

**PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS
AGENDA ITEM SUMMARY**

Meeting Date: January 13, 2015 ☒ Consent ☐ Regular
 ☐ Ordinance ☐ Public Hearing

Department
Submitted By: Environmental Resources Management
Submitted For: Environmental Resources Management

I. EXECUTIVE BRIEF

Motion and Title: Staff recommends motion to approve: an initial management plan for the Lantana Scrub Natural Area.

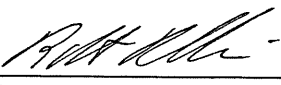
Summary: The initial management plan for the 34.1-acre Lantana Scrub Natural Area identifies the natural resources present on the site and provides for the preservation, restoration and ongoing management of those resources. The management plan also identifies recreational uses and amenities which may be accommodated on the site without adversely affecting the site’s natural resources. The first update to this management plan will be due in 2025. District 7 (SF)

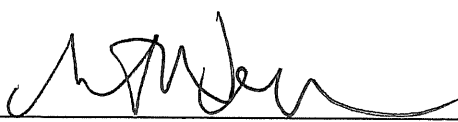
Background and Justification: The Lantana Scrub Natural Area is managed by the County’s Department of Environmental Resources Management. The Board of Trustees of the Internal Improvement Trust Fund holds title to 32.6 acres of the natural area which are managed in accordance with Amendment No. 1 to the Yamato Scrub management lease (lease no. 4176, R-2012-1688). The lease is scheduled to expire on February 23, 2048. An additional 1.5 acres is managed by the County pursuant to an Interlocal Agreement (R-2014-0287) with the Florida Department of Health.

The Palm Beach County Natural Areas Management Advisory Committee (NAMAC) reviews each natural area management plan prepared by county staff and makes a recommendation to the Board of County Commissioners. NAMAC reviewed the management plan for the Lantana Scrub Natural Area, held a public hearing on the plan on November 13, 2014, and unanimously recommended approval of the plan at its November 21, 2014 meeting.

The initial management plan identifies the capital improvements (public use facilities, management accessways/firebreaks, signage, fencing, initial invasive/nonnative vegetation removal and trash pickup) completed and proposed for the natural area. Initial invasive/nonnative vegetation removal, fence installation and trash pickup activities have been completed. Site development (construction/installation of the proposed public use facilities, management accessways/firebreaks and signage) is expected to cost \$117,269; site development will commence in FY 2015, contingent upon budget availability. Annual management and maintenance costs, including biological monitoring, prescribed burns, ongoing nonnative/invasive animal and vegetation control, and repair and replacement of facilities, as needed, are currently estimated to be \$144,658. Funds for the capital improvements, and annual management and maintenance of the site are expected to come from the Natural Areas Fund, Natural Areas Stewardship Endowment Fund, Ag Reserve Land Management Fund and/or County General Fund. Staff also will diligently pursue grant funding to offset a portion of land management costs.

- Attachments:**
1. Lantana Scrub Natural Area Management Plan

Recommended by:  12/8/14
Department Director Date

Approved by:  12/12/14
County Administrator Date

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2015	2016	2017	2018	2019
Capital Expenditures	<u>117,269</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Operating Costs	<u>144,658</u>	<u>148,998</u>	<u>153,468</u>	<u>158,072</u>	<u>162,814</u>
External Revenues	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Program Income (County)	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
In-Kind Match (County)	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
NET FISCAL IMPACT	<u>\$261,927</u>	<u>\$148,998</u>	<u>\$153,468</u>	<u>\$158,072</u>	<u>\$162,814</u>
# ADDITIONAL FTE POSITIONS (Cumulative)	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Is Item Included in Current Budget? Yes X No

Budget Account No.: Fund 1226 Department 380 Unit 3162 Object various

Program

B. Recommended Sources of Funds/Summary of Fiscal Impact:

Fiscal year 2015 costs include remaining capital improvements (public use facilities, management accessways/firebreaks and signage) which are estimated at \$117,269. Over the past five years, management and maintenance costs for County owned/managed natural areas have increased an average of 3% per year. Actual costs for FY 2016 and beyond may be higher or lower than projected. Funds for the capital improvements, and annual management and maintenance of the site are expected to come from the Natural Areas Fund (1226), Natural Areas Stewardship Endowment Fund (1220), Ag Reserve Land Management Fund (1222) and/or County General Fund.

C. Department Fiscal Review:

III. REVIEW COMMENTS

A. OFMB Fiscal and /or Contract Administrator Comments:

OFMB *AK* *12/9* *AK* *12/10/14*

Mr. J. Jacobson
Contract Administrator
12-15-14 B Wheeler

B. Legal Sufficiency:


Assistant County Attorney

C. Other Department Review:

Department Director



MANAGEMENT PLAN FOR LANTANA SCRUB NATURAL AREA



October 2014

Lease No. LEASE NO. 4176 Amendment No. 1

Prepared by:

**Palm Beach County
Department of Environmental Resources Management
2300 N. Jog Road, 4th Floor
West Palm Beach, Florida 33411-2743**



**MANAGEMENT PLAN FOR
LANTANA SCRUB NATURAL AREA**

October 2014

LEASE NO. 4176

Amendment No. 1

Prepared by:

**Palm Beach County
Department of Environmental Resources Management
2300 N. Jog Road, 4th Floor
West Palm Beach, Florida 33411-2743**

Conservation Management Plan

Required for State-owned conservation lands less than 160 acres
Chapter 253.034, 259.032, rule 18-2.021

Section A: General Information

Item #	Requirement	Information	Page Numbers and/or Appendix
1.	The common name of the property.	Lantana Scrub Natural Area	ix
2.	Lease number.	4176 Amendment 1	ix
3.	Acres.	32.6	ix
4.	Name of agency that is managing the property.	Palm Beach County	ix
5.	Provide an executive summary/description of this property that includes a brief description of the resources, uses and proposed uses, outstanding features etc.	See Exec. Summary	xvii
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	See site location map Figure 2 and Facility use map Figure 6	12-2, 12-6
7.	A map showing the proximity of this managed area to other conservation areas within 5 miles	See Figure 1	12-1
8.	Please attach a legal description of the property	See Appendix D	Appendix D
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.	See sections 3 to 3.10, 4.5.2 to 4.5.3, 5.1 to 5.3	3-1 to 3-13, 4-8 to 4-12, 5-1 to 5-3, Appendix A and B
10.	A brief description of soil types, attaching USDA maps when available.	See sections 3.1 to 3.1.3, Figure 3	3-1 to 3-3, 12-3
11.	Is the property adjacent to an aquatic preserve or designated area of critical state concern? If YES please identify.	No. See sections 1.3 and 3.8, Figure 1	1-3, 3-12, 12-1
12.	Was the property acquired by a conservation land acquisition program?	No. See sections 1.6 and 1.7	1-5 to 1-6
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). If YES please identify.	Yes. See sections 1.4 and 1.6 to 1.7	1-4, 1-5 to 1-7
14.	Are there any reservations or encumbrances on the property? If YES please identify.	No. See section 1.7	1-6

Section B: Natural and Cultural Resources

Item #	Requirement	Information	Page Numbers and/or Appendix
15.	Are there any archeological or historical sites on this property?	No. See section 3.10	3-13
15.a	How do you plan to locate, protect and preserve these resources?	See sections 2.1 to 2.2	2-1 to 2-6
15.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.	See section 3.10	3-13
16.	Are there any buildings on the property that are fifty or more years old? If YES please identify.	No. See section 3.10	3-13
16.a	Please identify	N/A	N/A
16.b	Have these buildings been evaluated by a historian or historic architect to determine their historical and/or architectural significance.	N/A	N/A
16.c	Please state whether any such buildings are listed in the Florida Master Site File, National Register of Historic Places or a local register of historic places and identify such buildings.	N/A	N/A

17.	Please identify natural resources on the property that are listed in the Florida Natural Areas Inventory.	See Section 3.9	3-12
18.	Are any imperiled natural communities, unique natural features, or any State and federally listed endangered or threatened plant or animal species, on site? If YES, please provide a specific description of how you plan to identify, locate, protect and preserve these species.	Yes. See sections 3.6 to 3.6.2	3-7 to 3-12
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".	No water resources or Outstanding Florida Waters on site. See section 3.8	3-12
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? If YES please identify and provide locations on a map.	No. See section 3.7	3-12
21.	Are there fish or wildlife resources (both game and non-game) on the property? If YES please describe.	Yes. See section 3.5	3-7

Section C: Use of the Property

Item #	Requirement	Information	Page Numbers and/or Appendix
22.	Please provide a statement of the purpose for which the lands were acquired, the projected use or uses as defined in s. 253.034, and the statutory authority you have for such uses.	See section 1.6	1-5
23.	Please state the desired outcome for this property, and key management activities necessary to achieve the desired outcome, including public access.	See sections 2 to 2.2, 4.1 to 4.11, 5.1 to 5.4	2-1 to 2-6, 4-1 to 4-16, 5-1 to 5-4
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.	See sections 1.4 to 1.7	1-4 to 1-7
25.	Were multiple uses considered but not adopted? If yes, please describe why	No. See sections 1.4 to 1.6	1-4 to 1-6
26.	Please provide an analysis of the potential use of private land managers to facilitate the restoration or management of the property.	N/A. See section 1.7	1-6 to 1-7
27.	Please provide an analysis of the potential of the property to generate revenues to enhance the management of the property.	N/A. See sections 1.4 and 1.6	1-4 to 1-6
28.	Describe the projected, current and recent past uses of the property, and any unauthorized uses, if known.	See sections 1.2 to 1.4	1-3 to 1-7
29.	Do the planned uses impact renewable and non-renewable resources on the property? If YES, Please describe what specific activities will be taken to protect or enhance and conserve those resources and to compensate/mitigate the damage that is caused by the impacting use.	No. N/A	N/A
30.	Should any parcels of land within or adjacent to the property be purchased because they are essential to management of the property? If YES, Please attach a map of this area.	No. See section 1.3 and 1.5	1-3, 1-5

31.	Are there any portions of this property no longer needed for your use? If YES, Please attach a map of this area.	No	N/A
32.	Please describe what public uses and public access that would be consistent with the purpose for which this property was acquired.	See section 5 to 5.4	5-1 to 5-4

Section D: Management Activities

Item #	Requirement	Information	Page Numbers and/or Appendix
33.	If more than one agency manages this property, describe the management responsibilities of each agency and how such responsibilities will be coordinated.	Only Palm Beach County manages this property. See section 4.1	4-1
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.	See sections 1.6 to 1.7, 4.6	1-5 to 1-7, 4-13
35.	Identify adjacent land uses that will conflict with the planned use of this property, if any.	See section 1.3	1-3
36.	Please describe measures used to prevent/control invasive, non-native plants.	See section 4.5.2	4-8 to 4-11
37.	Was there any public or local government involvement/participation in the development of this plan? If YES please describe.	Yes. See section 1.8 and 8-1	1-7 to 1-9, 8-1 Appendices F and K
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.	See section 4.4.4. No chemicals will be used at the site.	4-4
39.	Management Goals. The Following 8 goals may not all be applicable to your site. Write N/A where appropriate. Also please add as many additional goals, objectives and measures as you wish.	See table below and section 2.2	x to xiv, 2-1 to 2-6

Core Objectives		Measure	Timeframe 2 yrs = Short Term 10 yrs = Long Term	Expenses and Manpower Budget
1	Habitat restoration and improvement <u>Description-</u>			
	Prescribe burn approximately 22 or 27 acres per year	See section 4.5.1	Within 2 yrs Within 10 yrs	See Table 4-5, Page 13-5 to 13-6
	Maintain approximately 22 or 27 acres per year within target fire return interval.	See section 4.5.1	Within 10 yrs	See Table 4-5, page 13-5 to 13-6
	Conduct habitat/natural community improvement on 34 acres	See section 4.5.4	Within 2 yrs	See Table 4-5, Page 13-5 to 13-6
	Conduct habitat/natural community restoration activities on 34 acres.	See section 4.5.4	Within 2 yrs Within 10 yrs	See Table 4-5, Page 13-5 to 13-6
	Conduct timber harvest for the purposes of habitat restoration	N/A	N/A	N/A
2	Public Access and recreational opportunities <u>Description-</u>			

	Maintain public access and recreational opportunities to allow for a recreational carrying capacity of <u>N/A</u> visitors per day	See Sections 4.10; 5.1 to 5.4	Within 2 yrs Within 10 yrs	See Table 4-5, Page 13-5 to 13-6
	Develop additional public access and recreational opportunities to allow for a carrying capacity of <u>N/A</u> visitors/day	See Sections 4.10; 5.1 to 5.4	Within 2 yrs Within 10 yrs	See Table 4-5, Page 13-5 to 13-6
	Continue to provide interpretive/education programs	See Sections 2.1; 2.2; 4.10; 5.1 to 5.3	Within 2 yrs Within 10 yrs	See Table 4-5, Page 13-5 to 13-6
	Develop new interpretive/education programs	See Section 4.10; 5.1 to 5.4	Within 2 yrs Within 10 yrs	See Table 4-5, Page 13-5 to 13-6
3	<u>Hydrological preservation and restoration.</u> <u>Description-</u>			
	Conduct or obtain a site assessment/study to identify potential hydrology restoration needs	N/A	N/A	N/A
	Restore natural hydrologic condition and functions to <u>N/A</u> acres on site	N/A	N/A	N/A
		<u>N/A</u> acres for which natural hydrologic conditions and function are restored	N/A	N/A
4	<u>Sustainable forest management.</u> <u>Description-</u>			
	Prepare& implement a silviculture management plan including reforestation, harvesting, prescribed burning, restoration, and timber stand improvement activities and goals.	N/A	N/A	N/A
	Develop and implement a process for conducting stand descriptions and forest inventory including a GIS database containing forest stands, roads & other attributes (including but not limited to: threatened & endangered species, archeological resources, exotic species locations, historical areas)	N/A	N/A	N/A
5	<u>Exotic and invasive species maintenance and control.</u> <u>Description-</u>			
	Annually treat acres of EPPC Category I and Category II invasive exotic plant species.	See Section 4.5.2	Within 2 yrs Within 10 yrs	See Table 5, Page 13-6
	Implement control measures on exotic and nuisance animal species	See Section 4.5.3	Within 2 yrs Within 10 yrs	See Table 5, Page 13-6
6	<u>Capital facilities and infrastructure</u> <u>Description-</u>			
	To maintain public use facilities, management roads, and 0.9 miles of trails to be constructed on site (as applicable)	See Sections 5.1 to 5.4	Within 2 yrs Within 10 yrs	See Table 4-5, Page 13-5 to 13-6

	To construct public use facilities, and 0.9 miles of trails (as applicable)	See Sections 5.1 to 5.4	Within 2 yrs Within 10 yrs	See Table 4 Page 13-5
	To improve or repair public use facilities. Management roads, and 0.9 miles of trails existing on site (as applicable)	See Sections 5.1 to 5.4	Within 2 yrs Within 10 yrs	See Table 5 Page 13-6
7	<u>Cultural and historical resources</u> <u>Description-</u>			
	Ensure all known sites are recorded in the FL Division of Historical Resources Master Site file	N/A	N/A	N/A
	Monitor <u>N/A</u> recorded sites and send updates to DHR Master Site file as needed	N/A	N/A	N/A
	Bring <u>N/A</u> of <u>N/A</u> recorded sites/cultural resources into good condition	N/A	N/A	N/A
8	<u>Imperiled species habitat maintenance, enhancement, restoration, or population restoration.</u> <u>Description-</u>			
	Develop baseline imperiled species occurrence inventory list	Baseline imperiled species occurrence inventory list complete - Yes	Within 2 yrs Within 10 yrs	See Table 5, Page 13-6
	Develop monitoring protocols for 14 selected imperiled species	See Sections 7.1 to 7.3	Within 2 yrs Within 10 yrs	See Table 5, Page 13-6
	Implement monitoring protocols for 14 imperiled species	See Sections 7.1 to 7.3	Within 2 yrs Within 10 yrs	See Table 5, Page 13-5
	[If applicable, provide additional measurable objective(s) for new or ongoing species-specific management activities for each of the priority species such as population augmentation, translocations, nest box projects, etc.]	N/A	N/A	N/A

Item #	Requirement	Information	Page Numbers and/or Appendix
40.	Costs	See Chapter 6	6.1 to 6.2 and Table 4-5, Page 13-5 to 13-6

Activity	<u>Yearly Estimated Cost</u>		
	<u>Priority Cost</u>	<u>Other Management Cost</u>	<u>Cost Effective Methods</u>
<u>Resource Management</u>	See Sections 6.1 to 6.2	See Chapter 6 and 13-5	Page 6-1 to 6-2 and Table 5 Page 13-6
<u>Administration</u>	See Sections 6.1 to 6.2	See Chapter 6 and 13-5	Page 6-1 to 6-2 and Table 5 Page 13-6
<u>Support</u>	See Sections 6.1 to 6.2	See Chapter 6 and 13-5	Page 6-1 to 6-2 and Table 5 Page 13-6
<u>Capital Improvements</u>	See Sections 6.1 to 6.2	See Chapter 6 and 13-5	Page 6-1 to 6-2 and Table 4 Page 13-5

<u>Recreation Visitor Services</u>	N/A	N/A	N/A
<u>Law Enforcement Activities</u>	N/A	N/A	N/A

Item #	Requirement	Information	Page Numbers and/or Appendix
41.	Does this plan conform to the State Lands Management Plan?	Yes	N/A
42.	Please provide the following contact information below:		

Name:	Lantana Scrub Natural Area
Managing Agency:	Palm Beach County Department of Environmental Resources Management
Address:	2300 North Jog Road West Palm beach
Phone:	561-233-2400
Email Address	rrobbins@pbcgov.org

Date Management Plan Prepared: September 23, 2014

LAND MANAGEMENT PLAN EXECUTIVE SUMMARY

Lead Agency: Palm Beach County Department of Environmental Resources Management

Common Name of Property: Lantana Scrub Natural Area

Location: Town of Lantana, Palm Beach County

Acreage: 32.6 acres are State-owned; 1.5 acres leased by the Department of Health and managed by the County pursuant to an Interlocal Agreement

Acreage Breakdown (rounded):

<u>Natural Community</u>	<u>Acres</u>
Scrub	23.9
Scrubby Flatwoods	10.2

Lease/Management Agreement Number: 4176 – Amendment 1

Use: Single-use

Management Responsibilities

Agency: Palm Beach County is responsible for all management and maintenance activities, except for public safety and law enforcement issues. The Town of Lantana is responsible for public safety and law enforcement.

Responsibility: See delegation of responsibilities under “Agency” above.

Designated Land Use: The site is managed under the "single-use" concept, which means that it is managed to preserve and restore natural resource values. Scientific research, environmental education and passive, resource-based recreation are encouraged as secondary management objectives as long as they do not jeopardize the protection of natural resources.

Sublease(s): None

Encumbrances: See Section 1.7.

Type of Acquisition: Lease

Unique Features

Natural: Within the context of Palm Beach County, the Pamlico Dune Ridge within the Lantana Scrub Natural Area should be considered a unique natural feature. Very few areas exist in Palm Beach County where the Pamlico Dune Ridge can be viewed in a relatively unaltered state. Both of the natural communities found on the site - scrub and scrubby flatwoods – are considered by the Florida Natural Areas Inventory to be imperiled both globally and in Florida. The natural area is managed to protect the natural resources on the site while allowing for passive outdoor recreation activities, scientific research and environmental education consistent with protection of those resources.

Archaeological/Historical: There are no known archaeological or historic resources present on the natural area. Any ground disturbance of previously undisturbed areas will be coordinated with the Florida Division of Historical Resources and the Palm Beach County archaeologist. If any archaeological or historical sites are discovered in the future, Division of Historical Resources management procedures will be followed to protect those sites. If human remains are found, the provisions of Section 872.05, Florida Statutes, will be followed to protect those remains. The County will comply with Chapter 267, Florida Statutes, in its management of any archaeological or historic sites discovered on the natural area.

Management Goals, Objectives and Actions

The goals for management of the Lantana Scrub Natural Area and the objectives identified to achieve those goals are listed in the following paragraphs and in Section 2.2 of the plan. Please refer to Section 5.6 and Table 3 of this management plan for recommended actions and priority schedule for proposed site development, management and restoration activities. This initial management plan is based on the site conditions and available management resources that existed at the time the plan was developed and on anticipated future conditions and management resources. If site conditions and available management resources change significantly during the ten-year management planning cycle, it may become necessary to adjust the management plan's priority schedule and cost estimates to reflect those changing conditions and resources. Any significant changes will be reviewed by the County's Natural Resources Management Advisory Committee.

Natural Resource Management

Habitat Restoration and Improvement

Goal 1. Create a landscape mosaic of healthy scrub in various stages of regrowth that takes into account the historic vegetation of the site and the needs of the listed species present, and that maximizes species diversity and habitat quality on the site (short-term and long-term).

Objective A. Conduct prescribed burns within Management Units 1 and 3 (Figure 5) at 15- to 20-year intervals to achieve a diversity of scrub successional stages.

Objective B. Follow the burn schedule provided in Table 3, and accelerate the schedule if weather conditions, funding opportunities and resources allow.

Objective C. Implement mechanical vegetative reduction of scrub habitat at least once every 15 to 20 years if fuel levels and smoke management and safety concerns result in extremely limited or unattainable prescribed burn conditions.

Objective D. Provide habitat for listed species that require early stages of scrub succession and those that require later stages by rotation burning of management units.

Objective E. Attempt to meet vegetation structure objectives recommended by the Florida Fish and Wildlife Conservation Commission (FWC) and the Florida Natural Areas Inventory (FNAI) in the 2010 Scrub Management Guidelines for Peninsular Florida (FWC and FNAI 2010), or subsequent updated versions, with appropriate adjustments made based on the needs of imperiled species present on the site.

Goal 2. Maintain and enhance a healthy scrubby flatwoods community (short-term and long-term).

Objective A. Conduct prescribed burns within Management Unit 2 (Figure 5) at 8- to 15-year intervals to maintain the scrubby flatwoods community on the site.

Objective B. Follow the burn schedule provided in Table 3, and accelerate the schedule if weather conditions, funding opportunities and resources allow.

Objective C. Implement mechanical vegetative reduction of scrubby flatwoods habitat at least once every 8- to 15-years if fuel levels, and smoke management and safety concerns result in extremely limited or unattainable prescribed burn conditions.

Imperiled Species Habitat Maintenance, Enhancement, Restoration, or Population Restoration

Goal 1. Protect and maintain imperiled species at existing population levels (short-term and long-term).

- Objective A. Conduct prescribed burns in accordance with the schedule provided in Table 3 to maintain the diversity and health of the plant communities on the site.*
- Objective B. Monitor the status of imperiled plant species populations in accordance with species-specific monitoring schedules established by ERM.*
- Objective C. Conduct annual migratory and nonmigratory wildlife species, periodic gopher tortoise surveys and ongoing opportunistic surveys for wildlife species observed on the natural area. Special care shall be taken to record sightings of imperiled species.*
- Objective D. Enforce relevant provisions of the Natural Areas Ordinance, such as those dealing with damage to or removal of plants, molestation or harassment of animals, introduction or release of nonnative plants and animals, and prohibition of domestic animals and pets.*

Goal 2. Increase populations of imperiled species present on the site or historically present on the site (long-term).

- Objective A. Encourage local colleges and universities, governmental agencies, and other appropriate entities to conduct research activities related to imperiled species present on the site, in order to obtain information useful for the management and maintenance of those species and their habitats.*
- Objective B. Assist botanical gardens, governmental agencies, and other appropriate entities wishing to conduct restoration activities related to imperiled species present on the site or formerly present on the site, including reintroduction of those species where feasible.*

Nonnative, Invasive and Nuisance Species Maintenance and Control

Goal 1. Control nonnative and invasive plant species, and nonnative and nuisance animal species so that they do not significantly impact native communities (short-term and long-term).

- Objective A. Maintain coverage of invasive nonnative plant species at less than 1 percent of the natural area.*
- Objective B. Conduct annual nonnative plant treatments.*
- Objective C. Prevent excessive growth of invasive native vines with annual treatments or as needed.*
- Objective D. Monitor the site for domestic and feral cats, coyotes, raccoons and other nuisance and nonnative animals during opportunistic observations and scheduled wildlife monitoring surveys, and remove/control the population of nuisance and nonnative animals as necessary and feasible.*

Hydrological Preservation and Restoration

This management objective is not applicable to the Lantana Scrub Natural Area. The natural area does not contain any wetlands.

Cultural and Historical Resources

This management objective is not applicable to the Lantana Scrub Natural Area. No significant cultural or historical resources have been identified on the site at this time. If any cultural or historical resources are identified at a later date, DHR management procedures (Appendix H) will be followed in order to protect these resources.

Sustainable Forest Management

This management objective is not applicable to the Lantana Scrub Natural Area. The natural area does not provide commercial forest resources.

Capital Facilities and Infrastructure

Goal 1. Maintain the existing facilities and infrastructure in safe condition (short-term and long-term).

Objective A. Monitor the integrity and condition of facilities on a regular basis once they have been constructed, including the parking lot, concrete nature trail, hiking trail, kiosk, signs, shade shelter, bike rack, fencing and gates.

Objective B. Close unsafe areas to the public immediately upon the detection of a problem.

Objective C. Replace/repair damaged fencing and signage as soon as possible.

Objective D. Replace cracked/damaged infrastructure within six months of detection.

Goal 2. Maintain the overall appearance and aesthetics of the natural area (short-term and long-term).

Objective A. Conduct volunteer events (e.g., trash pickup, trail trimming, plantings, etc.) at least annually.

Objective B. Maintain public use facilities (cleaning of concrete nature trail, etc.) on a biweekly or as-needed basis.

Objective C. Mow management accessways and firebreaks on an as-needed basis.

Objective D. Paint over or remove graffiti from public use facilities on an as-needed basis.

Public Access and Recreational Opportunities

Goal 1. **Design, permit (Town) and construct public access and resource-based recreational opportunities within the natural area by 2016, contingent upon annual budgetary funding and appropriations by the BCC (short-term).**

Objective A. *Design, permit and construct a shade shelter with benches.*

Objective B. *Complete construction of the hiking trail system.*

Objective C. *Design, permit and construct an accessible nature trail from the parking lot to the shade shelter.*

Objective D. *Install a natural area entrance/dedication sign, bicycle rack and interpretive kiosk at the pedestrian entrance.*

Objective E. *Create one ADA-compliant parking space and six car parking spaces by restriping and signing a portion of the existing Palm Beach County Lantana/Lake Worth Health Unit parking lot to provide vehicular access to the natural area.*

Security

Goal 1. **Implement appropriate security and access control measures to prevent unauthorized activities, such as use by off-highway vehicles, dumping and off-trail use (short-term and long-term).**

Objective A. *Install and maintain a fence and gate system which is designed to restrict public vehicular access to the designated parking lot and to eliminate dumping on the site.*

Objective B. *Install and maintain signage to identify the site as a natural area and to inform the public as to the uses and activities that are permitted and not permitted on the site.*

Objective C. *Continue to fund the Wildlands Task Force to enforce the Natural Areas Ordinance, as amended.*

Objective D. *Provide annual training sessions designed to educate local law enforcement officers about County ordinances related to the protection of natural areas and site-specific security issues.*

Ten-Year Implementation Schedule and Cost Estimates: See Tables 3 through 5, Section 5.6, and Chapter 6.

Acquisition Needs/Acreage: None

Surplus Lands/Acreage: No lands are considered surplus to the needs of the site.

Public Involvement:

Public involvement was solicited at regularly-scheduled meetings of the Palm Beach County Natural Areas Management Advisory Committee on October 17, 2014 and _____, 2014, at an advertised open house and public hearing on November 13, 2014, at a regularly-scheduled meeting of the Palm Beach County Board of County Commissioners on _____, 2014, and at the Acquisition and Restoration Council Meeting at which the plan was reviewed.

THE PALM BEACH COUNTY NATURAL AREAS SYSTEM MANAGEMENT STATEMENT

The Palm Beach County Natural Areas System is comprised of those environmentally sensitive lands that are owned or leased by the County and managed as natural areas by the County's Department of Environmental Resources Management. These natural areas were selected on the basis of their biological characteristics and were acquired to preserve the rare and diverse native ecosystems present on these sites and the endangered, threatened, and rare species of plants and animals that live there.

Purpose and Goals of the Natural Areas System

- *The purpose of the Natural Areas System is to protect historic native ecosystems and their biological diversity throughout Palm Beach County. Examples of each ecosystem shall be acquired and managed to preserve in perpetuity the full complement of plants and animals characteristic of that ecosystem. The management of each natural area shall be coordinated with that of the other natural areas in the system to support existing populations and to reflect in perpetuity the subtropical biological diversity characteristic of Palm Beach County in pre-development times.*
- *The wilderness values of each natural area shall be preserved.*
- *Where a natural area currently is physically or biologically connected to another publicly- or privately-owned natural area, attempts shall be made to maintain that connection through additional land acquisitions, regulatory preserve set-asides, conservation easements, interlocal agreements, and other appropriate actions.*

Management Considerations

- *The natural areas in the system shall be available to the public for passive, resource-based recreation, environmental education, and scientific research. Public use shall not take precedence over ecosystem protection. Proposed public uses shall take into account the specific environmental conditions of each natural area, and may be modified in response to changing environmental conditions.*
- *Facilities for passive public use shall be provided on each site. These facilities shall be designed to have a minimal impact on native ecosystems and shall be located in previously disturbed areas as much as possible.*
- *Facilities, structures, or roads other than management or access roads that would cause fragmentation of a natural area shall not be permitted within a natural area.*

- *The establishment of compatible land uses and activities on lands adjacent to a natural area shall be encouraged.*
- *To the extent possible, fire-maintained native ecosystems shall be burned at the appropriate interval and season, as determined by historical data, to maintain those ecosystems. Burns shall be conducted by trained personnel, using a prescribed burn plan that addresses safety and smoke concerns. The seasonality of prescribed burns may be adjusted for initial fuel reduction burns and site safety constraints.*
- *Where ecosystems within a natural area have been impacted by invasive, nonnative plant infestations, land-clearing activities, drainage, or flooding, attempts shall be made to restore those ecosystems to their previous condition or to a natural ecosystem best suited to the existing conditions on the natural area.*
- *The special requirements of listed species shall be considered in developing management strategies for each natural area, but management for an individual species shall not take precedence over management of an entire ecosystem or be allowed to have a detrimental impact on that ecosystem's complement of species.*

Management Plan Development and Update

- *A specific management plan, based on biological, hydrological, and historical information and interpretation of this information, shall be written for each natural area that takes into account the environmental conditions found on that natural area.*
- *Each management plan shall address the strategies and techniques that will be used to manage and restore native ecosystems, to protect listed species, control the occurrence of invasive, non-native plants and animals, to allow for appropriate public access, and to prevent unauthorized access and activities.*
- *Each plan shall be reviewed by the Palm Beach County Natural Areas Management Advisory Committee (NAMAC), a citizens' advisory board, and the public shall be invited to comment on the plan at a public hearing held by NAMAC in the community in which the site is located.*
- *Following NAMAC review of the comments received, the plan shall be sent to the Board of County Commissioners for approval.*
- *Each approved plan shall be subsequently reviewed at least every ten years by NAMAC.*

EXECUTIVE SUMMARY (FOR PALM BEACH COUNTY)

The 34.1-acre Lantana Scrub Natural Area is located within the western portion of the Town of Lantana. Palm Beach County leases 32.6 acres from the State of Florida and manages 1.5 acres pursuant to an Interlocal Agreement with the Department of Health. This two parcel site was leased from the State of Florida in 2012 and from the Department of Health in 2014.

Scrub and scrubby flatwoods are the only natural communities present on the site. Both the scrub and scrubby flatwoods communities are considered imperiled in Florida due to rarity or because of vulnerability to extinction due to some natural or man-made factor (Florida Natural Areas Inventory 2010). The natural area contains important habitats for many rare and/or endemic plant and animal species. Thus far, seven plant and six animal species recorded at the site have been listed for protection by at least one governmental agency or have been ranked by FNAI.

The primary objective for management of this site is to ensure the preservation of high-quality scrub and scrubby flatwoods vegetative communities and their associated wildlife populations. The secondary objectives are to provide for passive recreation, environmental education and scientific research consistent with protecting the natural resources of the natural area.

Fire exclusion and suppression, nonnative plant invasion, dumping, construction of adjacent roads and buildings, excess fill placement and off-highway vehicle traffic, have all impacted the site. These factors must be dealt with in the management of the natural area. In addition, the site managers face special challenges unique to fragmented natural communities located within urban and suburban environments.

To protect the natural vegetation communities and wildlife of the site, public use must remain limited to passive, nonconsumptive recreation; environmental education; and scientific study. Public use facilities are currently scheduled to begin construction in 2015 (contingent upon annual budgetary funding and appropriations by the BCC) and are expected to be open to the public in 2016. An accessible nature trail, hiking trail and kiosk with interpretive displays provide valuable opportunities for the public to observe the site's distinctive plant communities and associated animals and to appreciate their biological uniqueness. Parking facilities are provided on the south side of Southwinds Drive, in the northern border of the existing Health Center parking lot of the Department of Health. Opportunities for pedestrian access to the site are provided by the multiuse trailhead which runs inside the leased Department of Health property on the southern boundary of the site, and by a 5-foot wide concrete sidewalk on the north side of Southwinds Drive.

Local schools are invited to use the natural area for nature study, environmental education, and community service projects. The volunteer program of Palm Beach County's Department of Environmental Resources Management provides opportunities for people from local citizen's

organizations, schools and businesses, and members of the general public to learn about the natural area through firsthand experience removing nonnative plants and trash, and through participating in restoration activities such as planting projects. Scientific research permitted on the site includes monitoring of populations of rare and/or endemic species and evaluation of restoration and management techniques.

This management plan has been developed to identify management strategies designed to protect, maintain, restore and enhance the biological communities on the site, and on public use facilities proposed for the site. An annual stewardship report will be provided each year to the Division of State Lands of the Florida Department of Environmental Protection. The management plan will be reviewed at least once every ten years by Palm Beach County's Natural Areas Management Advisory Committee and updated as necessary on the basis of new information, improvements in management techniques or other relevant factors.

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1. INTRODUCTION

1.1 LOCATION AND DESCRIPTION

The 34.1-acre Lantana Scrub Natural Area (natural area) is located in the northwestern portion of the Town of Lantana (Town) in east-central Palm Beach County (County) (Figure 1). The Lake Worth Lagoon/Atlantic Intracoastal Waterway (AIWW) and Atlantic Ocean are located approximately 0.6 mile and 1.3 miles east of the natural area, respectively. Lake Osborne is approximately 0.6 mile west of the natural area. There are no federal- or state-owned parks or water resources within 10 miles of the natural area. The nearest federal- or state-owned park or water resource area is the Arthur R. Marshall Loxahatchee National Wildlife Refuge (approximately 10.3 miles to the southwest). County-managed natural areas within a 10-mile radius of the natural area include the Snook Islands Natural Area, 1.7 miles to the northeast; South Cove Natural Area, 8 miles to the north; Hypoluxo Scrub Natural Area, 1.4 miles to the southeast; High Ridge Scrub Natural Area, 1.6 miles to the southwest; Rosemary Scrub Natural Area, 2.3 miles to the south; North Ocean Ridge Natural Area, 4.2 miles to the southeast; Ocean Ridge Natural Area, 4.7 miles respectively to the southeast; and Seacrest Scrub Natural Area, 7 miles to the south.

Larger, developed County parks within 10 miles of the natural area, listed from north to south, are Haverhill, Lake Lytal, Okeehetee, John Prince, Park Ridge Golf Course, Buttonwood, Santaluces Athletic Complex, West Boynton, Canyon, Caloosa, Green Cay Nature Center and Wetlands, and Lake Ida. The closest Regional and District County parks to the natural area are John Prince Park, approximately 0.7 mile to the west, and Santaluces Athletic Complex, approximately 2.3 miles to the southwest, respectively (Figure 1). In addition, there are one beach park (R.G. Kreusler) to the northeast and three small neighborhood parks (Affron, Lake Worth West and Ixora) to the northwest that are owned by the County which are within three miles of the natural area.

The Town's Sport Complex is currently located approximately 0.3 mile south of the natural area, but will be relocated to just south of the natural area within the next few years (Figure 1a). Other Town-owned parks in the vicinity of the natural area include a Recreational Center, Bicentennial Park, Sportsman's Park, McKinley Park and Lantana Municipal Beach, to the southeast, and Maddock Park to the south (Figure 1). Howard Park, which is operated by the City of Lake Worth, adjoins the northeastern portion of the natural area. Other nearby parks owned by the City of Lake Worth include Bryant Park, Barton Park, Memorial Park and South Lakeside Park.

The 34.1-acre natural area is part of an approximately 144.1-acre State-owned parcel (including the former A.G. Holley Hospital, DOH Health Center) in Lantana. The Department of Health (DOH) was until recently leasing approximately 144 acres from the State. In exchange for a portion of land under lease to the DOH, and for the purpose of building a trailhead and the use of parking facilities, the County will assist in the relocation of an air quality station in the southeast

corner of the natural area. The legal description of the County-leased property and the DOH property (Figure 2) is provided in Appendix D.

The natural area is a contiguous parcel bordered on the north by the City of Lake Worth's former landfill and on the northeast side by the Osborne recreational Center on Wingfield Street, and Howard Park immediately north. A mix of industrial and residential housing borders the west side of Wingfield Street. On the east, North 8th Street divides the natural area from the industrial complex to the west. The southern portion of the site is bordered on the east by a vacant correctional facility across Whitney Street; and to the south by DOH Health Center on Southwinds Drive. Across Andrew Redding Road, a mixed residential area and Barton Elementary school are bordering the site to the west (Figure 2).

The natural area represents a small remnant of a variety of landforms of moderate to high-quality scrub and scrubby flatwoods vegetation communities. The site exhibits also a moderate amount of relief with different elevations occurring within the vegetation communities (USGS 1988). According to the 2008 South Florida Water Management District Light Detection and Ranging (LiDAR) map of the site, natural ground elevations within the natural area range from approximately 14 feet to just under 28 feet NGVD (National Geodetic Vertical Datum). The highest elevations are within the scrubby flatwoods community near the southern boundary of the site; the lowest elevations are in the eastern and western portions of the site.

1.2 PAST USES

The Lantana Scrub Natural Area has remained, for the most part, as undisturbed native vegetation despite interferences from past uses. Perimeter disturbances associated with construction of railroad and roads, and the development of adjacent industrial and commercial properties began in the 1910s and 1920s, and continues today. Numerous narrow and platted lots with bisecting unpaved roads are visible on the aerial photographs taken during the 1940s. Perimeter roads and development to the south have caused permanent changes to the native vegetation within their rights of way. Clearing, grading and dumping of spoil material during the 1960s and 1970s created disturbed areas along the edges of the property, and small areas of disturbed scrubby flatwoods and scrub communities were created as a result of clearing and filling activities in the central and eastern portion of the site, and along the edges of the Lake Worth landfill. Otherwise, the past uses of the site have caused mostly temporary and/or minor problems on small areas scattered throughout the site. Some minor levels of hunting may have occurred on the site, but it does not appear that the site ever contained large populations of game species.

Off-highway vehicle (OHV) traffic had caused some damage to the scrubby flatwoods and certain portions of the scrub communities in the eastern and southern portions of the site. OHV users have repeatedly cut the fence in the northeastern corner of the site. Wildlands Task Force deputies have increased surveillance of the natural area when needed. The natural area had been

known to contain a very large homeless population. At the time of acquisition the homeless use of the site had been reduced by local government efforts but it still remains a minor concern.

1.3 ADJACENT LAND USES

The natural area, DOH property and the Town's future sports complex are designated as "Mixed Use Industrial District" on the Future Land Use Map that was adopted by the Town on September 22, 2014 (Town of Lantana 2014a). The lands adjacent to the natural area on the west and on the east also are within the Town. They have the following future land use designations: I (Industrial) on the eastern border, and residential on the western border with a designation of R15 (High Density Residential, 15 units per acre).

All of the area south of the natural area is designated MI (Industrial). This area contains the DOH Lantana/Lake Worth Health Unit; the Flaming Center for special needs adults; the former multi-use complex occupied by the A. G. Holley Hospital facility; and a former halfway house facility building near the southeast corner of the natural area.

The natural area also is zoned "Mixed Industrial" on the Zoning Map that was adopted by the Town on September 22, 2014 (Town of Lantana 2014b). The zoning designations for the adjacent lands are: I (Industrial) on the eastern border that contains light industry facilities, warehouses, office buildings, and residential on the western border with a designation of R15 (High Density Residential, 15 units per acre).

The lands adjacent to the natural area on the north and northeast are within the City of Lake Worth. They have the following designations on the 2013 Future Land Use Map for that municipality (City of Lake Worth Planning and Zoning Department 2013): former landfill – P (Public); Osborne Community Center – Public (Public Recreation and Open Space), Howard Park – Public (Public Recreation and Open Space); west of Wingfield Street – MDR (Medium Density Residential); and For the Children Family Support Center – Public (Public Recreation and Open Space) in the eastern corner of South Douglas Street.

The zoning district designation on the City's 2013 Zoning Map (City of Lake Worth 2013b) for the adjacent lands are: Landfill - P (Public), Howard Park and I.A. Banks Memorial Park - PROS (Public Recreation and Open Space), and SF-TF-14 (Single-Family and Two-Family Residential).

Both direct and indirect impacts from adjacent and nearby land uses are to be expected. The biggest threats posed by frontage on Andrew Redding Road and North 8th Street are invasion of the site by nonnative plant species growing in the road rights of way, dumping and animal mortality from vehicular traffic. Adjacent and nearby commercial, industrial and residential developments also may be a threat to the natural area in that they contain nonnative plants that act as a seed source which could allow the plants to invade the natural area.

The former landfill that is immediately north of the natural area may contain substances that could adversely affect local groundwater resources, including those within the natural area.

The proposed relocation of the Lantana sports complex to lands immediately south of the natural area could adversely affect the natural area. Lighting installed to allow after-dark use of the sports complex could adversely affect wildlife by interfering with natural resting and feeding times. Trash and balls from the sports complex may also enter the natural area unless chain-link fencing and/or mesh is installed along the northern border of the sports complex. On the positive side, the natural area may receive more visitors due to its proximity to the relocated sports complex.

Domestic and feral cats (*Felis catus*) and dogs (*Canis lupus familiaris*) can cause wildlife mortality. The number of domestic animals likely to enter the site is anticipated to be low, since most of the site is bordered by commercial and industrial facilities. Ongoing efforts to mitigate for any impacts associated with domestic animals include an aggressive nonnative species control program, public outreach, volunteer and interpretive programs, and enforcement of the Palm Beach County Natural Areas Ordinance (Chapter 11, Article XI of the Palm Beach County Code; <http://www.co.palm-beach.fl.us/erm/natural/naturalareaordinances.htm/>) provision concerning the prohibition of domestic animals and pets on the natural area.

1.4 USES THAT ARE NOT APPROPRIATE

Public uses on county natural areas such as the Lantana Scrub Natural Area are regulated by the Palm Beach County Natural Areas Ordinance (Natural Areas Ordinance) which was adopted by the County's Board of County Commissioners (BCC). This ordinance provides for passive recreational activities such as hiking, nature study, and photography; fishing in designated areas; environmental education; and scientific research. It prohibits destructive uses such as OHV use, dumping, and poaching of plants and animals, and requires special permits for camping, horseback riding, scientific research involving collection of plant and animal specimens or the use of watercraft in wetlands, and nighttime use of the natural area.

There are no plans for any concessions or support services to be located on the site, nor are there plans to provide a camping area. There are sufficient retail businesses in the vicinity of the natural area to supply services normally provided by concessionaires. A camping area is not appropriate given the large area it would impact and the imperiled status of many of the upland natural communities on the site. Horseback riding is not appropriate because of the loose soils found at this site and because the site is located in an urban area far from equestrian communities. Trapping and hunting are prohibited by the Palm Beach County Natural Areas Ordinance and the site does not contain significant populations of game species. Due to a lack of wetlands, the site does not provide habitat for any fish species. Mountain bicycle usage of the site is prohibited by the Natural Areas Ordinance, and there will be no bicycle access to the site. There are no navigable waters on the site, so there is no need to accommodate boating uses.

There are no other alternative activities that were considered but not adopted as acceptable uses for the natural area.

1.5 OUTPARCELS

There are no outparcels adjacent to the natural area that would be suitable for acquisition since the entire A.G. Holley site is State-owned and leased to third parties. All of the lands adjacent to the natural area have been developed for commercial, industrial, residential or recreational purposes.

1.6 MANAGEMENT CONSTRAINTS

The natural area is managed under the single-use concept by Palm Beach County, and therefore has no multiple-use potential for revenue generation. The Board of Trustees of the Internal Improvement Trust Fund (TIITF) of the State of Florida (State) holds a 100 percent title interest in the natural area. The state-owned portion of the site is managed under the constraints imposed by the 50-year State management lease (lease no. 4176 Amendment 1) from TIITF to Palm Beach County (See Section 1.7). This lease runs until the year 2048. The lease provisions require that the County manage the leased premises only for the conservation and protection of natural and historic resources and for resource-based public outdoor recreation that is compatible with the conservation and protection of these public lands, as set forth in subsection 253.023(11), Florida Statutes.

This initial management plan for the leased premises is in accordance with Chapters 18-2 and 18-4 of the Florida Administrative Code (FAC) and it contains the information required under Section 259.032, F.S. This initial plan will be sent for approval to the Division of State Lands (DSL) of the Florida Department of Environmental Protection (FDEP). The next revision to the plan will be due in 2025.

The most significant management constraint on the natural area is the requirement to protect rare and endangered plants, animals and ecosystems. The size, shape, and location of the natural area do not restrict certain management activities such as nonnative and invasion vegetation removal, or upland restoration activities. These factors do, however, limit what can be done on the site relative to the reintroduction of fire and the restoration of scrub and scrubby flatwoods areas. The site's proximity to the DOH Health Center, an elementary school, residential and commercial areas, Interstate 95 and other major roads severely limit the options for prescribed burning.

There are no other known legislative or executive constraints that affect the development or management of the site. The natural area is not within an aquatic preserve or a designated area of critical state concern, and is not under study for such a designation.

Although the surrounding industrial, commercial and residential uses do not directly conflict with the management of the natural area, they are a source of invasive nonnative plant and domestic pet incursions, and complicate prescribed burn management.

The County also manages the natural area under the constraints of the Palm Beach County Natural Areas Ordinance. This ordinance regulates public uses on county-managed natural areas. This ordinance provides for passive recreational activities such as hiking, nature study, and photography; fishing in designated areas; environmental education; and scientific research. It prohibits destructive uses such as OHV use, dumping, and poaching of plants and animals, and requires special permits for camping, horseback riding, scientific research involving collection of plant and animal specimens or the use of watercraft in wetlands, and nighttime use of the natural area. No dogs, cats, or other domestic animals are permitted on the natural area. Chapter 9 of the Code of Ordinances of Lantana, Florida also prohibits dumping.

1.7 EASEMENTS, CONCESSIONS AND LEASES

There are no easements on the natural area. There are no encroachments on the site, no concessions on the property, and no leases other than the management lease granted to the County by the State over the Yamato Scrub Natural Area (lease no. 4176 Amendment 1), as amended to include the A.G. Holley tract (now known as Lantana Scrub Natural Area) and the Interlocal Agreement between the County and the DOH (Appendix I).

In December 2012 the original lease for Yamato Scrub Natural Area (lease no. 4176) was amended to include a 32.6-acre state-owned tract located at the 144-acre A.G. Holley State Hospital campus in Lantana. This tract had been identified by the County's Environmentally Sensitive Lands Acquisition Advisory Committee (ESLAAC) as having high priority for acquisition with funds from the 1991 Environmentally Sensitive Lands Acquisition bond referendum, but was not able to be acquired, and those funds were expended. In 2004 the DOH, in conjunction with the Town, began to develop a master plan for the A.G. Holley campus. The master plan included preservation of approximately 35 acres of Florida scrub to be managed by ERM. In 2011 the Legislature authorized the closure of the hospital and the surplus of the A.G. Holley property. ERM was able to negotiate the preservation of the scrub tract for environmental purposes. The lease for the Yamato Scrub was then amended to include the management of the 32.6-acre A.G. Holley tract. The lease amendment contains a provision that would allow the DOH to relocate gopher tortoises (*Gopherus polyphemus*) to the natural area from adjacent lands currently leased from the State (lease no. 2603), if such relocation is permissible under current state law at the time of the relocation.

Under the DOH interlocal agreement with the County executed on March, 2014, the DOH will designate 6 to 8 parking spaces along the northern border of the Health Center parking lot as public parking for the natural area. The County is responsible for building a trailhead, managing and maintaining the leased portion of the property where public use facilities will be constructed. The County will remove the exotic/invasive vegetation and maintain the natural habitat within

the DOH leased property, and will provide up to 2000 sq. ft. for the relocation of an air quality station within the southeast corner of the natural area. The location of this air quality station was selected in order to minimize impact to the natural area. Underground electric power lines from the Florida Power and Light (FPL), running from the wood pole located 25-feet south from the southeastern corner of the site, could be used to provide power supply to the air quality station. The County will provide up to \$5,000 to offset the cost of installing the electrical connection to the air quality station. An 8-foot chain-link fence approximately 75-feet by 20-feet will also be installed around the air quality station. A phone box and a guy anchor are also located next to the power pole. Three FPL power poles are located along the southern boundary north of the parking lot although no recorded easements were found at this location. On the western border of the natural area, on the east side of Andrew Redding, an FPL flush box is also identified along the 6-foot asphalt sidewalk.

1.8 PLAN DEVELOPMENT AND REVIEW

State statutes require the DSL to conduct a land management review every five years for all state-owned conservation lands that are greater than 1,000 acres in size, but do not exclude the review of sites smaller than 1,000 acres. If the FDEP land management review team has conducted a management review of a site, the findings and recommendations of the review team are required to be considered in the preparation of the 10-year update to that site's management plan. A land management review has not yet been conducted at this natural area and no management recommendations for this site have been yet received from FDEP.

The primary purpose of the County's Natural Areas System is to protect native ecosystems and their biological diversity throughout Palm Beach County. Therefore, each natural area's management plan must ensure that the proposed management and restoration activities will preserve and enhance/restore the existing and historic natural vegetation communities, and their associated plant and animal species. Scientific research, environmental education, and passive, resource-based recreation are permitted on natural areas as long as they do not jeopardize the protection of natural resources.

Before a comprehensive initial management plan could be developed for the Lantana Scrub Natural Area, a thorough inventory and assessment of the site's natural resources was required. Information was obtained on the natural area's soils; water resources and hydrology; unique natural features and/or geological features; historic and existing natural communities and the associated plants; fish and wildlife; listed species; invasive/nonnative plant and animal species; archaeological resources; and historic land uses. All applicable archaeological reports, BCC agenda items, correspondence, grant award agreements, interlocal agreements, newspaper clippings, press releases, maps, aerial photographs, plant and animal species survey data, Annual Site Evaluation (ASE) reports, environmental assessments/reports, restoration plans, and applicable county and/or municipal Future Land Use and zoning maps contained in ERM's files were reviewed. Outside research and field inspections were conducted to fill in informational gaps.

Once the necessary background information was obtained, an initial management plan was drafted for the site. The primary goals of the initial management plan were to: 1) identify the existing natural and cultural resources; 2) address the site-specific strategies and techniques that would be used to manage and restore those resources; and 3) identify recreational uses which could be accommodated without adversely affecting the site's natural and cultural resources. Other items considered during the preparation of the initial management plan included current and proposed monitoring and land management activities and costs (including listed species monitoring and management, and invasive/nonnative plant and animal species control); a fire management plan (including a prescribed burn schedule); proposed wetland and/or upland restoration plans; capital construction costs for construction and replacement of public use facilities; annual management and maintenance costs; security measures; fencing and signage needs; and any current and/or anticipated problems or issues identified by staff.

As development of the draft management plan neared completion, the seven members of the County's Natural Areas Management Advisory Committee (NAMAC) were invited to tour the natural area with staff and to hear an overview of the management/restoration activities and recreational uses proposed for the site. All comments and suggestions received from NAMAC at the site visit were taken into consideration during completion of the draft management plan. The draft management plan was then sent to NAMAC, the State, as owner of the site, and interested members of the public for review and discussion.

The purpose of NAMAC is to review and comment on management plans developed by staff for natural areas acquired and/or managed by the County, and to hold public hearings on the initial management plans prior to their review and adoption by the BCC. NAMAC was originally established on August 16, 1994 when the BCC adopted Resolution 94-1051. On February 24, 2009, the original resolution was repealed and NAMAC was reestablished by Resolution 2009-0319. The current membership categories are: a member with experience in the management of natural areas, a biological scientist, a professional educator with knowledge of South Florida ecosystems, a representative of a local municipal government parks and recreation program, a member of the Palm Beach County Parks and Recreation Department staff, and two citizens having an interest in the preservation and conservation of natural areas.

Members of the public were invited to provide comments on the initial management plan at the October 17, 2014 and _____, 2014 regularly-scheduled meeting of NAMAC as the plan was being reviewed by the committee prior to approval for public hearing. Town representatives also participated in that review and had the opportunity to review and comment on the draft management plan. A copy of the draft revised plan also was provided to a representative of the Palm Beach Soil and Water Conservation District, who was invited to submit comments on the management plan and to participate in the NAMAC review. The members of NAMAC held a publicly-noticed evening public hearing on the draft management plan on _____, 2014 at _____ in Lantana. A notice of the public hearing was posted in each kiosk on the natural area, in a paper of general circulation (Appendix F) and on the ERM

website. An open house held prior to the public hearing allowed the public to review and discuss the management plan with county staff and to view a display of the existing and proposed public use facilities. The draft management plan was available through ERM's website for a minimum of 30 days prior to the public hearing.

Members of the public who could not attend the public hearing or who attended but wished to provide comments after the hearing were allowed to submit written comments to the County during the one-week period following the hearing. ____ comments were received from the public (Appendix F). Members of the public were also invited to provide comments at a subsequent, regularly-scheduled meeting of NAMAC held on _____, 2014. NAMAC members took those comments into consideration prior to forwarding the draft management plan to the BCC with a recommendation that it be approved. Members of the public also had the opportunity to comment on the plan on _____, 2014 when it was considered and approved by the BCC. A summary of the comments made by the Town members of the public are included as Appendix F.

1.9 SITE HISTORY

Pre 1840

The Lantana Scrub Natural Area represents a small remnant of a large ridge of predominantly scrub habitat that ran north-south from St. Augustine to Southern Palm Beach County. In the vicinity of the natural area the ridge was located between a large freshwater lake, known today as the Lake Worth Lagoon to the east, and an inland freshwater lake/marsh system that included Lake Osborne and the former Lake Webster to the west (PBC ERM 1997). The Lake Worth Lagoon was named after one of the last commanding officers of the United States Army in the Second Seminole War, General William J. Worth.

The Seminole Indian Wars and Early Settlers – 1840 to 1876

The First Seminole Indian War took place in northern Florida and southern Georgia from 1817 - 1818. During this short war, U.S. forces quickly defeated the Seminoles and their black allies, pushing them out of northern Florida and into the interiors of the State. An 1823 treaty confined the Seminoles to a reservation in the interior portions of central and southern Florida. Then in 1830, the U.S. Congress passed the Indian Removal Act, which gave the government the authority to forcibly move Native Americans from Florida and Georgia to Oklahoma (FDHR undated, Robison and Andrews 1995). While most Seminoles were relocated, some refused to leave and tensions mounted between the U.S. Army, white settlers and the Seminoles (Robison and Andrews 1995). The Second Seminole Indian War (1835-1842) ended when the U.S. Army gave up trying to force all Seminoles to relocate to Oklahoma. After the Third Seminole Indian War ended in 1857, the Seminoles slowly emerged from their hideouts deep in the Everglades.

There were no known settlers in the vicinity of the natural area until the early 1870s (Corbett

1992). Palm Beach County's first permanent settler, Charlie Moore, moved to the shores of Lake Worth Lagoon near the present-day Town of Hypoluxo in November 1872. By 1874, 10 to 12 people were living along the lagoon. They were followed by more pioneers, who settled farther north along the lagoon on the island of Palm Beach or along the Loxahatchee River at Jupiter.

The most notable early settlers in the Town were the Lymans (Linehan 1980). In 1887 Morris B. Lyman built a home on the homesteaded property obtained by his father Morris Kenney Lyman on a natural point of land known as Lyman's Point. Lyman's Point was located where the present-day Ocean Avenue Bridge in Lantana crosses the Lake Worth Lagoon. In 1888 Morris B. Lyman arrived with his family, and in 1889 he established a general store called the Indian Trading Post. By August 1889 the store became also a post office, with M.B. Lyman as the postmaster. When M.B. Lyman was asked to choose a name for the post office, he chose Lantana Point, for the abundance of the exotic lantana shrub that grew there. Later the word "Point" was dropped. Lyman's home south of Ocean Avenue has been preserved and is part of the present-day Old Key Lime House Restaurant. The Lyman family platted their land and sold off lots as additional families came to live in the area. The Lantana Point area became the nucleus of the Town, which was incorporated in 1921 with 100 residents and 22 registered voters (Linehan and Nelson 1994).

Canals, Railroads and Development – 1877 to 1928

Private and government engineers visited southeast Florida numerous times from the 1820s through the early 1880s to determine the feasibility of an inland transportation canal along the Atlantic coast. Even though the canal was determined to be feasible, the federal government declined to appropriate funds for the construction of the canal, citing the then-minimal population of south Florida. In 1879 the State began offering 3,840 acres of swamp and "overflowed" lands for each mile of canal constructed and the right to collect tolls to pay for maintenance of the completed portions of canal (Crawford 2002). This induced the Florida Coast Line Canal and Transportation Company (canal company) to begin constructing an inland waterway known as the Florida East Coast Canal (the predecessor to the AIWW) southward from St. Augustine in 1882. Dredging began north of the natural area at the mouth of Lake Worth Creek in 1892 (Corbett 1992). The canal company cut through the final sand ridge north of the natural area and entered the northern portion of the present-day Lake Worth Lagoon in May 1898 (Crawford 2002). The dredging of the Florida East Coast Canal, east of the natural area, made the area much more enticing to settlers. The natural area was part of the lands deeded in 1890 from the State of Florida to the canal company for work on the canal. In 1891, the site was sold to Mr. John A. Laubach and from 1892 on, it had multiple ownerships.

The next disturbance near the natural area was the construction in 1895 of the segment of the Jacksonville, St. Augustine and Indian River Railroad in the Lantana area. A portion of this railroad was constructed approximately 0.3 mile east of the natural area. Also in 1895, the

Jacksonville, St. Augustine and Indian River Railroad changed its name to the Florida East Coast (FEC) Railway (Boca Raton Historical Society 1974).

Then in 1905, a nine-foot-wide road was constructed just outside the right of way for the FEC tracks. This road later became part of the Dixie Highway, a system of roads that ran from Jacksonville to Miami. In 1909, Palm Beach County was formed out of the northern portion of Dade County (PBC History Online undated). In 1916, Palm Beach County voters passed a \$1 million bond to pave and widen the Dixie Highway from 9 feet to 24 feet throughout the County (Boca Raton Historical Society 1973). The construction of the railroad, FEC Canal, county road and the precursor to the Dixie Highway greatly enhanced access to the area east of the natural area. The FEC Railway also provided fast, reliable transportation to markets in the northeast, thereby making fruit and vegetable farming profitable for farmers in Southeast Florida (Boca Raton Historical Society 1974).

In 1915, the Lake Worth Drainage District was formed and began to dig a network of canals to drain the area west of the coastal ridge and east of State Road 7/U.S. Highway 441 that lay between Okeechobee Road and the Hillsboro Canal. Major north-south canals were dug every 2 to 2.5 miles and were called equalizing canals. Equalizing Canal 4 (or the E-4 Canal) was dug through the lake/marsh system 1.7 miles northwest and southwest of the Natural Area, lowering surface water levels from approximately 15 feet to 8.5 feet. This canal cut through Lake Webster, and drained it completely, causing the lake to disappear. Lowered water levels in Lake Osborne caused it to shrink in size, and ground water levels in the natural area were also reduced due to the overall lower water levels in the chain-of-lakes, which comprises Lake Osborne.

It was also in 1915, and later in 1927, that major disturbances affected permanently the freshwater Lake Worth Lagoon and the natural area: the construction of the current Palm Beach Inlet and South Lake Worth Inlet (also known as Boynton Inlet). By 1915 the Florida Legislature chartered the Lake Worth Inlet District (which later became the Port of Palm Beach District), to create a permanent inlet four feet deep in the north Lagoon (FIND undated). The new inlet was completed in 1917 and it permanently changed the freshwater system to a brackish system. In 1927 the South Lake Worth Inlet was also completed to increase flushing in the southern portion of the Lagoon. Water elevations within the brackish lagoon dropped with the inlet openings and groundwater levels were also lowered in the lands adjacent to and west of the lagoon (Treasure Coast Regional Planning Council 2009).

In 1921, the Lantana Finance Corporation bought the natural area from Mary A. Lyman and sold it in 1926 to Ridge View Realty Corporation. When a devastating Category 4 hurricane hit Miami in 1926, it discouraged many people who were considering moving to Florida to buy land, consequently in the late 1920s the Florida land boom collapsed.

Tax Deeds and Development – 1929 to 1940

After the land boom crashed and the Great Depression hit hard, many landowners were unable to

pay their taxes, especially those levied by the Everglades Drainage District, which had sold bonds to build the major canals in southeast Florida. A state law was passed in 1937, known as the Murphy Act, which allowed the TIITF Board of Trustees of the State of Florida to take title to properties with delinquent taxes and convey that title to others for the back taxes owed. The state law also allowed other taxing entities to file ownership claims on properties with delinquent taxes. The Town filed a lawsuit for unpaid taxes in 1938 against Ridge View Realty Corporation for lands including Section 33, Township 44 South, Range 43 East. Several parcels of lands, including the natural area and the current site of A.G. Holley Hospital, reverted back to Palm Beach County ownership in 1945 by decree when the County was the plaintiff in numerous tax delinquent cases. Palm Beach County was ultimately granted title to the natural area, and in 1947 it deeded the entire A.G. Holley tract (approximately 160 acres) to the State of Florida Tuberculosis Board for the sum of \$10. Only the South and East 40-foot right of ways were excluded from the property and retained in County's ownership.

The A.G. Holley Hospital and Residential Development – 1940 to 1970

Aerial photographs of the natural area taken in 1940 (USGS 1940) provide a detailed view of the site and its surroundings. They show I-95 and Lantana Road already being constructed and numerous narrow platted and unpaved roads are visible on the photographs within and outside the natural area. The natural communities on the site appear to be disturbed by bisecting unpaved roads. The eastern portion of the site adjacent to North 8th Street appears to be completely cleared of most of the vegetation.

Construction of Southeast Florida State Sanatorium (currently known as A.G. Holley), south of the natural area started in late 1940's. According to the newspapers at that time, the State spent approximately \$4 million dollars for this tuberculosis (TB) facility. Mr. Ross Watson was largely responsible for the construction of the hospital. After serving as director of construction for the State's first TB sanatorium in Orlando, he came to Delray Beach in 1945 where he resumed working for the State Tuberculosis Board as director of construction for the Lantana Sanatorium. The contract was awarded in 1948. The dedication of the hospital by the State Tuberculosis Board was on July 16, 1950 with the expectation that this hospital was going to serve as a model for two additional hospitals planned by the State (Emilie Keyes 1950). The Southeast Tuberculosis Hospital was originally built to serve 500 patients, with living accommodations for the physicians, nurses and administrative staff. It was the second of four state tuberculosis hospitals built in Florida between 1938 and 1952 (Wikipedia 2014). Much of the understory and tree canopy within the area currently classified as scrubby flatwoods was cleared prior to 1953 and again in the early 1960s (USDA 1953 and 1964).

A 1964 aerial photograph (Palm Beach County Property Appraiser 1964) shows a large squared cleared area of approximately 10.7 acres still visible within the scrubby flatwoods community, within the central portion of the site. This cleared cut area corresponds with the outline of the hospital back parking lot, facing north. It appears from current aerials and present site conditions that this once cleared area is defined by a ridge of large sand pines along its edges, spoil piles to

the north, east and west, and by higher elevations in the scrubby flatwoods community compared to the scrub communities. Although this area was heavily disturbed, it recovered almost entirely. The scrub area appeared slowly recovering from past disturbances occurred during the 1940's and 1950's, however the most eastern scrub portion of the site (approximately 4 acres), was still affected by the clearing of the vegetation. The aerial also showed significant residential development occurring across Andrew Redding Road, and on the east side of North 8th St. The current industrial park north of Gator Drive appears to be filled with spoil for future development. To the north of the natural area, where the Lake Worth landfill is located, the construction of the two baseball fields appears to be completed, and a large area between the two fields was scraped down to bare mineral soil. Several survey cuts were visible in the scrub area on the western portion of the landfill. Also, in 1964 the State's TB board granted to the Town the West 50-foot wide right away of the SE ¼ of Section 33, Township 44 South, Range 43 East, for the sum of \$1.00.

In 1969 the Southeast Florida State Sanatorium was renamed after Adrian Glenn- known as A.G. Holley, a Panhandle hardware store owner and a member of the State's TB board (Emilie Keyes 1950). The A. G. Holley was the last of the original American sanatoriums that continued to be dedicated to tuberculosis until its closure. It was also in 1969 that the State TB Board deeded the A.G. Holley property to the TIITF, with the exception of 40-feet south and east of the property for the roads right of way.

With the discovery of drugs to treat tuberculosis patients outside of the hospital setting, the daily census at the hospital by 1971 dropped to less than half of the original 500. By 1976 the beds and staff at A. G. Holley were reduced to serve a maximum of 150 patients. As space became available, other agencies were invited to move onto the complex to utilize the unique environment (Wikipedia 2014). In 1972 the TIITF leased the entire A.G. Holley site to the DOH, with the exception of the previously described right of ways.

Several other changes at the natural area are visible in the early 1970s aerial photographs (Palm Beach County Property Appraiser 1970). A large area of approximately 11 acres in the eastern portion of the natural area was cleared cut again. Two long elevated ridges of fill are visible in the northern and southern part of this impacted area, in an east-west direction. These spoil piles are still present today at the site. The clearing of this area was likely made by the hospital as part of their development. Another 2.2 acres of scrub community was also cleared cut in the eastern portion of the natural area, along the western edge. The area adjacent the entire southern border of the site, where the DOH Health Center parking lot is currently located, was also cleared cut and scraped down to bare mineral soil.

Development, Roadways and Other Disturbances – 1971 to 2011

A 1973 aerial photograph (Palm Beach County Property Appraiser 1973) showed the scrubby flatwoods community slowly recovering in the natural area, along with the western scrub portion of the site. Few disturbed open areas were still visible in the eastern portion. To the north of the

natural area, work on the Lake Worth landfill appeared to be started. Several clearing activities were visible in the northern portion of the A.G. Holley property, likely for the expansion of the hospital facility. From 1977 to 1984, more buildings were added to the hospital property and the surrounding neighborhood. The scrub area on the western portion of the landfill was completely cleared along with the baseball field within the landfill footprint (Palm Beach County Property Appraiser 1977, 1984). In 1977 the DOH partially released a parcel of approximately 5 acres on the southwest corner of the A.G. Holley property, near Lantana Road and Andrew Redding Road. This portion was eventually leased to the Department of Highway and Safety and it is currently housing the Driving License office for the area.

In 1982, the DOH sub-leased approximately 10 acres of the A.G. Holley property to the county for the construction of a sport complex in the scrubby western portion of the natural area, along Andrew Redding Road. The sub-lease was contingent to the establishment and operation of a sport complex within a 3-year timeframe. If the sport complex was not going to be constructed within that timeframe, the property was going to be reverted to the State. Although accounts of this sport complex were not found, it is apparent that this project was never initiated and the site reverted back to the State.

In 1984, a major disturbance occurred in the natural area. In the location where the current management road is, at the edge of the western portion of scrubby flatwoods community, an approximately 400-feet long by 100-feet wide area (in its widest point) was cleared cut in a north-south direction, and potentially excavated. This disturbance might be related to the new construction of several buildings in the northwest corner of the A.G. Holley hospital, south of Southwinds Drive. Current LiDAR elevations show this area ranging from 14.7-feet to 17-feet NGVD, compared to the surroundings scrub elevations ranging from 18 to 20-feet NGVD.

By 1986, the central portion of the scrubby flatwoods and the eastern portion of the scrub area showed the natural communities recovering (FDOT 1986). Visible unpaved trails in the scrub area and around the perimeter are still present today. The open sandy area previously cleared in 1984 was still visible at the western edge of the scrubby flatwoods community. Construction of some new facilities southeast of the natural area, where the current the Flaming Center is located, appears to be already started by this time. The former landfill to the north it was also under construction and many warehouses were added to the industrial park north of Gator Drive.

Aerial photographs taken between 1989 and 1999 indicated that the landfill was fully constructed and eventually closed, and that commercial and residential development significantly expanded around the natural area, especially in the industrial Park north of Gator Drive (Palm Beach County Property Appraiser 1989, 1993, 1995, 1999). In 1989 the DOH subleased approximately 9.4 acres to the County for the construction of a public health unit. The 1991 Florida Department of Transportation (FDOT) aerial photograph showed the DOH Health Center just south of the natural area being constructed along with its parking lot. The access road to the parking lot from Andrew Redding Road was also being built during this timeframe (FDOT 1991). In 1994 the DOH also subleased approximately 22.6 acres in the south portion of the

A.G. Holley site to the Town. This space was used to develop the current baseball fields and recreational complex along Lantana Road.

By 1995 the TIITF obtained another partial release of the A.G. Holley property from the DOH. This 5-acres site is located adjacent to the natural area, on the southeast corner of the site. A 30-year lease with the State of Florida Department of Juvenile Justice (DJJ) was executed on November 1995 for the construction of a correctional half-way house for juveniles. Aerial photographs taken between September 1993 and May 1995 indicated that the half-way house was already built before the execution of the lease (Palm Beach County Property Appraiser 1993, 1995). This lease was modified by the DJJ in 2007, and the entire property was re-released to the TIITF on April 2008. In 2007 the DJJ agreed to relinquish 0.7 acres in the northern portion of this site to the county, to be incorporated in the current Yamato lease no. 4176 with the DSL to be managed as a preserve for Gopher Tortoises; however this option was never proposed to the county. In fact by 2008, the TIITF entered into another lease agreement with the Town for the management and operation of a police department at the existing DJJ facilities and surrounding property. The building however was never occupied by the police department and the property is still vacant. If the opportunity is presented, the county will pursue the acquisition of the 0.7 acre parcel to be included in the state management lease (lease no. 4176 Amendment 1) with the TIITF.

From 1989 to 1999, the natural area recovered its scrub habitats, however, perimeter disturbances associated with construction of roads, and the development of adjacent industrial and commercial properties have caused permanent changes to the native vegetation. Clearing, grading and dumping of spoil material have created disturbed areas along the edges of the property, and areas of disturbed scrubby flatwoods and scrub communities filled with exotics were created as a result of clearing and filling activities in the central and eastern portion of the site, and along the edges of Lantana landfill (Palm Beach County Property Appraiser 1989, 1993, 1995 and 1999).

Other disturbances at the site occurred between 2004 and 2005 by hurricanes Frances and Jeanne in 2004, and hurricane Wilma in October 2005. Subsequent field investigations by ERM staff revealed evidence of tree fall and trees with broken crowns, and that most of the downed trees were sand pines. Aerial photographs from 2005 showed a loss of canopy with toppled or broke off tops of sand pines within the scrub community, and discrete amounts of woody debris visible on the ground. The effects of these storms resulted in a more open area within the scrubby flatwoods community (Palm Beach County Property Appraiser 2004, 2005 and 2006).

Numerous OHV trails have been created on the site over the years. OHV traffic caused damage to the scrubby flatwoods and certain portions of the scrub communities in the eastern and southern portions of the site. Aerial photographs taken between 2006 and 2011 showed visible trails especially in the eastern scrubby area (Palm Beach County Property Appraiser 2006, 2007, 2008, 2009, 2011). OHV users have repeatedly cut the fence in the northeastern corner of the site. These activities have stopped since the County's Wildlife Task force initiated their

surveillance, and fencing of the property was completed in 2013. The natural area had also been known to contain a very large homeless population residing on the site. At the time of acquisition the homeless use of the site had been reduced by local government efforts but it remains a minor concern.

Preservation Efforts and Lease Acquisition– 1989 to 2012

In 1989 the Lantana Scrub site was identified as Ecosite #41 worthy of preservation *Inventory of Native Ecosystems of Palm Beach County* prepared by Florida Atlantic University (FAU) staff and primarily authored by Grace Iverson and Dan Austin (Iverson and Austin 1988). This inventory was the basis of the Environmentally Sensitive Lands Acquisition Program begun with the \$100 million bond referendum of 1991. The site was (and still is) State-owned, totaling approximately 144 acres. Negotiations for acquisition of ecosite #41 from the State were unsuccessful throughout the 1990s.

In 1994 County records indicate that contamination was discovered at the A. G. Holley Hospital facility during removal of a 25,000 gallon above ground tank used to store No. 6 fuel oil. No. 6 fuel oil is exempt from regulation by Florida statutes; however, contamination resulting from a discharge of No. 6 fuel oil must still be cleaned up. The hospital had also eight fuel storage tanks and reported two spills or leaks (Gibson 2005). The FDEP issued a memo stating that the contamination cleanup process should be handled in accordance with Chapter 17-70, Florida Administrative Code (F.A.C.). As a result, the hospital submitted a Discharge Report Form on August 1994 for the No. 6 fuel oil discharge. A warning notice was subsequently issued to the hospital management about the requirements of Chapter 17-70, F.A.C. A.G. Holley Hospital applied for state assisted funding of the No. 6 fuel oil cleanup through the Petroleum Cleanup Participation Program. This program is a cost sharing program with a \$300,000 cap. The responsible party must conduct a limited contamination assessment at their own cost and contribute 25% of subsequent cleanup costs. Due to the proximity of A.G. Holley's own water supply well, the site was assigned a priority score making it immediately eligible for state funding. A.G. Holley Hospital was notified in correspondence from FDEP of their eligibility on August 2003, and again on February 2004. A second petroleum product discharge was reported on October 1999 following removal of an underground diesel fuel generator tank. Low level soil contamination was detected during the tank closure assessment. In 2012, ERM staff verified from the Contamination Clean-up and Monitoring Section of FDEP that the two discharge clean-ups at the site have both been completed, and have received Site Rehabilitation Completion Order letters from the FDEP for the petroleum discharges.

In 2003, the DOH began investigating turning the A.G. Holley Hospital site into a massive medical complex with labs to fight bioterrorism, with state-of-the-art labs and isolation wards for treatment of infectious diseases, including TB and SARS (Severe Acute Respiratory Syndrome). Further discussions included the opportunity for a teaching hospital, housing development, and a hotel and international conference center to be included in the complex.

In 2004, the DOH in conjunction with the Town began to develop a Master Plan for the A.G. Holley campus. The master plan included preservation of approximately 35 acres of Scrub preserve under a long-term lease from the State to be managed by ERM. In August 2004, ERM staff met with officials of the Town and the Chief Executive Officer of A.G. Holley Hospital at that time to discuss the leasing the scrub habitat area, on the north boundary of the site, and managing it as a County Natural Area in concert with several other scrub habitat natural areas in the central County area. In late 2004 and into 2005, the DOH formed an advisory committee made up of representatives from the Town, the hospital, universities with medical schools, local politicians and State legislators. The committee advised and provided guidance to consultants that were hired by the DOH to prepare the Master Plan for the property. ERM staff attended these monthly advisory meetings throughout 2005 and the occasional meetings in 2006. Throughout these many monthly meetings, preservation of the scrub habitat with management by the County through ERM was always agreed upon by all the parties.

In February 2006, at the direction of the advisory committee the County began direct negotiations with the Deputy General Counsel of the DOH about leasing the scrub land from the State. The Master Plan that was finalized in June 2006 and included a scrub preserve across the northern boundary of the site and approximated 35 acres in size. In July 2006, it became evident that the DOH did not have the funding available to implement the Master Plan. The DOH and the Governor's Office announced they were going to investigate bonding to develop the new hospital and would let the private sector build the new respiratory hospital and privatize the hospital and its operation. All negotiations on leasing the land to the County moved to very slow pace until these new studies were completed. In September 2006, the Master Plan was approved, and in November 2006 representatives from the DSL visited the site with ERM staff and provided recommendation for the 35 acres of scrub land to be leased to the County and managed by ERM.

In January 2007, ERM received authorization from DSL to survey the land and develop a legal description and sketch of the scrub property for leasing purposes. From 2007 to 2010 ERM staff pursued the leasing of the property, however, because of budgetary constraints in funding the Master Plan at the State level, several delays occurred.

On January 2011, a new Governor and new department heads at State were appointed and the A.G. Holley hospital site implementation was again delayed. The Town changed the zoning on the site from "Public Use" to "Mixed Use Industrial District". In 2011 the Legislature authorized the closure of the hospital and the sale of the A.G. Holley property.

In December 2012, ERM was able to negotiate the preservation of the scrub tract for environmental purposes and the County entered into a lease agreement with FDEP. The 2012 original lease for Yamato Scrub Natural Area (lease no. 4176) was amended to include the 32.6-acre state-owned tract which is now known as the Lantana Scrub Natural Area.

On March 2014, the Governor and the TIITF Board voted to approve the sale of the A.G. Holley 79.91-acre parcel to Lantana Development, LLC for \$15.6 million. In August 2014, the sale of the property was finalized by the State. Included in the sale are 22.6 acres that the Town is currently subleasing from the DOH for its sport complex, along Lantana Road. This lease is set to expire on December 2024 with no renewable options. The Lantana Town Council has decided to relocate its current baseball fields behind the former hospital, on the 11 acres scrub tract just south of the natural area and adjacent to the Health Unit. The new sport complex will include three baseball fields, two batting cages and two pitches (Alexandra Seltzer, 2014). A new lease agreement until 2048 for this 11-acre parcel was executed by the Town. Although no records of this new lease could be found up to date, it is likely the Town obtained a sublease from DOH to start the planning of these new recreational facilities. Lantana Development LLC will contribute \$2.5 million to the Town to relocate the baseball fields, while the State will contribute \$1 million. That complex has to be built by December 2015 in order for the Town to receive State's funding (Alexandra Seltzer, 2014).

2. PURPOSE AND OBJECTIVES

2.1 PURPOSE OF ACQUISITION

The primary purpose for the acquisition of the natural area was to preserve the site's ecological resources. The acquisition, preservation and perpetual management of this site has and will continue to help protect high-quality examples of scrub and scrubby flatwoods natural communities, their component plant and animal species, and the quality and quantity of local groundwater resources. Acquisition of this site will provide the general public with opportunities for recreational activities, environmental education and scientific research which are consistent with the primary objectives. It has also helped Palm Beach County and the Town comply with portions of their respective comprehensive plans. All portions of the natural area are important to preserving ecological resource values of the site. Because every portion of the site provides habitat for at least one rare or endangered plant species, animal species, or natural community, there are no portions of the property that can be declared as surplus.

2.2 MANAGEMENT GOALS AND OBJECTIVES

The natural area contains moderate to high-quality scrub and scrubby flatwoods native vegetation communities (Figure 4). These communities, most of which can be considered as high-quality within the context of urbanized southeastern Florida, were in a somewhat degraded condition at the time of site acquisition as a result of fire exclusion and suppression, nonnative plant invasions, construction of adjacent and interior roads and trails, excavation and removal of fill materials, OHV traffic, dumping and other human-caused disturbances. The primary goal of site management is to preserve and, where appropriate, restore or enhance the scrub and scrubby flatwoods communities, together with their component species, as described in Section 3.3. Maintaining and improving the ecological quality of these communities is the primary management objective for this site. Management efforts to date have included environmental restoration/enhancement of the scrubby flatwoods and scrub communities, securing the site with fencing, gates and signage, and the implementation of invasive/nonnative plant control programs. Additional management activities proposed for this site include prescribed burning. Habitats for listed species will be managed for the needs of individual species when such management is compatible with the overall management of the ecosystems within the natural area.

The site is managed under the "single-use" concept, which means that it is managed to preserve and restore/enhance the existing natural resource values. Scientific research, environmental education and public outdoor recreational uses are encouraged as secondary management objectives as long as they do not jeopardize the protection of natural resources. Passive, resource-based outdoor recreational uses, such as nature appreciation and study, hiking and photography are allowed throughout the site pursuant to the rules and restrictions contained within the Natural Areas Ordinance, as amended.

The following goals and objectives reflect desired management outcomes that are specific to the Lantana Scrub Natural Area. The objectives are actions or measureable outcomes of management targeted to achieve either short-term goals (achievable within 2 years) or long-term goals (achievable within 10 years).

Habitat Restoration and Improvement

- Goal 1. Create a landscape mosaic of healthy scrub in various stages of regrowth that takes into account the historic vegetation of the site and the needs of the listed species present, and that maximizes species diversity and habitat quality on the site (short-term and long-term).
- Objective A. Conduct prescribed burns within Management Units 1 and 3 (Figure 5) at 15- to 20-year intervals to achieve a diversity of scrub successional stages.
- Objective B. Follow the burn schedule provided in Table 3, and accelerate the schedule if weather conditions, funding opportunities and resources allow.
- Objective C. Implement mechanical vegetative reduction of scrub habitat at least once every 15 to 20 years if fuel levels and smoke management and safety concerns result in extremely limited or unattainable prescribed burn conditions.
- Objective D. Provide habitat for listed species that require early stages of scrub succession and those that require later stages by rotation burning of management units.
- Objective E. Attempt to meet vegetation structure objectives recommended by the Florida Fish and Wildlife Conservation Commission (FWC) and the Florida Natural Areas Inventory (FNAI) in the 2010 Scrub Management Guidelines for Peninsular Florida (FWC and FNAI 2010), or subsequent updated versions, with appropriate adjustments made based on the needs of imperiled species present on the site.
- Goal 2. Maintain and enhance a healthy scrubby flatwoods community (short-term and long-term).
- Objective A. Conduct prescribed burns within Management Unit 2 (Figure 5) at 8- to 15-year intervals to maintain the scrubby flatwoods community on the site.

Objective B. Follow the burn schedule provided in Table 3, and accelerate the schedule if weather conditions, funding opportunities and resources allow.

Objective C. Implement mechanical vegetative reduction of scrubby flatwoods habitat at least once every 8- to 15-years if fuel levels, and smoke management and safety concerns result in extremely limited or unattainable prescribed burn conditions.

Imperiled Species Habitat Maintenance, Enhancement, Restoration, or Population Restoration

Goal 1. Protect and maintain imperiled species at existing population levels (short-term and long-term).

Objective A. Conduct prescribed burns in accordance with the schedule provided in Table 3 to maintain the diversity and health of the plant communities on the site.

Objective B. Monitor the status of imperiled plant species populations in accordance with species-specific monitoring schedules established by ERM.

Objective C. Conduct annual migratory and nonmigratory wildlife species, periodic gopher tortoise surveys and ongoing opportunistic surveys for all wildlife species observed on the natural area. Special care shall be taken to record sightings of imperiled species.

Objective D. Enforce relevant provisions of the Natural Areas Ordinance, such as those dealing with damage to or removal of plants, molestation or harassment of animals, introduction or release of nonnative plants and animals, and prohibition of domestic animals and pets.

Goal 2. Increase populations of imperiled species present on the site or historically present on the site (long-term).

Objective A. Encourage local colleges and universities, governmental agencies, and other appropriate entities to conduct research activities related to imperiled species present on the site, in order to obtain information useful for the management and maintenance of those species and their habitats.

- Objective B. Assist botanical gardens, governmental agencies, and other appropriate entities wishing to conduct restoration activities related to imperiled species present on the site or formerly present on the site, including reintroduction of those species where feasible.

Nonnative, Invasive and Nuisance Species Maintenance and Control

Goal 1. Control nonnative and invasive plant species, and nonnative and nuisance animal species so that they do not significantly impact native communities (short-term and long-term).

- Objective A. Maintain coverage of invasive nonnative plant species at less than 1 percent of the natural area.

- Objective B. Conduct annual nonnative plant treatments

- Objective C. Prevent excessive growth of invasive native vines with annual treatments or as needed.

- Objective D. Monitor the site for domestic and feral cats, coyotes, raccoons and other nuisance and nonnative animals during opportunistic observations and scheduled wildlife monitoring surveys, and remove/control the population of nuisance and nonnative animals as necessary and feasible.

Hydrological Preservation and Restoration

This management objective is not applicable to the Lantana Scrub Natural Area. The natural area does not contain any wetlands.

Cultural and Historical Resources

This management objective is not applicable to the Lantana Scrub Natural Area. No significant cultural or historical resources have been identified on the site at this time. If any cultural or historical resources are identified at a later date, DHR management procedures (Appendix H) will be followed in order to protect these resources.

Sustainable Forest Management

This management objective is not applicable to the Lantana Scrub Natural Area. The natural area does not provide commercial forest resources.

Capital Facilities and Infrastructure

Goal 1. Maintain public use facilities and infrastructure in safe condition (short-term and long-term).

Objective A. Monitor the integrity and condition of facilities on a regular basis once they have been constructed, including the parking lot, concrete nature trail, hiking trails, kiosk, signs, shade shelter, benches, bike rack, fencing and gates.

Objective B. Close unsafe areas to the public immediately upon the detection of a problem.

Objective C. Replace/repair damaged fencing and signage as soon as possible.

Objective D. Replace cracked/damaged infrastructure within six months of detection.

Goal 2. Maintain the overall appearance and aesthetics of the natural area (short-term and long-term).

Objective A. Conduct volunteer events (e.g., trash pickup, trail trimming, plantings, etc.) at least annually.

Objective B. Maintain public use facilities (cleaning of concrete nature trail, etc.) on a biweekly or as-needed basis.

Objective C. Mow management accessways and firebreaks on an as-needed basis.

Objective D. Paint over or remove graffiti from public use facilities on an as-needed basis.

Public Access and Recreational Opportunities

Goal 1. Design, permit (Town) and construct public access and resource-based recreational opportunities within the natural area by 2016, contingent upon annual budgetary funding and appropriations by the BCC (short-term).

Objective A. Design, permit and construct a shade shelter with benches.

Objective B. Complete construction of the hiking trail system.

- Objective C. Design, permit and construct an accessible nature trail from the parking lot to the shade shelter.
- Objective D. Install a natural area entrance/dedication sign, bicycle rack and interpretive kiosk at the pedestrian entrance.
- Objective E. Create one ADA-compliant parking space and six car parking spaces by restriping and signing a portion of the existing Palm Beach County Lantana/Lake Worth Health Unit parking lot to provide vehicular access to the natural area.

Security

- Goal 1. Implement appropriate security and access control measures to prevent unauthorized activities, such as use by OHVs, dumping and off-trail use (short-term and long-term).
 - Objective A. Install and maintain a fence and gate system which is designed to restrict public vehicular access to the designated parking lot and eliminate dumping on the site.
 - Objective B. Install and maintain signage to identify the site as a natural area and to inform the public as to the uses and activities that are permitted and not permitted on the site.
 - Objective C. Continue to fund the Wildlands Task Force to enforce the Natural Areas Ordinance, as amended.
 - Objective D. Provide annual training sessions designed to educate local law enforcement officers about County ordinances related to the protection of natural areas and site-specific security issues.

3. NATURAL AND CULTURAL RESOURCES

The Lantana Scrub Natural Area represents a small remnant of an extensive mosaic of upland communities formerly present along the coast of southeastern Florida. Agriculture, urbanization, road and railroad construction, hydrologic modifications, fire suppression and a host of other human disturbances have eliminated or severely modified the majority of the upland natural communities in this area. With the exception of Lake Osborne, human disturbances have eliminated all freshwater wetland communities in the vicinity of the natural area. The natural area is not a designated area of state concern or under study for such designation, and is not within an aquatic preserve.

Acquisition of sites like the natural area is important because it helps preserve examples of rare natural communities and rare and/or endemic plant and animal species in southeastern Florida. If the goal of preserving these historic remnants is to succeed, however, management of these sites must be conducted in a proactive manner. Managers must recognize that these sites are disturbed fragments of larger historic ecosystem mosaics, and management activities must include the elimination or mitigation of as many unnatural disturbances to the remaining natural communities as possible.

In order to develop meaningful management objectives, policies and procedures, a thorough inventory and assessment of the site's natural resources must be conducted. Information must be obtained on soils; water resources and hydrology; mineral resources; unique natural features; natural communities and their constituent plants; fish and wildlife; listed natural features and species; and outstanding native landscapes. Within these categories, it is critical to identify the disturbance processes that may alter ecosystem structures and functions, and thereby affect long-term management goals. The following sections provide this information regarding the site's natural resources. Every effort has been made to identify information gaps where they exist.

Both the scientific name and the common name of a plant or animal species are provided the first time the species is mentioned in this management plan. After the initial reference, only the common name is used. The scientific and common names of the plants and animals recorded at the natural area are provided in Appendixes A and B, respectively.

3.1 SOILS

Brown et al. (1990) urged caution when using soil maps, even at the scale of county maps, because soil properties are highly variable over the landscape. Despite these limitations, the Palm Beach County soil maps (United States Department of Agriculture, Soil Conservation Service [USDA, SCS] 1978; United States Department of Agriculture, Natural Resource Conservation Service [USDA, NRCS] 2013), are useful tools in determining the historic distributions of natural communities and plants as well as in predicting responses of natural communities to alterations of historic hydrology and fire frequency.

The following descriptions of soil series, soil phases, and vegetation are based on a combination of updated series descriptions available on the USDA, NRCS website (USDA, NRCS undated) and more detailed soil descriptions contained in USDA, SCS (1978). In this plan, scientific names have been added to the descriptions for clarification where possible. USDA, SCS (1989) correlated soil types with ecological communities in Florida, and these correlations are listed for each soil series. USDA, SCS (1989) used a different ecological community classification system than the FNAI system that is used in other parts of this plan.

Although the present tense has been used to describe these soils, most soils in Palm Beach County have been modified by hydrologic manipulations and other disturbances. All of the soils on the natural area have been altered by an increase in the depth from the soil surface to the water table due to regional drainage.

Two soil series are present at the natural area: Paola and St. Lucie (Figure 3). In addition, one soil mapping unit representing artificial soil is present on the site: Urban Land.

3.1.1 Paola

The Paola series consists of very deep, nearly level to sloping, excessively-drained, deep sandy soils in uplands (USDA, SCS 1978; USDA, NRCS undated). Under natural conditions the water table is below a depth of 72 inches (USDA, NRCS undated). USDA, SCS (1989) stated that sand pine scrub was the typical ecological community found on this soil. Scrubby flatwoods also may be found on this soil, especially following disturbance of the natural fire regime. The natural vegetation is described as including sand pine (*Pinus clausa*), slash pine (*Pinus elliottii*), longleaf pine (*Pinus palustris*), sand live oak (*Quercus geminata*), scattered turkey oak (*Quercus laevis*) and bluejack oak (*Quercus incana*) in the canopy, and an understory of cacti, mosses, lichens, fiveangled dodder (*Cuscuta pentagona*), Florida rosemary (*Ceratiola ericoides*) and scattered saw palmetto (*Serenoa repens*) (USDA, NRCS undated). The series is represented at the natural area as part of the St. Lucie – Paola – Urban land complex, 0 to 8 percent slopes (Figure 3).

3.1.2 St. Lucie

The St. Lucie series consists of nearly level to sloping, excessively-drained, very deep, sandy soils on long, narrow, dune-like ridges and isolated knolls near the Atlantic coast (USDA, SCS 1978; USDA, NRCS undated). Under natural conditions the water table is below a depth of 72 inches (USDA, NRCS undated). USDA, SCS (1989) stated that sand pine scrub was the typical ecological community present on this soil. The natural vegetation is described as including sand pine, sand live oak, saw palmetto, dwarf willow (*Salix humilis*), Florida rosemary, pricklypear (*Opuntia* sp.), Dixie reindeer lichen (*Cladina subtenuis*), and sparse clumps of wiregrass (*Aristida stricta* var. *beyrichiana*) and rose natalgrass (*Melinis repens*) (USDA, SCS 1978; USDA, NRCS undated). The series is represented at the natural area as part of the St. Lucie – Paola – Urban land complex, 0 to 8 percent slopes (Figure 3).

3.1.3 Urban Land

This mapping unit consists of soils that have been so altered by dredging, filling, or regrading that the parent soil can no longer be easily recognized (USDA, SCS 1978). It occurs adjacent to and within developed areas. This mapping unit is represented at the natural area by one soil complex, the St. Lucie – Paola – Urban land complex, 0 to 8 percent slopes (Figure 3).

3.2 HYDROLOGY

There are no wetlands on the site, nor does it appear that any wetlands existed on the site prior to regional drainage improvements. The natural area does not contain any drainage improvements nor is it connected to any historic wetland system. Nevertheless, the water table within the natural area has dropped several feet due to local and regional hydrologic manipulations. The first hydrological impact that occurred in vicinity of the natural area was the creation of an inlet near the present-day Lake Worth Inlet in the early 1860s (Vines 1970). The inlet was prone to migrate and close; it was even relocated in 1877 to a different site north of the original cut until the new location also proved to be unstable. In 1918 the Lake Worth Inlet was stabilized at its original location. The creation of the Lake Worth Inlet lowered water levels within the Lake Worth Lagoon from a few feet above sea level before the inlet was created, to sea level following the opening of the inlet. This lowered the water table in the vicinity of the natural area. Drainage systems constructed west of the natural area also lowered the local water table. According to a water surface and shoreline map drawn by Pierce (1970), over fifty percent of the historic surface area of Lake Osborne was lost due to over drainage between 1883 and 1969.

Two water wells located within the A.G. Holley hospital and one near the baseball fields provide potable drinking water and water for irrigation systems associated with the hospital facility and surrounding outbuildings. Due to the highly permeable soils found within the natural area, excessive use of these water wells could lower the water table within the natural area. However, due to the lack of organic matter and the natural depth to the water table, it is not likely that the soil complex found at this site has been greatly impacted by the aforementioned well usage.

Natural ground elevations within the natural area range from approximately 14 feet to just under 28 feet NGVD (SFWMD 2008). The highest elevations are within the scrubby flatwoods community near the southern boundary of the site; the lowest elevations are in the eastern and western portions of the site.

The natural area receives some limited runoff from adjacent roads and parking areas, neither of which have a stormwater drainage system or significant retention swale. Although some runoff may enter the natural area from the adjacent landfill or hospital property during extreme rainfall events, any surface water entering the natural area would quickly percolate into the highly permeable soils found within the natural area.

3.3 NATURAL COMMUNITIES

The following discussion provides a general description of each of the two natural and altered plant communities present on the natural area. Wherever possible, the community descriptions are based upon the FNAI classification system (FNAI 2010) and contain information on the rarity of the community worldwide and in Florida (FNAI 2013). If a community is so altered that it no longer resembles or functions as a natural community (as described by FNAI), an alternative description has been developed to supplement or replace the FNAI community description. The phrase "natural community" is used in this plan, even when a historic community has been heavily modified. Any classification system is artificial, and not all communities in a natural area will fall neatly into discrete classification units.

The plant communities at the natural area represent a mosaic of historic, successional and altered communities. Modifications to the historic natural communities are the result of decades of drainage, fire exclusion, nonnative pest plant invasions, the placement and removal of spoil, OHV use, illegal dumping, road construction and development of adjacent properties. Today, natural communities found at the site include scrub and scrubby flatwoods. There are no beaches or dunes on the property.

The goal of natural communities management is to reverse or lessen the impact of as many of the human-caused disturbances to the natural area as possible, and to restore and maintain as many of the functions and values of the natural communities that historically occupied the site as possible. The two communities on the natural area have been enhanced but more work needs to be done to restore them (see Section 4.5.4). They will be maintained through the implementation of nonnative plant and animal control programs (see Sections 4.5.2 and 4.5.3), through the closure of all old OHV trails that are not part of the management accessway/firebreak system, and through security measures designed to eliminate or reduce OHV use and dumping (see Section 4.7). They will be also maintained through the implementation of a prescribed burn program and/or through mechanical vegetation reduction (see Section 4.5.1).

3.3.1 Scrub

Scrub communities occur on sand ridges along former shorelines and are characterized by very-well-drained soils, a relatively open canopy, a dense-to-open understory layer, and a sparse groundcover layer. Scrub communities are composed of evergreen shrubs, with or without a canopy of pines (FNAI 2010). The signature species – three species of shrubby oaks (myrtle oak [*Quercus myrtifolia*], sand live oak and Chapman's oak [*Quercus chapmanii*]), sand pine and Florida rosemary – are found in scrub statewide. Other typical scrub plant species which occur in Palm Beach County include saw palmetto, threeawns (*Aristida* spp.), hairsedges (*Bulbostylis* spp.), pinweeds (*Lechea* spp.), jointweeds (*Polygonella* spp.), sandyfield beaksedge (*Rhynchospora megalocarpa*) and ground lichens (*Cladina* spp. and *Cladonia* spp.) (FNAI 2010, Wunderlin and Hansen 2011). Animal species found in Palm Beach County that typically are associated with scrub include red widow spider (*Latrodectus bishopi*), oak toad (*Anaxyrus*

quercicus), six-lined racerunner (*Aspidoscelis sexlineata*), coachwhip (*Coluber flagellum*), Florida scrub lizard (*Sceloporus woodi*), Florida scrub-jay (*Aphelocoma coerulescens*), common ground-dove (*Columbina passerina*), yellow-rumped warbler (*Setophaga coronata*), loggerhead shrike (*Lanius ludovicianus*), eastern towhee (*Pipilo erythrophthalmus*), Florida mouse (*Peromyscus floridanus*) and eastern spotted skunk (*Spilogale putorius*) (Bartlett and Bartlett 2003, 2011a and 2011b, Cox et al. 1987; FNAI and FDNR 1990; NatureServe 2013, Pranty et al. 2006).

Scrub is a fire-maintained community (FNAI 2010). Natural fire frequency can range from 5 to 70 years, and is dependent on the dominant plant species – oak scrub has a natural fire interval of 5 to 20 years, sand pine scrub has a fire interval ranging from 20 to 80 years, and rosemary scrub likely burns at intervals of 10 to 40 years. Periodic fire is one of the physical disturbances that help maintain the areas of open sand that characterize typical scrub. Fire is necessary for the growth and proliferation of many of the rare and/or endemic species that are found in scrub communities in Florida.

The density of key species within a scrub canopy often is a reflection of fire frequency. Individual sand pines usually are killed by fire, but replaced through reseeding. It takes nearly 10 years for the replacement stand of sand pines to mature and begin producing new seeds, and sand pines start to die off once they reach 50 years of age (FNAI 2010). Therefore, fires which occur at relatively short intervals (before replacement trees become mature enough to produce seeds) or at relatively long intervals (approaching, or beyond, the normal reproductive life of sand pine) may eliminate sand pines from a scrub community. Similarly, Florida rosemary succumbs to fire and is reestablished from seed. This species requires 10-15 years to reach reproductive maturity and becomes senescent around 40 years of age. As a result, Florida rosemary also may be eliminated from scrub due to too frequent or too infrequent fire. Most of the other scrub species resprout readily from root-shoots following fire.

The scrub community at the natural area will be prescribed burned or mechanically reduced on a 15-to 20-year interval. The scrub community occupies approximately 23.8 acres, or 70 percent of the site (Figure 4), and is predominately sand pine scrub.

The western portion of the scrub community consists of a sparse overstory of sand pines, very densely growing native scrub subcanopy and groundcover species, and almost no open sandy areas. The lack of open sandy areas within this portion of the scrub community indicates that fire has been suppressed for a long time within this portion of the natural area. In contrast, the eastern portion of the scrub community has a relatively open canopy with open patches of white sugar sand, a more open understory layer and a sparse groundcover layer. This portion of the scrub community appears to be a healthy vegetation community because of repeated land clearing that resulted in the sparse groundcover and denuded patches of sand.

FNAI (2013) ranked scrub as G2/S2 - imperiled both globally and in Florida because of rarity or vulnerability to extinction.

3.3.2 Scrubby Flatwoods

Scrubby flatwoods are characterized as having an open canopy of widely-spaced pine trees and a low, shrubby understory dominated by scrub oaks and saw palmetto, often interspersed with areas of barren white sand (FNAI 2010). Scrubby flatwoods will not flood, even under extremely wet conditions (Abrahamson and Hartnett 1990). The principal canopy species in South Florida is slash pine. In Palm Beach County the understory consists of one or more of three scrub oaks - myrtle oak, Chapman's oak and sand live oak - and shrubs typical of mesic flatwoods such as saw palmetto, gallberry (*Ilex glabra*), coastalplain staggerbush (*Lyonia fruticosa*), fetterbush (*Lyonia lucida*) and deerberry (*Vaccinium stamineum*) (FNAI 2010, Wunderlin and Hansen 2011). Grasses and subshrubs include wiregrass, broomsedge bluestem (*Andropogon virginicus*), little bluestem (*Schizachyrium scoparium*), dwarf live oak (*Quercus minima*), shiny blueberry (*Vaccinium myrsinites*), dwarf huckleberry (*Gaylussacia dumosa*), gopher apple (*Licania michauxii*), Chapman's goldenrod (*Solidago odora* var. *chapmanii*), running oak (*Quercus pumila*), coastalplain honeycombhead (*Balduina angustifolia*), narrowleaf silkgrass (*Pityopsis graminifolia*) and October flower (*Polygonella polygama*). Animal species that occur in Palm Beach County and that are typically associated with scrubby flatwoods include oak toad, pine woods treefrog (*Hyla femoralis*), gopher tortoise, six-lined racerunner, eastern diamond-backed rattlesnake (*Crotalus adamanteus*), Florida scrub lizard, northern bobwhite (*Colinus virginianus*), common ground-dove, Florida scrub-jay, eastern towhee and Florida mouse (Abrahamson and Hartnett 1990, Bartlett and Bartlett 2003, 2011a and 2011b, NatureServe 2013).

Due to the relatively sparse ground cover and the presence of open, sandy areas, natural fire frequency in scrubby flatwoods is lower than in other flatwoods communities (Abrahamson and Hartnett 1990). Under natural conditions, this community burns once every 5 to 15 years (FNAI 2010). Scrubby flatwoods tend to burn in a spotty fashion leaving a mosaic of lightly-burned, intensely-burned and unburned areas (Abrahamson and Hartnett 1990).

The scrubby flatwoods community at the natural area will be prescribed burned or mechanically reduced on an 8- to 15-year interval. Although the proposed burn interval is longer than what is typically desired for scrubby flatwoods communities, the proximity of numerous smoke-sensitive areas precludes the more frequent burning of this community. There are 10.2 acres of scrubby flatwoods at the natural area, or 30 percent of the site (Figure 4). The scrubby flatwoods portion of the natural area consists of mature sand pines, slash pines, with a heavy saw palmetto and scrub oak understory.

FNAI (2013) ranked scrubby flatwoods as G2/S2? - imperiled both globally and in Florida because of rarity or vulnerability to extinction. The question mark indicates that the state status is questionable at present.

3.4 PLANTS

A total of 93 species of plants have been recorded at the natural area (Appendix A). Of these, seven are listed for protection or special management by a government agency or FNAI (Table 1). To date, 23 species of plants recorded at the site are not native to the South Florida mainland. These species are discussed in more detail in Section 4.5.2.

Some native plant species recorded at the natural area are habitat-specific, using only one natural community, while others use a variety of natural communities. Therefore, the preservation, restoration, enhancement and management of the variety of natural communities at the natural area are critical to the long-term preservation of plant species indigenous to the site.

3.5 ANIMALS

A total of 54 species of animals have been recorded at the natural area - 2 arachnids, 10 insects, 8 reptiles, 32 birds and 2 mammals (Appendix B). Of these, six are listed for protection or special management by a government agency or FNAI (Table 2). To date, four species of vertebrates recorded at the site are not native to the South Florida mainland. These species are discussed in more detail in Section 4.5.3.

Some native animal species recorded at the natural area are habitat-specific, using only one natural community, while others use a variety of natural communities. Therefore, the preservation, restoration, enhancement and management of the variety of natural communities at the natural area are critical to the long-term preservation of animal species indigenous to the site.

3.6 LISTED SPECIES

3.6.1 Plants

Seven plant species recorded at the natural area have been listed for protection by at least one governmental agency or have been ranked by FNAI (Table 1). These species will be protected as components of the natural communities of which they are a part. All listed/ranked plant species recorded at the natural area will be protected through the implementation of management activities designed to restore, enhance and maintain the natural communities in which they occur; by control/removal of invasive nonnative vegetation at the natural area; by implementing a prescribed burning program; by routing management accessways, trails and other public use facilities away from known populations whenever possible; by relocating plants that cannot be avoided during construction and restoration activities; and by protecting the site from plant collectors. Species known to be susceptible to fire will be protected during prescribed burn activities by one or more of the following actions: having multiple management units, burning only one scrub-dominated management unit at a time to maintain a seed source on the unburned parts of the site, maintaining a mosaic of seral stages on the site, creating temporary firebreaks,

or possibly relocating individual plants to other locations on the site prior to a prescribed burn. Information regarding the monitoring of listed/ranked plant species is provided in Section 7.2.

This section includes a brief description of each listed/ranked species and any species-specific management/protection strategy that will be used to protect that species. The ranks and designations assigned to the species are provided in Table 1. Listed/ranked plant species recorded at the natural area are discussed in alphabetical order by common name.

Banded airplant (*Tillandsia flexuosa*)

This epiphytic bromeliad was recorded at the natural area by ERM staff in 2003, but it has not been observed since. Banded airplant typically is found in hammocks and cypress swamps (Wunderlin and Hansen 2011). Banded airplant is susceptible to fire. This species is becoming rare within the County's Natural Area System and will be protected by avoiding the areas in which the plants occur during mechanical vegetation reduction activities and prescribed burn activities.

Common wild pine (*Tillandsia fasciculata*)

This epiphytic bromeliad was recorded at the natural area by ERM staff in 2003, 2012, 2013 and 2014. It typically is found in cypress swamps, hammocks and flatwoods (Wunderlin and Hansen 2011). Common wild pine is susceptible to fire. Although individual plants may be killed by prescribed burning, it is expected that the regenerating trees and shrubs will be recolonized by airborne seeds drifting in from the unburned portions of the site.

Curtiss's milkweed (*Asclepias curtissii*)

This extremely rare, endemic perennial herb was recorded at the natural area by ERM staff in 2012, 2013 and 2014. It typically is found in scrub (Wunderlin and Hansen 2011), usually in close association with woody shrubs that provide shade (Mondo et al. 2010).

Giant wild pine (*Tillandsia utriculata*)

This epiphytic bromeliad was recorded at the natural area by ERM staff in 2003, 2012, 2013 and 2014. Giant wild pine typically is found in hammocks and cypress swamps (Wunderlin and Hansen 2011). This species is susceptible to fire, and grows mostly in habitats that burn infrequently. Although individual plants may be killed by prescribed burning, it is expected that the regenerating trees and shrubs will be recolonized by airborne seeds drifting in from the unburned portions of the site.

Inflated & reflexed wild pine (*Tillandsia balbisiana*)

This epiphytic bromeliad was recorded at the natural area by ERM staff in 2012, 2013 and 2014. Inflated & reflexed wild pine typically is found in hammocks and scrub (Wunderlin and Hansen 2011). This species is susceptible to fire. Although individual plants may be killed by prescribed burning, it is expected that airborne seeds drifting in from the unburned portions of the site will colonize the regenerating trees and shrubs.

Largeflower false rosemary (*Conradina grandiflora*)

This endemic shrubby mint was initially recorded at the natural area by Florida Atlantic University staff in 1986 (Iverson 1986) and by ERM staff in 2003, 2005, 2012, 2013 and 2014. This small shrub typically is found in scrub and scrubby flatwoods (Gann et al. 2013). It is adapted to fire.

Scrub pinweed (*Lechea cernua*)

This endemic forb was recorded at the natural area by ERM staff in 2003, 2012, 2013 and 2014. Scrub pinweed typically is found in scrub (Wunderlin and Hansen 2011). It is adapted to fire.

3.6.2 Animals

Six animal species recorded at the natural area have been listed for protection by at least one governmental agency or have been ranked by FNAI (Table 2). They include three reptiles and three birds.

The listed/ranked animal species at the natural area will be managed and protected as components of the natural communities of which they are a part. All listed/ranked animal species will be managed and protected through the implementation of management activities designed to restore, enhance and maintain the natural communities used by these species; by establishing a protective buffer zone around any existing nest or rookery, or any nest or rookery that may be discovered in the future; and by the enforcement of anti-poaching regulations. ERM will coordinate with FWC on the management of the site for protection of listed animals.

This section includes a brief description of each listed/ranked species, including the habitats in which it is typically found and the species' primary diet. The ranks and designations assigned to the species are provided in Table 2. Listed/ranked animal species recorded at the natural area are discussed in alphabetical order by common name.

American redstart (*Setophaga ruticilla*)

This migratory warbler was recorded at the natural area by ERM staff in 2012. American redstarts actively glean foliage for insects and spiders, and hover or take long flights to capture

flying insects (Pranty et al. 2006). Fall migrants arrive in Florida between late July and early November, and spring birds pass through between late March and early June (Maehr and Kale 2005). This species does not nest in South Florida (Sherry and Holmes 1997).

Eastern diamond-backed rattlesnake (*Crotalus adamanteus*)

This large, heavy-bodied, venomous snake was recorded at the natural area by ERM staff in 2005. The eastern diamond-backed rattlesnake is a carnivore; its diet is primarily small mammals, ranging in size from mice to rabbits (Bartlett and Bartlett 2003). This species typically occurs in pine woods, palmetto scrubland, coastal strand and the Everglades. It may occasionally be found in gopher tortoise burrows (Ashton and Ashton 2008). Eastern diamond-backed rattlesnake will be protected by educating visitors on the ecological value of rattlesnakes.

Florida scrub lizard (*Sceloporus woodi*)

This small, endemic lizard was recorded by Florida Atlantic University staff in 1986 (Iverson 1986) and by ERM in 2003. The Florida scrub lizard feeds primarily on insects, spiders and small arthropods (Branch and Hokit 2008). Its habitats are sand pine scrub and other xeric habitats where dry, well-drained, deep sandy soils with open patches of unvegetated sand are present (Jackson 1973).

Gopher tortoise (*Gopherus polyphemus*)

This medium-sized terrestrial turtle was recorded on the site by ERM staff in 2012, 2013 and 2014. Gopher tortoises are plant eaters; the bulk of their diet consists of grasses and herbaceous plants and they are known to feed on up to 400 species of plants (Ashton and Ashton 2008). They can travel up to two miles from their burrows to feed on seasonal vegetation such as flowers, fruits and leaves from trees, shrubs and vines, deer feeding plots, or ripe orchard fruits on neighboring properties. They also may eat a variety of other items, such as carrion, small animals, insects and other invertebrates. The gopher tortoise typically inhabits sandhill, scrub, scrubby flatwoods, xeric hammock, pine flatwoods, dry prairie, coastal strand, mixed pine-hardwood communities and a variety of disturbed well-drained habitats (FWC 2012). The gopher tortoise is considered to be a keystone species in upland communities because of the important role that this species plays in relation to other plants and animals. At least 411 species of vertebrate and invertebrate animals are known to use gopher tortoise burrows (Mushinsky et al. 2006).

The proximity of the natural area to numerous smoke-sensitive areas severely limits the use of prescribed fire as a gopher tortoise habitat management tool. In recognition of this, mechanical vegetation reduction activities will be used create open space suitable for gopher tortoises during periods when it is not possible to conduct a prescribed burn (see Section 4.5.1).

Hairy woodpecker (*Picoides villosus*)

This nonmigratory bird species was recorded at the natural area by ERM staff in 2005. Hairy woodpeckers seem to be dependent on fire-maintained pine forests, where they feed on the larvae of wood-boring beetles that become abundant soon after a pine tree is killed (Pranty et al. 2006). This species also may eat other insects, nuts and fruits. It is typically found in pine flatwoods or plantations, mixed pine and cypress forests, and riparian forests. Hairy woodpeckers nest in cavities excavated in live or dead tree trunks or limbs. This species is not known to nest on the natural area. Potential nesting habitat for this species will be protected by allowing dead pine trees to remain standing on the site unless they pose a hazard to the public or land management personnel.

Peregrine falcon (*Falco peregrinus*)

This large migratory raptor was recorded at the natural area by ERM staff in 2014. It feeds on a variety of birds, including ducks, shorebirds and gulls (Pranty et al. 2006). The peregrine falcon inhabits a variety of open, mostly coastal habitats, as well as inland lakes and marshes (Maehr and Kale 2005, Pranty et al. 2006). Florida represents an important wintering area for this species, especially for the Arctic subspecies (Maehr and Kale 2005). This species does not nest in Florida (Pranty et al. 2006).

3.7 MINERAL RESOURCES

There are no known commercially viable oil, gas, or phosphate deposits, or any other mineral resources at the natural area. All known mineral resources rights on the natural area are owned by the State of Florida.

3.8 UNIQUE NATURAL FEATURES AND OUTSTANDING NATIVE LANDSCAPES

Iverson and Austin (1988) divided Palm Beach County into a number of biogeographic regions which correlated with the biological and physiographic features of the County. Along the eastern edge of Palm Beach County, they identified the Present Dune – the area immediately adjacent to the Atlantic Ocean - and the Pamlico Dune Ridge - an area of Pleistocene dunes west of and historically separated from the Present Dune by a series of sloughs, rivers and lakes. The Lantana Scrub Natural Area is located on the Pamlico Dune Ridge.

Within the context of Palm Beach County, the Pamlico Dune Ridge within the Lantana Scrub Natural Area should be considered a unique natural feature. Very few areas exist in the County where the Pamlico Dune Ridge can be viewed in a relatively unaltered state. There are no coral reefs, springs, rapids, caverns, sinkholes, or state- or nationally-designated wild and scenic rivers at the natural area. The entire natural area site should be considered an outstanding native landscape containing relatively unaltered flora, fauna and geologic conditions.

3.9 RESOURCES ON THE PROPERTY THAT ARE LISTED IN THE FLORIDA NATURAL AREAS INVENTORY

A letter from FNAI on the resources that FNAI has listed as occurring on this site is provided in Appendix G. Information on all new listed species recorded at the Lantana Scrub Natural Area will be provided to FNAI, using the form that is available on the FNAI web site.

Both of the intact natural communities present on the natural area have been classified by FNAI (2013) as imperiled (S2) in Florida (scrub and scrubby flatwoods).

Three of the listed plant species found at the natural area are ranked by FNAI (2013) as very rare (S3) in Florida (large-flowered rosemary, banded wild-pine, and scrub pinweed). The other plant species that are listed for protection or special management by a government agency have not been ranked by FNAI (Table 1).

All of the listed animal species recorded at the natural area are ranked by FNAI (2013) as apparently very rare (S3) and imperiled (S2) in Florida. Four are ranked as very rare (eastern diamond-backed rattlesnake, Florida scrub lizard, gopher tortoise and hairy woodpecker) and two are ranked as imperiled (American restart and peregrine falcon).

3.10 ARCHAEOLOGICAL AND HISTORICAL RESOURCES

No archaeological or historic resources are known to be present on the natural area (Bureau of Archaeological Research Division of Historical Resources-personal communication 5/21/2014). Any ground disturbance of previously undisturbed areas will be coordinated with FDHR and the Palm Beach County archaeologist. If any archaeological or historical sites are discovered in the future, FDHR management procedures (Appendix H) will be followed to protect those sites. If human remains are found, the provisions of Section 872.05, Florida Statutes, will be followed to protect those remains. The County will comply with Chapter 267, Florida Statutes, in its management of any archaeological or historic sites discovered on the natural area. If historic resources are found on the natural area, a historic resources protection plan will be developed in consultation with the Palm Beach County Historic Preservation Officer. If future resources permit and funding is appropriated, the County will consider conducting an archival and historical study to determine if anything of historic importance occurred on the property, and conduct a direct archaeological study if the results of the archival and historical study indicate that an archaeological study would be beneficial.

4. MANAGEMENT AND RESTORATION ACTIVITIES

Long-term resource management and restoration of the site began with baseline inventories and assessments of natural communities and listed species described in Chapter 3 of this plan. A survey of this site and adjacent lands was conducted by Florida Atlantic University staff in 1986 (Iverson 1986). In addition, several plant community, and plant and animal species surveys were conducted by ERM staff between 2003 and 2014. The information collected during these surveys was used as the basis for determining the management activities necessary to protect, restore, enhance and maintain the natural resources of the site, and for determining the locations and types of public use facilities for passive recreation that will be installed on the site.

4.1 MANAGEMENT RESPONSIBILITIES

Management activities are primarily the responsibility of the County, with assistance from volunteers from the local community. These activities are coordinated by ERM. A lease agreement for management of the natural area was developed between the County and FDEP in December 2012. Pursuant to the lease agreement, the County is responsible for the installation, repair, maintenance and replacement of all facilities associated with the conservation, protection and management of the site's natural resources, as well as those facilities that are associated with approved resource-based public outdoor activities.

On March 11, 2014, the County and DOH entered into a 25-year Interlocal Agreement which affects a 1.5-acre portion of the natural area (see "DOH Leased Property" in Figure 2). Pursuant to the Interlocal Agreement, the DOH agreed to designate six to eight parking spaces along the northern border of the Health Center parking lot as parking for the natural area. The DOH also agreed to allow the County to build a trailhead for a paved nature trail, a kiosk and bike rack within the DOH-leased property, and to manage and maintain that portion of the DOH-leased property as part of the natural area.

Since this site does not contain commercially-viable quantities of timber, suitable pasture lands or other commercially-viable resources, there is little interest in the site by private land managers. Additionally, there are very few private conservation land managers in heavily-urbanized southeastern Florida. Moreover, the County desires to manage this property to capture the synergistic benefits of incorporating the Lantana Scrub into the management efforts of surrounding natural areas in the County's Natural Areas Program. For these reasons, management will have to be performed by public agencies.

4.2 MANAGEMENT UNITS

The natural area is composed of a mosaic of native plant communities that were originally part of a greater regional mosaic of upland and wetland ecosystems. Since the late 1800s, the natural area has been affected by ongoing direct and indirect human disturbances. These disturbances include the creation of two permanent inlets that greatly affected water levels within the Lake

Worth Lagoon and lowered the regional water table; creation and maintenance of a regional drainage system; deposition and removal of fill materials; fire exclusion and suppression; creation and use of interior dirt trails by OHVs; illegal dumping; isolation of the site from other native lands as lands around the natural area were developed for residential, commercial and industrial purposes; nonnative pest plant invasions; and construction and maintenance of paved roads and utility lines.

The successful management of natural communities on isolated, natural preserves such as the Lantana Scrub Natural Area depends to a great extent on the design of the management units. The natural area is currently divided into three management units, using management accessways and man-made features as boundaries and firebreaks (Figure 5). The management units have been designed to maximize the long-term diversity of natural communities, and native plant and animal species on the site. These units range in size from 7 to 15 acres (Figure 5), and are small enough to allow for safe and practical fire management. A management unit may be subdivided into smaller units in order to facilitate management and/or monitoring activities, or to minimize the effect of smoke on adjacent properties during a prescribed burn.

4.3 MANAGEMENT NEEDS AND PROBLEMS

The primary goal of site management is to preserve and, where appropriate, enhance or recreate native scrub and scrubby flatwoods communities, together with their component species, as described in Chapter 2.

The natural area consists of two fire-maintained ecosystems. However, according to historical aerials it appears that fire has been suppressed on the site for more than 50 years. Restoration of a natural fire regime is necessary to maintain the native, fire-maintained plant communities as well as to ensure the continuance of listed species populations. Fire management is addressed in Section 4.5.1 and in the Fire Management Plan (Appendix J).

The construction of adjacent roads, the repetitive clearing of native vegetation between the late 1930s and the mid 1980s (USDA 1940, Palm Beach County Property Appraisers 1984), spoil deposition and removal, and OHV usage also impacted the natural area prior to its leasing by the County. Many of these activities eliminated native upland vegetation; the affected areas were subsequently invaded by invasive nonnative and ruderal plants. Shortly after leasing the natural area, the County began a concerted effort to remove and control the existing nonnative plants. As of 2014 the County's efforts have reduced the aerial coverage of nonnative plants to less than 15 percent of the site. Ongoing nonnative plant control efforts will be required to further reduce the extent of nonnative plant species and to maintain the site in a healthy vegetative condition. Restoration efforts that have been completed and that are proposed for the site are described in Section 4.5.

Surrounding developments are a perpetual source of new nonnative species invasions. Nonnative plants are present on adjacent properties and some have spread into the site.

Nonnative pet animals [e.g., northern curly-tailed lizards] may have escaped, or been intentionally released, from adjacent and nearby developed properties. Management activities necessary to deal with nonnative plants and animals are addressed in Sections 4.5.2 and 4.5.3.

Human-caused impacts from unauthorized activities such as OHV use and illegal dumping are ongoing management concerns. Both of these activities have occurred on an occasional basis since the natural area was leased to the County. To minimize these prohibited activities, split rail fencing was installed along the western and southern perimeters of the property in July 2013. The following month the existing chain link fence along the northern and eastern perimeters of the natural area was repaired, and access gates were installed in the southwestern and southeastern corners of the property. The County has asked the Town's police department and the County's Wildland Task Force to provide regular patrols of the natural area to help deter the OHV usage and illegal dumping.

4.4 MAINTENANCE

4.4.1 Removal of Debris and Litter

None of the debris located within the natural area was removed prior to its coming under management by the County. All visible debris within the site following its acquisition has been removed by county staff with the assistance of community volunteers. If additional debris becomes visible after a prescribed burn or other management/restoration activity, it also will be removed in a timely manner, unless such removal would cause undesirable damage to natural communities or listed species. The installation and maintenance of perimeter fencing and management access gates has and will help prevent the dumping of trash and hazardous materials on the site. Periodic site cleanups to remove litter will be conducted, as necessary, by county staff with the assistance of volunteers.

4.4.2 Trail Maintenance

Periodic trail maintenance will be performed by county staff and community volunteers. All existing trails that are not necessary for site management, and which have not been incorporated as part of a designated hiking trail, will not be maintained to discourage their use by the public. These unused trails will be allowed to revegetate with native vegetation.

4.4.3 Facilities Maintenance

County staff will be responsible for the maintenance of the hardened nature trail, hiking trails, shade shelter, interpretative kiosk, permanent dedication sign and other signage, fences, gates, bike rack, designated parking spaces within the DOH parking lot and management accessways/firebreaks.

4.4.4 Arthropod Control Plan

No chemical arthropod control methods will be used at the Lantana Scrub Natural Area. There are no wetlands on the site.

4.5 RESTORATION AND ENHANCEMENT ACTIVITIES

The site has been and will continue to be managed in a manner that preserves, restores and enhances the natural resource values. The restoration and enhancement of the natural communities within the natural area has begun. Activities conducted to date include the implementation of an invasive/nonnative plant control program throughout the natural area (see Section 4.5.2), the implementation of a nonnative animal control program (see Section 4.5.3) and the exclusion of unauthorized uses (see Section 4.5.6).

4.5.1 Fire Management

Both of the natural communities found on the site – scrub and scrubby flatwoods - are dependent upon fire for their long-term restoration and maintenance. Given the extensive alterations that have been made to the local landscape, lightning-induced fire cannot be expected to fulfill the fire needs of these fire-maintained communities. In addition, the risk of damage from wildfire is considerable due to the proximity of the natural area to adjoining residential properties and other forms of development. However, it must be noted that the same residential properties and other forms of development that are at risk from wildfire make smoke managements concerns the foremost inhibitor to the reintroduction of fire to the natural area. As such, the use of a combination of controlled, prescribed fire, together with the construction of firebreaks, mechanical fuel reduction and other safety precautions, is necessary to fully achieve the stated management objectives.

ERM has assumed the primary responsibility for prescribed burning. Assistance in the form of firefighting staff and equipment will be requested from Palm Beach County Fire Rescue which has several stations near the natural area. Additional assistance may be provided by Florida Department of Agriculture and Consumer Services' (FDACS), Florida Forest Service (FFS), Palm Beach County Parks and Recreation Department, FWC, The Nature Conservancy (TNC) and trained volunteers. Fire-related safety training is required of all county staff and others participating in a prescribed burn. All prescribed burns will comply with Section 590.125(3), Florida Statutes (Certified Prescribed Burning; Legislative Findings and Purpose).

ERM has written a flexible fire management plan for the natural area (Appendix J). Development of the fire management plan has been coordinated with FFS and FWC. This plan is based on the information about natural vegetation communities and listed species contained in the management plan. The fire management plan takes into consideration surrounding land uses,

safety issues in the event of a wildfire, and the ecological consequences of specific fire management strategies. The overall goal of the fire management plan is to introduce a fire regime (a repeatable pattern of fire with predictable results) onto the natural area that will sustain the fire-dependent communities on the site. Due to the urban development surrounding the Lantana Natural Area, smoke management concerns dictate extremely narrow weather conditions in which prescribed burning may take place. In the event that particular units are unable to be prescribed burned, mechanical reduction of vegetation may be used as a surrogate for fire. Specific objectives for different areas of the site will depend upon site conditions and other management objectives for that area. The plan includes the following general objectives:

- 1) To ensure the long-term existence and viability of the natural scrub and scrubby flatwoods communities found on the site, and the listed plant and animal species present in these habitats.
- 2) To provide viable wildlife habitat for wildlife species that use, or could potentially use, the natural scrub and scrubby flatwoods communities on the site.
- 3) To control the regrowth and regeneration of invasive and nonnative vegetation following treatment or removal activities, thereby assisting in the restoration of disturbed areas.
- 4) To reduce the danger of wildfire by reducing the buildup of fuels that has resulted from the infrequent occurrence of fire in recent decades.

To meet these objectives, the fire management plan contains specific tools and management practices designed to minimize adverse impacts to native vegetation and wildlife, while maximizing the beneficial effects of prescribed burns. One of these tools is the use of firebreaks. A network of created management accessways and perimeter firebreaks has been established to provide permanent firebreaks within the site. These management accessways and perimeter firebreaks serve as the boundaries of three management/burn units (Figure 5) and provide vehicular access for conducting the prescribed burns. Some management accessways/firebreaks or portions of management accessways/firebreaks are used for other management activities, such as nonnative plant control, or as part of the hiking trail system.

Existing trails were used to create the management accessway/firebreak system when possible. New management accessways/firebreaks were constructed as unimproved, natural-surface clearings where existing trails were either not present or not wide enough to meet the goals of the fire management plan. Prior to the construction of a management accessway or firebreak, the area was surveyed to verify that the construction would not adversely impact any listed species. If an adverse impact would occur, the location of the management accessway or firebreak was adjusted to avoid affecting a listed species, or the listed species was relocated elsewhere on the site.

Prior to a prescribed burn, management accessways that will be used as firebreaks will be widened on a case-by-case basis to facilitate safe prescribed burning conditions. These widths can range from 15 to 20 feet when fuels in the unit to be burned are low in height, to widths of up to 50 feet where the unit to be burned is adjacent to homes and other fire-sensitive structures, and/or where high fuel loads are present. Firebreaks which are wider than 20 feet may include a combination of areas that have been cleared of vegetation (bare soil), and areas where the vegetation has been mowed or cut/chopped to approximately 6 to 12 inches in height. Areas used as management accessways/firebreaks will be allowed to regenerate to 13 to 15 feet once the burn is concluded. Areas used solely as firebreaks will be allowed to regenerate completely following a prescribed burn.

Prior to burning a management unit, the unit will be surveyed for fire-intolerant listed plant species. If a fire-intolerant species is found within the unit, individual plants may be relocated outside the burn area. Alternatively, a firebreak may be established around hard-to-relocate species or around larger populations of listed plants. Areas protected by firebreaks created to protect listed plant species will not be burned until the next scheduled burn. These relatively small unburned areas will increase the diversity of the site. Firebreaks for the protection of listed species will be temporary in nature and will be made by cutting vegetation, not by plowing or disking. A permit will be obtained for the relocation of a listed plant species when required.

The fire management plan also takes into account the seasonality and frequency of naturally-occurring fires; the burn schedule is designed to approximate the natural incidence of fire in the site's communities. In general, prescribed fires should be conducted during the early part of the growing season, which extends from March to July. Natural lightning-induced fires normally occur during the growing season. The natural incidence of winter fires generally is low. Prescribed winter fires should similarly be rare in occurrence, to ensure that fire events are synchronized with the fire-adapted life histories and reproductive cycles of resident species. However, where fire has been suppressed for a long period of time and fuel loads have become heavy, prescribed winter fires may be used to begin restoration of a native fire regime. Winter fires generally are cooler and can reduce accumulations of excess fuel while limiting the undesirable destruction of vegetation. On sites such as the natural area, winter fuel reduction fires may be more appropriate, at least in the short term. Backing fires, pre-burn mechanical cutting of dense understory vegetation and other techniques will be used, as needed, for prescribed burns in the natural area in order to reduce fire intensity and decrease smoke generation. Although seasonality of fire is important, prescribed burns will be implemented only when weather conditions allow for favorable smoke management because of the highly-restrictive nature of surrounding smoke-sensitive areas.

A total of three management units have been identified for this site (Figure 5). These units range in size from 7 to 14 acres. All of the management units are scheduled to be treated with prescribed fire. The management units were designed so that fire would be able to burn through ecotones and move in a more natural, spotty fashion across the landscape. The resulting patchwork of burned and unburned stands within a management unit will produce a mosaic of

vegetation at various stages of maturity, thereby maximizing diversity within and among communities. This will provide habitat for individual species that typically use, or may even be restricted to, communities in a particular state of maturity.

The management units are moderate in size, given the safety and logistical constraints affecting this site. Management units must not be so large that control of a prescribed fire and attendant smoke becomes too difficult or uncertain. Depending on the specific conditions and objectives of a burn, a management unit may be further subdivided into smaller subunits for conducting the prescribed burn.

The burn interval for each of the management units was chosen based on the predominant natural community present in that unit. An interval of 15 to 20 years was selected for Management Units 1 and 3 which are dominated by scrub. An interval of 8 to 15 years was selected for Management Unit 2 which is dominated by scrubby flatwoods. Although burn intervals of 5 to 15 years are recommended (FNAI 2010) for scrubby flatwoods communities, the shorter end of the recommended interval is not currently attainable due to resource limitations, and site-specific smoke management and safety concerns that severely limit weather conditions under which prescribed burning may take place. The burn return interval will be shortened if weather conditions, funding opportunities and resources allow.

When the use of prescribed fire is not feasible/permitted, ERM will strive to create a mosaic of natural communities and successional stages, and reduce the risk of catastrophic wildfire through the use of mechanical reduction methods, subject to and contingent upon annual budgetary funding and appropriations by the BCC.

All management units within the natural area are scheduled to be burned within the next 12 years. The proposed burn schedule for the natural area is as follows: Units 2 and 3 in 2016, and Units 1 and 2 in 2026 (Table 3). Using the proposed burn schedule, Unit 2 will be on a 10-year interval and the scrub units will be on a 20-year interval, which will be within the ranges recommended by FNAI (2010). For logistical and ecological reasons, it might be practical to reduce fuels in Unit 2 at the same time that Units 1 and 3 are reduced. Mechanical vegetation reduction may be used as a surrogate for fire if conditions prevent the use of prescribed fire during these times. Based on current knowledge and experience, a single burn or mechanical fuel reduction does little to kill established scrub oaks due to the significant amounts of nutrients stored in their roots. The scrub oaks use a large amount of these stored nutrients and direct them into rapid growth. Approximately 1 year after a burn or mechanical reduction, the resprouting vegetation should be mowed as low as possible. The treated area should be surveyed 2-years post burn or mechanical reduction to see if any additional mowing of scrub oaks is necessary.

A specific burn plan will be prepared for each management unit prior to conducting a prescribed burn. A summary of key information to assist with the development of specific burn plans is provided in Appendix J.

There have been no wildfires since the County took over management of the site. If a wildfire occurs on the site in the future, the appropriate actions will be taken by the authorized fire emergency response agency. Active fire suppression measures will be avoided as much as possible, but will be utilized if deemed necessary by that agency. These suppression measures rely upon the use of heavy machinery and plow lines, and are extremely destructive to vegetation and other natural features. If such measures are undertaken to control a fire, all plow lines will be backfilled after the fire has been extinguished, and disturbed areas will be rehabilitated to the greatest extent possible.

A public education campaign will be developed and implemented for this natural area. This campaign will include informing the adjacent residents and business owners of the necessity and benefits of fire, the safety features of prescribed burning versus wildfires, and the strategies that will be developed to minimize the impacts of smoke on the nearby developed areas. The County will coordinate with the Town, Palm Beach County Fire Rescue and FFS prior to conducting a prescribed burn. If requested, county staff will meet with local community groups such as homeowners' associations to coordinate with residents, provide information on the necessity of conducting prescribed burns, and describe the safety precautions that will be taken to protect adjacent lands.

4.5.2 Invasive/Nonnative Plant Control

Like many fragmented conservation lands in southeastern Florida, the natural area has been invaded by a number of nonnative plant species. To date, 23 species of nonnative plants have been recorded at the natural area – 24.7 percent of the 93 plant species recorded (Appendix A). Many of these species were brought to the site by animals (especially birds), or spread from adjacent residential areas, industrial and commercial areas, or from vegetation piles that were illegally dumped on the site before the County took over management. Many were recorded on the site prior to the implementation of the invasive/nonnative plant control program and may no longer be present. Nonnative plant species are expected to continue to colonize the site from the surrounding residential, industrial and commercial areas; periodic invasive/nonnative plant control treatments will be required to prevent these species from adversely affecting the natural area.

A number of the nonnative, and some native, plant species recorded at the natural area exhibit invasive tendencies. In this management plan, the phrase “invasive plant species” includes the plants designated as Category I (invasive) and Category II (potentially invasive) by Florida Exotic Pest Plant Council (FLEPPC 2013), those designated as noxious weeds or Class I or Class II prohibited aquatic plants by FDACS (2006 and 2008), as well as certain native plants. Invasive plant species have caused substantial disturbances at the natural area in the past, especially in the scrub and scrubby flatwoods natural communities, and around the perimeter of the site. Invasive nonnative plant species pose a serious threat to the natural communities and listed species found at the site, and are a major management concern. At the present time, balsampear (*Momordica charantia*), rose natalgrass, rosary pea (*Abrus precatorius*) and

woman's tongue (*Albizia lebbek*) are considered the highest priority nonnative plant species for removal at the natural area.

Sixteen (69.6 percent) of the 23 nonnative plant species recorded at the natural area are designated as either Category I or Category II species by FLEPPC (2013). A current copy of FLEPPC's list of invasive exotic plant species, sorted by category, can be found at <http://www.fleppc.org/list/list.htm>. Three (13.0 percent) of the nonnative plant species have been designated as noxious weeds by FDACS (FDACS 2006) and two (8.7 percent) have been designated as Class I prohibited aquatic plants (FDACS 2008). All of these species are identified in Appendix A.

Control of nonnative and invasive native plant species has been given a high priority in the management of the natural area. The initial multi-phase invasive/nonnative plant control program began in February 2013 and will be completed by December 2015. Follow-up treatments for invasive/nonnative vegetation will be conducted on an as-needed basis. The site is tending towards maintenance condition. A management unit is considered to be in a maintenance condition when the coverage of invasive plant species does not exceed 1 percent of the canopy or understory layers within any given management year. Although invasive nonnative species are the traditional targets of plant eradication/control activities, invasive native species also can have an adverse impact on fragmented natural communities. If a native plant species begins to have an adverse effect on other native species within the natural area, it may be targeted for eradication/control until such time as the area in which it is located is considered to be in a maintenance condition.

Methodologies used at the natural area to control/eradicate invasive nonnative and invasive native plant species have included mechanical removal methods, herbicidal treatments and removal by hand. The proposed use of prescribed fire also will help control invasive nonnative and invasive native plant species at the natural area. Biological control methods may be implemented in the future if deemed appropriate for the natural area. Ruderal species, which typically are found on open disturbed sites and do not have the capacity to invade functioning natural communities, have been and will continue to be controlled using good management practices, such as prescribed burning and the elimination of unnecessary disturbances.

Mechanical removal methods typically are used to remove accessible, dense stands of highly-invasive nonnative trees such as Australian-pine (*Casuarina equisetifolia*), Australian umbrella tree (*Schefflera actinophylla*), Brazilian pepper (*Schinus terebinthifolius*), earleaf acacia (*Acacia auriculiformis*) and melaleuca (*Melaleuca quinquenervia*). The tree and its root system are mechanically grubbed out and then chipped for on-site use or off-site disposal. Any outlying sprouts or resprouts from root remnants are spot-treated with herbicides. Mechanical methods were used to remove areas of dense of nonnative vegetation throughout the natural area in February 2013.

Herbicidal treatments typically are used to control/eradicate individual and scattered invasive and nonnative trees, shrubs and palms; inaccessible by heavy equipment, dense stands of invasive nonnative trees; and invasive and nonnative vines and groundcover species. Invasive nonnative aquatic plant species that become problematic at the site may be controlled using an appropriate aquatic herbicide. Treatments utilizing herbicides comply with instructions found on the herbicide label, are applied under the supervision of a licensed applicator and employ Best Management Practices for their application.

Herbicidal application methodologies include hack-and-squirt, cut-stump, basal bark, foliar treatments and broadcast spraying. Hack-and-squirt, cut-stump and basal bark methods are typically used to control/eradicate individual and scattered sapling and adult nonnative trees, shrubs and palms. Foliar treatments are used for invasive and nonnative vines, and for small patches of invasive and nonnative grasses, sedges and forbs. Broadcast spraying is primarily used for larger areas of invasive and nonnative grasses, sedges and forbs. Invasive plant species which are resistant to herbicides or which easily resprout from basal mats, roots or vegetative fragments may require repeated herbicide application before the species is eradicated from an area.

Hand removal is used to remove seedlings of invasive and nonnative tree and shrub species. Since tree and shrub seedlings are not reproductive, they are pulled out of the ground and left to decompose on site after the soil has been shaken from the roots of the plant.

Hand removal also may be used in combination with herbicide treatments to treat invasive and nonnative vines, as well as invasive and nonnative plants that are resistant to herbicides. In the case of invasive and nonnative vines, the targeted vine is cut at an appropriate height. The base is then hand-pulled or treated with a systemic herbicide; vine stems are either removed from the supporting plant or left to decompose in the trees. In the case of plants that are resistant to herbicides, hand removal may be used as the sole plant control method or it may be used as a follow up method to remove plants that are still alive following an herbicidal treatment.

Finally, hand removal may be used to help control plant species that readily reestablish from seed (for example rose Natalgrass and thalia lovegrass [*Eragrostis atrovirens*]) or that resprout from roots, cuttings, underground rhizomes, tubers, corms, stems or other vegetative fragments (for example, air potato [*Dioscorea bulbifera*], golden pothos [*Epipremnum pinnatum*], American evergreen [*Syngonium podophyllum*], arrowleaf elephant's ear [*Xanthosoma sagittifolium*] and nightblooming cactus [*Hylocereus nudatus*]). In this latter case, the seedheads and vegetative parts of the invasive nonnative plants are bagged and removed from the site.

4.5.3 Nonnative and Nuisance Animal Control

Nonnative and nuisance (feral and certain native species) animals also can be a problem within sites like the natural area. Populations of nonnative and nuisance animals will be monitored as part of the systematic and opportunistic wildlife surveys. Targeted surveys for nonnative

animals and nuisance may be undertaken if they are necessary to acquire additional information. Nonnative and nuisance animal control programs will be developed and implemented, as necessary, to control species that adversely affect the natural area. Thus far, one invertebrate species - the elongate twig ant (*Pseudomyrmex gracilis*) - and three species of vertebrates - brown anole (*Anolis sagrei*), European starling (*Sturnus vulgaris*) and northern curly-tailed lizard (*Leiocephalus carinatus*) - recorded at the natural area are not indigenous to the South Florida mainland. One vertebrate species that has not yet been recorded at the natural area, but that may become a nuisance in the future is the raccoon (*Procyon lotor*).

The elongate twig ant does not appear to be having a significant impact on the natural area. Therefore no control methods are proposed for this species at this time.

The brown anole occurs throughout peninsular Florida and has apparently become the most abundant anole in South Florida (FWC undated[a]). This prolific species is well-adapted to habitats modified by humans and can live in most inland and coastal habitats, including disturbed areas (FWC undated[a]), Meshaka et al. 2004). Although its primary diet is insects, the brown anole also eats hatchling green anoles; this predation appears to have caused a rapid decline in the population of the native green anole in Florida. The brown anole was recorded at the natural area by ERM in 2012 and 2014. Potential control efforts for this species will be explored in the future if it is determined that it is having a negative effect on the natural area.

The European starling typically is associated with disturbed sites and urban environments, as well as open grassy or agricultural areas (FWC undated[b], Johnson and Givens 2012). This medium-sized songbird is omnivorous; it feeds on a wide variety of invertebrates (such as beetles, insects, earthworms and spiders), as well as seeds, plants and fruits. It is a cavity nester, and can aggressively displace native species such as wood ducks, bluebirds, purple martins, woodpeckers and flycatchers from nest holes in trees, human-made structures and artificial nesting boxes. This species was recorded at the natural area by ERM in 2014. Due to the limited amount of habitat available for cavity-nesters on the site, this species is not expected to have a significant negative impact on native bird species at the natural area.

The northern curly-tailed lizard is a popular animal in the pet trade and individuals frequently are released or escape (FWC undated[c]). This lizard typically occupies open, sandy or rocky habitats, including disturbed areas; it excavates short burrows under rocks, sidewalks and similar materials to provide shelter from inclement weather and to serve as nighttime retreats (Meshaka et al. 2004). It can be found in the coastal portions of Southeast Florida where it inhabits parks, canal banks, seawalls, and urban and agricultural areas. Northern curly-tailed lizards eat invertebrates including beetles, roaches and ants, and may be preyed on by domestic cats and possibly by herons (FWC undated[c], Meshaka et al 2004). This species was recorded at the natural area by ERM in 2014. This species is not expected to adversely affect the natural area; no control methods will be undertaken for this species.

Domestic and feral cats and dogs have not yet been reported on the natural area, but may be

observed in the future given the site's proximity to residential areas. FWC has estimated that there are approximately 5.3 million cats in Florida that spend some or all of their time outdoors, potentially preying on wildlife, and that approximately 2.8 million of those may be feral (FWC 2003). Cats are an increasing problem in natural areas in South Florida because of their predation on birds and small animals. There also is the potential for rabies to spread to feral and domestic cats from infected wildlife. Control of feral and domestic cats will focus on educating the surrounding community, combined with selective live-trapping, if necessary. Any members of the public observed walking dogs on the site will be informed that domestic pets are not allowed on the site and the owners may be subject to citation under the provisions of the Natural Areas Ordinance. The regulatory signs that will be posted on the boundaries of the site and the natural area rules sign that will be posted at the public entrance both will contain a "no pets" statement.

4.5.4 Restoration and Enhancement Projects

The restoration and enhancement of the natural communities within the natural area will be completed by 2015. Activities conducted to date include the implementation of an invasive/nonnative plant control program throughout the natural area (see Section 4.5.2), the mechanical reduction of vegetation to reduce fuel levels and begin to create a mosaic of natural communities and successional stages within the site (see Section 4.5.1), and the removal of large amounts of trash dumped on the site prior to the County's leasing of the site. As of August 2014 mechanical nonnative vegetation removal activities had been completed and 15 volunteer events to collect trash at the site had been completed. Restoration and enhancement activities conducted to date have already begun to restore the scrubby flatwoods and scrub natural communities on the site in terms of biological composition and ecological function. These projects are described in the following sections.

Although no large scale planting is anticipated at the site, scattered planting of native species may occur within the natural area. It will take several years for any plantings to mature and for additional native plants to recruit into the restored and enhanced areas. As a result, it will take several years for the natural area to reach full restoration status.

4.6 SOIL AND WATER CONSERVATION

The St. Lucie-Paola-Urban land complex is listed as a sloping soil and has potential for erosion. More detailed information on the soils present is provided in Section 3.1. The location of this complex is shown in Figure 3. In general, soil-disturbing activities have been, and will continue to be avoided, except for the construction, use and maintenance of management accessways and public use facilities, and restoration and enhancement activities. All areas disturbed prior to leasing of the natural area by the County are being managed to encourage revegetation by native plant species. Any grade changes and bare areas that are created by construction of public use facilities and trails may be stabilized by the use of erosion control fabrics and/or replanting with native vegetation. Management accessways and firebreaks were located to avoid steep slopes

wherever possible, sited to cross the slope at an angle, or located on already-existing sand trails. Because permeability is rapid in most of the sloping soils on the natural area, runoff erosion should not be a problem on the management accessways and firebreaks. If runoff erosion becomes a problem, appropriate measures will be undertaken to stop or control the effects of this erosion. Appropriate silt fencing measures were undertaken for site restoration and facility construction activities with the potential to discharge sediment into surface waters. These measures also will be taken for any future restoration or construction activities on the site. Protection of the only geologic feature within the natural area - the Pamlico dune ridge - will be ensured through the ongoing protection and preservation of this site.

4.7 SECURITY

The Town has the primary responsibility for public safety and law enforcement at the natural area. These responsibilities include routine patrols of the boundaries and the prevention of vandalism, trespass, dumping and damage to the property and natural resources. There is no on-site manager or security guard and no on-site staff residence.

The County also has contracted with the Palm Beach County Sheriff's Office to have Wildlands Task Force deputies conduct extra patrols of the natural area when needed. The Wildlands Task Force is a specially-trained and specially-equipped unit that was formed to prevent illegal OHV use and related activities on the natural areas managed by the County and to enforce the provisions of the Natural Areas Ordinance.

The County's Natural Areas Ordinance regulates public use of the natural area. This ordinance provides for passive recreational activities such as hiking, nature study, and photography; for environmental education; and for scientific research. It prohibits destructive uses such as OHV use, dumping, and poaching of plants and animals. The ordinance gives law enforcement personnel the authority to fine and/or arrest persons damaging a natural area. Except for service animals, no dogs, cats or other domestic animals are permitted on the natural area. Dumping on public lands also is prohibited by state law (state statute 403.413). Chapter 9 of the Code of Ordinances of the Town, Florida also prohibits dumping.

The natural area is open to the public daily from sunrise to sunset. Access hours will be posted at each public entrance.

No vehicles (for example, OHVs, bicycles or skateboards) are permitted beyond the designated parking lot, except to perform the maintenance and prescribed burning activities described in this management plan, and except as authorized by the County's Access Policy for Use of Natural Area Trails and Other Public Use Facilities by Persons with Mobility Disabilities.

In the unlikely event that any unforeseen occurrence, either natural or human-caused, severely alters the natural values of the Lantana Scrub Natural Area, ERM staff will assess the nature of the alteration and will take remedial action to secure and/or stabilize the site if necessary.

Natural events such as fires, floods and hurricanes may shift the ecology of the site from its present condition and cause damage to human-made structures (such as the kiosk, shade shelter, signs and fencing), but in no way would severely limit or eliminate the natural values of the site. The first priority following a natural or human-caused event will be to secure the site with fencing to prevent dumping and vandalism.

The natural area may be closed to public use until the site is stabilized and repairs are made to the structures. The native communities at this site will be managed to naturally regenerate following such an event. The County will inform DSL of the altered condition of the site and future management plans and objectives. If the natural values of the site are severely limited or eliminated, the County and State will discuss future plans for the site. Management practices will be modified to reflect any new conditions at the site, and the management plan will be updated to reflect these changes. All major events affecting the natural communities at the natural area will be discussed in the next annual report to DSL and in the next update of the management plan.

4.8 STAFFING

Because of the low management needs of the Lantana Scrub Natural Area, the relatively small size of the site and its proximity to developed areas, there is no on-site staffing. ERM has created a roving management team that is responsible for management at this site and other county-managed natural areas. The members of the management team have been trained to conduct all levels of management activities, including invasive vegetation control, prescribed burning and monitoring. Volunteers from local citizens' organizations, businesses and schools will provide additional support where feasible and necessary. Currently, no local volunteers have been trained as site stewards. Once site stewards are recruited, they will periodically visit the site and provide reports on its conditions and any problems noted to ERM's volunteer coordinator and site manager.

4.9 COORDINATION WITH ADJACENT LAND MANAGERS

There are no conservation lands located adjacent to or in the immediate vicinity of the natural area. The County will review any proposed land use changes or development plans for properties adjacent to the natural area to ensure the protection of biological communities and to avoid or minimize adverse impacts on listed species, and will work with the Town to try to locate any required preserve areas so that they are adjacent to the natural area.

4.10 PUBLIC OUTREACH, ENVIRONMENTAL EDUCATION AND SCIENTIFIC RESEARCH

ERM has a very active public outreach and environmental education program. To help members of the public become invested in the natural area, volunteer work days/environmental educational events will be held onsite at least once a year. Volunteer activities range from trash

pickups, to removal of nonnative and invasive plant species, to trail maintenance, to assisting with environmental restoration projects. A short, site-specific educational presentation is conducted at the beginning of each volunteer work day to give the volunteers a deeper appreciation for the site they are working on. In addition, ERM staff is available to assist the faculty of local schools in developing educational programs for school use of the natural area. If a volunteer site steward is identified in the future, they will receive training from ERM staff prior to assuming their duties.

Interpretative exhibits will be prepared and installed in a kiosk located adjacent to the parking lot near the natural area public entrance. The kiosk exhibits will provide general information about the natural area, its topographic features and aquifer recharge significance, the natural communities and wildlife found on the site, the protection of listed species and their habitats, restoration projects that have been undertaken at the site, ongoing management activities such as prescribed fire and other interesting information about the site. ERM staff will design and print a trail guide for the site; the trail guide will be available in a brochure box attached to the kiosk. The kiosk exhibits and trail guides will be updated as appropriate, and the exhibits will be periodically changed to provide returning visitors with a more comprehensive view of the natural area.

The natural areas portion of ERM's website includes links to trail guides, photo albums for most natural areas, current management plans, Naturescope programs (if available for that specific natural area), information on how to obtain a free application for mobile devices and maps of the County's natural areas. Each natural area map shows the trail system and main public use facilities that are available at that site. The link to the Lantana Scrub Natural Area management plan will be updated after the plan has been reviewed and approved by FDEP/ARC. Information on Lantana Scrub Natural Area can be accessed at: www.pbcgov.com/erm/natural/natural-areas/Lantana-scrub/. The natural areas mobile map can be accessed at: www.pbcgov.com/erm/mobile-maps.

No specific research needs have been identified for this site. ERM does not anticipate performing any scientific research other than compiling and interpreting the data from monitoring activities, but will allow researchers affiliated with local institutes of higher learning, botanical gardens and government agencies to conduct scientific research on a permit basis.

4.11 CLIMATE CHANGE

The preservation, restoration and enhancement of the Lantana Scrub Natural Area will help address climate change in two ways. First, the preservation and enhancement/restoration of native vegetative communities on the site will help reduce greenhouse gases by converting carbon dioxide to oxygen. Second, the restored/enhanced native vegetation communities within the natural area will serve as a refuge for wildlife that may be affected by climate change-induced habitat losses.

5. SITE DEVELOPMENT AND IMPROVEMENT

5.1 PUBLIC USE FACILITIES AND ACCESS

The natural area is a publicly-owned preserve and is operated as a natural resource-based, passive outdoor recreational site. It also is available for environmental education and scientific research. The proposed public uses have been carefully chosen, and will be designed and located so as to not have a significant impact on any of the rare and endangered plants, animals and natural communities found on the natural area. At the same time, these public uses will provide for adequate public passive recreational opportunities such as nature appreciation and study, photography and hiking.

The natural area will be open to the public during daylight hours, unless a special, after-hours use permit has been issued. The hours of operation will be posted at the entrance to the nature trail. The natural area parking lot, which will be created out of a portion of the existing DOH parking lot, will not be gated.

The major structures and improvements proposed for this site are described in the following sections and shown on Figure 6. These structures and improvements will help the County, Town and State achieve their goals of preserving and restoring the natural resources of the natural area, while providing for compatible public uses. The concrete nature trail, shade shelter and parking lot will comply with ADA requirements. The cost to design, permit and construct/install the County-managed public use facilities and signage will be approximately \$XXXXXX (in 2014 dollars). The County will be responsible for maintaining all public use facilities, fencing and signage on the natural area, including those located within the DOH-leased portion of the natural area (Appendix I).

All public access to the natural area will be via Southwinds Drive and the existing DOH parking lot (Figure 6). A portion of the DOH parking lot north of the Health Center will be used to create a parking lot for the natural area. Eight existing parking spaces will be restriped to create one ADA-compliant parking space and six regular parking spaces (Figures 2 and 6). A minimum 5-foot-wide concrete path will connect the ADA-compliant parking space to the kiosk and entrance to the concrete nature trail. A bicycle rack will be installed adjacent to the parking lot to encourage visitors to ride bicycles to the natural area.

Approximately 0.9 mile (total-length) of designated pedestrian trails will be created on the site (Figure 6). An approximately 0.4-mile-long accessible nature trail and 0.5-mile-long natural-surface hiking trail will be constructed within the natural area. All of the trails will be accessed from the parking lot.

The concrete nature trail will begin at the kiosk and will run in an easterly direction into the adjacent scrubby flatwoods and scrub communities. It will end in a small loop; a shade shelter with two benches will be constructed along this portion of the trail. The nature trail will be a

minimum of 5 feet wide to accommodate wheelchairs and other mobility devices. Trail markers will be placed at various points along the nature trail with station numbers corresponding to descriptive information in the printed trail guide.

An approximately 0.5-mile-long natural-surfaced hiking trail will begin near the start of the nature trail (Figure 6). The trail will run north into the scrubby flatwoods community; it will then turn in an easterly direction to join the nature trail in the scrub community. Portions of the natural-surfaced hiking trail will be co-located with management accessways/firebreaks and will be maintained in accordance with the standards set forth for those uses (see Section 5.4). The portions of the hiking trail that are not co-located with management accessways/firebreaks will be maintained either by hand at a width of 3 feet, or by periodic mowing with a small tractor with a bush hog mower at a width of 6 feet. The hiking trail system will not be improved or marked for interpretive purposes. All management accessways/firebreaks also are available for foot traffic, but will not be improved or marked for interpretive purposes.

All of the trails will be constructed on existing paths and trails, and within disturbed areas whenever feasible. Public use of existing secondary trails leading off designated hiking and nature trails, and management accessways/firebreaks will be discouraged by appropriate signage and vegetative barriers, by not maintaining these secondary trails, and by encouraging the regeneration of native vegetation in these trails.

All improvements and major land alterations will be done in compliance with applicable local, state, regional and federal laws and regulations. All required licenses and permits were and will be obtained prior to the commencement of any construction, native vegetation removal, or major land alterations on the natural area.

5.2 FENCING AND GATES

The site has been fenced to help control/eliminate sporadic incidences of undesirable OHV traffic, the poaching of native plants and wildlife from the site, and the dumping of trash. In July 2013 the existing, dilapidated, chain link fence along the western and southern borders of the natural area was removed and replaced with a 4-foot-tall, three-hole split rail fence with wire backing. The following month the existing chain-link fence along the northern and eastern border of the property was repaired. Two management access gates were installed: one 12-foot-wide steel bull gate was installed in the southwest corner of the property, and a pair of 4-foot-tall galvanized chain-link gates was installed in the southeast corner of the site.

5.3 SIGNS

A double-sided entrance sign will be installed near the entrance to the nature trail. It will state that the natural area is “Owned by the State of Florida and managed by Palm Beach County for environmental preservation and passive public recreation”.

Regulatory signs have been posted at each corner of the natural area and every 500 feet along the perimeter of the natural area. The signs state that the Lantana Scrub Natural Area is a protected natural area and cite the appropriate County ordinance. A welcome sign, “No Pets Allowed” sign and “Wildlands Task Force Patrol Area” sign will be installed adjacent to the kiosk. Access hours, “Foot Traffic Only” and “No Bikes Allowed” signs will be installed near the entrance to the nature trail. Signs which direct the public towards the natural area will be installed at the intersection of Lantana Road and Andrew Redding Road, and on the southeast and northwest corners of Andrew Redding Road and Southwinds Drive. Signs also will be installed along management accessways within the site to notify pedestrians when they are approaching either the hiking trail or nature trail.

A “No Trash Area” sign will be installed adjacent to the natural area parking lot. Trash receptacles will not be provided at the natural area for several reasons: 1) ERM believes the lack of trash receptacles encourages people to minimize and recycle their trash as much as possible; 2) the use of trash receptacles within natural areas tends to draw wildlife into areas where they may come into conflict with, or be fed by, members of the public; 3) some people use the trash receptacles as their personal “dumpsters” - they empty all the trash from their vehicles into the receptacles - which leaves little or no room for other trash; 4) people continue to place trash into and around trash receptacles even after they are full resulting in unsanitary/unsafe conditions for other visitors and wildlife, and trash which is left around full receptacles then blows into the adjacent natural communities; and 5) ERM has found that removal of trash receptacles from County-managed natural areas does not increase the amount of trash/litter that is found on any given site.

A nature trail guide will be developed. Paper copies of the guide will be available in a brochure box attached to the kiosk and an electronic copy will be able to be downloaded from ERM’s website. Signposts will be installed at various points along the nature trail, with station numbers corresponding to descriptive information in the trail guide.

5.4 MANAGEMENT ACCESSWAYS/FIREBREAKS

Management accessways are primarily used for resource management and on-site monitoring, although portions of these accessways may be incorporated into the hiking trail system. Management accessways provide numerous benefits, including more rapid access in the event of a wildfire, protection of adjacent developed areas from wildfire, and facilitation of the monitoring of dumping and other illegal activities along the natural area’s edge. Initially, the management accessways on this site will be cleared areas with an unimproved sand/dirt surface that will be approximately 15 to 20 feet wide. Following their initial clearing management accessways will be maintained at a standard maintenance width of 13 to 15 feet, except when used as a firebreak. This width will efficiently and effectively provide safe passage for vehicles and equipment. Routine maintenance of the management accessways will be accomplished by periodic mowing. Disking of management accessways will occur only around management units where a prescribed burn is planned in the near future, or where a management accessway borders

a developed area and a firebreak disked to produce bare mineral soils is needed for safety reasons.

A management accessway/firebreak system has been established around the perimeter of the natural area. The management accessways/firebreaks between each of the three management units within the natural area will be located as much as possible on existing paths, trails and disturbed areas on the site. Prior to construction, all management accessway/firebreak locations are surveyed for listed species. If listed species are likely to be impacted by the management accessway/firebreak construction, the accessways/firebreaks are rerouted wherever possible, or the listed species are relocated elsewhere on the site. Additional firebreaks may be established within management units to create smaller burn units.

5.5 OTHER STRUCTURES AND IMPROVEMENTS

No structures or improvements are planned for the site other than those described in Section 5.1.

5.6 PRIORITY SCHEDULE FOR MANAGEMENT AND RESTORATION ACTIVITIES

A priority schedule for completed and proposed management and site development activities is provided in Table 3. Initial invasive/nonnative vegetation removal activities, including the mechanical removal/reduction of certain nonnative vegetation, have begun. Fencing and gates were purchased and installed along the western and southern perimeter of the site, existing fencing along the northern and eastern perimeter of the site was repaired, and perimeter management accessways/firebreaks have been cleared. A fire management plan has been prepared and a prescribed burn program is scheduled to be initiated in 2016.

Public use facilities are currently scheduled to begin construction in 2015 (contingent upon annual budgetary funding and appropriations by the BCC) and are expected to be open to the public in 2016. One nature trail and one hiking trail will be constructed. A portion of the existing DOH parking lot will be modified to provide parking for the natural area, and one bicycle rack and one kiosk with interpretive displays and brochure box will be installed.

An updated management plan will be due to the state in 2025.

6. COST ESTIMATES AND FUNDING SOURCES

Funding for the development, restoration and management of the Lantana Scrub Natural Area has and will come from the Palm Beach County Natural Areas Fund, Palm Beach County Natural Areas Stewardship Endowment Fund, Ag Reserve Land Management Fund and/or Palm Beach County General Fund. The Town has the primary responsibility for public safety and law enforcement within the natural area. The County has sole responsibility for site development, restoration and management of this site. Staffing for habitat management and facility maintenance will be accomplished with existing county personnel, with assistance from site stewards, county contractors and community volunteers.

Initial capital costs for nonnative vegetation removal, wildfire mitigation, and site security and development are estimated to total approximately \$ [REDACTED] (in 2014 dollars). Actual and estimated costs for initial capital expenditures and long-term management are provided in Table 4. Expenditures to date have totaled \$151,073 and include initial invasive/nonnative vegetation removal/control activities; installation of fencing, regulatory signs and gates; site security; and construction of perimeter management accessways/firebreaks. The cost to construct the proposed public use facilities (including a 7-car parking lot, with one ADA parking space, a kiosk with interpretive and/or informational display, an approximately 0.4 mile-long nature trail and 0.5-mile-long natural-surfaced hiking trail, a small shade shelter with two benches and a bike rack); construct interior management accessways/firebreaks; complete initial nonnative vegetation removal/control activities; complete initial wildfire mitigation activities; and install additional signage will be approximately \$ [REDACTED] (in 2014 dollars). All of these proposed activities are subject to and contingent upon annual budgetary funding and appropriations by the BCC.

Annual maintenance and operation expenses for the next 10 years are estimated to be \$ [REDACTED] (Table 4). Costs of management will be minimized through the cooperation of local citizens' and nonprofit organizations, businesses, schools, and individual volunteers, and by coordinating the management of natural areas on a countywide basis. However, it is recognized by the County that the management of this natural area will require more than volunteer assistance. Some activities, such as prescribed burning and mechanical fuel reduction, herbicide application, operation of chain saws, and other hazardous or extremely technical operations, are not suited to volunteers. The County will provide such services, or assistance from contractors will be obtained where necessary. Maintenance of the public use facilities, ongoing invasive/nonnative vegetation control/removal activities, and other planned management activities on the natural area are subject to and contingent upon annual budgetary funding and appropriations by the BCC.

The County has established a Natural Areas Stewardship Endowment Fund. Funds received from restricted gifts and other sources are invested, and the interest earned is used to provide operating funds for management of county-owned and county-leased natural areas. The County also may apply for funds available from the Pollution Control Recovery Trust Fund administered

by FDEP. In addition, funds are available as provided in Article 14, Chapter C (Vegetation Preservation and Protection) of the Palm Beach County Unified Land Development Code. Fees collected from violations of the provisions of this section will be deposited into the Natural Areas Fund, and can be used for the management of lands acquired or leased by the County as natural areas. Monies from the sale of development rights on lands purchased by the County as natural areas, as well as monies received from leases of county-owned land in the Agricultural Reserve, also are potential sources of funds for management purposes. Even with these possible funding sources, the County recognizes the need for additional management funds. ERM will investigate all possible local, state, or federal sources of land management funds. The County will not apply for funds from any grant program whose requirements conflict with the terms and conditions of the lease agreement. Any fee received by ERM from any public or private entity for projects to offset adverse impacts to imperiled species or their habitats will be deposited into the Natural Areas Fund and used to restore, manage, enhance, repopulate or acquire imperiled species habitat and to implement land management plans for sites with such habitats.

7. MONITORING AND REPORTING

The public uses permitted on the site by Palm Beach County will be carefully chosen and designed so as to not have a significant impact on any of the rare and endangered plants, animals, and natural communities found on the natural area. No specific carrying capacity has been determined for this natural area. The site is managed specifically to promote natural resource values. In general, the size of the parking lot and restricted public access points are the limiting factors in controlling public usage. No OHVs, bicycles, domestic animals or pets are allowed past the parking lot/trailhead, so impacts from these sources are minimal. Except for management purposes, all human traffic within the natural area is by foot. As of October 2014, there was one geocache on the site. This recreational activity does not appear to be having any effects on the natural area. The effects of human impacts on the site will be determined through implementation of the monitoring program described in the following sections.

Photomonitoring, vegetation, wildlife and climate change monitoring programs will be initiated for the natural area in 2015; opportunistic wildlife surveys have been conducted since 2012. The purpose of these monitoring programs is to determine whether the stated management and restoration objectives for natural vegetation communities and listed species are being achieved. Results of the monitoring program will be used to evaluate the success of prescribed fires and/or mechanical vegetation reduction activities, invasive/nonnative plant treatments, and other restoration and management efforts at the natural area. The monitoring program and management practices will be adjusted if an analysis of the monitoring data indicates that management objectives are not being met. If an analysis of monitoring data indicates that public uses are having a negative impact on vegetation and/or wildlife populations, a carrying capacity or additional use restrictions may need to be established for the site.

A series of monitoring protocols has been developed to ensure consistency in monitoring activities on all natural areas managed by ERM. Copies of these protocols are available upon request. The types of monitoring that will be conducted on the natural area are summarized in the following paragraphs. The monitoring requirements and procedures contained in this chapter are based on the monitoring protocols in existence as of October 2014; if any of the monitoring protocols are amended or revised prior to the initial update of this management plan, the monitoring requirements contained in this chapter will be revised so that they are in compliance with the newly approved monitoring protocols. Monitoring data will be used to prepare ASE reports (see Section 7.6).

7.1 PHOTOMONITORING

The primary objective of photomonitoring is to obtain a qualitative, long-term visual record of changes in vegetative composition and/or condition over time, including the effects of planned management and restoration activities. Photomonitoring also may be used on a short-term basis to document changes in vegetation coverage which are related to specific restoration or management activities, such as the mechanical removal of invasive/nonnative vegetation, ditch

filling/plugging, recontouring of areas which have been mined or filled, and prescribed fire; or to document changes related to natural events, such as wildfires and tropical storms/hurricanes.

Photomonitoring will begin at the natural area in 2015 and will be performed annually. At least one permanent photomonitoring station per management unit will be established in an area where planned management or restoration activities are anticipated to occur or in an area in which natural vegetation succession of management interest is expected to occur. Additional photomonitoring stations may be established to adequately monitor a particular event (for example, extreme high water conditions, mechanical invasive/nonnative vegetation removal, a wildfire, etc.). When a management unit is burned, changes in vegetation will be measured with photos taken pre-burn, immediately post-burn, and at 3, 6 and 12 months post-burn.

The location of each permanent monitoring station will be recorded with a global positioning system (GPS) receiver which uses satellite signals to determine the longitude and latitude of a particular spot to an accuracy that can be within one meter. The location of each station also will be clearly described on a photomonitoring form, along with any additional reference points (such as trees, structures, or other unique features) used to help staff locate the station in the field.

One set of color images will be taken at each photomonitoring station during each monitoring phase. These images will then be combined into a panoramic photograph using digital imaging software and stored electronically with the name of the site, the management unit number and the station number. Each panoramic photograph will be centered on a predetermined and repeatable compass heading. A reference collection of all images taken is maintained by ERM and used when the ASE reports are prepared.

7.2 VEGETATION MONITORING

Any plant species observed on the site that is listed as endangered or threatened by USFWS (undated), is listed as endangered by FDACS (2004), or is assigned a state rank of S1, S2 or S3 by FNAI (2013) will be surveyed annually or biennially in order to track population trends. Additional surveys may be conducted if it is determined that such surveys are necessary to document changing site conditions or the effects of significant events or land management activities, such as prescribed burns. If the population of a species is too large to practically count all individuals, a representative portion of the population will be surveyed. Locations of individual plants or groups of plants will be mapped with a GPS receiver. A species-specific monitoring plan may be developed for an endangered plant species when more intense monitoring is needed due to regulatory requirements or management information needs, or because the species is highly endangered or suspected to be declining.

Species listed as threatened by FDACS (2004) that have a widespread distribution or species that are commercially available will be monitored at least once every 5 years to determine if those species are still present on the natural area. Special surveys with specific objectives may be conducted as needed to document changing site conditions, the effects of a land management

activity such as a prescribed burn, or the impacts of a significant natural event such as a hurricane, wildfire, pest, disease or invasive species.

7.3 WILDLIFE MONITORING

At least one migratory/nonmigratory point count station will be established in each of the three management units. Migratory bird surveys and nonmigratory wildlife surveys will be conducted on a biannual and annual basis, respectively, beginning in 2015. Opportunistic wildlife surveys have been conducted at the site since 2012. Data collected during these surveys will be used to determine what effect, if any, public recreational uses, and management and restoration activities have on resident and migratory wildlife populations at the natural area.

Migratory bird surveys will be conducted biannually when migratory bird species are expected to be present – September through October (fall) and February through May (spring). Nonmigratory wildlife surveys will be conducted annually from June through August. Surveys will occur in the morning, beginning as soon as it is light enough to see a distance of at least 200 meters (approximately 660 feet) and ending no later than four hours after official sunrise. All surveys will be conducted in a manner that is largely repeatable in order to obtain information that can be compared from year to year. Survey information will include qualitative and quantitative observations of animals, tracks, burrows/nests or other signs. Opportunistic wildlife surveys are conducted during other monitoring events and routine site maintenance activities. Special care will be taken to record all sightings of imperiled species.

Any animal species recorded at the site that is listed as endangered, threatened, or of special concern by USFWS (undated) or FWC (2013), or is tracked by FNAI (2013), will be recorded as being present on the site. A species-specific monitoring plan may be developed for any endangered animal species that is recorded as breeding on the site, if deemed necessary/feasible by the site manager.

Regularly-scheduled species-specific monitoring will be conducted at the natural area for one species - the gopher tortoise. A baseline gopher tortoise monitoring will be conducted in 2015. Gopher tortoise surveys will be conducted biennially from March through October. The survey methodology used at the natural area will follow the protocol described in Appendix 4 of the FWC Gopher Tortoise Permitting Guidelines (FWC 2008, revised 2013).

7.4 HYDROLOGICAL MONITORING

Since there are no wetlands, hydrological monitoring will not be conducted at the site.

7.5 CLIMATE CHANGE MONITORING

All of the monitoring information gathered on the site will be evaluated for changes that may be the result of climate change. If changes in rainfall patterns and/or vegetation communities are noted over time, staff will attempt to mitigate for these changes if possible. If the changes

cannot be mitigated for, county staff will modify its management practices to provide the highest quality vegetation communities practicable under the new climate conditions.

7.6 ANNUAL REPORT

ERM will prepare an ASE each year in October. A copy of the ASE will be submitted to DSL. Each ASE will include information related to structural improvements, natural events, management activities and restoration activities which occurred during the prior year, as well as the degree of success of any management and restoration activities relative to the stated management goals for the site. The ASE will include a description of any changes to the monitoring plan that occurred during the prior year, as well as recommendations for future management actions for the natural area. A general review of management efforts related to natural vegetation communities and the status of listed species also will be completed at the end of each management year and included in the ASE.

The ASE also will be the vehicle through which detailed information on the management of the natural area will be shared with other ERM staff, including any new or current employee who may be assigned as the site manager. ASEs will provide information that will be used in conjunction with data stored in the NRS portion of ERM's Environmental Enterprise Database to allow staff biologists, ecologists and engineers to analyze and evaluate the success of staff management activities on the natural area over a period of years. ASEs will provide the basis for trend analysis of site data that will be performed at least every five years by staff.

Information on all listed species described in the management plan and all new listed species observed on the Lantana Scrub Natural Area will be provided to FNAI on an annual basis, using one of the forms that are available at <http://www.fnai.org/fieldreportingforms.cfm> or as otherwise requested by FNAI.

8. COMPLIANCE WITH STATE AND LOCAL GOVERNMENT PLANS

The public uses proposed by Palm Beach County have been carefully chosen and will be designed so as to not have a significant impact on any of the rare and endangered plants, animals, or natural communities found on the Lantana Scrub Natural Area. At the same time, these proposed public uses will provide for adequate public passive recreational opportunities such as nature appreciation and study, photography and hiking. The facilities also will be available for environmental education, and will be constructed in a manner sensitive to aesthetic considerations. The County believes that the proposed public uses will comply with the 1981 Conceptual State Lands Management Plan, particularly the provisions regarding balanced public utilization.

This management plan was submitted to the Town for review and comment. The Town has provided a letter (Appendix K) confirming that this management plan is in compliance with the Town's Comprehensive Plan.

9. ACRONYMS

ADA - Americans with Disabilities Act
AIWW – Atlantic Intracoastal Waterway
ATV – all-terrain vehicle
BCC – Palm Beach County Board of County Commissioners
DJJ - Department of Juvenile Justice
DSL - Division of State Lands
ERM - Palm Beach County Department of Environmental Resources Management
ESLAAC – Palm Beach County Environmentally Sensitive Lands Acquisition Advisory Committee
FAC – Florida Administrative Code
FAU – Florida Atlantic University
FDACS - Florida Department of Agriculture and Consumer Services
FDEP - Florida Department of Environmental Protection
FDHR - Florida Department of State, Division of Historical Resources
FDOT – Florida Department of Transportation
FEC – Florida East Coast Railway
FFS - Florida Forest Service
FLEPPC - Florida Exotic Pest Plant Council
FNAI - Florida Natural Areas Inventory
FPL- Florida Power & Light Company
FWC - Florida Fish and Wildlife Conservation Commission
GIS – geographic information system
GPS - global positioning system
NAMAC - Palm Beach County Natural Areas Management Advisory Committee
NGVD - National Geodetic Vertical Datum
NRCS – Natural Resources Conservation Service
OHV – off-highway vehicle
SCS – Soil Conservation Service
SFWMD - South Florida Water Management District
TB – Tuberculosis
TIITF – Trustees of the Internal Improvement Trust Fund
TNC – The Nature Conservancy
USACE – United States Army Corps of Engineers
USCGS – United States Coast and Geodetic Survey
USDA – United States Department of Agriculture
USFWS - United States Department of Commerce, Fish and Wildlife Service
USGS – United States Geological Survey

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11. FIGURES

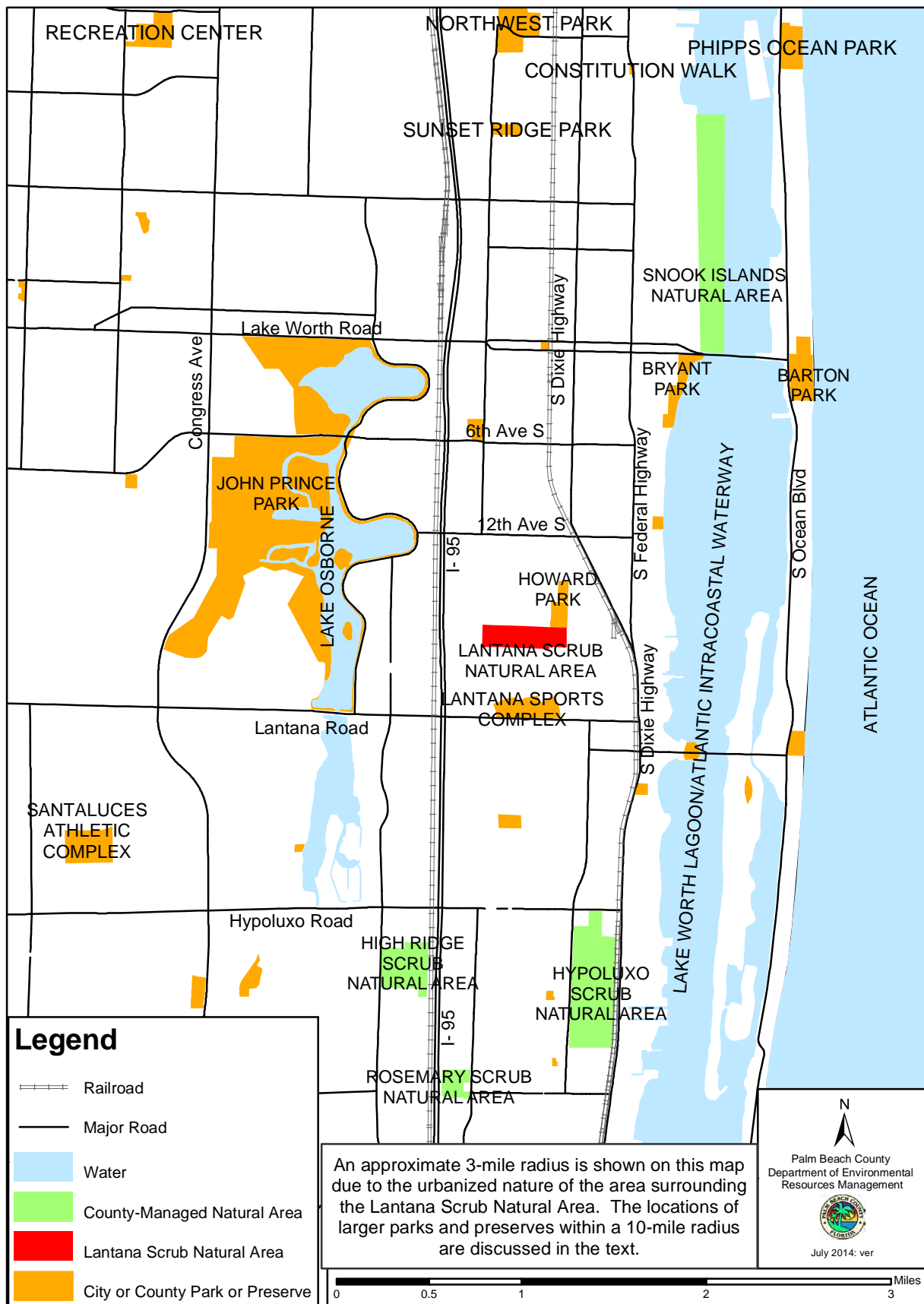


Figure 1. Lantana Scrub Natural Area Location Map

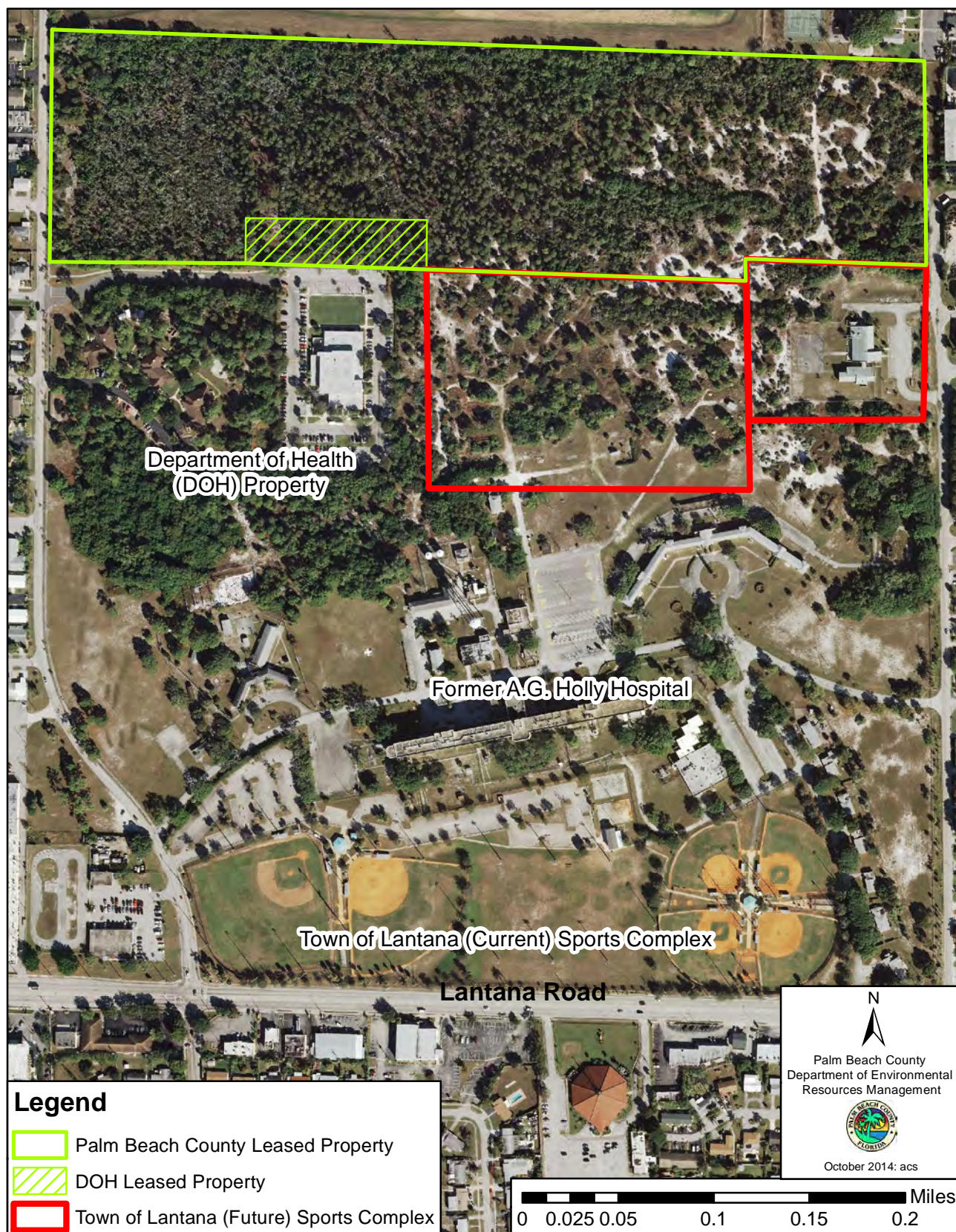


Figure 1a. Land Uses South of Lantana Scrub Natural Area

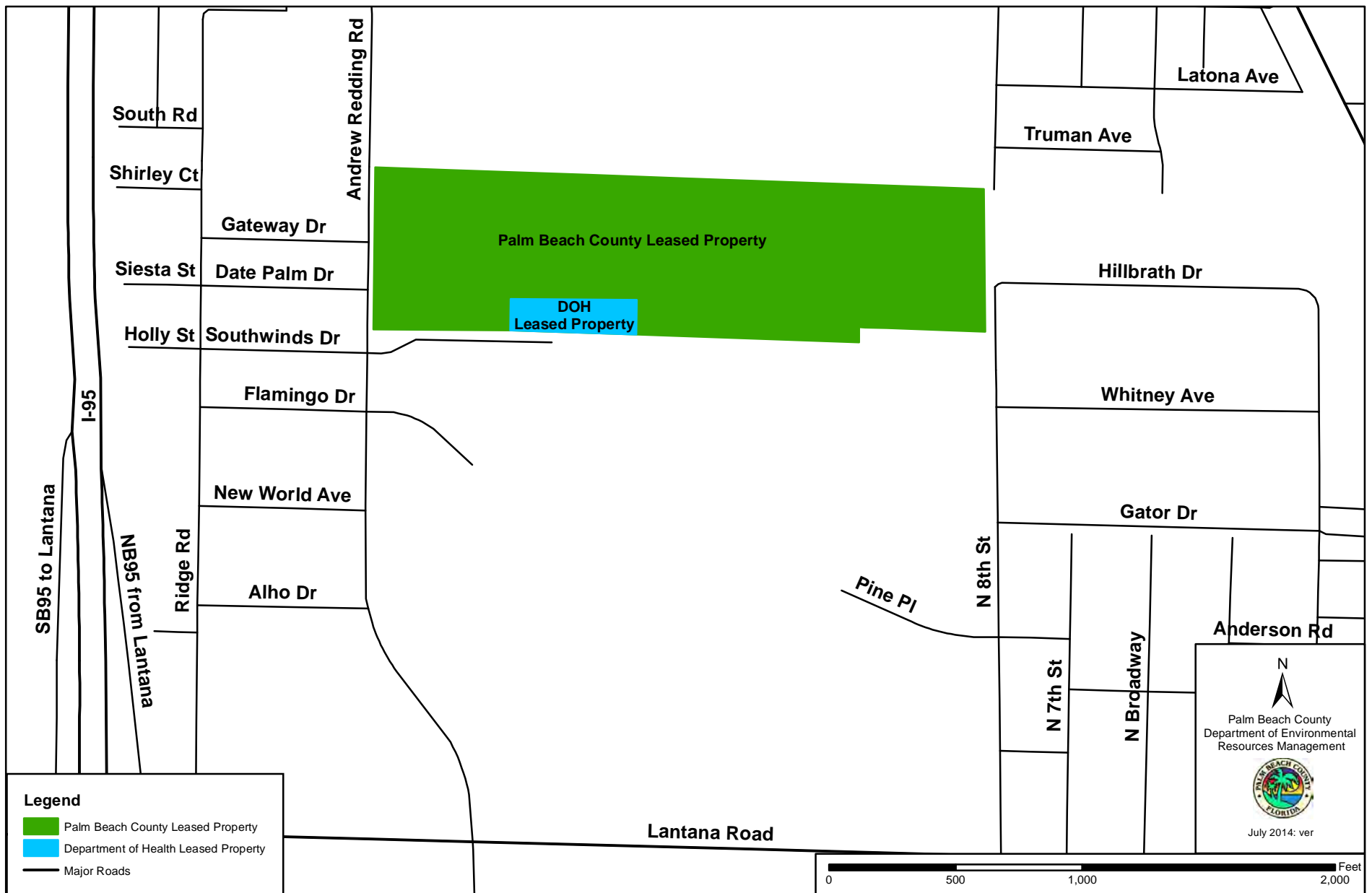


Figure 2. Lantana Scrub Natural Area Leased Areas



Figure 3. Lantana Scrub Natural Area Soils Map



Figure 4. Lantana Scrub Natural Area Vegetation Communities Map

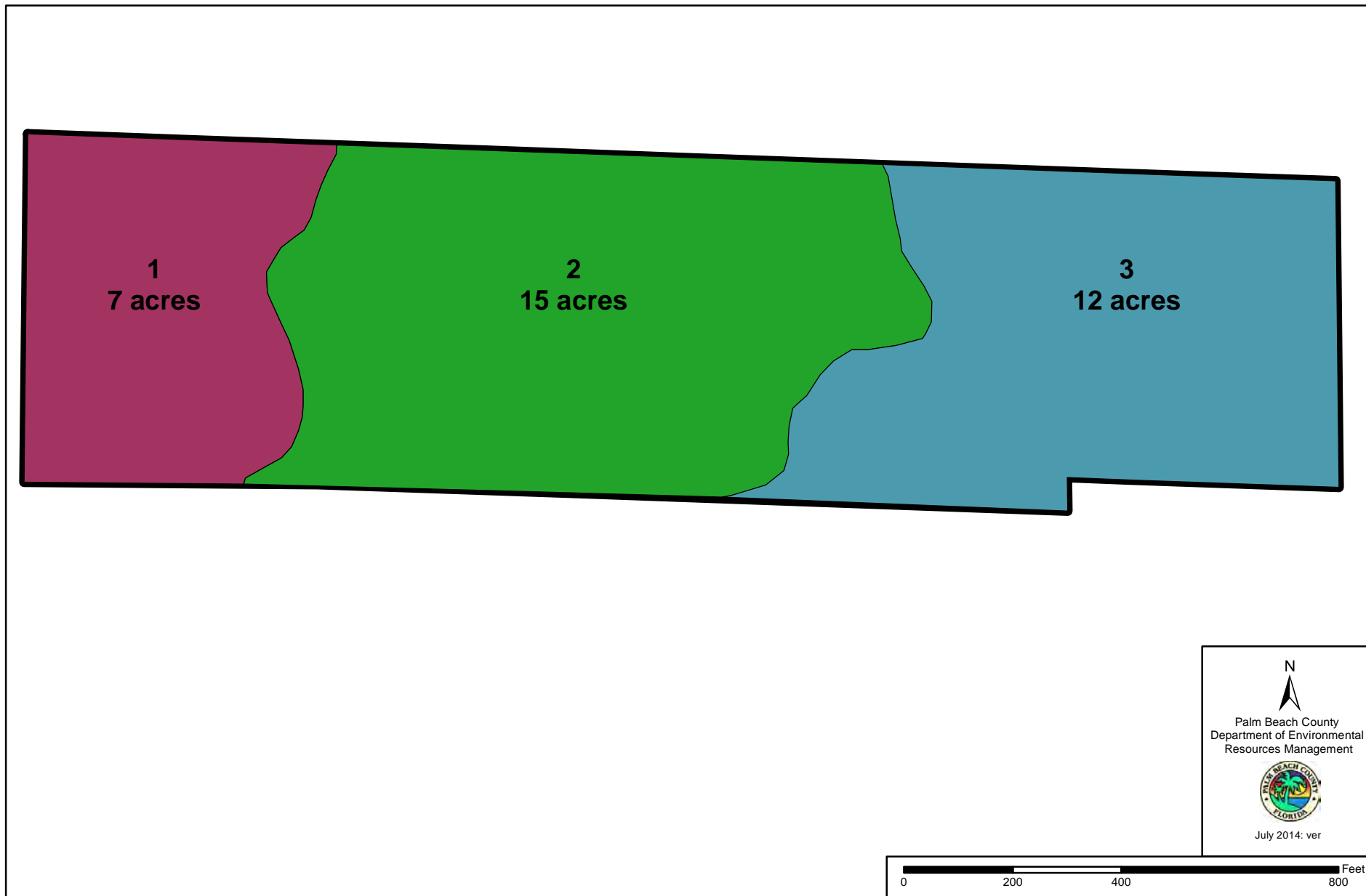


Figure 5. Lantana Scrub Natural Area Management Units Map

12. TABLES

Table 1. Listed Plant Species Recorded at the Lantana Scrub Natural Area

SCIENTIFIC NAME	COMMON NAME	STATUS/RANK DESIGNATIONS		
		USFWS	FDACS	FNAI
<i>Asclepias curtissii</i>	Curtiss's milkweed	N	E	N
<i>Conradina grandiflora</i>	Large-flowered rosemary	N	T	G3/S3
<i>Lechea cernua</i>	Scrub pinweed	N	T	G3/S3
<i>Tillandsia balbisiana</i>	Inflated & reflexed wild pine	N	T	N
<i>Tillandsia fasciculata</i>	Common wild pine	N	E	N
<i>Tillandsia flexuosa</i>	Banded airplant	N	T	G5/S3
<i>Tillandsia utriculata</i>	Giant wild pine	N	E	N

CE = Commercially exploited

E = Endangered

FDACS = Florida Department of Agriculture and Consumer Services

FNAI = Florida Natural Areas Inventory

N = Not listed

T = Threatened

USFWS = United States Fish and Wildlife Service

Occurrences determined from field surveys by Iverson (1986) and from data collected by ERM (2003-2014). Ranks assigned by FNAI are from a June 2013 tracking list (FNAI 2013), designations assigned by the Florida Department of Agriculture and Consumer Services are from FDACS (2004), and designations assigned by the United States Fish and Wildlife Service are from USFWS (undated). Definitions for the ranks and designations used by these entities are provided in Appendix C.

Table 2. Listed Animal Species Recorded at the Lantana Scrub Natural Area

SCIENTIFIC NAME	COMMON NAME	STATUS/RANK DESIGNATIONS		
		USFWS	FWC	FNAI
<i>Crotalus adamanteus</i>	Eastern diamond-backed rattlesnake	N	N	G4/S3
<i>Falco peregrinus</i>	Peregrine falcon	N	N	G4/S2
<i>Gopherus polyphemus</i>	Gopher tortoise	C	ST	G3/S3
<i>Picoides villosus</i>	Hairy woodpecker	N	N	G5/S3
<i>Sceloporus woodi</i>	Florida scrub lizard	N	N	G3/S3
<i>Setophaga ruticilla</i>	American redstart	N	N	G5/S2

C = Candidate species
 E = Endangered
 FE = Federally-designated Endangered
 FT = Federally-designated Threatened
 FT(S/A) = Federally-designated Threatened due to Similarity of Appearance
 FWC = Florida Fish and Wildlife Conservation Commission
 FNAI = Florida Natural Areas Inventory
 N = Not listed
 SSC = State Species of Special Concern
 ST = State-designated Threatened
 T = Threatened
 T(S/A) = Threatened due to Similarity of Appearance
 USFWS = United States Fish and Wildlife Service

Occurrences determined from field surveys by Iverson (1986) and from data collected by ERM (2003-2014). Ranks assigned by FNAI are from a June 2013 tracking list (FNAI 2013); designations assigned by FWC are from FWC (2013); and designations assigned by USFWS are from USFWS (undated). Definitions for the ranks and designations used by these entities are provided in Appendix C.

Table 3. Priority Schedule for Management Activities

ACTIVITY	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Initial management plan	X											
NAMAC review of management plan	X											X
Update/revise management plan											X	X
Public hearing on updated management plan	X											X
County Commission approval of initial management plan		X										X
ARC review and approval of initial management plan		X										X
Construct Public use facilities		X	X									
Prescribed burn or mechanical fuel reduction - Unit 2			X									2026
Prescribed burn or mechanical fuel reduction - Unit 3			X									
Prescribed burn or mechanical fuel reduction - Unit 1												2026
Conduct monitoring activities		X	X	X	X	X	X	X	X	X	X	X
Conduct maintenance invasive/nonnative plant control activities	X	X	X	X	X	X	X	X	X	X	X	X
Conduct regular facilities maintenance/mowing	X	X	X	X	X	X	X	X	X	X	X	X
Coordinate volunteer work day – cleanup of site	X	X	X	X	X	X	X	X	X	X	X	X

Table 4. Cost Estimates and Funding Sources for Public Use Facilities and Capital Restoration Activities (In 2014 Dollars)

ITEM	ACTUAL ¹ AND ESTIMATED ² COSTS	FUNDING SOURCE(S)
Install 1 large roofed kiosk with concrete pad, 1 wave-style bicycle rack with concrete pad, 1 metal-roofed 13-foot x 13-foot shade shelter with two benches	\$29,707 ²	Natural Areas Fund
Install 6" concrete nature trail 1,867 linear feet by 5 feet and 30 square yards kiosk pad - 1,067 square yards @ \$42/ square yard with 15 percent added for field adjustment	\$51,536 ²	Natural Areas Fund
Fencing – install 3-hole post-and-rail fence (3,110 linear feet), 4-foot-high chain link gate and 12-foot-wide bull gate with 8"x10" wooden pole; , remove 641 linear feet of 5-foot-high chain link fence	\$42,466 ¹	Natural Areas Fund
Signage – entrance sign with credits \$900, 2 facility signs @ \$30 ea., 2 access hours sign @ \$13.50 ea, 9 posted natural area signs @ \$20 ea., 1 welcome/rules signs at trail entrance @ \$20, 20 temporary signs (coroplast) @ \$5.00 ea., 1 “No Trash Area” @ \$13.50, 1 “Foot Traffic Only” sign @ \$13.50, 1 “No Pets Allowed sign” @ \$13.50, 1 “Do Not feed animals” sign @ \$13.50, 1 “No Seed Collection sign” @ \$10.00	\$6,940 ^{1, 2}	Natural Areas Fund
20 tree removal @ \$50/ea., 20 stump removal - \$25/ea., clearing and grubbing nature trail	\$1,522 ^{1,2}	Natural Areas Fund
Construction of natural-surfaced hiking trails/firebreaks/management accessways, including vegetation clearing, tree mower for (60 hr. @ \$165/hr), front loader (80 hr. @ \$85/hr), Chain saw operators (80 hr. @ \$85/hr), hiking trails markers: 6 @ \$25 ea.	\$28,825 ^{1, 2}	Natural Areas Fund
Fuel reduction burns – 2 burns @ \$27,000 ea.	\$54,000 ²	Natural Areas Fund
TOTAL PROJECTED COSTS (IN 2014 DOLLARS)	\$209,774	

NOTES:

¹ Public use facilities/restoration work has been completed – the figure shown is an actual cost.

² Public use facilities/restoration work has not been completed – the figure shown is an estimated cost.

Table 5. Estimated Annual Maintenance and Operation Costs

Site Management and Maintenance

Prescribed habitat burns or mechanical fuel reduction (personnel and equipment – \$ 27,000/burn or reduction, 2 burns in 10-year period) = \$ 5400/year	\$5400*
Mowing and maintenance of management accessways/hiking trails (3 times/year @ \$351/time)	\$1,053*
Maintenance of public use facilities, nature trail, an average of 3 times/month (12 months @ \$1,100/month)	\$13,200*
Fenceline maintenance (3 times/year @ \$351/time)	\$1,053*
Site management – monitoring program, management plan updates, annual reports, listed species protection, volunteer coordination and supervision, educational materials, intergovernmental coordination (694 hrs x 65.14/hr)	\$45,207*
Maintenance nonnative plant control (34 acres @ \$1,500/acre/year)	\$51,000**
Repair/replacement due to damage/vandalism (0.005% of structural facilities cost of \$209,774)	\$1049**
<i>Subtotal – present annual cost</i>	<i>\$117,962</i>

Capital Facilities Maintenance and Replacement

Removal and replacement of facilities with 10- and 20-year expected life (facilities with 10-year expected life, including trail markers, all signs, restriping of parking lot, post-and-rail fencing; facilities with 20-year expected life, including bicycle rack, all metal gates, chain-link fencing, kiosk, detectable warning surfaces)	\$84,444**
Estimated annual cost over 10 years @ 4% interest rate	\$10,412**
Removal and replacement of facilities with 10- and 30-year expected life (facilities with 30-year expected life = (restriping of parking spot and entrance)	\$15,086**
<u>Estimated annual cost over 20 years @ 4% interest rate</u>	<u>\$4,728**</u>
<i>Subtotal – estimated annual capital replacement costs</i>	<i>\$114,670**</i>

TOTAL ANNUAL COST (in 2014 dollars) \$232,632

*To be performed by existing Palm Beach County personnel

**To be paid for with interest from Natural Areas Stewardship Endowment Fund

NOTE: All facilities and activities listed are subject to annual budgetary funding and appropriations by the Palm Beach County Board of County Commissioners

APPENDIX A
PLANT SPECIES RECORDED AT THE LANTANA SCRUB NATURAL AREA

APPENDIX A

PLANT SPECIES OBSERVED AT THE LANTANA SCRUB NATURAL AREA Updated 8/21/2014

<u>Scientific Name</u>	<u>Common Name</u>
<i>Abrus precatorius</i> * (NX) (CAT I)	Rosary pea
<i>Acacia auriculiformis</i> * (CAT I)	Earleaf acacia
<i>Albizia lebbbeck</i> * (CAT I)	Woman's tongue
<i>Ambrosia artemisiifolia</i>	Common ragweed
<i>Andropogon floridanus</i>	Florida bluestem
<i>Andropogon</i> sp.	Bluestem
<i>Aristida stricta</i> var. <i>beyrichiana</i>	Wiregrass
<i>Asclepias curtissii</i>	Curtiss' milkweed
<i>Asimina reticulata</i>	Netted pawpaw
<i>Balduina angustifolia</i>	Coastalplain honeycomhead
<i>Bidens</i> sp.	Beggarticks
<i>Bulbostylis ciliatifolia</i>	Capillary hairsedge
<i>Bursera simaruba</i>	Gumbo-limbo
<i>Callicarpa americana</i>	American beautyberry
<i>Cassytha filiformis</i>	Love vine
<i>Catharanthus roseus</i> *	Madagascar periwinkle
<i>Cenchrus gracillimus</i>	Slender sandspur
<i>Ceratiola ericoides</i>	Florida rosemary
<i>Chamaesyce hypericifolia</i>	Graceful sandmat
<i>Chamaesyce hyssopifolia</i>	Hyssopleaf sandmat
<i>Chrysobalanus icaco</i>	Cocoplum
<i>Cladina subtenuis</i>	Dixie reindeer lichen
<i>Cladonia leporina</i>	Jester lichens
<i>Cnidoscolus stimulosus</i>	Tread-softly
<i>Commelina diffusa</i> *	Common dayflower
<i>Conradina grandiflora</i>	Large-flowered rosemary
<i>Crinum</i> sp.	Swamplily
<i>Croton glandulosus</i>	Vente conmigo
<i>Cyperus croceus</i>	Bladwin's flatsedge
<i>Cyperus odoratus</i>	Fragrant flatsedge
<i>Dactyloctenium aegyptium</i> * (CAT II)	Durban crowfoot grass
<i>Desmodium</i> sp.	Ticktrefoil
<i>Dichanthelium</i> sp.	Witchgrass
<i>Emilia fosbergii</i> *	Florida tasselflower
<i>Emilia</i> sp. *	Tasselflower
<i>Eragrostis ciliaris</i> *	Gophertail lovegrass
<i>Eugenia uniflora</i> * (CAT I)	Surinam cherry
<i>Eustachys petraea</i>	Pinewoods fingergrass
<i>Ficus aurea</i>	Strangler fig

<i>Helianthemum nashii</i>	Florida scrub frostweed
<i>Kalanchoe</i> sp.*	Widow's thrill
<i>Lechea cernua</i>	Scrub pinweed
<i>Licania michauxii</i>	Gopher apple
<i>Linaria canadensis</i>	Canada toadflax
<i>Lyonia fruticosa</i>	Coastalplain staggerbush
<i>Lyonia lucida</i>	Fetterbush
<i>Macroptilium lathyroides</i> * (CAT II)	Wildbushbean
<i>Melaleuca quinquenervia</i> * (NX) (PAP I) (CAT I)	Melaleuca
<i>Melinis repens</i> * (CAT I)	Rose natalgrass
<i>Melochia corchoriflora</i> *	Chocolateweed
<i>Momordica charantia</i> * (CAT II)	Balsampear
<i>Myrica cerifera</i>	Wax myrtle
<i>Nephrolepis exaltata</i>	Wild boston fern
<i>Opuntia humifusa</i>	Pricklypear cactus
<i>Opuntia</i> sp.	Pricklypear
<i>Palafoxia feayi</i>	Feay's palafox
<i>Panicum maximum</i> * (CAT II)	Guinea grass
<i>Parthenocissus quinquefolia</i>	Virginia creeper
<i>Persea borbonia</i>	Red bay
<i>Phytolacca americana</i>	American pokeweed
<i>Pinus clausa</i>	Sand pine
<i>Pinus elliottii</i>	Slash pine
<i>Pityopsis graminifolia</i>	Narrowleaf silkgrass
<i>Poinsettia cyathophora</i>	Paintedleaf
<i>Polanisia tenuifolia</i>	Slender clammyweed
<i>Polygonella</i> sp.	Jointweed
<i>Portulaca pilosa</i>	Pink purslane
<i>Psychotria nervosa</i>	Wild coffee
<i>Quercus chapmanii</i>	Chapman's oak
<i>Quercus geminata</i>	Sand live oak
<i>Quercus myrtifolia</i>	Myrtle oak
<i>Rhynchospora megalocarpa</i>	Sandyfield beaksedge
<i>Ricinus communis</i> * (CAT II)	Castorbean
<i>Rubus</i> sp.	Blackberry
<i>Sabal palmetto</i>	Cabbage palm
<i>Sansevieria hyacinthoides</i> * (CAT I)	Bowstring hemp
<i>Schefflera actinophylla</i> * (CAT I)	Shefflera
<i>Schinus terebinthifolius</i> * (NX) (PAP I) (CAT I)	Brazilian pepper
<i>Selaginella arenicola</i>	Sand spike-moss
<i>Serenoa repens</i>	Saw palmetto
<i>Smilax auriculata</i>	Earleaf greenbrier
<i>Stipulicida setacea</i>	Pineland scalypink
<i>Syzygium cumini</i> * (CAT I)	Java plum

<i>Tillandsia balbisiana</i>	Inflated & reflexed wild pine
<i>Tillandsia fasciculata</i>	Common wild pine
<i>Tillandsia flexuosa</i>	Banded airplant
<i>Tillandsia recurvata</i>	Ballmoss
<i>Tillandsia usneoides</i>	Spanish moss
<i>Tillandsia utriculata</i>	Giant wild pine
<i>Tradescantia spathacea</i> * (CAT II)	Oyster-plant
<i>Vernonia blodgettii</i>	Florida ironweed
<i>Vitis rotundifolia</i>	Muscadine
<i>Ximenia americana</i>	Hog plum

NOTES:

* = Nonnative species

NX = Species is on the state noxious weed list (Rule 5B-57.007, Florida Administrative Code)

PAP I = Species designated as Class I Prohibited Aquatic Plant by FDACS (2008)

PAP II = Species designated as Class II Prohibited Aquatic Plant by FDACS (2008)

(CAT I) = Exotic species designated as Category I by FLEPPC (FLEPPC 2013)

(CAT II) = Exotic species designated as Category II by FLEPPC (FLEPPC 2013)

Scientific and common names of vascular plant species generally follow ITIS (2014); Nature Serve (2012); USDA, NRCS (2014), and Wunderlin and Hansen (2008). Lichens are from Brodo et al. (2001).

APPENDIX B
ANIMAL SPECIES RECORDED AT THE LANTANA SCRUB NATURAL AREA

APPENDIX B

ANIMAL SPECIES RECORDED AT THE LANTANA SCRUB NATURAL AREA UPDATED 8/18/2014

SCIENTIFIC NAME

COMMON NAME

ARTHROPODA

Arachnida (Arachnids)

Argiope Argentata

Silver garden spider

Gasterachanta cancriformis

Spinybacked orbweaver

Insecta (Insects)

Coleoptera

Strategus antaeus

Ox beetle

Lepidoptera

Agraulis vanillae

Gulf fritillary

Anartia jatrophae

White peacock

Danaus plexippus

Monarch

Heliconius charitonia

Zebra

Phoebis sennae

Cloudless sulfur

Odonata

Celithemis eponina

Halloween pennant

Libellula needhami

Needham's skimmer

Diptera

Lucilla sericata

Common green bottle fly

Hymenoptera

*Pseudomyrmex gracilis**

Elongate twig ant

CHORDATA

Reptilia (Reptiles)

Squamata

*Anolis sagrei**

Brown anole

Aspidoscelis sexlineata

Six-lined racerunner

Coluber constrictor

North American racer

Crotalus adamanteus

Eastern diamond-backed rattlesnake

*Leiocephalus carinatus**

Northern curly-tailed lizard

Micrurus fulvius
Sceloporus woodi

Harlequin coral snake
Florida scrub lizard

Testudines
Gopherus polyphemus

Gopher tortoise

AVES (Birds)

Accipitriformes
Accipiter striatus
Cathartes aura

Sharp-shinned hawk
Turkey vulture

Columbiformes
Columbina passerine
Zenaida macroura

Common ground-dove
Mourning dove

Falconiformes
Falco peregrinus
Falco sparverius

Peregrine falcon
American kestrel

Passeriformes
Bombycilla cedrorum
Cardinalis cardinalis
Corvus brachyrhynchos
Cyanocitta cristata
Dumetella carolinensis
Melospiza melodia
Mimus polyglottos
Mniotilta varia
Passerina cyanea
Polioptila caerulea
Quiscalus major
Sayornis phoebe
Setophaga caerulescens
Setophaga coronata
Setophaga discolor
Setophaga palmarum
Setophaga pinus
Setophaga ruticilla
Setophaga striata
*Sturnus vulgaris**
Turdus migratorius

Cedar waxwing
Northern cardinal
American crow
Blue jay
Gray catbird
Song sparrow
Northern mockingbird
Black-and-white warbler
Indigo bunting
Blue-gray gnatcatcher
Boat-tailed grackle
Eastern phoebe
Black-throated blue warbler
Yellow-rumped warbler
Prairie warbler
Palm warbler
Pine warbler
American redstart
Blackpoll warbler
European Starling
American robin

Pelecaniformes

Ardea Herodias

Great blue heron

Piciformes

Melanerpes carolinus

Red-bellied woodpecker

Piciodes pubescens

Downy woodpecker

Piciodes villosus

Hairy woodpecker

Strigiformes

Bubo virginianus

Great horned owl

Mammalia (Mammals)

Sciurus carolinensis

Eastern gray squirrel

Sylvilagus floridanus

Eastern cottontail

* = Nonnative species

NOTE: Scientific and common names of species generally follow FWC (2013), FNAI (2013), NatureServe (2013), ITIS (2014) or Arnett (2000).

APPENDIX C
DEFINITIONS OF DESIGNATIONS AND RANKS
FOR LISTED SPECIES AND NATURAL COMMUNITIES

APPENDIX C

DEFINITIONS OF DESIGNATIONS AND RANKS FOR LISTED SPECIES AND NATURAL COMMUNITIES

United States Fish and Wildlife Service (USFWS) - Wildlife and Plants

Species listed in the Code of Federal Regulations (CFR) and protected under the provisions of the Endangered Species Act of 1973 (16 USC 1531-1543, as amended); animals are listed in 50 CFR 17-11 and plants are listed in 50 CFR 17-12; definitions are from 16 USC 1532, 36 CFR 219.36 and 50 CFR 17.50.

Endangered (E)	Any species which is in danger of extinction through all or a portion of its range other than a species of the Class Insecta determined by the Secretary [of the Interior] to constitute a pest whose protection under the provisions of this chapter would present an overwhelming and overriding risk to man
Threatened (T)	Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range
Candidate (C)	Species identified by the United States Fish and Wildlife Service (USFW) or the National Marine Fisheries Service (NFMS), which are considered to be candidates for listing under the Endangered Species Act as published in the <i>Federal Register</i> .

If a species is not endangered or threatened, but it closely resembles an endangered or threatened species, such species may be treated as endangered or threatened if the Director of USFWS makes a determination that the species shall appear in the list in 50 CFR 17.11 (wildlife) or the list in 50 CFR 17.12 (plants) and that the notation (S/A) shall appear in the status column following the letter “E” for endangered or the letter “T” for threatened, due to its similarity of appearance to an endangered or threatened species – for example, E (S/A) or T (S/A).

Florida Fish and Wildlife Conservation Commission (FWC) - Animals

Species listed in Chapter 68A-27 of the Florida Administrative Code (F.A.C.) as Florida Endangered and Threatened Species and protected under that chapter and the Endangered and Threatened Species Act, Section 372.072, Florida Statutes (F.S.); definitions are from Chapter 68A-27.

Federally-designated Endangered and	Species of fish or wild animal life, subspecies or isolated populations of species or subspecies, whether vertebrate or invertebrate, that are native to Florida and are classified as Endangered or Threatened under
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Threatened Species (FE) and (FT)	Commission rule by virtue of designation by the United States Departments of Interior or Commerce as endangered or threatened under the Federal Endangered Species Act, 16 U.S.C. § 1531 et seq. and rules thereto.
State-designated Threatened Species (ST)	As designated by the Commission, species of fish or wild animal life, subspecies, or isolated population of a species or subspecies, whether vertebrate or invertebrate, that are native to Florida and are classified as Threatened as determined by paragraph (a), (b), (c), (d), or (e) [in subsequent part of definition] in accordance with Rule 68A-27.0012., F.A.C. The designation of a species as threatened shall include all subspecies unless stated otherwise in Commission rule.
Species of Special Concern (SSC)	Per Rule 68A-27.005: During the moratorium period created in subsection 68A-27.0012(4), F.A.C.: Management plans will be developed for the species listed in this rule and the species will be evaluated under the listing criteria in subsection 68A-27.001(3), F.A.C. for listing as a State-designated Threatened species. If the Commission determines that the species warrants listing as a State-designated Threatened species, final Commission action on the listing shall include removing reference to the species from this rule. If the species evaluation demonstrates the species does not qualify for listing as a State-designated Threatened species, the Commission will remove the species from this rule upon completion of a management plan. After a biological status review is conducted and a management plan is approved, the Commission will decide whether a species should remain listed when the species is determined to be data deficient pursuant to the Guidelines for Using the IUCN Red List Categories and Criteria.
Candidate Species	A species of fish or wild animal life, subspecies, or isolated populations of species or subspecies, whether invertebrate or vertebrate, that the Commission has determined warrants listing as a State-designated Threatened Species in accordance with Rule 68A-27.0012, F.A.C., and is awaiting final Commission action to be added to the list of Florida Endangered and Threatened Species in Rule 68A-27.003, F.A.C.

Florida Department of Agriculture and Consumer Affairs (FDACS) - Plants

Species listed in Chapter 5B-40 of the Rules of FDACS, Division of Plant Industry and protected under the Preservation of Native Flora of Florida Act (Section 581.185, F.S.); definitions are from that Act

Endangered (E)	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 species or threatened species pursuant to the federal Endangered Species Act of 1973, as amended. Pub. L. No. 93-205 (87 Stat. 884).
Threatened (T)	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.
Commercially Exploited (CE)	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.

Florida Natural Areas Inventory (FNAI) - Plants, Animals and Natural Communities

FNAI ranks indicate the global (G) or state (S) status of a species or a natural community. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Rank definitions are from FNAI (2013).

FNAI Global Rank Definitions

- G1 Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- G2 Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3 Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- G4 Apparently secure globally (may be rare in parts of range).
- G5 Demonstrably secure globally.
- GH Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker).
- GX Believed to be extinct throughout range.

- GXC Extirpated from the wild but still known from captivity or cultivation.
- G#? Tentative rank (e.g., G2?).
- G#G# Range of rank; insufficient data to assign specific global rank (e.g., G2G3).
- G#T# Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have the same definition as above (e.g., G3T1).
- G#Q Rank of questionable species – ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q).
- G#T#Q Same as above, but validity as subspecies or variety is questioned.
- GU Unrankable; due to a lack of information no rank or range can be assigned (e.g., GUT2).
- GNA Ranking is not applicable because the element is not a suitable target for conservation (e.g., a hybrid species).
- GNR Element not yet ranked (temporary).
- GNRTNR Neither the element nor the taxonomic subgroup has yet been ranked.

FNAI State Rank Definitions

- S1 Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- S2 Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- S3 Either very rare and local in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- S4 Apparently secure in Florida (may be rare in parts of range).
- S5 Demonstrably secure in Florida.
- SH Of historical occurrence in Florida, possibly extirpated, but may be rediscovered (e.g., ivory-billed woodpecker).

- SX Believed to be extirpated throughout Florida.
- SU Unrankable; due to a lack of information no rank or range can be assigned.
- SNA State ranking is not applicable because the element is not a suitable target for conservation (e.g., a hybrid species).
- SNR Element not yet ranked (temporary).

APPENDIX D
LEGAL DESCRIPTION

Appendix D

A PARCEL OF LAND BEING A PORTION OF THE PROPERTY DESCRIBED IN OFFICIAL RECORD BOOK 1706, PAGE 583, OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, LYING IN THE SOUTHEAST QUARTER OF SECTION 33, TOWNSHIP 44 SOUTH, RANGE 43 EAST, PALM BEACH COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE EAST QUARTER CORNER OF SAID SECTION 33; THENCE NORTH 87° 56' 11" WEST ALONG THE NORTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 33, A DISTANCE OF 40.04 FEET TO A LINE LYING 40.00 FEET WEST OF (AS MEASURED AT RIGHT ANGLES TO) AND PARALLEL WITH THE EAST LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 33 AND THE POINT OF BEGINNING; THENCE SOUTH 00° 36' 27" EAST ALONG SAID PARALLEL LINE, A DISTANCE OF 564.39 FEET TO THE NORTH LINE OF THE PROPERTY DESCRIBED IN THE TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND DEED - LEASE NO. 4091, DATED SEPTEMBER 27, 1995 AND AS SHOWN ON THE BOUNDARY SURVEY FOR THE DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES - PREPARED BY FLORIDA SURVEYING AND MAPPING, INC., JOB NO. 1-94-052BL - DATED 10/26/94 AND THE BOUNDARY SURVEY FOR A.G. HOLLEY SCRUB TURTLE LEASE PARCEL - PREPARED BY PALM BEACH COUNTY, PROJECT NO. 2007012-15 (DWG. NO. S-3-07-2736) - DATED 06/05/2007; THENCE NORTH 87° 56' 11" WEST ALONG SAID NORTH LINE, A DISTANCE OF 499.94 FEET TO THE WEST LINE OF SAID LEASE; THENCE SOUTH 00° 36' 27" EAST ALONG SAID WEST LINE, A DISTANCE OF 61.29 FEET TO A LINE LYING 625.00 FEET SOUTH OF (AS MEASURED AT RIGHT ANGLES TO) AND PARALLEL WITH THE NORTH LINE OF SAID SOUTHEAST QUARTER (SE 1/4); THENCE NORTH 87° 56' 11" WEST ALONG SAID PARALLEL LINE, A DISTANCE OF 880.84 FEET TO THE EAST LINE OF THE PROPERTY AS SHOWN ON THE BOUNDARY SURVEY FOR THE LANTANA/LAKE WORTH HEALTH CLINIC -PREPARED BY FLORIDA SURVEYING AND MAPPING, INC., JOB NO. 3-89-26 - DATED 04/18/89; THENCE NORTH 00° 33' 51" EAST ALONG SAID EAST LINE, A DISTANCE OF 136.00 FEET TO THE NORTH LINE OF SAID BOUNDARY SURVEY; THENCE NORTH 89° 26' 09" WEST ALONG SAID NORTH LINE, A DISTANCE OF 500.00 FEET; THENCE SOUTH 00° 33' 51" WEST CONTINUING ALONG SAID NORTH LINE, A DISTANCE OF 125.00 FEET; THENCE NORTH 89° 26' 09" WEST CONTINUING ALONG SAID NORTH LINE, A DISTANCE OF 540.00 FEET TO A LINE LYING 50.00 FEET EAST OF (AS MEASURED AT RIGHT ANGLES TO) AND PARALLEL WITH THE WEST LINE OF THE SOUTHEAST (SE 1/4) OF SAID SECTION 33; THENCE NORTH 00° 33' 51" EAST ALONG SAID PARALLEL LINE, A DISTANCE OF 641.43 FEET TO THE NORTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 33; THENCE SOUTH 87° 56' 11" EAST ALONG SAID NORTH LINE, A DISTANCE OF 2408.34 FEET TO SAID LINE 40.00 FEET WEST OF (AS MEASURED AT RIGHT ANGLES TO) AND PARALLEL WITH THE EAST LINE OF SAID SOUTHEAST QUARTER (SE 1/4) AND THE POINT OF BEGINNING.

APPENDIX E
NATURAL AREAS MANAGEMENT ADVISORY COMMITTEE MEMBERS
AND AFFILIATIONS

APPENDIX F
PUBLIC HEARING NOTICE AND PUBLIC COMMENT SUMMARY

APPENDIX G
FLORIDA NATURAL AREAS INVENTORY REPORT

APPENDIX H
FLORIDA DEPARTMENT OF STATE, DIVISION OF HISTORICAL
RESOURCES MANAGEMENT PROCEDURES

Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Properties
(revised February 2007)

These procedures apply to state agencies, local governments, and non-profits that manage state-owned properties.

A. General Discussion

Historic resources are both archaeological sites and historic structures. Per Chapter 267, Florida Statutes, *'Historic property' or 'historic resource' means any prehistoric district, site, building, object, or other real or personal property of historical, architectural, or archaeological value, and folklife resources. These properties or resources may include, but are not limited to, monuments, memorials, Indian habitations, ceremonial sites, abandoned settlements, sunken or abandoned ships, engineering works, treasure trove, artifacts, or other objects with intrinsic historical or archaeological value, or any part thereof, relating to the history, government, and culture of the state.'*

B. Agency Responsibilities

Per State Policy relative to historic properties, state agencies of the executive branch must allow the Division of Historical Resources (Division) the opportunity to comment on any undertakings, whether these undertakings directly involve the state agency, i.e., land management responsibilities, or the state agency has indirect jurisdiction, i.e. permitting authority, grants, etc. No state funds should be expended on the undertaking until the Division has the opportunity to review and comment on the project, permit, grant, etc.

State agencies shall preserve the historic resources which are owned or controlled by the agency.

Regarding proposed demolition or substantial alterations of historic properties, consultation with the Division must occur, and alternatives to demolition must be considered.

State agencies must consult with Division to establish a program to location, inventory and evaluate all historic properties under ownership or controlled by the agency.

C. Statutory Authority

Statutory Authority and more in depth information can be found in the following:

Chapter 253, F.S. – State Lands

Chapter 267, F.S. – Historical Resources

Chapter 872, F.S. – Offenses Concerning Dead Bodies and Graves

Other helpful citations and references:

Chapter 1A-32, F.A.C. – Archaeological Research

Chapter 1A-44, F.A.C. – Procedures for Reporting and Determining Jurisdiction Over Unmarked Human Burials

Chapter 1A-46, F.A.C. – Archaeological and Historical Report Standards and Guidelines

The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings

D. Management Implementation

Even though the Division sits on the Acquisition and Restoration Council and approves land management plans, these plans are conceptual. Specific information regarding individual projects must be submitted to the Division for review and recommendations.

Managers of state lands must coordinate any land clearing or ground disturbing activities with the Division to allow for review and comment on the proposed project. Recommendations may include, but are not limited to: approval of the project as submitted, pre-testing of the project site by a certified archaeological monitor, cultural resource assessment survey by a qualified professional archaeologist, modifications to the proposed project to avoid or mitigate potential adverse effects.

Projects such as additions, exterior alteration, or related new construction regarding historic structures must also be submitted to the Division of Historical Resources for review and comment by the Division's architects. Projects involving structures fifty years of age or older, must be submitted to this agency for a significance determination. In rare cases, structures under fifty years of age may be deemed historically significant. These must be evaluated on a case by case basis.

Adverse impacts to significant sites, either archaeological sites or historic buildings, must be avoided. Furthermore, managers of state property should make preparations for locating and evaluating historic resources, both archaeological sites and historic structures.

E. Minimum Review Documentation Requirements

In order to have a proposed project reviewed by the Division, the following information, at a minimum, must be submitted for comments and recommendations.

Project Description – A detailed description of the proposed project including all related activities. For land clearing or ground disturbing activities, the depth and extent of the disturbance, use of heavy equipment, location of lay down yard, etc. For historic structures, specific details regarding rehabilitation, demolition, etc.

Project Location – The exact location of the project indicated on a USGS Quadrangle map, is preferable. A management base map may be acceptable. Aerial photos indicating the exact project area as supplemental information are helpful.

Photographs – Photographs of the project area are always useful. Photographs of structures are required.

Description of Project Area – Note the acreage of the project, describe the present condition of project area, and any past land uses or disturbances.

Description of Structures – Describe the condition and setting of each building within project area if approximately fifty years of age or older.

Recorded Archaeological Sites or Historic Structures – Provide Florida Master Site File numbers for all recorded historic resources within or adjacent to the project area. This information should be in the current management plan; however, it can be obtained by contacting the Florida Master Site File at (850) 245-6440.

* * *

Questions relating to the treatment of archaeological and historic resources on state lands should be directed to:

Susan M. Harp
Historic Preservation Planner
Division of Historical Resources
Bureau of Historic Preservation
Compliance and Review Section
R. A. Gray Building
500 South Bronough Street
Tallahassee, FL 32399-0250

Phone: (850) 245-6367
Fax: (850) 245-6438

APPENDIX I
INTERLOCAL AGREEMENT

(a)

**INTERLOCAL AGREEMENT
BETWEEN
PALM BEACH COUNTY
(LANTANA SCRUB NATURAL AREA)
AND
FLORIDA DEPARTMENT OF HEALTH
(LANTANA/LAKE WORTH HEALTH CENTER)**

R 2014 0287

This Interlocal Agreement (the "Agreement") shall be effective as of the _____ day of _____, 2014 (the "Effective Date") and is being entered into by and between PALM BEACH COUNTY, a political subdivision of the State of Florida, by and through its Board of County Commissioners, with offices at 301 North Olive Avenue, 4th Floor, West Palm Beach, Florida 33401, (hereinafter referred to as the "County") and the FLORIDA DEPARTMENT OF HEALTH, for its Lantana/Lake Worth Health Center ("Health Center"), with offices at 1050 W. 15TH Street, Riviera Beach, Florida 33404 (hereinafter referred to as "DOH").

WITNESSETH:

WHEREAS, the County is currently in the process of developing its Lantana Scrub Natural Area on land leased from the State in that area generally depicted in attached Exhibit "A" (hereinafter referred to as the "Lantana Scrub"); and

WHEREAS, DOH is the Lessee of those parcels of real property described in attached Exhibit "B" (the "DOH Property"); and

WHEREAS, the County desires to manage and use the portion of the DOH Property that is north of the Health Center parking lot for access to the Lantana Scrub for ingress and egress for public use trails and land management activities; and

WHEREAS, as part of the County's management of its Lantana Scrub Natural Area, the County desires to remove exotic vegetation from the DOH Property north of the Health Center parking lot to eliminate a seed source to the Lantana Scrub; and

WHEREAS, to eliminate the need to clear good native vegetation within the natural area, the County desires to use from six (6) to eight (8) parking spaces along the northern border of the Health Center parking lot as parking for the Lantana Scrub; and

WHEREAS, in return for allowing the County to manage and use the portion of the DOH Property north of the parking lot and use 6-8 parking spaces along the northern border of the Health Center parking lot as parking for visitors to the Lantana Scrub, DOH desires the County provide certain assistance in the location of an air quality monitoring station in some mutually agreeable location on the Lantana Scrub; and

WHEREAS, County staff and staff from the DOH have inspected the properties and various locations for placement of the air quality monitoring station and agreed upon a location in the southeast corner of the County's leased property, as described and depicted in Exhibit "C"; and

WHEREAS, the assistance from the County in locating the air quality monitoring station desired

by DOH may involve financial assistance of up to 50% of the cost, but not to exceed \$5,000 (five thousand dollars), to provide power lines to the station; and

WHEREAS, it is the goal of the County and DOH to cooperate and assist each other, where possible, in order to provide the most efficient delivery of services to their respective residents and patients; and

WHEREAS, the County and DOH are authorized to enter into this Agreement pursuant to Section 163.01, Florida Statutes, which permits local government units to make the most efficient use of their powers by enabling them to cooperate with other government entities on a basis of mutual advantage; and

WHEREAS, the County and DOH agree that it is in their respective best interests to work together in a cooperative manner by pooling and advancing their resources in order to carry out the implementation and construction of their respective programs and projects.

NOW, THEREFORE, in accordance with Chapter 163, Part I, Florida Statutes, as amended, but specifically subject to the provisions of Section 163.01(9) and (11), Florida Statutes, the County and DOH for and in consideration of the mutual benefits, understandings and promises as set forth herein, do enter into this Agreement and represent, covenant, and agree with each other as follows:

SECTION 1. RECITALS. The parties do hereby acknowledge and agree that the above recitals are true and correct to the best of their knowledge and belief and do incorporate them herein by this reference.

SECTION 2. COUNTY OBLIGATIONS. The County does hereby agree to the following duties and obligations, namely:

(A) Remove exotic/invasive vegetation and maintain the natural habitat within the DOH property north of the Health Center parking lot.

(B) Provide an adequate space, up to a maximum of 2000 sq. ft., according to specifications provided by DOH and access to such designated space, for an air quality monitoring station (provided and installed by DOH).

(C) Fund up to a maximum of 50% of the cost, but not to exceed \$5,000 (five thousand dollars), to provide power to the air quality monitoring station.

SECTION 3. DOH OBLIGATIONS. DOH does hereby agree to the following :

(A) Allow the County to manage vegetation and natural communities within the DOH Property north of the Health Center parking lot.

(B) Allow public access to parking facilities and future public use facilities to be located on the DOH Property north of the Health Center parking lot, including, but not limited to, an informational kiosk, bike rack and trailhead for a paved (5-foot wide) nature trail that will proceed into the surrounding Lantana Scrub property.

(C) In the southeast corner of the Lantana Scrub property, install and maintain the air quality monitoring station to be placed within the area depicted in Exhibit "C".

SECTION 4. MISCELLANEOUS PROVISIONS.

(A) **NOTICES.** Any and all written notices required or permitted to be given hereunder shall be deemed received upon hand delivery, facsimile transmission or three (3) days if same are deposited in U.S. Mail and sent via certified mail, return receipt requested.

All notices to the County shall be sent to:

County of Palm Beach
Board of County Commissioners
Department of Environmental Resources Management
2300 N. Jog Rd.
West Palm Beach, Florida 33411
Designated Representative: __Robert Robbins, Director
Phone: (561) 233-2400
Fax: (561) 233-2414

All notices to DOH shall be sent to:

Florida Department of Health
1050 W. 15th Street
Riviera Beach, Florida 33404
Designated Representative: William A. Walker III
Phone: (561) 840-4522
Fax: (561) 845-4658

(B) **AMENDMENTS.** Except as expressly permitted herein to the contrary, no modification, amendment or alteration in the terms or conditions contained herein shall be effective unless contained in a written document executed with the same formality as this Agreement by both parties.

(C) **VENUE AND ELECTION OF REMEDIES.** This Agreement shall be construed and governed by the laws of the State of Florida. Any and all legal action arising out of or necessary to enforce this Agreement shall be held in the Fifteenth Judicial Circuit in and for Palm Beach County. No remedy herein conferred upon any party is intended to be exclusive of any other remedy and each and every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder or now or hereinafter existing at law or in equity or by statute or otherwise. No single or partial exercise by any party of any right, power or remedy hereunder shall preclude any other or further exercise thereof.

(D) **WAIVER OF JURY TRIAL.** The parties hereby waive any rights any of them may have to a jury trial in any litigation arising out of or related to this Agreement and agree that they shall not elect a trial by jury. The parties hereto have separately, knowingly and voluntarily given this waiver of right to trial by jury with the benefit of competent legal counsel.

(E) **EQUAL OPPORTUNITY PROVISION.** The Parties agree that no person shall, on the

grounds of race, color, sex, age, national origin, disability, religion, ancestry, marital status, familial status, sexual orientation, gender identity or expression be excluded from the benefits of, or be subjected to any form of discrimination under any activity carried out by the performance of this Agreement.

(F) **CONSTRUCTION.** The parties acknowledge that each has shared equally in the drafting and preparation of this Agreement and, accordingly, no Court or Administrative Hearing Officer construing this Agreement shall construe it more strictly against one party than the other and every covenant, term and provision of this Agreement shall be construed simply according to its fair meaning.

(G) **SEVERABILITY.** In the event any section, paragraph, sentence, clause or provision hereof is held invalid by a court of competent jurisdiction, such holding shall not affect the remaining portions of this Agreement and the same shall remain in full force and effect unless the invalid finding is as to payment or construction obligations of a party in which event the Agreement shall be thereupon terminated.

(H) **ENTIRE UNDERSTANDING.** This Agreement represents the entire understanding between the parties and supersedes all other negotiations, representations or agreements, either written or oral, relating to the matters which are the subject of this Agreement.

(I) **HEADINGS.** The headings contained in this Agreement are for convenience of reference only and shall not limit or otherwise effect in any way the meaning or interpretation of this Agreement.

(J) **CLERK OF COURT.** A copy of this Agreement shall not be recorded with the Clerk of the Court in and for Palm Beach County, Florida.

(K) **TERM.** This Agreement shall continue in full force and effect for twenty-five (25) years from its Effective Date, unless earlier terminated as authorized herein. This Agreement may be extended upon the mutual agreement of the parties provided that the time remaining in the respective State leases would have sufficient term to allow such an extension.

(L) **EFFECTIVE DATE.** This Agreement shall be effective as of the last date that it is signed by the parties hereto.

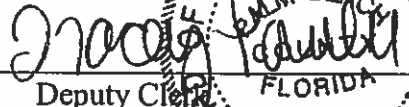
(M) **INSPECTOR GENERAL.** Palm Beach County has established the Office of the Inspector General in Palm Beach County Code, Section 2-421 - 2-440, as may be amended. The Inspector General's authority includes but is not limited to the power to review past, present and proposed County contracts, transactions, accounts and records, to require the production of records, and to audit, investigate, monitor, and inspect the activities of the any party contracting with the County, its officers, agents, employees, and lobbyists in order to ensure compliance with contract requirements and detect corruption and fraud. Failure to cooperate with the Inspector General or interfering with or impeding any investigation shall be in violation of Palm Beach County Code, Section 2-421 - 2-440, and punished pursuant to Section 125.69, Florida Statutes, in the same manner as a second degree misdemeanor.

(N) **NO THIRD PARTY BENEFICIARIES.** No provision of this Agreement is intended to, or shall be construed to, create any third party beneficiary or to provide any rights to any person or entity not a party to this Agreement, including but not limited to any citizen or employees of the County and/or the DOH.

MAR 11 2014

EXECUTED by PALM BEACH COUNTY this _____ day of _____, 2014.

ATTEST: Sharon R. Rock, Clerk of Court

By: 
Deputy Clerk

Approved as to form and legal sufficiency

R2014-0287

PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS

By: 
Mayor Priscilla A. Taylor



Approved as to terms and conditions

EXECUTED by DOH this 26th day of December, 2013.

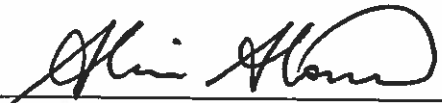
ATTEST:

By: 

(SEAL)



PALM BEACH COUNTY
FLORIDA DEPARTMENT OF HEALTH

By: 
Alina Alonso, M.D.
Director

Approved as to legal form and sufficiency:


By: 
Attorney
Palm Beach County
Florida Department of Health

EXHIBIT A

PBC ERM Leased Property

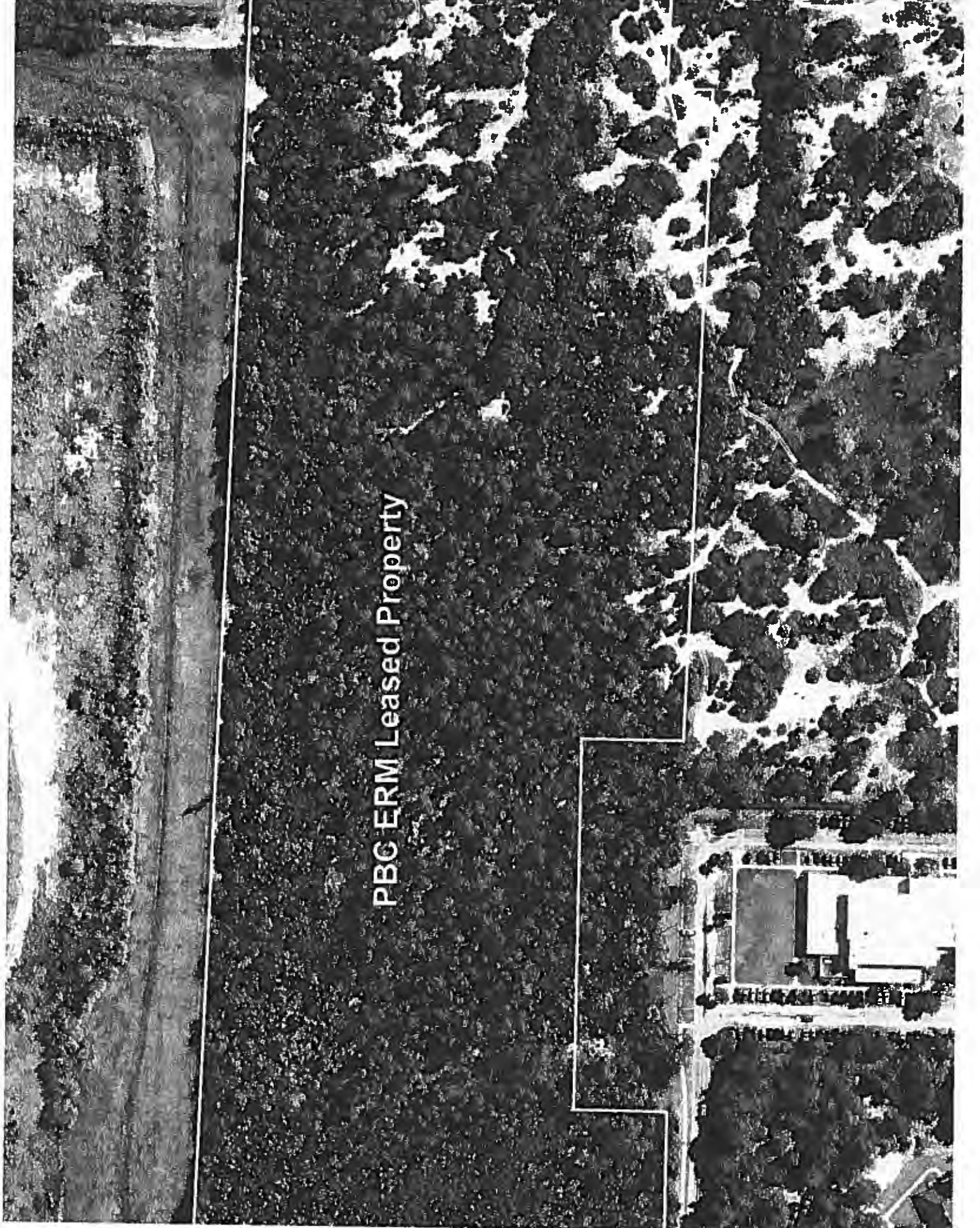
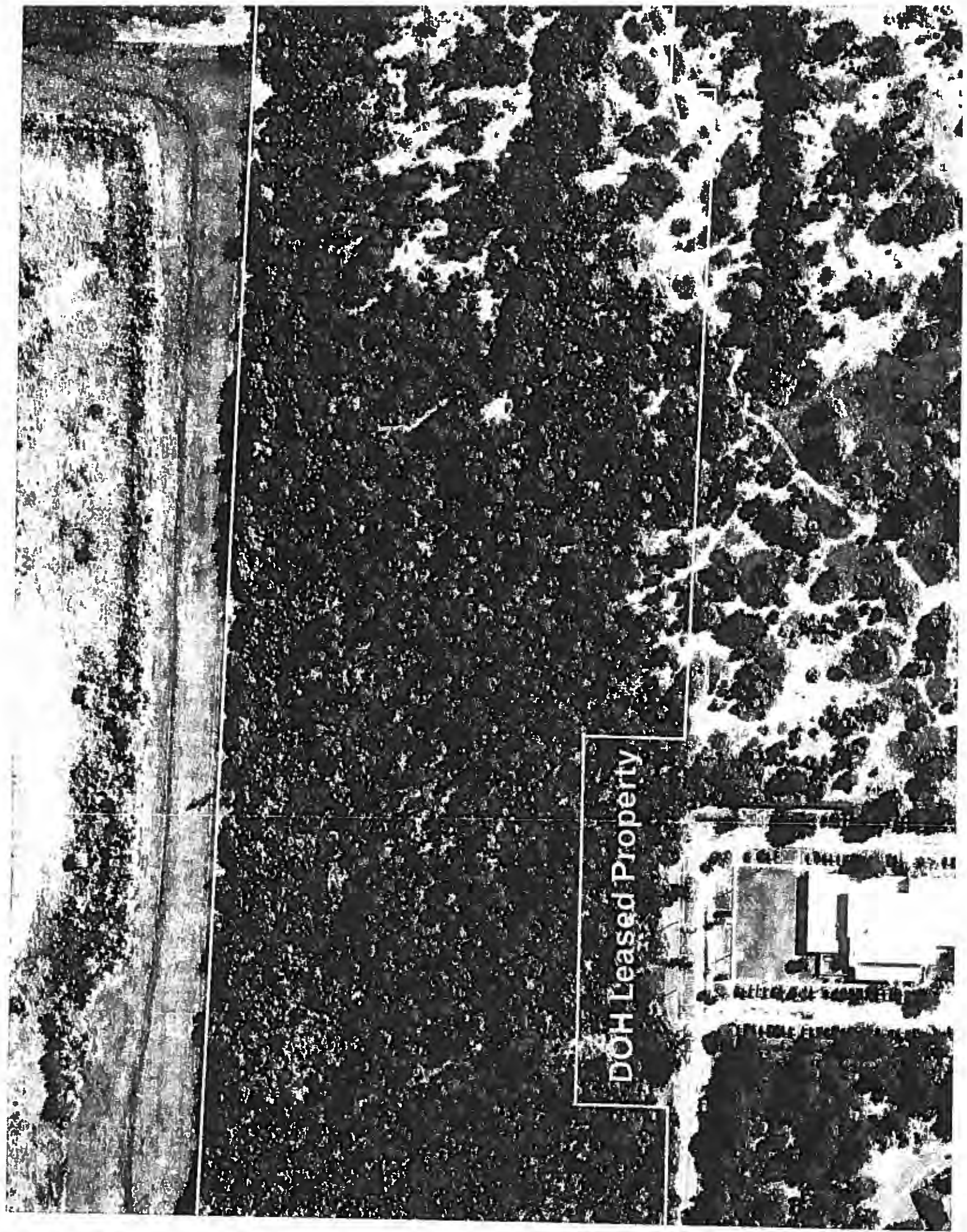
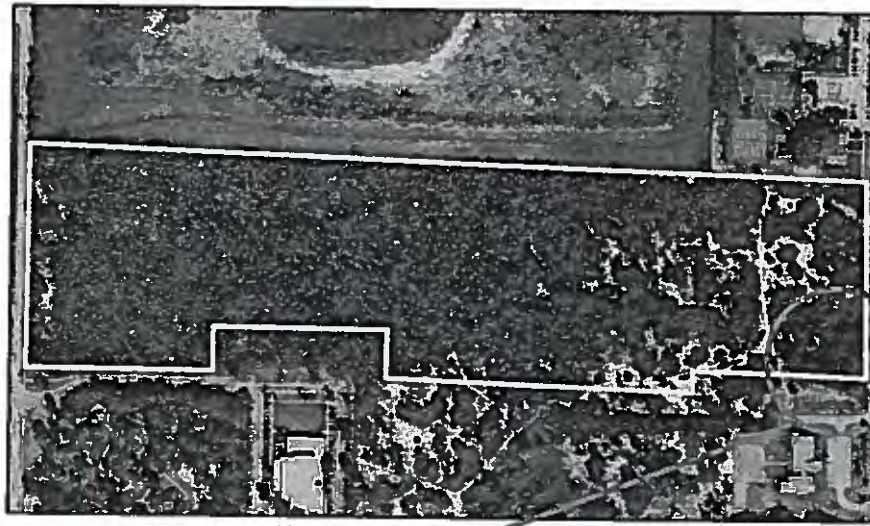


EXHIBIT "B"



DOH Leased Property

Lantana Scrub
Proposed Air Quality
Structure Location



0 250 500 Feet
N



0 25 50 Feet
N

STATE OF FLORIDA, COUNTY OF PALM BEACH
I, SHARON R. BOCK, Clerk & Comptroller-Deputy
this to be a true and correct copy of the original
filed in my office on MAR 11 2004
dated at West Palm Beach, FL
By: Sharon R. Bock
Deputy Clerk



EXHIBIT "C"

OAL2

BOARD OF TRUSTEES OF THE INTERNAL
IMPROVEMENT TRUST FUND OF THE
STATE OF FLORIDA

LEASE AGREEMENT

YAMATO SCRUB

Lease No. 4176

THIS LEASE AGREEMENT, made and entered into this 24th day of February 1998, by and between the BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA hereinafter referred to as "LESSOR," and PALM BEACH COUNTY, FLORIDA, hereinafter referred to as "LESSEE."

LESSOR, for and in consideration of mutual covenants and agreements hereinafter contained, does hereby lease to said LESSEE, the lands described in paragraph 2 below, together with the improvements thereon, and subject to the following terms and conditions:

1. DELEGATIONS OF AUTHORITY: LESSOR'S responsibilities and obligations herein shall be exercised by the Division of State Lands, Department of Environmental Protection.
2. DESCRIPTION OF PREMISES: The property subject to this lease, is situated in the County of Palm Beach, State of Florida and is more particularly described in Exhibit "A" attached hereto and hereinafter called the "leased premises".
3. TERM: The term of this lease shall be for a period of 50 years commencing on February 24, 1998 and ending on February 23, 2048 unless sooner terminated pursuant to the provisions of this lease.
4. PURPOSE: LESSEE shall manage the leased premises only for the conservation and protection of natural and historical resources and for resource based public outdoor activities and education which are compatible with the conservation and protection of these public lands, as set forth in subsection 259.032(11), Florida Statutes, along with other related uses

necessary for the accomplishment of this purpose as designated in the Management Plan required by paragraph 8 of this lease.

5. QUIET ENJOYMENT AND RIGHT OF USE: LESSEE shall have the right of ingress and egress to, from and upon the leased premises for all purposes necessary to the full quiet enjoyment by said LESSEE of the rights conveyed herein.

6. UNAUTHORIZED USE: LESSEE shall, through its agents and employees, prevent the unauthorized use of the leased premises or any use thereof not in conformity with this lease.

7. ASSIGNMENT: This lease shall not be assigned in whole or in part without the prior written consent of LESSOR, which consent shall not be unreasonably withheld. Any assignment made either in whole or in part without the prior written consent of LESSOR shall be void and without legal effect.

8. MANAGEMENT PLAN: LESSEE shall prepare and submit a Management Plan for the leased premises in accordance with subsection 18-2.021(4), Florida Administrative Code, within twelve months of the effective date of this lease. The Management Plan shall be submitted to LESSOR for approval through the Division of State Lands, Department of Environmental Protection. The leased premises shall not be developed or physically altered in any way other than what is necessary for security and maintenance of the leased premises without the prior written approval of LESSOR until the Management Plan is approved. LESSEE shall provide LESSOR with an opportunity to participate in all phases of preparing and developing the Management Plan for the leased premises. The Management Plan shall be submitted to LESSOR in draft form for review and comments within ten months of the effective date of this lease. LESSEE shall give LESSOR reasonable notice of the application for and receipt of any state, federal or local permits as well as any public hearings or meetings relating to the development or use of the leased premises. LESSEE shall not proceed with development of said

leased premises including, but not limited to, funding, permit applications, design or building contracts until the Management Plan required herein has been submitted and approved. Any financial commitments made by LESSEE which are not in compliance with the terms of this lease shall be done at LESSEE'S own risk. The Management Plan shall emphasize the original management concept as approved by LESSOR at the time of acquisition which established the primary public purpose for which the leased premises were acquired. The approved Management Plan shall provide the basic guidance for all management activities and shall be reviewed jointly by LESSEE and LESSOR at least every five years. LESSEE shall not use or alter the leased premises except as provided for in the approved Management Plan without the prior written approval of LESSOR. The Management Plan prepared under this lease shall identify management strategies for exotic species, if present. The introduction of exotic species is prohibited, except when specifically authorized by the approved Management Plan.

9. EASEMENTS: All easements including, but not limited to, utility easements are expressly prohibited without the prior written approval of LESSOR. Any easement not approved in writing by LESSOR shall be void and without legal effect.

10. SUBLEASES: This lease is for the purposes specified herein and subleases of any nature are prohibited without the prior written approval of LESSOR, which approval shall not be unreasonably withheld. Any sublease not approved in writing by LESSOR shall be void and without legal effect.

11. RIGHT OF INSPECTION: LESSOR or its duly authorized agents, representatives or employees shall have the right to reasonably inspect the leased premises and the works and operations of LESSEE in any matter pertaining to this lease.

12. PLACEMENT AND REMOVAL OF IMPROVEMENTS: All buildings, structures and improvements shall be constructed in accordance

with plans that are in accordance with the approved Management Plan or shall require the prior written approval of LESSOR as to purpose, location and design which approval shall not be unreasonably withheld. Further, no trees, other than non-native species, shall be removed or major land alterations done without the prior written approval of LESSOR. Removable equipment and removable improvements placed on the leased premises by LESSEE which do not become a permanent part of the leased premises will remain the property of LESSEE and may be removed by LESSEE before or upon termination of this lease.

13. INSURANCE REQUIREMENTS: During the term of this lease LESSEE shall procure and maintain policies of fire, extended risk, and liability insurance coverage. The extended risk and fire insurance coverage shall be in an amount equal to the full insurable replacement value of any improvements or fixtures located on the leased premises. The liability insurance coverage shall be in amounts not less than \$100,000 per person and \$200,000 per incident or occurrence for personal injury, death, and property damage on the leased premises. Such policies of insurance shall name LESSOR, the State of Florida and LESSEE as co-insureds. LESSEE shall submit written evidence of having procured all insurance policies required herein prior to the effective date of this lease and shall submit annually thereafter, written evidence of maintaining such insurance to the Bureau of Land Management Services, Division of State Lands, Department of Environmental Protection, Mail Station 130, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000. LESSEE shall purchase all policies of insurance from a financially-responsible insurer duly authorized to do business in the State of Florida. Any certificate of self-insurance shall be issued or approved by the Insurance Commissioner, State of Florida. The certificate of self-insurance shall provide for casualty and liability coverage. LESSEE shall immediately notify LESSOR and

the insurer of any erection or removal of any building or other improvement on the leased premises and any changes affecting the value of any improvements and shall request the insurer to make adequate changes in the coverage to reflect the changes in value. LESSEE shall be financially responsible for any loss due to failure to obtain adequate insurance coverage, and the failure to maintain such policies or certificate in the amounts set forth shall constitute a breach of this lease.

14. LIABILITY: Each party is responsible for all personal injury and property damage attributable to the negligent acts or omissions of that party and the officers, employees and agents thereof. Nothing herein shall be construed as an indemnity or a waiver of sovereign immunity enjoyed by any party hereto, as provided in Section 768.28, Florida Statutes, as amended from time to time, or any other law providing limitations on claims.

15. PAYMENT OF TAXES AND ASSESSMENTS: LESSEE shall assume full responsibility for and shall pay all taxes, assessments, liens or other similar liabilities that accrue to the leased premises or to the improvements thereon arising after this lease commences including any and all ad valorem taxes and drainage and special assessments or personal property taxes of every kind and all construction or materialman's liens which may be hereafter lawfully assessed and levied against the leased premises subsequent to the effective date of this lease. In no event shall the LESSEE be held liable for such liabilities which arose prior to the effective date of this lease.

16. NO WAIVER OF BREACH: The failure of LESSOR to insist in any one or more instances upon strict performance of any one or more of the covenants, terms and conditions of this lease shall not be construed as a waiver of such covenants, terms or conditions, but the same shall continue in full force and effect, and no waiver of LESSOR of any of the provisions hereof shall in any event be

deemed to have been made unless the waiver is set forth in writing, signed by LESSOR.

17. TIME: Time is expressly declared to be of the essence of this lease.

18. NON-DISCRIMINATION: LESSEE shall not discriminate against any individual because of that individual's race, color, religion, sex, national origin, age, handicap, or marital status with respect to any activity occurring within the leased premises or upon lands adjacent to and used as an adjunct of the leased premises.

19. UTILITY FEES: LESSEE shall be responsible for the payment of all charges for the furnishing of gas, electricity, water and other public utilities to the leased premises and for having the utilities turned off when the leased premises are surrendered.

20. MINERAL RIGHTS: This lease does not cover petroleum or petroleum products or minerals and does not give the right to LESSEE to drill for or develop the same.

21. RIGHT OF AUDIT: LESSEE shall make available to LESSOR all financial and other records relating to this lease, and LESSOR shall have the right to audit such records at any reasonable time during the term of this lease. This right shall be continuous until this lease expires or is terminated. This lease may be terminated by LESSOR should LESSEE fail to allow public access to all documents, papers, letters or other materials made or received in conjunction with this lease, pursuant to the provisions of Chapter 119, Florida Statutes.

22. CONDITION OF PREMISES: LESSOR assumes no liability or obligation to LESSEE with reference to the conditions of the leased premises. The leased premises herein are leased by LESSOR to LESSEE in an "as is" condition, with LESSOR assuming no responsibility for the care, repair, maintenance or improvement of the leased premises for the benefit of LESSEE.

23. COMPLIANCE WITH LAWS: LESSEE agrees that this lease is contingent upon and subject to LESSEE obtaining all applicable permits and complying with all applicable permits, regulations, ordinances, rules, and laws of the State of Florida or the United States or of any political subdivision or agency of either.

24. NOTICE: All notices given under this lease shall be in writing and shall be served by certified mail including, but not limited to, notice of any violation served pursuant to Section 253.04, Florida Statutes, to the last address of the party to whom notice is to be given, as designated by such party in writing.

LESSOR and LESSEE hereby designate their address as follows:

LESSOR: Department of Environmental Protection
Division of State Lands
Bureau of Land Management Services, M.S. 130
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

LESSEE: Palm Beach County Board of County Commissioners
Department of Environmental Resources Management
3323 Belvedere Road, BLDG. 502
West Palm Beach, Florida 33406

25. BREACH OF COVENANTS, TERMS, OR CONDITIONS: Should LESSEE breach any of the covenants, terms, or conditions of this lease, LESSOR shall give written notice to LESSEE to remedy such breach within sixty days of such notice. In the event LESSEE fails to remedy the breach to the satisfaction of LESSOR within sixty days of receipt of written notice, LESSOR may either terminate this lease and recover from LESSEE all damages LESSOR may incur by reason of the breach including, but not limited to, the cost of recovering the leased premises and attorneys' fees or maintain this lease in full force and effect and exercise all rights and remedies herein conferred upon LESSOR.

26. DAMAGE TO THE PREMISES: (a) LESSEE shall not do, or suffer to be done, in, on or upon the leased premises or as affecting said leased premises or adjacent properties, any act which may result in damage or depreciation of value to the leased premises

or adjacent properties, or any part thereof. (b) LESSEE shall not generate, store, produce, place, treat, release or discharge any contaminants, pollutants, or pollution, including, but not limited to, hazardous or toxic substances, chemicals or other agents on, into, or from the leased premises or any adjacent lands or waters in any manner not permitted by law. For the purposes of this lease, "hazardous substances" shall mean and include those elements or compounds defined in 42 USC Section 9601 or which are contained in the list of hazardous substances adopted by the United States Environmental Protection Agency (EPA) and the list of toxic pollutants designated by the United States Congress or the EPA or defined by any other federal, state or local statute, law, ordinance, code, rule, regulation, order or decree regulating, relating to, or imposing liability or standards of conduct concerning any hazardous, toxic or dangerous waste, substance, material, pollutant or contaminant. "Pollutants" and "pollution" shall mean those products or substances defined in Chapters 376 and 403, Florida Statutes, and the rules promulgated thereunder, all as amended or updated from time to time. In the event of LESSEE's failure to comply with this paragraph, LESSEE shall, at its sole cost and expense, promptly commence and diligently pursue any legally required closure, investigation, assessment, cleanup, decontamination, remediation, restoration and monitoring of (1) the leased premises, and (2) all off-site ground and surface waters and lands affected by LESSEE's such failure to comply, as may be necessary to bring the leased premises and affected off-site waters and lands into full compliance with all applicable federal, state or local statutes, laws, ordinances, codes, rules, regulations, orders and decrees, and to restore the damaged property to the condition existing immediately prior to the occurrence which caused the damage. LESSEE'S obligations set forth in this paragraph shall survive the termination or

expiration of this lease. This paragraph shall not be construed as a limitation upon LESSEE'S obligations as set forth in paragraph 14 of this lease, nor upon any other obligations or responsibilities of LESSEE as set forth herein. Nothing herein shall relieve LESSEE of any responsibility or liability prescribed by law for fines, penalties and damages levied by governmental agencies, and the cost of cleaning up any contamination caused directly or indirectly by LESSEE'S activities or facilities. Upon discovery of a release of a hazardous substance or pollutant, or any other violation of local, state or federal law, ordinance, code, rule, regulation, order or decree relating to the generation, storage, production, placement, treatment, release or discharge of any contaminant, LESSEE shall report such violation to all applicable governmental agencies having jurisdiction, and to LESSOR, all within the reporting periods of the applicable governmental agencies. This paragraph shall not be deemed to apply to any conditions existing prior to the effective date of this lease.

27. ENVIRONMENTAL AUDIT: At LESSOR'S discretion, LESSEE shall provide LESSOR with a current Phase I environmental site assessment conducted in accordance with the Department of Environmental Protection, Division of State Land's standards prior to termination of this lease, and if necessary a Phase II environmental site assessment.

28. SURRENDER OF PREMISES: Upon termination or expiration of this lease, LESSEE shall surrender the leased premises to LESSOR. In the event no further use of the leased premises or any part thereof is needed, LESSEE shall give written notification to the Bureau of Land Management Services, Division of State Lands, Department of Environmental Protection, Mail Station 130, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, at least six months prior to the release of any or all of the leased premises. Notification shall include a legal description, this

lease number, and an explanation of the release. The release shall only be valid if approved by LESSOR through the execution of a release of lease instrument with the same formality as this lease. Upon release of all or any part of the leased premises or upon termination or expiration of this lease, all permanent/capital improvements, including both physical structures and modifications to the leased premises, shall become the property of LESSOR, unless LESSOR gives written notice to LESSEE to remove any or all such improvements at the expense of LESSEE. The decision to retain any improvements upon termination of this lease shall be at LESSOR'S sole discretion. Prior to surrender of all or any part of the leased premises a representative of the Division of State Lands, Department of Environmental Protection, shall perform an on-site inspection and the keys to any building on the leased premises shall be turned over to the Division.

29. BEST MANAGEMENT PRACTICES: LESSEE shall implement applicable Best Management Practices for all activities conducted under this lease in compliance with Paragraph 18-2.018(2)(h), Florida Administrative Code, which have been selected, developed, or approved by LESSOR, LESSEE or other land managing agencies for the protection and enhancement of the leased premises.

30. PUBLIC LANDS ARTHROPOD CONTROL PLAN: LESSEE shall identify and subsequently designate to the respective arthropod control district or districts within one year of the effective date of this lease all of the environmentally sensitive and biologically highly productive lands contained within the leased premises, in accordance with Section 388.4111, Florida Statutes and Chapter 5E-13, Florida Administrative Code, for the purpose of obtaining a public lands arthropod control plan for such lands.

31. PROHIBITIONS AGAINST LIENS OR OTHER ENCUMBRANCES: Fee title to the leased premises is held by LESSOR. LESSEE shall not do or permit anything to be done which purports to create a lien or

encumbrance of any nature against the real property contained in the leased premises including, but not limited to, mortgages or construction liens against the leased premises or against any interest of LESSOR therein.

32. PARTIAL INVALIDITY: If any term, covenant, condition or provision of this lease shall be ruled by a court of competent jurisdiction to be invalid, void, or unenforceable, the remainder of the provisions shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

33. ARCHAEOLOGICAL AND HISTORIC SITES: Execution of this lease in no way affects any of the parties' obligations pursuant to Chapter 267, Florida Statutes. The collection of artifacts or the disturbance of archaeological and historic sites on state-owned lands is prohibited unless prior authorization has been obtained from the Department of State, Division of Historical Resources. The Management Plan prepared pursuant to Chapters 18-2 and 18-4, Florida Administrative Code, shall be reviewed by the Division of Historical Resources to insure that adequate measures have been planned to locate, identify, protect and preserve the archaeological and historic sites and properties on the leased premises.

34. SOVEREIGNTY SUBMERGED LANDS: This lease does not authorize the use of any lands located waterward of the mean or ordinary high water line of any lake, river, stream, creek, bay, estuary, or other water body or the waters or the air space thereabove.

35. ENTIRE UNDERSTANDING: This lease sets forth the entire understanding between the parties and shall only be amended with the prior written approval of LESSOR.

36. MAINTENANCE OF IMPROVEMENTS: LESSEE shall maintain the real property contained within the leased premises and the improvements located thereon, in a state of good condition, working order and repair including, but not limited to, keeping the leased premises free of trash or litter, meeting all building

and safety codes for the location situated, maintaining the planned improvements as set forth in the approved Management Plan and maintaining any and all existing roads, canals, ditches, culverts, risers and the like in as good condition as the same may be on the effective date of this lease, reasonable wear and tear excepted; provided, however, that any removal, closure, etc, of the above improvements shall be acceptable when the proposed activity is consistent with the goals of conservation, protection, enhancement, or safety of the natural and historical resources within the leased premises and with the approved Management Plan.

37. GOVERNING LAW: This lease shall be governed by and interpreted according to the laws of the State of Florida.

38. SIGNS: LESSEE shall ensure that the area is identified as being publicly owned and operated as a public facility in all signs, literature and advertising. If federal grants or funds are used by LESSEE for any project on the leased premises LESSEE shall erect signs identifying the leased premises as a federally assisted project.

39. SECTION CAPTIONS: Articles, subsections and other captions contained in this lease are for reference purposes only and are in no way intended to describe, interpret, define or limit the scope, extent or intent of this lease or any provisions thereof.

40. ADMINISTRATIVE FEE: LESSEE shall pay LESSOR an annual administrative fee of \$300. The initial annual administrative fee shall be payable within thirty days from the date of execution of this lease agreement and shall be prorated based on the number of months or fraction thereof remaining in the fiscal year of execution. For purposes of this lease agreement, the fiscal year shall be the period extending from July 1 to June 30. Each annual payment thereafter shall be due and payable on July 1 of each subsequent year.

IN WITNESS WHEREOF, the parties have caused this lease to be executed on the day and year first above written.

BOARD OF TRUSTEES OF THE INTERNAL
IMPROVEMENT TRUST FUND OF THE
STATE OF FLORIDA

By: Daniel T. Crabb (SEAL)
CHIEF, BUREAU OF LAND
MANAGEMENT SERVICES, DIVISION
OF STATE LANDS, DEPARTMENT OF
ENVIRONMENTAL PROTECTION

"LESSOR"

Patricia Toloday
Witness

Patricia Toloday
Print/Type Witness Name

Cheryl Granger
Witness

Cheryl Granger
Print/Type Witness Name

STATE OF FLORIDA
COUNTY OF LEON

The foregoing instrument was acknowledged before me this 24th day of February 1998, by Daniel T. Crabb, as Chief, Bureau of Land Management Services, Division of State Lands, Department of Environmental Protection, as agent for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida, who is personally known to me.

Patricia Toloday
Notary Public, State of Florida



Print/Type Notary Name

Commission Number:

Commission Expires:

Approved as to Form and Legality

By: James H. Hiss
DEP Attorney

R97 2143D

DEC 16 1997

PALM BEACH COUNTY, FLORIDA,
BY ITS BOARD OF COUNTY
COMMISSIONERS

Karen Claerbout
Witness

Karen Claerbout
Print/Type Witness Name

Joan Haverly
Witness

Joan Haverly
Print/Type Witness Name

By: Burt Aaronson

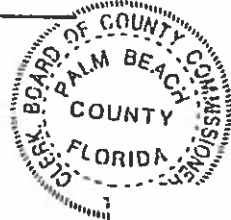
Burt Aaronson

Title: Chairman

DOROTHY H. WILKEN, CLERK
Board of County Commissioners

By Carla Zafra
DEPUTY CLERK
"LESSEE"

"OFFICIAL SEAL"



APPROVED AS TO FORM
AND LEGAL SUFFICIENCY

By: Heidi Zell
County Attorney

ATTEST:

By: _____
Print/Type Name

Title: _____

STATE OF FLORIDA
COUNTY OF PALM BEACH

The foregoing instrument was acknowledged before me this
16th day of December 1997, by Burt Aaronson, as
Board of County Commissioners of Palm Beach County, Florida, who is
personally known to me.

Willie Oswalt
Notary Public, State of Florida

(SEAL)



WILLIE OSWALT
COMMISSION # CC 364437
EXPIRES MAY 6, 1998
BONDED THRU
ATLANTIC BONDING CO., INC

Type Notary Name

Commission Number:

Commission Expires:

THIS INSTRUMENT PREPARED BY:

Jeffrey Walkin
Thomson Muraro Razook & Hart, P.A.
One Southeast Third Avenue
17th Floor
Miami, Florida 33131

FEB-27-1997 11:25am 97-071028
ORB 9674 Pg 814
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Tew + Bensley
✓ 6013 NW 33th
BR 33456

WARRANTY DEED

THIS INDENTURE, made as of this 27 day of February, 1997 by Boca Commerce Center Associates, a Florida general partnership ("Grantor"), whose address is 551 N.W. 77th Street, Boca Raton, Florida 33487, in favor of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida ("Grantee"), whose address is c/o Florida Department of Environmental Protection, Division of State Lands, 3900 Commonwealth Boulevard, Mail Station 115, Tallahassee, Florida 32399-3000.

NOW THEREFORE, Grantor, for and in consideration of Ten Dollars and other good and valuable consideration paid to Grantor by Grantee, the receipt and sufficiency of which are hereby acknowledged, hereby grants, bargains and sells to Grantee, its successors and assigns, all of its right, title and interest in and to the real property situated in Palm Beach County, Florida more particularly described on Exhibit "A" attached hereto, SUBJECT TO easements, restrictions, limitations and conditions of record, if any now existing, but any such interests that may have been terminated are not hereby re-imposed.

Grantor covenants it has good right and lawful authority to sell and convey the Property, and hereby fully warrants the title to the Property and will defend the same against the lawful claims of all persons whomsoever.

The benefits and obligations hereunder shall inure to and be binding upon the successors and assigns of the respective parties hereto.

THIS CONVEYANCE IS EXEMPT FROM FLORIDA DOCUMENTARY STAMP TAX PURSUANT TO THE UNITED STATES BANKRUPTCY CODE 11 U.S.C. §1146(C) AND FLORIDA ADMINISTRATIVE CODE §12B-4.054(31.). ACCORDINGLY, NO DOCUMENTARY STAMP TAX IS DUE AT THE TIME OF THE RECORDING OF THIS DEED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

IN WITNESS WHEREOF, Grantor has caused these presents to be executed in its name, by its duly authorized general partners as of the day and year first above written.

Witnesses:

Boca Commerce Center Associates

By: Boca-K Associates, Ltd., General Partner

By: Koad, Inc., General Partner

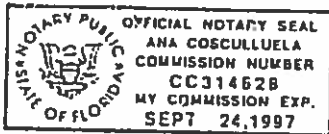
By: Frank E. Egger
Frank Egger - Vice-President

[Signature]
Name: Ana Cosculluela
[Signature]
Name: Frank Egger

STATE OF FLORIDA)
)
COUNTY OF DADE)

The foregoing instrument was acknowledged before me this 19th day of February, 1997, by Frank Egger, as Vice-President of Koad, Inc., a Florida corporation, as general partner of Boca-K Associates, Ltd, a Florida limited partnership, as a general partner of Boca Commerce Center Associates, a Florida general partnership, on behalf of the corporation and as an act of the partnerships. He ☒ (a) is personally known to me, or ☐ (b) has produced _____ as identification.

My commission expires:



[Signature]
Notary Public - State of Florida
Name: _____
[Seal]

APPROVED AS TO FORM AND LEGALITY
By: [Signature]
DEP Attorney
Date: 9-16-97

Witnesses:

Boca Commerce Center Associates

By: Bocacos Inc., General Partner

Name: *[Signature]*
[Signature]
Name: *[Signature]*

By: *[Signature]*
Hannjorg Hereth - President

STATE OF FLORIDA)
)
COUNTY OF DADE)

The foregoing instrument was acknowledged before me this 19th day of February, 1997, by Hannjorg Hereth, as President of Bocacos Inc., a Delaware corporation, as a general partner of Boca Commerce Center Associates, a Florida general partnership, on behalf of the corporation and as an act of the partnership. He ☒ (a) is personally known to me, or ☐ (b) has produced _____ as identification.

My commission expires:



[Signature]
Notary Public - State of Florida

[Seal]

Exhibit "A"

Real Property Legal Description

PARCEL 1:

A parcel of land lying in Section 6, Township 47 South, Range 43 East, more particularly described as follows;

COMMENCE at the Northeast corner of said Section 6;

THENCE S 89° 54' 06" W along the North line of said Section 6 a distance of 614.51 feet to the West right-of-way line of the Seaboard Coastline Railroad;

THENCE S 00° 10' 37" E along the said West right-of-way line a distance of 1759.10 feet to a point on the Southerly right-of-way line of Clint Moore Road, as recorded in Plat Book 4, Page 240 of the Public Records of Palm Beach County, Florida and the POINT OF BEGINNING;

THENCE continue S 00° 10' 37" E along the last described course, a distance of 241.74 feet to the point of curvature of a circular curve concave to the West;

THENCE Southerly and Westerly along the arc of said curve, along said Westerly right-of-way line, having a radius of 3365.62 feet, having a central angle of 37° 54' 31", an arc distance of 2226.80 feet;

THENCE N 00° 25' 10" E a distance of 1155.17 feet;

THENCE S 89° 49' 16" W a distance of 696.92 feet;

THENCE N 00° 09' 05" W a distance of 2247.67 feet to a point on the arc of a circular curve concave to the South, whose radius point bears S 16° 02' 55" W from the last described point, said point also being on the said Southerly right-of-way line of Clint Moore Road;

THENCE Easterly and Southerly along the arc of said curve, having a radius of 1849.86 feet, a central angle of 18° 54' 24", an arc distance of 610.42 feet;

THENCE S 34° 57' 19" W, radial to the last described curve, a distance of 38.38 feet;

THENCE S 45° 01' 58" E a distance of 247.52 feet;

THENCE S 48° 15' 37" E a distance of 932.56 feet to the POINT OF BEGINNING; (the last four described courses being coincident with the said Southerly right-of-way of Clint Moore Road).

PARCEL 2:

A portion of Section 6, Township 47 South, Range 43 East, Palm Beach County, Florida and a portion of Section 31, Township 46 South, Range 43 East, Palm Beach County, Florida, more particularly described as follows:

COMMENCING at the Northeast corner of said Section 6;

THENCE S 89° 54' 06" W, along the North line of said Section 6, a distance of 614.51 feet to the POINT OF BEGINNING, said point being on the West right-of-way line of the Seaboard Coastline Railroad;

THENCE S 00° 10' 37" E, along said right-of-way a distance of 100.00 feet;

THENCE S 89° 54' 06" W, parallel with and 100.00 feet South of, as measured at right angles to the North line of said Section 6, a distance of 300.00 feet;

THENCE S 00° 10' 37" E, a distance of 300 feet;

THENCE N 89° 54' 06" E, a distance of 300 feet to the said West right-of-way line of the Seaboard Coastline Railroad;

THENCE S 00° 10' 37" E, along said right-of-way, a distance of 1023.13 feet to a point on the Northerly right-of-way line of Clint Moore Road as recorded in Road Plat Book 4, Page 240 of the Public Records of Palm Beach County, Florida;

THENCE N 48° 15' 37" W a distance of 552.03 feet;

THENCE N 53° 15' 52" W a distance of 428.49 feet;

THENCE S 34° 57' 19" W a distance of 41.71 feet to a point on the arc of a circular curve concave to the Southwest, whose radius point bears S 34° 57' 19" W, from the last described point;

THENCE Northerly and Westerly along the arc of said curve, having a radius of 1969.86 feet; a central angle of 19° 55' 05", an arc distance of 684.79 feet (the last four described courses being coincident with said Northerly right-of-way line of Clint Moore Road);

THENCE N 00° 09' 05" W a distance of 543.21 feet to a point on the North line of said Section 6;

THENCE S 89° 54' 06" W along said Section line a distance of 669.43 feet to the North One-Quarter (N 1/4) corner of Section 6;

THENCE continue S 89° 54' 06" W along the last described course, a distance of 606.10 feet to the East top of bank of the L.W.D.D. E-4 Canal as laid out and in use;

THENCE N 03° 39' 32" W a distance of 228.12 feet;

THENCE N 08° 11' 09" W a distance of 812.33 feet;

THENCE N 01° 38' 02" E a distance of 287.91 feet;

THENCE N 07° 29' 43" E a distance of 740.15 feet to a point on the Easterly right-of-way line of Congress Avenue, as recorded in Road Plat Book 4, Page 143, of the Public Records of Palm Beach County, Florida, (the last four described courses being coincident with the east top of bank of L.W.D.D. E-4 Canal);

THENCE N 47° 33' 13" E along said Easterly right-of-way, a distance of 2229.65 feet to the point of curvature of a circular curve concave to the Northwest;

THENCE Northerly, along said right-of-way line of Congress Avenue, along the arc of said curve having a radius of 1969.86 feet, a central angle of 13° 51' 51", an arc distance of 476.66 feet;

THENCE S 89° 56' 10" E a distance of 727.76 feet to the aforesaid West right-of-way line of the Seaboard Coastline Railroad;

THENCE S 00° 10' 37" E along said right-of-way, a distance of 3913.66 feet to the POINT OF BEGINNING.

LESS AND EXCEPTING THE FOLLOWING DESCRIBED PROPERTY:

- A) All of BOCA COMMERCE CENTER PHASE I, according to the Plat thereof, as recorded in Plat Book 46, Page 44 of the Public Records of Palm Beach County, Florida.
- B) All of that portion of Section 31, Township 46 South, Range 43 East, Palm Beach County, Florida, lying Northeasterly and Easterly of the Westerly right-of-way line of N.W. 6th Avenue, BOCA COMMERCE CENTER PHASE I, according to the Plat thereof, as Recorded in Plat Book 46, Page 44 of the Public Records of Palm Beach County, Florida.
- C) All that portion of Section 31, Township 46 South, Range 43 East, Palm Beach County, Florida, lying Easterly of the Westerly right-of-way line of N.W. 6th Avenue, BOCA COMMERCE CENTER PHASE 2, according to the Plat thereof, as Recorded in Plat Book 60, Page 27, of the Public Records of Palm Beach County, Florida.
- D) All of "KRAFT FOODSERVICE, INC. DISTRIBUTION FACILITY" according to the Plat thereof, as Recorded in Plat Book 75, Pages 182 and 183 of the Public Records of Palm Beach County, Florida.
- E) A parcel of land lying in Section 31, Township 46 South, Range 43 East, Palm Beach County, Florida, more particularly described as follows:

COMMENCE at the Southeast corner of said Section 31;

THENCE S 89° 54' 06" W along the South line of said Section 31, a distance of 614.51 feet to a point on the said West right-of-way line of the SEABOARD COASTLINE RAILROAD;

THENCE N 00° 10' 37" W, along said right-of-way, a distance of 3913.66 feet;

THENCE N 89° 56' 10" W, a distance of 727.76 feet to a point on the arc of a circular curve

concave to the Northwest whose radius point bears N 56° 18' 38" W from the last described point, said point being on the Easterly right-of-way line of Congress Avenue, as Recorded in Plat Book 4, Page 143 of the Public Records of Palm Beach County, Florida.

THENCE Southerly and Westerly along said right-of-way line, along the arc of said curve, having a radius of 1969.86 feet, a central angle of 13° 51' 51", an arc distance of 476.66 feet to the point of tangency;

THENCE S 47° 33' 13" W along said right-a-way line, a distance of 568.55 feet to the POINT OF BEGINNING;

THENCE S 42° 26' 47" E along the Southwesterly line of "Tract B-B" of the plat of Boca Commerce Center Phase I as Recorded in Plat Book 46, Pages 44 through 46 inclusive of the Public Records of Palm Beach County, Florida, a distance of 65.00 feet;

THENCE N 47° 33' 13" E along the Southeasterly line of said "Tract B-B" a distance of 55.00 feet to the Westerly right-of-way of N.W. 6th Avenue as shown on said plat;

THENCE S 42° 26' 47" E along said right-of-way a distance of 98.00 feet to the point of curvature of a circular curve concave to the Southwest;

THENCE Southerly and Southeasterly along said right-of-way, along the arc of said curve having a radius of 907.00 feet, a central angle of 32° 04' 12", an arc distance of 507.67 feet to a point on a non-tangent line;

THENCE N 86° 10' 31" W a distance of 892.00 feet, to a point on the said Easterly right-of-way line of Congress Avenue;

THENCE N 47° 33' 13" E along said East right-of-way line, a distance of 700.00 feet to the POINT OF BEGINNING;

F) A parcel of land, being the North 100.00 feet of Section 6, Township 47 South, Range 43 East, Palm Beach County, Florida; less and except the West 2054.69 feet of said North 100.00 feet of Section 6, also, less and except the East 614.51 feet of said North 100.00 feet of Section 6.

G) That portion of Section 31, Township 46 South, Range 43 East, Palm Beach County, Florida, being the Easterly 40 feet of the following described parcel:

COMMENCING at the Southwest corner of said Section 31;

THENCE N 89° 54' 06" E along the South line of said Section 31, a distance of 2,062.14 feet to the POINT OF BEGINNING;

THENCE N 03° 39' 32" W a distance of 225.07 feet;

THENCE N 08° 11' 09" W a distance of 813.72 feet;

THENCE N 01° 38' 02" E a distance of 292.02 feet;

THENCE N 07° 29' 43" E a distance of 706.01 feet to a point on the South right-of-way line of Congress Avenue (120-feet in width);

THENCE N 47° 33' 13" E along the South right-of-way line of Congress Avenue a distance of 108.77 feet;

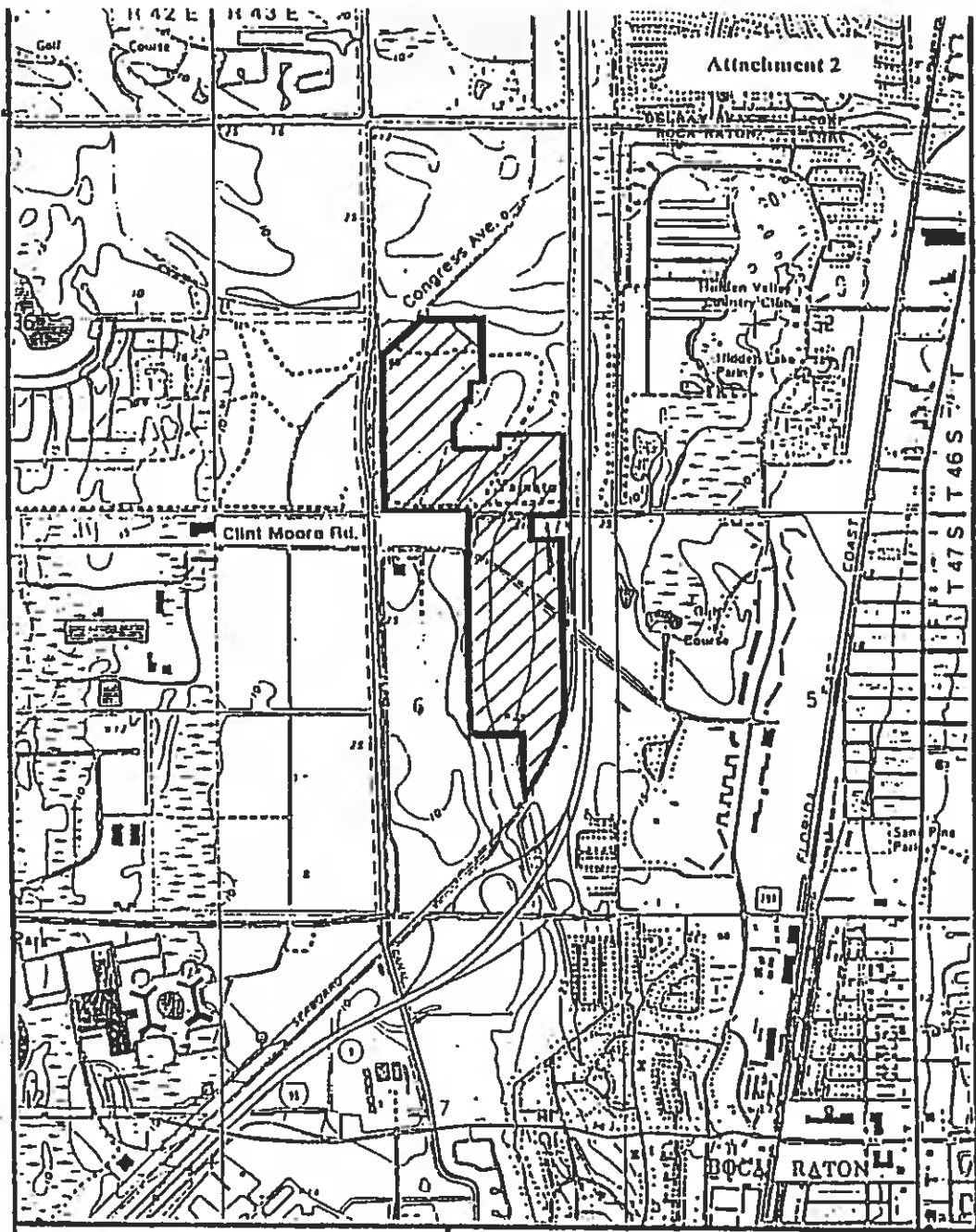
THENCE S 07° 29' 43" W a distance of 785.67 feet;

THENCE S 01° 38' 02" W a distance of 282.43 feet;

THENCE S 08° 11' 09" E a distance of 810.47 feet;

THENCE S 03° 39' 32" E a distance of 232.19 feet to a point on the South line of said Section 31;

THENCE S 89° 54' 06" W along said South Section line a distance of 70.14 feet to the POINT OF BEGINNING;



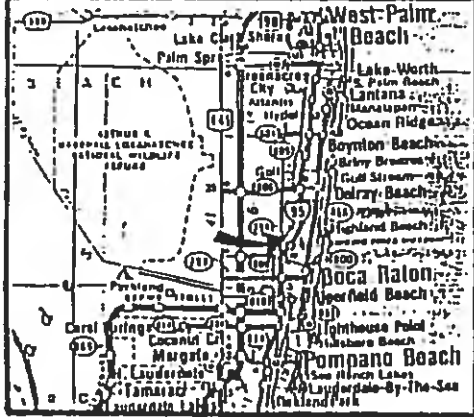
Attachment 2



YAMATO SCRUB

PALM BEACH

CO.



LEASED TRACT

ATL1

BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT
TRUST FUND OF THE STATE OF FLORIDA

R2012 1688

AMENDMENT NUMBER 1 TO LEASE NUMBER 4176

THIS LEASE AMENDMENT is entered into this 12th day of December, 2012, by and between the BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA, hereinafter referred to as "LESSOR," and PALM BEACH COUNTY, a political subdivision of the State of Florida, hereinafter referred to as "LESSEE";

W I T N E S S E T H

WHEREAS, LESSOR, by virtue of Section 253.03, Florida Statutes, holds title to certain lands and property for the use and benefit of the State of Florida; and

WHEREAS, on February 24, 1998, LESSOR and LESSEE entered into Lease Number 4176 (the "lease"); and

WHEREAS, LESSOR and LESSEE desire to amend the lease to add land to the leased premises.

NOW THEREFORE, in consideration of the mutual covenants and agreements contained herein, the parties hereto agree as follows:

1. The legal description of the leased premises set forth in Exhibit "A" of Lease Number 4176 is hereby amended to include the real property described in Exhibit "A" attached hereto, and by reference made a part hereof.
2. Additional paragraph 41 is added as follows:
 41. SPECIAL CONDITION: LESSEE shall allow the State of Florida Department of Health ("DOH") to relocate gopher tortoises from lands leased to DOH under Lease Number 2603 to the leased premises if such relocation is permissible under Chapter 68A-27, Florida Administrative Code, or other such law as is in effect at the time of relocation.
3. It is understood and agreed by LESSOR and LESSEE that in each and every respect the terms of Lease Number 4176, except as amended, shall remain unchanged and in full force and effect and the same are hereby ratified, approved and confirmed by LESSOR and LESSEE as of the date of this amendment.
4. It is understood and agreed by LESSOR and LESSEE that this Amendment Number 1 to Lease Number 4176 is hereby binding upon the parties hereto and their successors and assigns.

IN WITNESS WHEREOF, the parties have caused this lease amendment to be executed on the day and year first above written.

BOARD OF TRUSTEES OF THE INTERNAL
IMPROVEMENT TRUST FUND OF THE
STATE OF FLORIDA

Daphne Thomas
Witness

Daphne Thomas
Print/Type Witness Name

Keith Clayton
Witness

Keith Clayton
Print/Type Witness Name

By: Victoria F. Thompson (SEAL)
VICTORIA F. THOMPSON, PROGRAM
ADMINISTRATOR, BUREAU OF PUBLIC
LAND ADMINISTRATION, DIVISION OF
STATE LANDS, STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

"LESSOR"

STATE OF FLORIDA
COUNTY OF LEON

The foregoing instrument was acknowledged before me this 12th day of December, 2012, by Victoria F. Thompson, Program Administrator, Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, as agent for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida. She is personally known to me.



Keith E. Clayton
Notary Public, State of Florida

Print/Type Notary Name

Commission Number:

Commission Expires:

Approved as to Form and Legality

By: [Signature]
DEP Attorney

I, Yvonne Reigle
 Witness
YVONNE REIGLE
 Print/Type Name
Ann Clark
 Witness
Ann CLARK
 Print/Type Name

"LESSEE"

EXHIBIT "A"

A PARCEL OF LAND BEING A PORTION OF THE PROPERTY DESCRIBED IN OFFICIAL RECORD BOOK 1706, PAGE 583, OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, LYING IN THE SOUTHEAST QUARTER OF SECTION 33, TOWNSHIP 44 SOUTH, RANGE 43 EAST, PALM BEACH COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE EAST QUARTER CORNER OF SAID SECTION 33; THENCE NORTH 87° 56' 11" WEST ALONG THE NORTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 33, A DISTANCE OF 40.04 FEET TO A LINE LYING 40.00 FEET WEST OF (AS MEASURED AT RIGHT ANGLES TO) AND PARALLEL WITH THE EAST LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 33 AND THE POINT OF BEGINNING; THENCE SOUTH 00° 36' 27" EAST ALONG SAID PARALLEL LINE, A DISTANCE OF 564.39 FEET TO THE NORTH LINE OF THE PROPERTY DESCRIBED IN THE TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND DEED - LEASE NO. 4091, DATED SEPTEMBER 27, 1995 AND AS SHOWN ON THE BOUNDARY SURVEY FOR THE DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES - PREPARED BY FLORIDA SURVEYING AND MAPPING, INC., JOB NO. 1-94-052BL - DATED 10/26/94 AND THE BOUNDARY SURVEY FOR A.G. HOLLEY SCRUB TURTLE LEASE PARCEL - PREPARED BY PALM BEACH COUNTY, PROJECT NO. 2007012-15 (DWG. NO. S-3-07-2736) - DATED 06/05/2007; THENCE NORTH 87° 56' 11" WEST ALONG SAID NORTH LINE, A DISTANCE OF 499.94 FEET TO THE WEST LINE OF SAID LEASE; THENCE SOUTH 00° 36' 27" EAST ALONG SAID WEST LINE, A DISTANCE OF 61.29 FEET TO A LINE LYING 625.00 FEET SOUTH OF (AS MEASURED AT RIGHT ANGLES TO) AND PARALLEL WITH THE NORTH LINE OF SAID SOUTHEAST QUARTER (SE 1/4); THENCE NORTH 87° 56' 11" WEST ALONG SAID PARALLEL LINE, A DISTANCE OF 880.84 FEET TO THE EAST LINE OF THE PROPERTY AS SHOWN ON THE BOUNDARY SURVEY FOR THE LANTANA/LAKE WORTH HEALTH CLINIC - PREPARED BY FLORIDA SURVEYING AND MAPPING, INC., JOB NO. 3-89-26 - DATED 04/18/89; THENCE NORTH 00° 33' 51" EAST ALONG SAID EAST LINE, A DISTANCE OF 136.00 FEET TO THE NORTH LINE OF SAID BOUNDARY SURVEY; THENCE NORTH 89° 26' 09" WEST ALONG SAID NORTH LINE, A DISTANCE OF 500.00 FEET; THENCE SOUTH 00° 33' 51" WEST CONTINUING ALONG SAID NORTH LINE, A DISTANCE OF 125.00 FEET; THENCE NORTH 89° 26' 09" WEST CONTINUING ALONG SAID NORTH LINE, A DISTANCE OF 540.00 FEET TO A LINE LYING 50.00 FEET EAST OF (AS MEASURED AT RIGHT ANGLES TO) AND PARALLEL WITH THE WEST LINE OF THE SOUTHEAST (SE 1/4) OF SAID SECTION 33; THENCE NORTH 00° 33' 51" EAST ALONG SAID PARALLEL LINE, A DISTANCE OF 641.43 FEET TO THE NORTH LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF SAID SECTION 33; THENCE SOUTH 87° 56' 11" EAST ALONG SAID NORTH LINE, A DISTANCE OF 2408.34 FEET TO SAID LINE 40.00 FEET WEST OF (AS MEASURED AT RIGHT ANGLES TO) AND PARALLEL WITH THE EAST LINE OF SAID SOUTHEAST QUARTER (SE 1/4) AND THE POINT OF BEGINNING.

APPENDIX J

FIRE MANAGEMENT PLAN FOR LANTANA SCRUB

This plan contains generalized procedures that will apply to all burns conducted on the Lantana Scrub Natural Area. Specific information for each burn management unit will be gathered and reviewed prior to preparing the prescribed burn plan for each unit. A prescribed burn plan will not be finalized until a few days before a unit is planned to be burned in order to incorporate the current conditions on that unit. Therefore, specific prescribed burn plans will not be included in this fire management plan. Prescribed burn units are delineated by management units; the locations of individual management units can be seen on Figure 5 of the natural area's management plan. Additional information on fire management can be found in Section 4.5.1 of the management plan.

G.1 GOALS

The goals of the burn program at the Lantana Scrub Natural Area are to reintroduce fire to the scrub and scrubby flatwoods habitats at a frequency and intensity that will maintain these habitats in their various seral stages within the natural area. The fires are to be allowed to burn in a natural "patchy" fashion to most closely mimic natural fire patterns. The resulting patchwork of burned and unburned stands within a management unit will produce a mosaic of vegetation at various stages of maturity, thereby maximizing diversity within and among communities. This will provide habitat for individual species which typically use, or may even be restricted to, communities in a particular state of maturity. Additional goals to be achieved by the reintroduction of fire include: 1) providing viable wildlife habitat and ensuring the long-term existence of listed plants and animals that utilize the Lantana Scrub Natural Area; 2) assisting in the control of invasive non-native vegetation; and 3) reducing fuel loads that could lead to catastrophic wildfires. Individual goals for the success of each burn are established as part of the burn prescription and will generally include a desired percentage of consumption of ground cover and understory, and a percentage of acceptable crown scorch and consumption.

G.2 GENERAL PROCEDURES

The Incident Command System will be used on prescribed burns. This system enables communications to be guided through a chain-of-command process and permits the prescribed burn to be conducted in an organized manner. This system is used by Palm Beach County Fire-Rescue, the Florida Department of Agriculture, and the Consumer Services' Florida Forest Service (FFS), which enables these agencies to be easily brought into the prescribed burn operation when their assistance is requested.

G.2.1 Personnel

The Palm Beach County Department of Environmental Resources Management (ERM) will provide the personnel necessary to conduct prescribed burns. Additional personnel assistance may be sought from the Town of Lantana, Palm Beach County Fire-Rescue, Palm Beach County Parks and Recreation Department, and FFS. Each burn team will be headed by an Incident Commander (IC), who will conduct the prescribed burn. The IC must have received certification to conduct prescribed burns from FFS. The Fire Management Coordinator (FMC) will prepare the prescribed burn plan, conduct pre-burn coordination with other agencies and homeowners' groups, make crew assignments and coordinate communications. The IC will obtain a burn permit, oversee the burn, and make final decisions and adjustments during the burn.

The other positions on the burn crew may include division supervisor, ignition crew, safety officer, weather officer, information officer, holding crew, and spotters. The division supervisor is in charge of directing crews under his or her command in accordance with instructions from the IC, reporting all changes in burn or crew status to the IC, and has overall responsibility for the geographical area or role the division controls. The safety officer briefs the burn team on safety hazards and precautions, monitors the safety conditions throughout the burn, and reports any potentially hazardous conditions and injuries to the IC. The weather officer monitors weather conditions, records periodic weather observations, and makes periodic weather status reports to the IC. The holding crew drives and operates mechanized equipment such as a truck- or tractor-mounted water tank and pump. Spotters monitor the prescribed burn to see that it remains within management unit boundaries, and otherwise assist the division supervisor. The information officer coordinates with media representatives.

G.2.2 Equipment

ERM will provide the equipment resources necessary to conduct prescribed burns. Additional equipment resources may be sought from the Town of Lantana, Palm Beach County Fire-Rescue, Palm Beach County Parks and Recreation Department and FFS. All burn crew members shall wear Nomex fire-resistant outer clothing, leather lace-up boots with non-slip soles, leather gloves, a plastic firefighter's helmet, eye protection, an emergency fire shelter, and personal drinking water. Round-point shovels, fire rakes, and fire flaps will be available for crew members' use. Other hand tools available to the burn crew will be drip torches for igniting the fire and a belt weather kit for weather monitoring. All crew members have been issued radios for communication during burns. Crew members assigned to work together may use one radio due to feedback issues when multiple radios are used in close proximity. A first-aid kit and other safety equipment shall be kept in each crew vehicle.

Mobile equipment such as 4-wheel-drive pickup trucks (equipped with water tanks, pumps, and hoses) and all-terrain vehicles will be used, as well as other fire-suppression equipment such as tractor-mounted plow units, pumper trucks, and engines that may be supplied by FFS, Palm Beach County Parks and Recreation Department, and Palm Beach County Fire-Rescue. FFS

personnel with tractor-mounted plows and pumper trucks are stationed at the Loxahatchee Work Center on “D” Road in Loxahatchee Groves. They will be notified of any prescribed burn so that they can respond if more aggressive fire suppression measures are necessary.

G.2.3 Pre-burn Checklist

- Prepare specific burn prescription plan for each management unit
- Establish perimeter firebreaks
- Inspect management unit to identify potentially hazardous areas or species protection needs
- Assemble and inspect necessary equipment
- Make burn crew assignments
- Prepare maps and materials for pre-burn briefing
- Notify local agencies and officials and arrange for backup assistance
- Notify adjacent landowners and residents
- Monitor weather forecasts as the proposed burn day approaches
- Contact local law-enforcement authorities for assistance in directing traffic, if necessary

G.2.4 Burn Day Checklist

- Obtain burn authorization from FFS
- Mobilize burn crew and equipment
- Notify adjacent landowners and others who have requested prior notification of the burn
- Post burn notices on site and on adjacent highways and other roads, as needed
- Obtain spot weather forecast for management unit and other information necessary to determine that burn parameters will comply with prescription
- Coordinate on-site advance notice of burn with Palm Beach County Sheriff’s Office; request deputies to use their vehicle-mounted megaphones to notify visitors of the need to leave the site because of the pending burn
- Conduct pre-burn safety and ignition plan briefing for burn team
- Monitor weather forecasts and record on-site weather data
- Conduct test burn
- Conduct main burn if prescription conditions are met
- Mop-up and extinguish hot spots

G.2.5 Post-burn Checklist

- Monitor burn for rekindling of fire
- Remove burn notice signs
- Conduct post-burn review and burn crew input session
- Evaluate burn for success in meeting environmental objectives
- Evaluate burn plan and burn crew for areas of improvement
- Continue to evaluate burn at regular intervals

- Respond to follow-up contacts/requests for news media information

G.2.6 Forms

Standardized burn prescription forms are used as the basis of the burn prescription. Examples of the various forms used are attached as Exhibit 1. Other forms that may be used may vary slightly in design, but in general deal with incident objectives, organizational structure of the burn team, and a medical plan for the burn. Examples are supplied as Exhibits 2, 3, and 4, respectively.

G.3 FIRE MANAGEMENT PRESCRIPTION PREPARATION

Prior to conducting a prescribed burn within the Lantana Scrub Natural Area management units, a prescription for the burn will be developed. This prescription is a carefully prepared document that provides the strategy for introducing fire to the natural area in the safest manner possible. Preparation of the fire prescription for each burn involves the consideration of several factors, which may include, but are not limited to:

- Size and location of the management unit
- Boundaries of the management unit
- Topography and soils of the management unit
- Habitat type, density, and crown height
- Fuel load
- Presence of listed plant and animal species
- Smoke-sensitive areas (e.g., hospitals, schools, nursing homes, highways and roads, and other areas as determined by following the guidance for smoke management published in A Guide for Prescribed Fire in Southern Forests, pages 29-32, a publication of the National Wildfire Coordinating Group, February 1989)
- Dispersion Index
- Drought Index
- Temperature
- Wind speed
- Relative humidity
- Fine fuel moisture
- Staffing and equipment availability
- Time to complete the burn
- Specific objectives of the burn



PALM BEACH COUNTY
DEPARTMENT OF ENVIRONMENTAL RESOURCES MANAGEMENT

BURN UNIT#	QUAD NAME:	SECTION	TOWNSHIP	RANGE	BURN UNIT SIZE (ac):
DATE PREPARED:	NWS LATITUDE:	NWS LONGITUDE:	AUTHORIZATION #		
	FFS LATITUDE:	FFS LONGITUDE:	NWS FWF ZONE:		
PRESCRIPTION BY:		ADDRESS & PHONE: 2300 N. Jog Rd; WPB, FL 561-233-2400			
CERTIFIED BURNER:					
A. PREVIOUS BURNS	Date:	Fire Type:	Results:		
B. STAND DESCRIPTION –					
1. Overstory Type:	Fuel Model:	Density:	Height to Crown:		
2. Understory Type:	Understory Height:	Overstory Percent Cover:			
3. Dead Fuel Type:	Stand Age:	Estimated Tons per Acre:			
4. Soil Type and Topography					
C. PURPOSE(S) OF BURN:					
D. SPECIFIC OBJECTIVES:					
E. PRE-BURN FACTORS					
1. Passed Smoke Screening Test?					
2. Special Precautions:					
3. Notification List:					
4. Applicable Regulations:					
5. Smoke-Sensitive Areas & Critical Targets (see map):					
6. # of Crew Needed:		7. Equipment Needed:			
F. WEATHER FACTORS	Desired Range	Predicted	Actual		
1. 20' Wind Speed (mph)					
2. Wind Direction					
3. Minimum Mixing Height (feet)					
4. Dispersion Index					
5. Minimum Relative Humidity (%)					
6. Maximum Temperature (F)					
7. Fine Fuel Moisture (%)					
8. Days Since ½" Rain					
9. County Average Drought Index					
G. FIRE BEHAVIOR	Desired Range	Actual Range			
1. Firing Methods					
2. Months to Burn					
3. Time to Begin Ignition					
4. # of Hours to Complete					
5. Average Flame Lengths (feet)					
6. Rate of Spread (feet/hour)					
7. Fire Line Intensity (btu)					
H. POST BURN EVALUATIONS	Immediately After Burn	Future			
1. Objectives Met?		Date:			
2. Escapes (indicate on map)		Insect or Disease Damage:			
3. Spotting					
4. Smoke Problems					
5. % Understory Veg Consumed					
6. % Crown Scorch					
7. % Live Crown Consumed		Tree Mortality:			
8. Adverse Publicity					
9. Remarks					
I. SIGNATURE OF CERTIFIED BURNER AND DATE:					

INCIDENT OBJECTIVES ICS 202	1. INCIDENT NAME	2. DATE PREPARED
3. OPERATIONAL PERIOD (DATE/TIME)		
4. OBJECTIVES 1)		
2)		
3)		
5. Command Structure		
6. Communications		
7. CONTINGENCY:		
8. MOP-UP:		
9. GENERAL SAFETY MESSAGES 1) Watch for heat exhaustion; drink plenty of fluids.		
2) Know your safety zones and escape routes, refer to the map.		
3) Do not alter burn techniques/strategies without direction from the IC.		
202 ICS	7. PREPARED BY:	8. APPROVED BY (INCIDENT COMMANDER)

MEDICAL PLAN

Winding Waters Natural Area

This medivac protocol will be used in the event an injury occurs during a prescribed burn on the Winding Waters Natural Area.

West Palm Beach Fire Rescue (WPBFR) will provide medical staff to act as the medical unit and provide first responder medical assistance if assisting with the burn.

1. Report injuries to the IC via command organizational structure.
2. First burn team member to assist will insure injured is in a safe location.
3. Personnel on scene to provide first aid.
4. IC to determine status of injured.
5. If IC determines the injured requires medical assistance, WPBFR shall respond. If WPBFR is not assisting with the burn, they will be advised what type of vehicle will be needed to get to injured (4-wheel drive, etc.), and what vehicle(s) we have available should they need help getting to the injured.
6. If the condition of the injured requires transport to a hospital by helicopter, Fire Rescue on the scene will make the request.
7. If the IC determines that the injured will only need transport to an emergency room by our personnel then transportation will be decided by the IC at that time. The injured will be taken to the St. Mary's Medical Center Emergency Room.
8. If the injury does not require emergency room treatment, then worker's compensation procedures will be followed; that is, the injured will be taken to the Occupational Health Clinic, and a Supervisors Incident Report must be filled out by the employee's immediate supervisor.

