon being put to a vote, the result was as follows:

083072 P61445

John E. Manning	<u>Aye</u>
Douglas R. St. Cerny	<u>Aye</u>
Ray Judah	<u>Aye</u>
Andrew W. Coy	<u>Aye</u>
John E. Albion	<u>Aye</u>

DULY PASSED AND ADOPTED this 19th day of January, 1999.

ATTEST:  
CHARLIE GREEN, CLERK

BOARD OF COUNTY COMMISSIONERS  
OF LEE COUNTY, FLORIDA

BY: Michelle B. Keisner  
Deputy Clerk

BY: Ray Judah  
Chairman

Approved as to form by:  
[Signature]  
County Attorney's Office

APPENDIX K: Projected Costs for Resource Management

<b>HCMP - Projected Costs for Resource Management*</b>				
<b>Activity</b>	<b>Possible Funding Source(s)</b>	<b>C 20/20 Parcels</b>	<b>Possible Funding Source(s)</b>	<b>Non 20/20 Parcels</b>
Exotic Plant Control	C20/20 Funds; Grants; General Fund; in-house	\$656 per year for woody flora; \$820 for herbaceous flora	Grants; in-house	\$6400 (per year)
Prescribed Burning	C20/20 Funds; in-house	\$2500 a year	no cost to the County - funded by FWC	
Parcel 4 Pasture Restoration	C20/20 Funds; in-house	\$18,000 (\$600/ acre)	Parcel 4 is a 20/20 parcel – see columns to the left	
Exotic Animal Control (Feral Hogs)	\$3675 per year - average of 105 hogs per year (paid through the General Fund because the traps are generally set on non 20/20 property; 20/20 lands comprise less than 10% of Park)			
* Lee County's MOA with FWC divides stewardship responsibilities. FWC is responsible for prescribed burns, mechanical work, surveys, etc. LCPR is responsible for public access; exotic control (plant and animal) site security, facility maintenance, and environmental education.				

<b>HCGCP - Projected Costs for Resource Management*</b>				
<b>Activity</b>	<b>Possible Funding Source(s)</b>	<b>C 20/20 Parcels</b>	<b>Possible Funding Source(s)</b>	<b>Non 20/20 Parcels</b>
Initial Exotic Removal	C20/20 Funds; Grants; General Fund	\$13,400 (one-time cost)	Grants; General Fund	\$72,830 (one-time cost)
Exotic Plant Control - Maintenance	C20/20 Funds; Grants; General Fund	\$2978 per year	Grants; General Fund	\$16,185 per year
<p><i>* No management activities are advised until we can acquire inholdings. Economies of scale prohibit management of small, scattered areas.</i></p>				