



FLORIDA DEPARTMENT OF Environmental Protection

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Memorandum

TO: James Parker
Office of Environmental Services
Division of State Lands

FROM: Tyler Maldonado
Office of Park Planning
Division of Recreation and Parks

SUBJECT: Alafia River State Park
Ten Year Management Plan Update (Lease No. 4168)
Acquisition and Restoration Council (ARC) Public Hearing

DATE: May 7, 2019

Attached is the ARC executive summary, the Division of State Lands checklist and a copy of the subject management plan update. This plan is being submitted for the Division of State Lands' compliance review and for review by ARC members.

For your convenience and use, six discs with the subject management plan file is also being provided with this memorandum.

Please contact me by email at Tyler.Maldonado@floridadep.gov or by phone at 850.245.3070 if there are any questions related to this management plan.

Thank you for your assistance.

TM

Attachments

cc: Raymond Spaulding

Alafia River State Park Unit Management Plan May 2019 ARC Draft



LAND MANAGEMENT PLAN COMPLIANCE

CHECKLIST

→ Required for State-owned conservation lands over 160 acres ←

Instructions for managers:

Complete each item and fill in the applicable correlating **page numbers and/or appendix** where the item can be found within the land management plan (LMP). If an item does not apply to the subject property, please describe that fact on a correlating page number of the LMP. Do not mark an "N/A" for any items below.

For more information, please visit the stewardship portion of the Division of State Lands' website at: <http://www.dep.state.fl.us/lands/stewardship.htm>.

Section A: Acquisition Information Items

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
1.	The common name of the property.	18-2.018 & 18-2.021	1, Add. 1
2.	The land acquisition program, if any, under which the property was acquired.	18-2.018 & 18-2.021	1, Add. 1
3.	Degree of title interest held by the Board, including reservations and encumbrances such as leases.	18-2.021	1, Add. 1
4.	The legal description and acreage of the property.	18-2.018 & 18-2.021	1, Add. 1
5.	A map showing the approximate location and boundaries of the property, and the location of any structures or improvements to the property.	18-2.018 & 18-2.021	3, 5, 79
6.	An assessment as to whether the property, or any portion, should be declared surplus. <i>Provide Information regarding assessment and analysis in the plan, and provide corresponding map.</i>	18-2.021	90-91
7.	Identification of other parcels of land within or immediately adjacent to the property that should be purchased because they are essential to management of the property. <i>Please clearly indicate parcels on a map.</i>	18-2.021	90-91
8.	Identification of adjacent land uses that conflict with the planned use of the property, if any.	18-2.021	72
9.	A statement of the purpose for which the lands were acquired, the projected use or uses as defined in 253.034 and the statutory authority for such use or uses.	259.032(10)	1, 7-8
10.	Proximity of property to other significant State, local or federal land or water resources.	18-2.021	3, 5, 75

Section B: Use Items

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
11.	The designated single use or multiple use management for the property, including use by other managing entities.	18-2.018 & 18-2.021	1, Add. 1
12.	A description of past and existing uses, including any unauthorized uses of the property.	18-2.018 & 18-2.021	77
13.	A description of alternative or multiple uses of the property considered by the lessee and a statement detailing why such uses were not adopted.	18-2.018	7
14.	A description of the management responsibilities of each entity involved in the property's management and how such responsibilities will be coordinated.	18-2.018	7-8
15.	Include a provision that requires that the managing agency consult with the Division of Historical Resources, Department of State before taking actions that may adversely affect archeological or historical resources.	18-2.021	10, 65, 69, Add. 6
16.	Analysis/description of other managing agencies and private land managers, if any, which could facilitate the restoration or management of the land.	18-2.021	7-8

17.	A determination of the public uses and public access that would be consistent with the purposes for which the lands were acquired.	259.032(10)	77-90
18.	A finding regarding whether each planned use complies with the 1981 State Lands Management Plan, particularly whether such uses represent "balanced public utilization," specific agency statutory authority and any other legislative or executive directives that constrain the use of such property.	18-2.021	1-2, 7
19.	Letter of compliance from the local government stating that the LMP is in compliance with the Local Government Comprehensive Plan.	BOT requirement	Add. 10
20.	An assessment of the impact of planned uses on the renewable and non-renewable resources of the property, including soil and water resources, and a detailed description of the specific actions that will be taken to protect, enhance and conserve these resources and to compensate/mitigate damage caused by such uses, including a description of how the manager plans to control and prevent soil erosion and soil or water contamination.	18-2.018 & 18-2.021	19-26
21.	*For managed areas larger than 1,000 acres, an analysis of the multiple-use potential of the property which shall include the potential of the property to generate revenues to enhance the management of the property provided that no lease, easement, or license for such revenue-generating use shall be entered into if the granting of such lease, easement or license would adversely affect the tax exemption of the interest on any revenue bonds issued to fund the acquisition of the affected lands from gross income for federal income tax purposes, pursuant to Internal Revenue Service regulations.	18-2.021 & 253.036	7
22.	If the lead managing agency determines that timber resource management is not in conflict with the primary management objectives of the managed area, a component or section, prepared by a qualified professional forester, that assesses the feasibility of managing timber resources pursuant to section 253.036, F.S.	18-021	69-70, Add. 7
23.	A statement regarding incompatible use in reference to Ch. 253.034(10).	253.034(10)	7

*The following taken from 253.034(10) is not a land management plan requirement; however, it should be considered when developing a land management plan: The following additional uses of conservation lands acquired pursuant to the Florida Forever program and other state-funded conservation land purchase programs shall be authorized, upon a finding by the Board of Trustees, if they meet the criteria specified in paragraphs (a)-(e): water resource development projects, water supply development projects, storm-water management projects, linear facilities and sustainable agriculture and forestry. Such additional uses are authorized where: (a) Not inconsistent with the management plan for such lands; (b) Compatible with the natural ecosystem and resource values of such lands; (c) The proposed use is appropriately located on such lands and where due consideration is given to the use of other available lands; (d) The using entity reasonably compensates the titleholder for such use based upon an appropriate measure of value; and (e) The use is consistent with the public interest.

Section C: Public Involvement Items

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
24.	A statement concerning the extent of public involvement and local government participation in the development of the plan, if any.	18-2.021	8
25.	The management prospectus required pursuant to paragraph (9)(d) shall be available to the public for a period of 30 days prior to the public hearing.	259.032(10)	8, Add. 9
26.	LMPs and LMP updates for parcels over 160 acres shall be developed with input from an advisory group who must conduct at least one public hearing within the county in which the parcel or project is located. <i>Include the advisory group members and their affiliations, as well as the date and location of the advisory group meeting.</i>	259.032(10)	8, Add. 9
27.	Summary of comments and concerns expressed by the advisory group for parcels over 160 acres	18-2.021	Add. 9
28.	During plan development, at least one public hearing shall be held in each affected county. Notice of such public hearing shall be posted on the parcel or project designated for management, advertised in a paper of general circulation, and announced at a scheduled meeting of the local governing body before the actual public hearing. <i>Include a copy of each County's advertisements and announcements (meeting minutes will suffice to indicate an announcement) in the management plan.</i>	253.034(5) & 259.032(10)	8, Add. 9

29.	The manager shall consider the findings and recommendations of the land management review team in finalizing the required 10-year update of its management plan. <i>Include manager's replies to the team's findings and recommendations.</i>	259.036	70, Add. 8
30.	Summary of comments and concerns expressed by the management review team, if required by Section 259.036, F.S.	18-2.021	Add. 8
31.	If manager is not in agreement with the management review team's findings and recommendations in finalizing the required 10-year update of its management plan, the managing agency should explain why they disagree with the findings or recommendations.	259.036	Add. 8

Section D: Natural Resources

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
32.	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding soil types. <i>Use brief descriptions and include USDA maps when available.</i>	18-2.021	20, 22, Add. 3
33.	Insert FNAI based natural community maps when available.	ARC consensus	45
34.	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding outstanding native landscapes containing relatively unaltered flora, fauna, and geological conditions.	18-2.021	19-59
35.	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding unique natural features and/or resources including but not limited to virgin timber stands, scenic vistas, natural rivers and streams, coral reefs, natural springs, caverns, and large sinkholes.	18-2.018 & 18-2.021	19-59
36.	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding beaches and dunes.	18-2.021	N/A
37.	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding mineral resources, such as oil, gas and phosphate, etc.	18-2.018 & 18-2.021	20
38.	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding fish and wildlife, both game and non-game, and their habitat.	18-2.018 & 18-2.021	27-59
39.	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding State and Federally listed endangered or threatened species and their habitat.	18-2.021	53-57
40.	The identification or resources on the property that are listed in the Natural Areas Inventory. <i>Include letter from FNAI or consultant where appropriate.</i>	18-2.021	27-45
41.	Specific description of how the managing agency plans to identify, locate, protect, and preserve or otherwise use fragile, nonrenewable natural and cultural resources.	259.032(10)	19-70
42.	Habitat Restoration and Improvement		
42-A.	Describe management needs, problems and a desired outcome and the key management activities necessary to achieve the enhancement, protection and preservation of restored habitats and enhance the natural, historical and archeological resources and their values for which the lands were acquired.	259.032(10) & 253.034(5) ↓	27-53
42-B.	Provide a detailed description of both short (2-year planning period) and long-term (10-year planning period) management goals, and a priority schedule based on the purposes for which the lands were acquired and include a timeline for completion.		12-13, 27-53
42-C.	The associated measurable objectives to achieve the goals.		12-13, 27-53
42-D.	The related activities that are to be performed to meet the land management objectives and their associated measures. <i>Include fire management plans - they can be in plan body or an appendix.</i>		12-13, 27-53

42-E.	A detailed expense and manpower budget in order to provide a management tool that facilitates development of performance measures, including recommendations for cost-effective methods of accomplishing those activities.		12-13
43.	***Quantitative data description of the land regarding an inventory of forest and other natural resources and associated acreage. <i>See footnote.</i>	253.034(5)	28, 45
44.	Sustainable Forest Management, including implementation of prescribed fire management	18-2.021, 253.034(5) & 259.032(10) ↓	
44-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).		49-51
44-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).		12, 49-51
44-C.	Measurable objectives (see requirement for #42-C).		12, 49-51
44-D.	Related activities (see requirement for #42-D).		12, 49-51
44-E.	Budgets (see requirement for #42-E).		12
45.	Imperiled species, habitat maintenance, enhancement, restoration, or population restoration	259.032(10) & 253.034(5) ↓	
45-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).		53-59
45-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).		14, 53-59
45-C.	Measurable objectives (see requirement for #42-C).		14, 53-59
45-D.	Related activities (see requirement for #42-D).		14, 53-59
45-E.	Budgets (see requirement for #42-E).		14
46.	***Quantitative data description of the land regarding an inventory of exotic and invasive plants and associated acreage. <i>See footnote.</i>	253.034(5)	61
47.	Place the Arthropod Control Plan in an appendix. If one does not exist, provide a statement as to what arrangement exists between the local mosquito control district and the management unit.	BOT requirement via lease language	70
48.	Exotic and invasive species maintenance and control	259.032(10) & 253.034(5) ↓	
48-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).		59-64
48-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).		15, 59-64
48-C.	Measurable objectives (see requirement for #42-C).		15, 59-64
48-D.	Related activities (see requirement for #42-D).		15, 59-64
48-E.	Budgets (see requirement for #42-E).		15

Section E: Water Resources

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
49.	A statement as to whether the property is within and/or adjacent to an aquatic preserve or a designated area of critical state concern or an area under study for such designation. <i>If yes, provide a list of the appropriate managing agencies that have been notified of the proposed plan.</i>	18-2.018 & 18-2.021	8
50.	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding water resources, including water classification for each water body and the identification of any such water body that is designated as an Outstanding Florida Water under Rule 62-302.700, F.A.C.	18-2.021	25
51.	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding swamps, marshes, and other wetlands.	18-2.021	27-45
52.	***Quantitative description of the land regarding an inventory of hydrological features and associated acreage. <i>See footnote.</i>	253.034(5)	45

53.	Hydrological Preservation and Restoration	259.032(10) & 253.034(5) ↓	
53-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).		25-26
53-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).		11, 25-26
53-C.	Measurable objectives (see requirement for #42-C).		11, 25-26
53-D.	Related activities (see requirement for #42-D).		11, 25-26
53-E.	Budgets (see requirement for #42-E).		11

Section F: Historical, Archeological and Cultural Resources

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
54.	**Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding archeological and historical resources. <i>Include maps of all cultural resources except Native American sites, unless such sites are major points of interest that are open to public visitation.</i>	18-2.018, 18-2.021 & per DHR's request	65-69
55.	***Quantitative data description of the land regarding an inventory of significant land, cultural or historical features and associated acreage.	253.034(5)	67-68
56.	A description of actions the agency plans to take to locate and identify unknown resources such as surveys of unknown archeological and historical resources.	18-2.021	65-69
57.	Cultural and Historical Resources	259.032(10) & 253.034(5) ↓	
57-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).		65-69
57-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).		16, 65-69
57-C.	Measurable objectives (see requirement for #42-C).		16, 65-69
57-D.	Related activities (see requirement for #42-D).		16, 65-69
57-E.	Budgets (see requirement for #42-E).		16

****While maps of Native American sites should not be included in the body of the management plan, the DSL urges each managing agency to provide such information to the Division of Historical Resources for inclusion in their proprietary database. This information should be available for access to new managers to assist them in developing, implementing and coordinating their management activities.**

Section G: Facilities (Infrastructure, Access, Recreation)

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
58.	***Quantitative data description of the land regarding an inventory of infrastructure and associated acreage. <i>See footnote.</i>	253.034(5)	79
59.	Capital Facilities and Infrastructure	259.032(10) & 253.034(5) ↓	
59-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).		82-90
59-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).		17, 82-90
59-C.	Measurable objectives (see requirement for #42-C).		17, 82-90

59-D.	Related activities (see requirement for #42-D).		17, 82-90
59-E.	Budgets (see requirement for #42-E).		17
60.	*** Quantitative data description of the land regarding an inventory of recreational facilities and associated acreage.	253.034(5)	79
61.	Public Access and Recreational Opportunities	259.032(10) & 253.034(5) ↓	
61-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).		82-90
61-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).		17, 82-90
61-C.	Measurable objectives (see requirement for #42-C).		17, 82-90
61-D.	Related activities (see requirement for #42-D).		17, 82-90
61-E.	Budgets (see requirement for #42-E).		17

Section H: Other/Managing Agency Tools

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
62.	Place this LMP Compliance Checklist at the front of the plan.	ARC and managing agency consensus	Front
63.	Place the Executive Summary at the front of the LMP. Include a physical description of the land.	ARC and 253.034(5)	Front
64.	If this LMP is a 10-year update, note the accomplishments since the drafting of the last LMP set forth in an organized (categories or bullets) format.	ARC consensus	9
65.	Key management activities necessary to achieve the desired outcomes regarding other appropriate resource management.	259.032(10)	10-18
66.	Summary budget for the scheduled land management activities of the LMP including any potential fees anticipated from public or private entities for projects to offset adverse impacts to imperiled species or such habitat, which fees shall be used to restore, manage, enhance, repopulate, or acquire imperiled species habitat for lands that have or are anticipated to have imperiled species or such habitat onsite. The summary budget shall be prepared in such a manner that it facilitates computing an aggregate of land management costs for all state-managed lands using the categories described in s. 259.037(3) which are resource management, administration, support, capital improvements, recreation visitor services, and law enforcement activities.	253.034(5)	10-18
67.	Cost estimate for conducting other management activities which would enhance the natural resource value or public recreation value for which the lands were acquired, include recommendations for cost-effective methods in accomplishing those activities.	259.032(10)	10-18
68.	A statement of gross income generated, net income and expenses.	18-2.018	78

*** = The referenced inventories shall be of such detail that objective measures and benchmarks can be established for each tract of land and monitored during the lifetime of the plan. All quantitative data collected shall be aggregated, standardized, collected, and presented in an electronic format to allow for uniform management reporting and analysis. The information collected by the DEP pursuant to s. 253.0325(2) shall be available to the land manager and his or her assignee.

Alafia River State Park Executive Summary

Common Name of Property: Alafia River State Park

Location: Hillsborough County

Acreage: 7,717.81 acres

Lease / Number(s): 4168

Use: Single Use

Acreage Breakdown

Natural Communities and Altered Landcovers Existing Conditions		
Natural Communities	Acreage*	Percentage
Mesic Flatwoods	853	11.1%
Mesic Hammock	436	5.7%
Sandhill	87	1.1%
Scrub	14	0.2%
Scrubby Flatwoods	131	1.7%
Xeric Hammock	18	0.2%
Baygall	160	2.1%
Bottomland Forest	831	10.8%
Floodplain Swamp	135	1.8%
Hydric Hammock	31	0.4%
Blackwater Stream	35	0.4%
Altered Landcovers	Acreage*	Percentage
Abandoned Field/Pasture	203	2.6%
Developed	109	1.4%
Impoundment/Artificial Pond	583	7.5%
Invasive Exotic Monoculture	1,351	17.5%
Pasture Semi-Improved	504	6.5%
Pine Plantation	25	0.3%
Restoration Natural Community	27	0.4%
Spoil Area	1,463	19.0%
Successional Hardwood Forest	513	6.6%
Utility Corridor	209	2.7%
Total Acreage	7,718	100 %

*Acreage rounded to the nearest whole number

Management Responsibilities

Agency: Dept. of Environmental Protection, Division of Recreation and Parks

Responsibility: Public outdoor recreation and conservation

Designated Land Use: Public outdoor recreation and conservation

Sublease: None

Encumbrances: See Addendum 1 for details

Alafia River State Park Executive Summary

Unique Features

Overview: The purpose of Alafia River State Park is to provide outstanding public outdoor recreational opportunities to Florida residents and visitors within a unique and distinctive landscape while facilitating the restoration and protection of the park's natural resources. The park is located on what was once a large phosphate mining operation. The modified topography offers opportunities for reclamation of impacted natural areas and for recreational activities not normally found in this part of Florida. The park is renowned for its exceptional mountain biking trails, which accommodate all skill levels, from beginner to expert. The park provides a diversity of other recreational opportunities within a short drive of the densely populated Tampa Bay area. These include horseback riding, camping, hiking, paddling, fishing, and wildlife viewing within a distinctive landscape. The park serves as an important buffer that contributes to the protection of the Alafia River.

Management Goals, Objectives and Actions

Measurable objectives and actions have been identified for each of the Division's management goals for Alafia River State Park. While, the Division of Recreation and Parks utilizes the ten-year management plan to serve as the basic statement of policy and future direction for each park, a number of annual work plans provide more specific guidance for Division staff to accomplish many of the resource management goals and objectives of the park. Where such detailed planning is appropriate to the character and scale of the park's natural resources, annual work plans are developed for prescribed fire management, exotic plant management and imperiled species management. Annual or longer-term work plans are developed for natural community restoration and hydrological restoration.

The work plans provide the Division with crucial flexibility in its efforts to generate and implement adaptive resource management practices in the state park system. The work plans are reviewed and updated annually. Through this process, the Division's resource management strategies are systematically evaluated to determine their effectiveness. The process and the information collected is used to refine techniques, methodologies and strategies, and ensures that each park's prescribed management actions are monitored and reported as required by Chapters 253.034 and 259.037, Florida Statutes.

The goals, objectives and actions identified in this management plan will serve as the basis for developing annual work plans for the park. Since the plan is based on conditions that exist at the time the plan is developed, the annual work plans will provide the flexibility needed to adapt to future conditions as they change during the ten-year management planning cycle. As the park's annual work plans are implemented through the ten-year cycle, it may become necessary to adjust the management plan's priority schedules and cost estimates to reflect these changing conditions.

Alafia River State Park Executive Summary

Hydrological Management

Goal: Protect water quality and quantity in the parks, restore hydrology to the extent feasible and maintain the restored condition.

Objective: Conduct/obtain an assessment of the park's hydrological needs.

Objective: Monitor and address the fecal coliform showing up in Hurrah Creek.

Objective: Restore natural hydrological conditions and functions to approximately 2 acres of impoundment/artificial pond edges.

Natural Communities Management

Goal: Restore and maintain the natural communities / habitats of the parks.

Objective: Within 10 years have at least 2,400 acres of the park maintained within optimal fire return interval.

Objective: Establish new fire breaks as needed to accommodate new optimal fire return goals.

Objective: Maintain contracted, prescribed cattle grazing as needed, using ecological grazing best management practices, to assist in improving 2,400 acres of altered community

Objective: Test for the presence and levels of heavy metals in at least two areas of remnant mine tailings.

Objective: Conduct natural community/habitat improvement activities on 500 acres of natural and altered communities.

Imperiled Species Management

Goal: Maintain, improve or restore imperiled species populations and habitats in the parks.

Objective: Update baseline imperiled species occurrence inventory lists for plants and animals, as needed.

Objective: Monitor and document two selected imperiled animal species in the park.

Objective: Monitor and document eight selected imperiled plant species in the park.

Alafia River State Park Executive Summary

Exotic Species Management

Goal: Remove exotic and invasive plants and animals from the parks and conduct needed maintenance control.

Objective: Annually treat at least 680 gross acres infested with exotic plant species in the park.

Objective: Implement control measures on one nuisance and exotic animal species in the park.

Cultural Resource Management

Goal: Protect, preserve and maintain the cultural resources of the parks.

Objective: Implement a maintenance program for the Picnic/Thatcher Mound site and submit a formal National Register application.

Objective: Locate and assess all recorded sites in the park that are still in need of a full evaluation.

Ten-Year Implementation Schedule and Cost Estimates: See pages 10-18.

Acquisition Needs / Acreage: The optimum boundary for Alafia River State Park includes approximately 450 acres in areas along the park's northern and western boundary. The acquisition of these properties would serve to better protect the Alafia River corridor and improve overall park operations and management. The acquisition would also provide a greenway connection to Hillsborough County conservation lands to the north (See Optimum Boundary Map).

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

Public Involvement: DRP solicited public input by conducting a public meeting on Wednesday, March 27, 2019. The purpose was to present the management plan to the public. On Thursday, March 28, 2019, an advisory group meeting was held. The purpose of this meeting was to provide the advisory group members the opportunity to review and discuss the management plan (see Addendum 9).

Alafia River State Park Executive Summary

Proposed Recreational Opportunities and Support Facilities:

Recreation Facilities

Main Day Use/Trailhead Area

Bike skills area
Small picnic pavilion (2)
Observation platform
Parking improvements/expansion

Campground Area

Redesign campground
Fishing dock
Canoe/kayak launch
Equipment storage building

Three Finger Lake Equestrian Trailhead

Parking area
Restroom
Picnic pavilions (2)

Thatcher Road Day Use Area

Parking area
Restroom
Bridge improvements
Boat ramp improvements
Canoe/kayak launch
Picnic tables and grills

Primitive Equestrian Campground

Trailer sites
Potable water

Cabin Area

Vacation cabins (6)
Cabin support building

Support Facilities

Shop/Residence Area

Shop building expansion (add 2 bays)
Equipment shelter (4 bay)
Staff residence

Parkwide

Park road extensions
Support road bridge

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Introduction
Past Accomplishments
Future Objectives

Introduction

Alafia River State Park is located in southeastern Hillsborough County (see Vicinity Map). Access to the park is from County Road 39 (see Reference Map). The Vicinity Map also reflects significant land and water resources existing near the park.

Alafia River State Park was initially acquired on December 18, 1996. Currently, the park comprises 7,717.81 acres. The Board of Trustees of the Internal Improvement Trust Fund (Trustees) hold fee simple title to the park and on January 23, 1998, the Trustees leased (Lease Number 4168) the property to DRP under a 50-year lease. The current lease will expire on January 22, 2048.

Alafia River State Park is designated single-use to provide public outdoor recreation and conservation. There are no legislative or executive directives that constrain the use of this property (see Addendum 1).

Purpose and Significance of the Park

The purpose of Alafia River State Park is to provide outstanding public outdoor recreational opportunities to Florida residents and visitors within a unique and distinctive landscape while facilitating the restoration and protection of the park's natural resources.

- The park is located on what was once a large phosphate mining operation. The modified topography offers opportunities for reclamation of impacted natural areas and for recreational activities not normally found in this part of Florida.
- The park is renowned for its exceptional mountain biking trails, which accommodate all skill levels, from beginner to expert.
- The park provides a diversity of other recreational opportunities within a short drive of the densely populated Tampa Bay area. These include horseback riding, camping, hiking, paddling, fishing, and wildlife viewing within a distinctive landscape.

- The park serves as an important buffer that contributes to the protection of the Alafia River.

Purpose and Scope of the Plan

Alafia River is classified as a State Recreation Area in the DRP's unit classification system. In the management of a state recreation area, major emphasis is placed on maximizing the recreational potential of the unit. However, preservation of the park's natural and cultural resources remains important. Depletion of a resource by any recreational activity is not permitted. In order to realize the park's recreational potential, the development of appropriate park facilities is undertaken with the goal to provide facilities that are accessible, convenient and safe, to support public recreational use or appreciation of the park's natural, aesthetic and educational attributes.

This plan serves as the basic statement of goals and objectives for the management of Alafia River State Park as a unit of Florida's state park system. It identifies the goals, objectives, actions and criteria or standards that guide each aspect of park administration, and sets forth the specific measures that will be implemented to meet management objectives and provide balanced public utilization. The plan is intended to meet the requirements of Sections 253.034 and 259.032, Florida Statutes, Chapter 18-2, Florida Administrative Code, and is intended to be consistent with the State Lands Management Plan. With approval, this management plan will replace the 2004 approved plan.

Resource Management Component

The Resource Management Component provides a detailed inventory and assessment of the natural and cultural resources of the park. Resource management needs and issues are identified, and measurable management objectives are established for each of the park's management goals and resource types. This component provides guidance on the application of such measures as prescribed burning, exotic species removal,

imperiled species management, cultural resource management and restoration of natural conditions.

The DRP's philosophy of resource management is natural systems management. Primary emphasis is placed on restoring and maintaining, to the degree possible, the natural processes that shaped the structure, function and species composition of Florida's diverse natural communities as they occurred in the original domain. Single species management for imperiled species is appropriate in state parks when the maintenance, recovery or restoration of a species or population is complicated due to constraints associated with long-term restoration efforts, unnaturally high mortality or insufficient habitat. Single species management should be compatible with the maintenance and restoration of natural processes and should not imperil other native species or seriously compromise the park values.

The DRP's management goal for cultural resources is to preserve sites and objects that represent Florida's cultural periods, significant historic events or persons. This goal often entails active measures to stabilize, reconstruct or restore resources, or to rehabilitate them for appropriate public use.

Because park units are often components of larger ecosystems, their proper management can be affected by conditions and events that occur beyond park boundaries. Ecosystem management is implemented through a resource management evaluation program that assesses resource conditions, evaluates management activities and refines management actions, and reviews local comprehensive plans and development permit applications for park/ecosystem impacts.

Land Use Component

The Land Use Component is the recreational resource allocation plan for the park. Based on considerations such as access, population, adjacent land uses, park resources, current public uses, and existing development, measurable objectives are set to achieve the desired allocation of the physical space of the

park. These objectives identify use areas and propose the types of facilities and programs as well as the volume of public use to be provided.

Land use planning and park development decisions for the state park system are based on the dual responsibilities of the Florida Department of Environmental Protection, Division of Recreation and Parks. These responsibilities are to preserve representative examples of original natural Florida and its cultural resources, and to provide outdoor recreation opportunities for Florida's citizens and visitors.

The general planning and design process begins with an analysis of the natural and cultural resources of the unit, and then proceeds through the creation of a conceptual land use plan that culminates in the actual design and construction of park facilities. Input to the plan is provided by experts in environmental sciences, cultural resources, park operation and management. Additional input is received through public workshops, and through environmental and recreational-user groups. With this approach, the DRP objective is to provide quality development for resource-based recreation throughout the state with a high level of sensitivity to the natural and cultural resources at each park.

This component of the unit plan includes a brief inventory of the external conditions and the recreational potential of the unit. Existing uses, facilities, special conditions on use, and specific areas within the park that will be given special protection, are identified. The land use component then summarizes the current conceptual land use plan for the park, identifying the existing or proposed activities suited to the resource base of the park. Any new facilities needed to support the proposed activities are expressed in general terms.

All development and resource alteration proposed in this plan is subject to the granting of appropriate permits, easements, licenses, and other required legal instruments. Approval of the management plan does not constitute an exemption from complying with the appropriate local, state or federal agencies.

2 – Introduction

Legend

Alafia River State Park

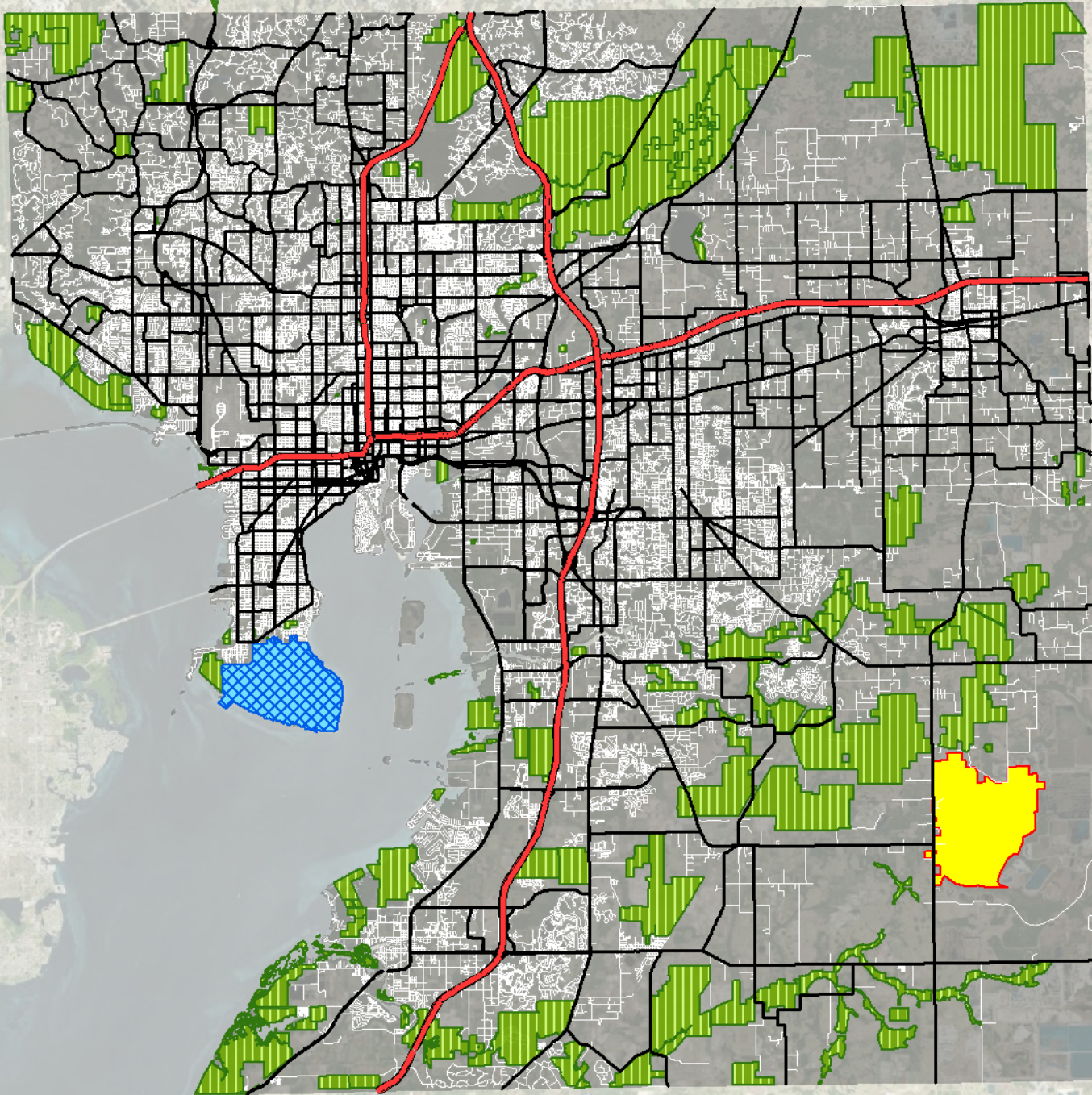
Conservation Lands

MacDill Air Force Base

Interstates

Major Roads

Local Streets



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© 2019 Microsoft Corporation Earthstar Geographics SIO

ALAFIA RIVER
STATE PARK

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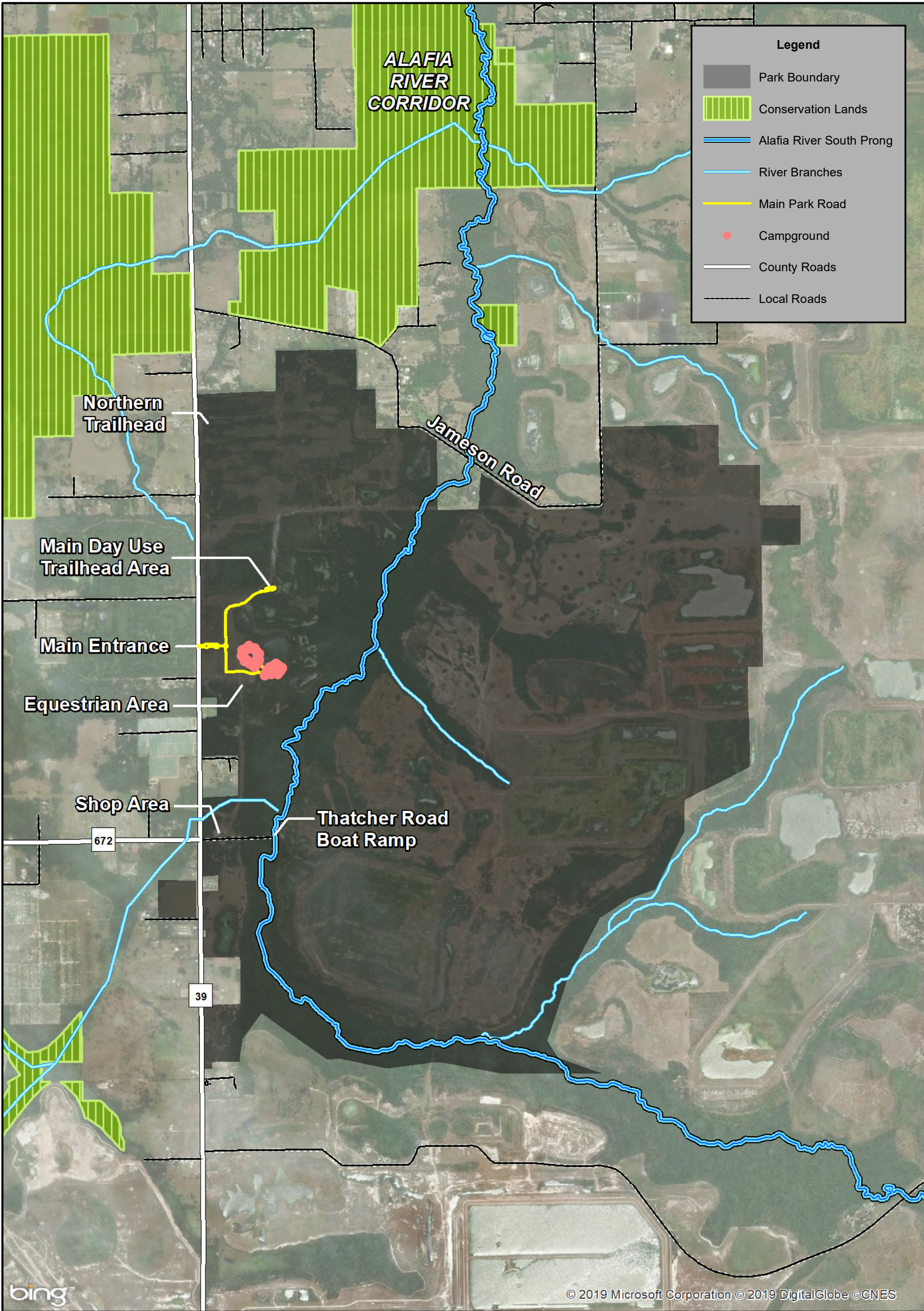
8 Miles

Florida Department of Environmental Protection

Division of Recreation and Parks

Date of aerial: 2011

HILLSBOROUGH COUNTY
VICINITY MAP



Secondary Uses Consideration

In accordance with 253.034(5) F.S., the potential of the park to accommodate secondary management purposes was analyzed. These secondary purposes were considered within the context of DRP's statutory responsibilities and the resource needs and values of the park. This analysis considered the park's natural and cultural resources, management needs, aesthetic values, visitation and visitor experiences. For this park, it was determined that timber management as part of the park's natural community management activities could be accommodated in a manner that would be compatible and not interfere with the primary purpose of resource-based outdoor recreation and conservation.

DRP has determined that uses such as, water resource development projects, water supply projects, stormwater management projects, linear facilities and sustainable agriculture and forestry (other than those forest management activities specifically identified in this plan) would not be consistent with this plan or the management purposes of the park.

In accordance with 253.034(5) F.S., the potential for generating revenue to enhance management was also analyzed. Visitor fees and charges are the principal source of revenue generated by the park. It was determined that timber management and cattle grazing would be appropriate at this park as additional sources of revenue for land management since it they are compatible with the park's primary purpose of resource-based outdoor recreation and conservation.

Contract Services

DRP may provide the services and facilities outlined in this plan either with its own funds and staff or through an outsourcing contract. Private contractors may provide assistance with natural resource management and restoration activities or a concessionaire may provide services to park visitors in order to enhance the visitor experience. For example, a concessionaire could be authorized to sell merchandise and food and to rent

recreational equipment for use in the park. A concessionaire may also be authorized to provide specialized services, such as interpretive tours, or overnight accommodations when the required capital investment exceeds that which DRP can elect to incur. Decisions regarding outsourcing, contracting with the private sector, the use of concessionaires, etc. are made on a case-by-case basis in accordance with the policies set forth in DRP's Operations Manual (OM).

Management Authority & Responsibility

In accordance with Chapter 258, Florida Statutes and Chapter 62D-2, Florida Administrative Code, the Division of Recreation and Parks (DRP) is charged with the responsibility of developing and operating Florida's recreation and parks system. These are administered in accordance with the following policy:

It shall be the policy of the Division of Recreation and Parks to promote the state park system for the use, enjoyment, and benefit of the people of Florida and visitors; to acquire typical portions of the original domain of the state which will be accessible to all of the people, and of such character as to emblemize the state's natural values; conserve these natural values for all time; administer the development, use and maintenance of these lands and render such public service in so doing, in such a manner as to enable the people of Florida and visitors to enjoy these values without depleting them; to contribute materially to the development of a strong mental, moral, and physical fiber in the people; to provide for perpetual preservation of historic sites and memorials of statewide significance and interpretation of their history to the people; to contribute to the tourist appeal of Florida.

The Board of Trustees of the Internal Improvement Trust Fund (Trustees) has granted management authority of certain sovereign submerged lands to the DRP under Management Agreement MA 68-086 (as amended January 19, 1988).

The management area includes a 400-foot zone from the edge of mean high water where a park boundary borders sovereign submerged lands fronting beaches, bays, estuarine areas, rivers or streams. Where emergent wetland vegetation exists, the zone extends waterward 400 feet beyond the vegetation. The agreement is intended to provide additional protection to resources of the park and nearshore areas and to provide authority to manage activities that could adversely affect public recreational uses.

Many operating procedures are standardized system-wide and are set by internal direction. These procedures are outlined in the OM that covers such areas as personnel management, uniforms and personal appearance, training, signs, communications, fiscal procedures, interpretation, concessions, public use regulations, resource management, law enforcement, protection, safety and maintenance.

General Park Management Goals

The following park goals express DRP's long-term intent in managing the state park:

- Provide administrative support for all park functions.
- Protect water quality and quantity in the park, restore hydrology to the extent feasible and maintain the restored condition.
- Restore and maintain the natural communities/habitats of the park.
- Maintain, improve or restore imperiled species populations and habitats in the park.
- Remove exotic and invasive plants and animals from the park and conduct needed maintenance-control.
- Protect, preserve and maintain the cultural resources of the park.
- Provide public access, recreational, and interpretive opportunities in the park.
- Develop and maintain the capital facilities and infrastructure necessary to meet the goals and objectives of this management plan.

Management Coordination

The Florida Department of Agriculture and Consumer Services (FDACS), Florida Forest Service (FFS), assists DRP staff in the development of wildfire emergency plans and provides the authorization required for prescribed burning. The Florida Fish and Wildlife Conservation Commission (FWC) assists staff in the enforcement of state laws pertaining to wildlife, freshwater fish, and other aquatic life existing within the park. In addition, the FWC aids DRP with wildlife management programs, including imperiled species management. The Florida Department of State (FDOS), Division of Historical Resources (DHR) assists staff to ensure protection of archaeological and historical sites.

Public Participation

DRP provided an opportunity for public input by conducting a public workshop and an advisory group meeting to present the draft management plan to the public. These meetings were held on March 27, 2019 and March 28, 2019, respectively. Meeting notices were published in the Florida Administrative Register (Vol. 45/53: March 18, 2019), included on the DEP Calendar, posted in clear view at the park, and promoted locally.

Other Designations

Alafia River State Park is not within an Area of Critical State Concern as defined in Section 380.05, Florida Statutes, and it is not presently under study for such designation. The park is a component of the Florida Greenways and Trails System, administered by the Department's Office of Greenways and Trails.

All waters within the park have been designated as Outstanding Florida Waters, pursuant to Chapter 62-302, Florida Administrative Code. Surface waters in this park are also classified as Class III waters by the Department. This park is not within or adjacent to an aquatic preserve as designated under the Florida Aquatic Preserve Act of 1975 (Section 258.35, Florida Statutes).

Past Accomplishments

The resource management and land use components of this management plan provide a thorough inventory of the park's natural, cultural and recreational resources. They outline the park's management needs and problems and recommend both short and long-term objectives and actions to meet those needs. The past accomplishments and future objectives section address the administrative goals for the park and reports on DRP progress toward achieving resource management, operational, and capital improvement goals and objectives since approval of the previous management plan for this park.

Since the approval of the last management plan for Alafia River State Park in 2004, significant work has been accomplished and progress made towards meeting the DRP's management objectives for the park. These accomplishments fall within four general categories: park administration and operations, resource management, recreation and visitor services, and park facilities.

Park Administration and Operations

- CSO (Friends of Alafia) established.
- Volunteers recruited to assist with park operations.
- In the process of adding a concession operation.

Resource Management

Natural Resources

- Partnered with Suncoast Working Group to assist with management of exotic invasive plants through FWC contracts.
- Over 380 acres of invasive exotic are treated annually by staff, volunteers, and FWC Uplands Invasive Plant Management Service. In 2015, the FWC program provided control on an additional 400 acres.
- Implemented cattle grazing as a tool to help manage the more than 1,600 acres of invasive exotic plants, particularly cogon grass.

- Over two-thirds of the park were re-assessed for natural community designations and health, resulting in a more detailed understanding of the reclamation potential for the park and the steps needed to achieve that potential.

Cultural Resources

- Completed archaeological modeling and on-site studies for the entire park.

Recreation and Visitor Services

- The CSO provided wayfinding signs on equestrian trails.
- Worked with the CSO to promote ecotourism opportunities in the surrounding communities.
- Expanded interpretation programming to include moonlight hikes and rides.

Park Facilities

- Stabilized bike trails in coordination with the SWAMP mountain bike club.
- Friends of Alafia assumed trail maintenance duties in 2018.
- Constructed stables and paddocks near the campground in coordination with the CSO.
- Developed a primitive group camping area.

Future Objectives

This section also compiles the management goals, objectives, and actions expressed in the separate parts of this management plan for easy review. Estimated costs for the ten-year period of this plan are provided for each action and objective, and the costs are summarized under standard categories of land management activities. The Ten-Year Implementation Schedule and Cost Estimates summarizes the management goals, objectives, and actions that are recommended for implementation over this period. Measures are identified for assessing progress toward completing each objective and action. The timeframes for completing each objective and action are Continuous (C), Short-Term (ST), Long-Term (LT), and Unfunded Need (UFN). Preliminary cost estimates for each action are provided and the estimated total costs to complete each objective are computed. Finally, all costs are consolidated under the following three standard land management categories: administration and support, resource management, and recreation and visitor services.

Many of the actions identified in the plan can be implemented using existing staff and funding. However, a number of continuing activities and new activities with measurable quantity targets and projected completion dates are identified that cannot be completed during the life of this plan unless additional resources for these purposes are provided.

The plan's recommended actions, time frames, and cost estimates will guide the DRP's planning and budgeting activities over the period of this plan. It must be noted that these recommendations are based on the information that exists at the time the plan was prepared. A high degree of adaptability and flexibility must be built into this process to ensure that the DRP can adjust to changes in the availability of funds, improved understanding of the park's natural and cultural resources, and changes in statewide land management issues, priorities, and policies.

Statewide priorities for all aspects of land management are evaluated each year as part of the process for developing the DRP's annual legislative budget requests. When preparing these annual requests, the DRP considers the needs and priorities of the entire state park system and the projected availability of funding from all sources during the upcoming fiscal year. In addition to annual legislative appropriations, the DRP pursues supplemental sources of funds and staff resources wherever possible, including grants, volunteers and partnerships with other entities. The DRP's ability to accomplish the specific actions identified in the plan will be determined largely by the availability of funds and staff for these purposes, which may vary from year to year. Consequently, the target schedules and estimated costs may need to be adjusted during the ten-year management planning cycle.

Goal I: Provide administrative support for all park functions.		Measure	Planning Period	Estimated Manpower and Expense Cost* (10-years)
Objective A	Continue day-to-day administrative support at current levels.	Administrative support ongoing	C	\$366,000
Objective B	Expand administrative support as new lands are acquired, new facilities are developed, or as other needs arise.	Administrative support expanded	UFN	\$255,000

C – Continuous; ST – Short Term (within 2 years); LT – Long Term (within 10 years); UFN – Unfunded Need

10 – Future Objectives

Goal II: Protect water quality and quantity in the park, restore hydrology to the extent feasible, and maintain the restored condition.		Measure	Planning Period	Estimated Manpower and Expense Cost* (10-years)
Objective A	Conduct / obtain an assessment of the park's hydrological needs.	Assessment conducted	UFN	\$392,000
Action 1	Seek assistance through SWFWMD's Cooperative Funding Initiative (CFI), or other programs. Submit proposal, including a draft Statement of Work (SOW), to outsource a park-wide assessment of the hydrology situation.	SOW defined; proposal submitted	ST	\$12,000
Action 2	Implement project	Project implemented	UFN	\$380,000
Objective B	Monitor and address the fecal coliform showing up in Hurrah Creek.	Qty fecal coliform reduced or removed	LT	\$6,500
Objective C	Restore natural hydrological conditions and functions to approximately 2 acres of impoundment / artificial pond edges.	# Acres restored or with restoration underway	UFN	\$12,000
Action 1	Evaluate the impoundment/artificial pond areas and select optimal areas for re-grading and plantings.	Project areas selected	UFN	\$3,000
Action 2	Re-grade and install plantings as appropriate.	# Acres restored or with restoration underway	UFN	\$9,000

C – Continuous; ST – Short Term (within 2 years); LT – Long Term (within 10 years); UFN – Unfunded Need

Goal III: Restore and maintain the natural communities/habitats of the park.		Measure	Planning Period	Estimated Manpower and Expense Cost* (10-years)
Objective A	Within 10 years have at least 2,400 acres of the park maintained within optimal fire return interval.	# Acres within FRI target	LT	\$1,430,500
Action 1	Develop/update annual burn plan; include grazing contract annual requirements for burning; manage fire-dependent communities by burning 800 -1,800 acres annually.	Annual plan report; acres burned	C	\$1,418,500
Action 2	Engage user groups, stakeholders, volunteers in supporting prescription burning at the park, where feasible.	# of people engaged	C	\$12,000
Objective B	Establish new fire breaks as needed to accommodate new optimal fire return goals.	# Miles evaluated; firebreaks established	UFN	\$42,000
Action 1	Evaluate firebreaks for ecotone disruption and whether any inadvertently cause fire suppression in any communities	# Miles evaluated	ST	\$12,000
Action 2	Adjust Management Zone boundaries, if necessary	Management zone map updated	ST	\$30,000
Objective C	Maintain contracted, prescribed cattle grazing as needed, using ecological grazing best management practices, to assist in improving 2,400 acres of altered community	Contract in place and signed; condition improved	C	\$26,600
Action 1	Define the metrics that determine which acres would benefit from grazing and which acres should be exempt from grazing	Set of metrics defined	ST	\$3,000
Action 2	Provide a grazing contract that includes the metrics and engage a contractor	Contract in place and signed;	ST	\$5,600
Action 3	Supervise contract requirements and maintain communication with the contractor and NRCS	Surveys or inspections recorded quarterly	C	\$10,000
Action 4	Evaluate grazed lands for level of improvement; adjust annual plans and contract amendments accordingly	Evaluation completed annually	C	\$8,000

12 – Future Objectives

Goal III: Restore and maintain the natural communities/habitats of the park.		Measure	Planning Period	Estimated Manpower and Expense Cost* (10-years)
Objective D	Test for the presence and levels of heavy metals in at least two areas of remnant mine tailings.	Soil analysis report	ST	\$200
Objective E	Conduct natural community/habitat improvement activities on 500 acres of natural and altered communities.	# Acres restored or with restoration underway	UFN	\$239,000
Action 1	In all Developed acres, set mowing schedules to allow for optimum recruitment and maintenance of the native plant species that occur or "volunteer;" include only native species for landscaping	Plan developed; no non-park plants (native) in landscaping	ST	\$46,000
Action 2	For all Utility Corridor acres, approach the utilities to develop a natural communities improvement plan.	Plan developed;	ST	\$8,000
Action 3	In at least 200 acres of the flatwoods-type acres (see AR-28, AR-36A, AR38B and AR-39), bring Mesic Flatwoods from Fair to Good condition through fire and exotics control and through wiregrass seeding.	Condition improved	UFN	\$166,000
Action 4	Bring at least 8 acres of Hydric Hammock community (see AR-16, north of McMullen Branch) to Good condition by moving the grazing fence line and by grading the existing plow-line so that surface water can flow through the community and fire can move appropriately along its edges.	Condition improved	UFN	\$3,000
Action 5	Bring at least 14 acres of scrub to Excellent maintenance condition by reducing sand pines and following FRI	Condition improved	LT	\$12,500
Action 6	Bring at least 20 acres of Altered: Pine Plantation (see AR-07) to Mesic Hammock/Mesic Flatwoods community in Fair to Good condition by introducing fire.	# acres burned; condition improved	LT	\$3,500

C – Continuous; ST – Short Term (within 2 years); LT – Long Term (within 10 years); UFN – Unfunded Need

Goal IV: Maintain, improve or restore imperiled species populations and habitats in the park.		Measure	Planning Period	Estimated Manpower and Expense Cost* (10-years)
Objective A	Update baseline imperiled species occurrence inventory lists for plants and animals, as needed.	List updated	C	\$13,000
Action 1	Continue to send monthly wildlife reports and plant queries or observations to the District Biology office, including suspected imperiled species and their locations. Assessments completed for Objective B, Community Improvements, will add to all species data.	Lists updated	C	\$6,000
Action 2	District Biology office continues to confirm species' identification, updates species data lists, including herbarium accession records, and updates FNAI imperiled species data.	Species reports confirmed; lists updated	C	\$7,000
Objective B	Monitor and document two selected imperiled animal species in the park.	# Species monitored	C	\$13,500
Action 1	Develop monitoring protocols for 2 selected imperiled animal species including southeastern American kestrel and gopher tortoise.	# Protocols developed	ST	\$3,500
Action 2	Implement monitoring protocols for 2 imperiled animal species: southeastern American kestrel and gopher tortoise.	# Species monitored; reports available	C	\$10,000
Objective C	Monitor and document eight selected imperiled plant species in the park.	# Species monitored	C	\$24,800
Action 1	Develop monitoring protocols for 4 selected imperiled plant species: comb polypody, wild pine, spreading airplant, and angularfruit milkvine.	# Protocols developed	ST	\$6,800
Action 2	Implement monitoring for four species in Action 1. Monitoring results report/documentation should include management guidelines, as needed.	# Species monitored; reports available	C	\$9,000
Action 3	Implement monitoring for four scrub species: Florida goldenaster, nodding pinweed, scrub plum, and Britton's beargrass.	# Species monitored; reports available	C	\$9,000

14 – Future Objectives

Goal V: Remove exotic and invasive plants and animals from the park and conduct needed maintenance-control.		Measure	Planning Period	Estimated Manpower and Expense Cost* (10-years)
Objective A	Annually treat at least 680 gross acres infested with exotic plant species in the park.	# Acres treated	C	\$2,014,800
Action 1	Annually develop/update exotic plant management work plan.	Plan developed/updated	C	\$16,000
Action 2	Implement annual work plan and continue maintenance and follow-up treatments, as needed. Seek outside assistance, as appropriate, to meet these goals	Plan implemented		\$1,976,800
Action 3	Verify that grazing contract acres are included in this number and are being treated by the rancher.			\$2,000
Action 4	Develop and implement plan to address exotic aquatic plants.			\$20,000
Objective B	Implement control measures on one nuisance and exotic animals species in the park.	# Species for which control measures implemented	C	\$150,000
Action 1	Annually develop, improve and implement exotic animal management work plan for wild hogs; seek outside assistance as needed.	# hogs removed	C	\$150,000

C – Continuous; ST – Short Term (within 2 years); LT – Long Term (within 10 years); UNF – Unfunded Need

Goal VI: Protect, preserve and maintain the cultural resources of the park.		Measure	Planning Period	Estimated Manpower and Expense Cost* (10-years)
Objective A	Implement a maintenance program for the Picnic/Thatcher Mound site and submit a formal National Register application.	Documentation complete	LT	\$13,000
Action 1	Establish a maintenance program for the Picnic/Thatcher Mound (HI00003) to implement restoration, rehabilitation, stabilization, and preservation.	Assessments complete	UFN	\$10,000
Action 2	Work with DHR, AIST and SHPO to implement the application process. If the site qualifies, complete the registration and begin developing an interpretive plan.	Reports and priority lists completed	LT	\$3,000
Objective B	Locate and assess all recorded sites in the park that are still in need of a full evaluation.	Documentation complete	LT	\$26,000

C – Continuous; ST – Short Term (within 2 years); LT – Long Term (within 10 years); UFN – Unfunded Need

Goal VII: Provide public access and recreational opportunities in the park.		Measure	Planning Period	Estimated Manpower and Expense Cost* (10-years)
Objective A	Expand the park's recreational carrying capacity by 344 users per day.	# of visitors per day	UFN	\$1,294,000
Objective B	Continue, improve, and develop new interpretive programs.	# of interpretive programs	C	\$30,000

Goal VIII: Develop and maintain the capital facilities and infrastructure necessary to meet the goals and objectives of this management plan.		Measure	Planning Period	Estimated Manpower and Expense Cost* (10-years)
Objective A	Maintain all public and support facilities in the park.	Facilities maintained	C	\$1,100,000
Objective B	Improve and/or repair 5 existing use areas.	# of facilities and miles of road	UFN	\$13,631,000
Objective C	Construct 2 new use areas and 4.5 miles of road.	# of facilities and miles of road	UFN	\$1,853,000

C – Continuous; ST – Short Term (within 2 years); LT – Long Term (within 10 years); UFN – Unfunded Need

Summary of Ten-Year Cost Estimates		
Management Categories	Total Estimated Manpower and Expense Cost (10 years)	Percentage
Administration and Support	\$621,000	3 %
Resource Management	\$4,403,900	19 %
Hydrology	\$410,500	2%
Natural Communities	\$1,738,300	7%
Imperiled Species	\$51,300	0.5%
Exotic Species	\$2,164,800	9%
Cultural Resources	\$39,000	0.5%
Recreation and Visitor Services	\$17,908,000	78 %
Public Access	\$1,324,000	6%
Capital Improvements	\$16,584,000	72%
Total Ten-Year Cost Estimate	\$22,932,900	100 %



Resource Management Component

Natural Resources

Topography

The 7,718 acres of the park lie on the western part of the Polk Upland (White 1970). Elevations within the Polk Upland range from 100 to 155 feet above mean sea level with river bottoms around 50 feet above mean sea level. The rivers of the Polk Upland are somewhat incised, creating more topographic relief than is typical of the surrounding physiographic units (Clewell *et al.*, 1982). The South Prong of the Alafia, which is within the park, is well incised. The topography of the rest of the park is greatly altered by mining processes, with changes of over 20 feet above and 20 feet below the naturally contours of the property. Many such changes occur over very short distances, as seen in the steep inclines and broad berms.

Geology

The 1918 Geological Survey reports that "Hillsborough County lies in the Coastal Plain province, where the soil-forming material consists of unconsolidated deposits washed from the piedmont plateau laid down on the sea floor in ancient times and subsequently uplifted above the level of the sea. The underlying formations consist of limestone, marl, and phosphatic gravels." The southern part of the county is formed of Pleistocene and recent depositions, consisting of sand, clay, marl, coquina limestone, peat and muck. The greater part of the surface material consists of a siliceous sand of uniformly fine grade that varies in depth from a few inches to many feet. Bordering the Alafia River and principal tributaries, discontinuous strips, rarely more than two or three miles wide, have a clay or sandy clay to marl subsoil.

In the 1989 Geological Survey, what had been delineated as Coastal Plain Province is reframed as part of the Polk Upland, which consists of deep, loose quartz sands that overlie mostly impermeable clastics. Beneath these lies the limestone bedrock of the Hawthorn (Miocene) Formation. The impermeable clastics consist of iron-cemented sands, clay-containing sands, and phosphate nodules, the latter being the major incentive

for extensive surface mining in the region. The subsurface clays intercept groundwater before it can percolate to bedrock. As a result, solution activity in the Polk Upland is less pronounced than in most other provinces of peninsular Florida. In poorly drained sites, the iron-cemented sands are one to two feet beneath the soil surface and comprise alluvial (subsurface) spodic horizon within the soil profile (Clewell *et al.* 1982).

By the time of the 1989 survey, phosphate mining operations had significantly impacted the lands now part of ARSP, decimating geological patterns across broad areas. Drilling records on file at Brewster Phosphates reveal that the limestone bedrock was 40-60 feet deep in the uplands, with loose, coarse sands being mostly 10-25 feet deep (Clewell 2000). These sands could store substantial quantities of groundwater, which moved by gravity over the impermeable strata, and eventually seeped into the South Prong of the Alafia and its tributaries. Since phosphate ore is found from 15 to 50 feet below the ground surface, many of the sandy pockets and the iron-cemented sands were overturned or otherwise re-arranged in the mining process.

During the years of mining in the ARSP area, there were few requirements for mining companies to mitigate any damage to the land. Reclamation work generally consisted of tree plantings and the installation of pastures and groves. The tree plantings were done as groupings or as timbering plantations and could include species never found in the area. However, there are two small exemplary restoration efforts, although one used imported topsoil before planting.

With so much of the land redefined by mining, good ecological management going forward must incorporate knowledge of the basic processes of phosphate mining. The desired ore is generally in a matrix of equal parts sand, clay and fluorapatite, a phosphate mineral. In Florida, the phosphate rock is extracted by strip-mining. Dragline cranes remove the top layer of soil (overburden) and scoop up the phosphate matrix. The matrix is put in a pit, where high-pressure water guns create slurry that can be pumped to a processing plant. At the processing plant, the

"beneficiation" process separates the sand and clay from the phosphate rock. After the largest particles are removed, the slurry is run through a hydrocyclone that uses centrifugal force to remove the clay. Waste clay is pumped to a settling pond or clay settling area. Sand and sand-sized phosphate particles, called "flotation feed," are put through a process that uses chemical reagents, water and physical force to separate the sand and phosphate. Remaining sand is pumped back to the mine where it will be used to "reclaim" the site when mining is complete.

Roughly 40 percent of a mine site becomes clay-settling area. Three to five years after the start of "reclamation," a top crust forms that is 50-60 percent solids. Beneath the crust, the clay maintains the consistency of pudding for an unknown number of years. With such an unstable base, land use options are limited. In addition, settling areas are much less permeable than Florida's natural sandy soil, which means rainfall cannot seep through the clay bottom to recharge the aquifer, and surface and underground water flows are altered. (TBS 2002; Our Phosphate Risk 2008; FIPR 2017).

Soils

About 4,000 acres of the park are composed of human-altered soils: Arents Nearly Level, Arents Very Steep, and Slickens. Arents soils are created by disturbances to depths of 40 feet or more and have none of the identifiable structures or horizons that are used to determine natural soil profiles. Slickens is the term used to designate mine tailings, the materials left after the process of separating the valuable fraction from the uneconomic fraction of the ore. Slickens may have concentrations of heavy metals, such as arsenic, cadmium, lead or mercury.

The pre-Arents soils west of the river were predominantly Myakka-Basinger-Holopaw (USDA 1989) or Norfolk Hammock-St. Lucie-Leon (USDA 1918). These are nearly level, poorly to very poorly drained soils that have a sandy subsoil, are sandy throughout or have a loamy subsoil (1989). Such soils tend to be

associated with mesic to scrubby flatwoods with a mosaic of hydric and mesic hammocks.

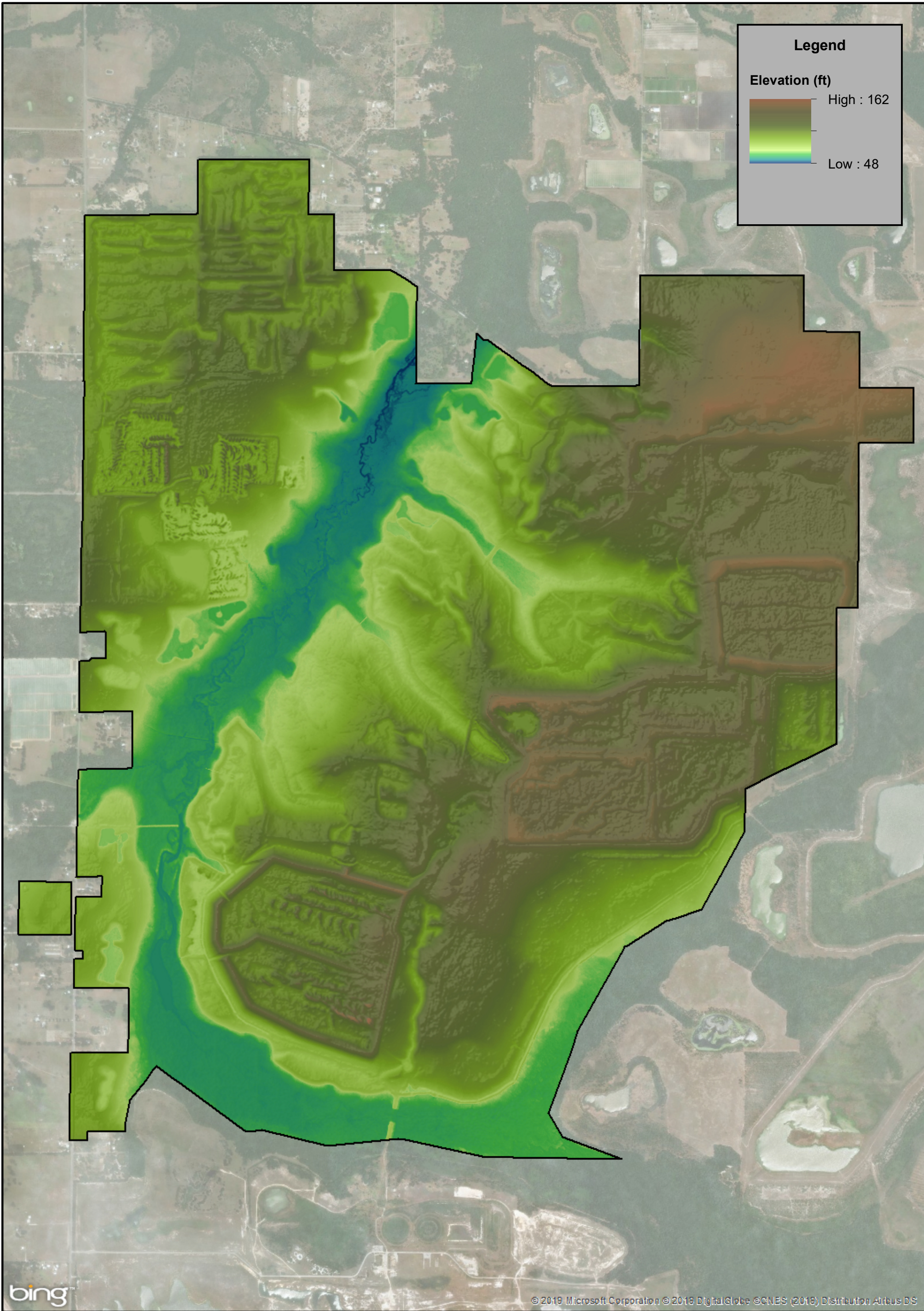
Pre-Arents and pre-slickens soils east of the river included Myakka-Immokalee-Pomello and Candler-Lake (1989) or Norfolk-Norfolk Hammock (USDA 1918). These are nearly level to variously sloping, poorly to well drained soils that have a sandy subsoil or are sandy throughout, and such soils tend to be associated with sandhill and a mosaic of scrub, and xeric to hydric hammocks.

Of the remaining natural soils, roughly half are Winder Fine Sand (USDA 1989), and others include Candler fine sand, Zolfo fine sand and Archbold fine sand.

Winder fine sand is a fine loamy, siliceous soil often associated with broad sloughs on the flatwoods, and in ARSP it is the underlying soil for the floodplain swamp, bottomland forest, and portions of the baygall and hydric hammock communities. Candler and Zolfo fine sands are usually associated with sandhill or upland flatwoods, as are Malabar and Lake fine sand. Archbold fine sand is associated with scrub. Please see the Soils Map. Detailed descriptions for the various soil types are found in Addendum 3.

Minerals

Phosphate has been mined from these lands. (The term Alafia has purportedly been translated from one Native American dialect as "River of Fire," possibly referring to the phosphorus glowing at night along the river bottom.) As areas worked became depleted of commercially-feasible deposits, the mines were closed. At the time of writing this plan, there were no mining activities within the present park boundary.



Legend

Elevation (ft)

High : 162

Low : 48

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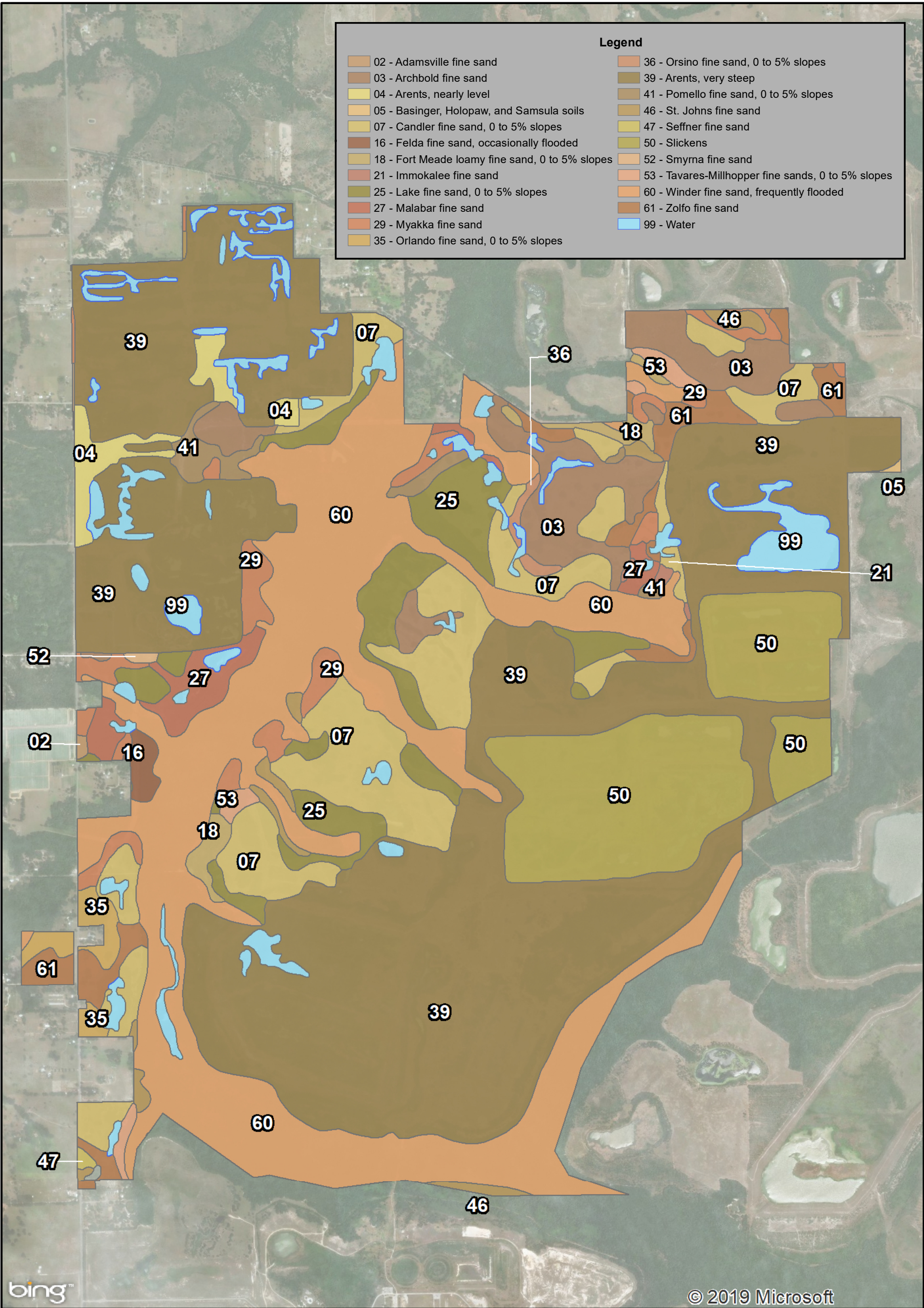
ALAFIA RIVER STATE PARK

0 0.25 0.5 1 Mile

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Florida Department of Environmental Protection
Division of Recreation and Parks
Date of aerial: 2011

TOPOGRAPHIC MAP



Legend

02 - Adamsville fine sand

03 - Archbold fine sand

04 - Arents, nearly level

05 - Basinger, Holopaw, and Samsula soils

07 - Candler fine sand, 0 to 5% slopes

16 - Felda fine sand, occasionally flooded

18 - Fort Meade loamy fine sand, 0 to 5% slopes

21 - Immokalee fine sand

25 - Lake fine sand, 0 to 5% slopes

27 - Malabar fine sand

29 - Myakka fine sand

35 - Orlando fine sand, 0 to 5% slopes

36 - Orsino fine sand, 0 to 5% slopes

39 - Arents, very steep

41 - Pomello fine sand, 0 to 5% slopes

46 - St. Johns fine sand

47 - Seffner fine sand

50 - Slickens

52 - Smyrna fine sand

53 - Tavares-Millhopper fine sands, 0 to 5% slopes

60 - Winder fine sand, frequently flooded

61 - Zolfo fine sand

99 - Water

Hydrology

The central water feature in the park is a blackwater river, known as the South Prong of the Alafia River. This surface feature has an “L” shape and flows west and then north-northwest, reaching the Alafia River about six miles north of the park boundaries. Tributaries feeding into this river include several streams, creeks or branches within the park boundaries. The most notable of the streams mapped to date (from north to south along east side of river) include Jameson Branch, McMullen Branch, Pollard Branch, Dogleg Branch, and then Boggy Branch; the latter’s entry, flowing southwest into the river, gives the impression that the river has a reverse-J shape in the park. Entering the river on the west side, north to south, are Hurrah Creek and Cemetery Branch. Hurrah Lake is essentially a widened area of the South Prong, covering roughly 13 acres. Overall, surface sheet flow would appear to follow the complicated flow patterns of the river and its branches, with some scattered interruptions caused by borrow pits and overburden or bermed areas created for clay slurry dumps. US Geological Survey (USGS), working with Southwest Florida Water Management District (SWFWMD), has a water flow gauge on the South Prong, south of most of the tributaries; flow levels at the gauge are generally lowest in May and highest in September (USGS 2007).

Hillsborough County Environmental Protection Commission (EPC) has two water quality monitoring stations that relate to the section of South Prong Alafia within park boundaries. One is on the minor tributary about 300 feet north of Thatcher Road, on the east side of CR39; the second one is downstream, at the bridge on Jameson Road at the north end of the park (Station Number 548). Measurements are taken quarterly. Broadly speaking, water quality measures at the southern, upstream station (545) tend to be poorer than the northern, downstream station (548), with lower dissolved oxygen, higher fecal coliform, and higher nitrogen readings on Hurrah Creek. The presence of fecal coliform in the tributary needs to be more fully investigated and prevented.

There are many lakes at the park, all of which are man-made remnants from mining processes. Most lack natural littoral profiles or structure or vegetal components. Most are nutrient poor, with dissolved oxygen levels ranging from low to absent; vegetation is predominantly composed of invasive aquatic species. A few of the shallower ponds have littoral profiles that are in good condition, with spotted water hemlock (*Cicuta maculata*), and many other native obligate wetland species growing along the water’s edges. The “lakes” immediately south of Thatcher Road leading to the bridge are being used as retention ponds for stormwater feeds from the neighborhoods west of CR 39; these need to be monitored for overflow, quality and erosion. There may be some seepage or flow between the various lakes, and a few connections have been located by park staff, but the overall status of such dynamics is unknown. Investigating and mapping flow connections between the impoundment areas would provide useful information.

Roughly 40 percent of a mine site can be clay settling area, and there are clay settling areas within the park boundaries. The most easily identifiable are those found in AR-10, AR-13, AR-31A, AR-20A, and the berm-enclosed area in AR-19A. But there are others scattered throughout the arents and slickens areas. Culverts placed in clay settling areas are prone to failure, such as the one in AR-31. The consolidation of the clay settling areas typically takes decades.

No records for park-wide hydrological assessments were identified during the research for this management plan. Such an assessment is needed to fully determine current conditions for best management planning. The kind of expertise required to perform water quality assessments or management, beyond erosion control and ecosystem management efforts, is not currently part of the skill sets managed by FPS. Proper water quality and hydrology assessments are accomplished only through partnerships with water management agencies, such as Hillsborough County’s EPC, SWFWMD, or the FWC aquatic programs.

Hydrological Management Program

Goal: Protect water quality and quantity in the park, restore hydrology to the extent feasible and maintain the restored condition.

The natural hydrology of most state parks has been impaired prior to acquisition to one degree or another. Florida's native habitats are precisely adapted to natural drainage patterns and seasonal water level fluctuations. Variations in these factors frequently determine the types of natural communities that occur on a particular site. Even minor changes to natural hydrology can result in the loss of plant and animal species from a landscape. Restoring state park lands to original natural conditions often depends on returning natural hydrological processes and conditions to the park. This is done primarily by filling or plugging ditches, removing obstructions to surface water "sheet flow," installing culverts or low-water crossings on roads, and installing water control structures to manage water levels.

Objective A: Conduct/obtain an assessment of the park's hydrology and models for analyzing best restoration plans.

- | | |
|----------|---|
| Action 1 | Seek assistance through SWFWMD's Cooperative Funding Initiative (CFI), or other programs. Submit proposal, including a draft Statement of Work (SOW), to outsource a park-wide assessment of the hydrology situation, one that includes modeling the data once collected and produces scenarios for best management practices needed at the park. |
| Action 2 | Implement project; this could take two to five years. |

A useful hydrology assessment is likely to need two years of data gathering and establishing the appropriate models for analyses, and another year or two to run various "what if" analyses through the models to provide the park with direction and priorities. The hydrology assessment project

should include, at the least: defining probable watershed boundaries as they relate to the park; mapping all impoundment areas and identifying any flow connections between them; applying historical data and current communities conditions to assess optimal flow patterns throughout the park; identifying clay settling areas and assessing for safety or other related issues; determining need for littoral edges for, and safe access to, impoundment areas. Having the assessment data and modeling in place not only provides an initial basis for determining and prioritizing work at the park but can continue to serve to support adaptive management for best management practices in the future. SWFWMD assists with such projects and their experience is invaluable. Their assistance includes financial match support, knowledge of the how to best frame a project to get the best vendors, experience with the vendors who do this work, and experience with supervising such projects as they are being implemented. Contact the CFI staff to learn the current programs and protocols for obtaining their support.

Objective B: Monitor and address the fecal coliform detected in Hurrah Creek.

Coordinate with local water quality authorities for assistance in monitoring coliform levels and to correct the problem.

Objective C: Restore/create natural hydrological conditions and functions to at least 2 acres of impoundment/artificial pond edges.

- | | |
|----------|---|
| Action 1 | Evaluate the impoundment/artificial pond areas and select optimal areas for re-grading and plantings. |
| Action 2 | Re-grade and install plantings as appropriate. |

This objective is intended to begin the development of better wetland structure and health to the existing water features at the park.

Natural Communities

This section of the management plan describes and assesses each of the natural communities found in the state park. It also describes the desired future condition (DFC) of each natural community and identifies the actions that will be required to bring the community to its desired future condition. Specific management objectives and actions for natural community management, exotic species management, and imperiled species management are discussed in the Resource Management Program section of this component.

The system of classifying natural communities employed in this plan was developed by the Florida Natural Areas Inventory (FNAI). The premise of this system is that physical factors such as climate, geology, soil, hydrology and fire frequency generally determine the species composition of an area, and that areas that are similar with respect to those factors will tend to have natural communities with similar species compositions (FNAI 2010). Obvious differences in species composition can occur, however, despite similar physical conditions. In other instances, physical factors are substantially different, yet the species compositions are quite similar. For example, coastal strand and scrub--two communities with similar species compositions--generally have quite different climatic environments, and these necessitate different management programs. Some physical influences, such as fire frequency, may vary from FNAI's descriptions for certain natural communities in this plan.

The determination of appropriate natural communities and the assessments of their health are based on historical growth and largely on soil types and structures. More than half of the acres at ARSP fit neither FNAI's natural nor altered community descriptions. Presently, FNAI has no classifications for the native plant assemblages that find their way back – reclaim the land – after the severe surface, seed bank and soils disruptions caused by phosphate mining. Until there are distinctions for such reclaimed areas, this plan imposes the current FNAI community designations that

most closely approximate what exists at the park. Many will never have the same species assemblies, growth history, topography, ground structure or soils. The study of historical vegetation patterns to assist with this portion of the plan has included vegetation notes found in the 1918 soils survey, 1970s aerials, notes from archaeological studies in the 1970s, notes from the ARSP 2004 Unit Management Plan, notes from a mining company biologist, reports from various revegetation efforts, and the examination of the remnant few “restoration” efforts that have had success at the park. In general, the historical data indicate a predominance of “rolling pinelands,” which were probably mesic flatwoods in the more upland areas, and sandhill and scrubby flatwoods with pockets of scrub and xeric hammock in the drier uplands.

The extent of disturbance on these lands, particularly the extent of invasive plant monocultures, requires that the park consider resource management practices beyond those that might work on less altered lands. To this end, the park has implemented cattle grazing as a management tool. There is already some evidence of its usefulness: roughly 215 acres were recently moved out of the grazing plan because they have improved sufficiently that Desired Future Conditions can be achieved with other management tools. The cost of an equivalent improvement using other techniques would have been prohibitive. More discussion of grazing at ARSP is found in the Restoration Goals section, at the end of the community descriptions.

When a natural community within a park reaches the desired future condition, it is considered in a “maintenance condition” and assessed as Good or Excellent. Required actions for sustaining a community's maintenance condition may include: maintaining optimal fire return intervals for fire-dependent communities; ongoing control of non-native plant and animal species; maintaining natural hydrological functions, including historic water flows and water quality; preserving a community's biodiversity and vegetative structure; protecting viable populations of plant and animal species,

particularly those that are imperiled or endemic; and preserving intact ecotones that link natural communities across the landscape.

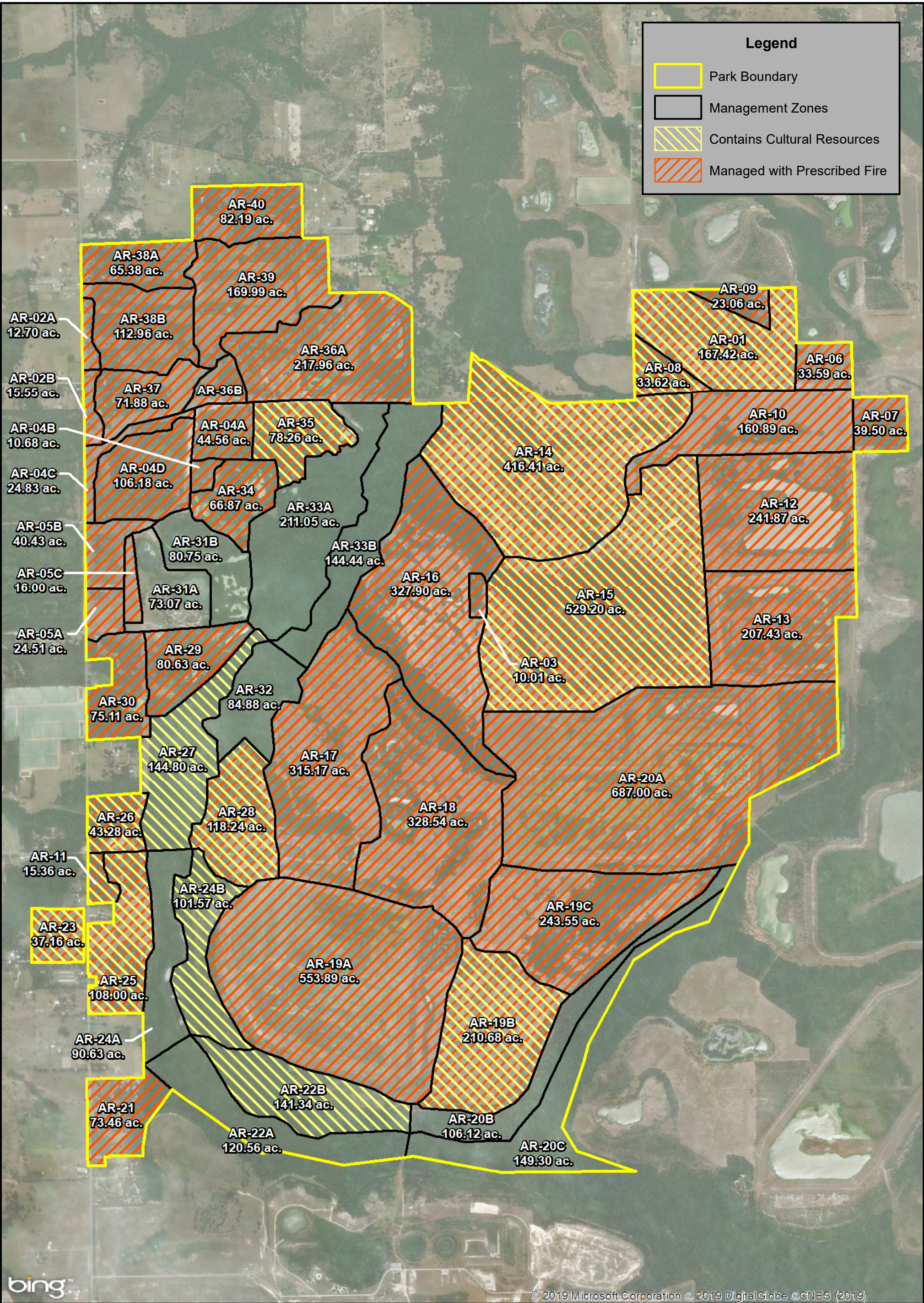
The entire park is divided into management zones to reference management activities (see Management Zones Map). The shape and size of each zone may be based on natural community type, burn zone, and the location of existing roads and natural fire breaks. It is important to note that all burn zones are management zones; however, not all management zones include fire-dependent natural communities. Table 1 reflects the management zones with the acres of each zone.

The park currently contains eleven distinct natural communities and ten altered landcover types (see Natural Communities Map). Over time, with proper management and restoration efforts, a few of the communities discussed will disappear and at least one new community will emerge (see DFC in Spoil Area discussion). The individual community discussions below are sorted by first grouping them as terrestrial, palustrine, riverine and altered types, respectively, and then alphabetically by name within those groupings. A list of currently known plants and animals occurring in the park is contained in Addendum 4.

Table 1. Natural Communities and Altered Landcovers Existing Conditions		
Natural Communities	Acreage*	Percentage
Mesic Flatwoods	853	11.1%
Mesic Hammock	436	5.7%
Sandhill	87	1.1%
Scrub	14	0.2%
Scrubby Flatwoods	131	1.7%
Xeric Hammock	18	0.2%
Baygall	160	2.1%
Bottomland Forest	831	10.8%
Floodplain Swamp	135	1.8%
Hydric Hammock	31	0.4%
Blackwater Stream	35	0.4%
Altered Landcovers	Acreage*	Percentage
Abandoned Field/Pasture	203	2.6%
Developed	109	1.4%
Impoundment/Artificial Pond	583	7.5%
Invasive Exotic Monoculture	1,351	17.5%
Pasture Semi-Improved	504	6.5%
Pine Plantation	25	0.3%
Restoration Natural Community	27	0.4%
Spoil Area	1,463	19.0%
Successional Hardwood Forest	513	6.6%
Utility Corridor	209	2.7%
Total Acreage	7,718	100 %

*Acres rounded to the nearest whole number

Combined Landcover Types	Acreage*	Percentage
Terrestrial (Upland)	1,539	19.9%
Palustrine (Wetland)	1,157	15.0%
Riverine	35	0.4%
Altered	4,987	64.6%



Mesic Flatwoods

Desired future condition: Mesic flatwoods is characterized by an open canopy of tall pines, typically longleaf pine (*Pinus palustris*) or South Florida slash pine (*Pinus elliottii*), and a dense ground layer of low shrubs, grasses and forbs. Saw palmetto (*Serenoa repens*) is generally present but not overly dominant. Other shrub species may include gallberry (*Ilex glabra*), fetterbush (*Lyonia lucida*), runner oak (*Quercus pumila*), shiny blueberry (*Vaccinium myrsinites*), and dwarf huckleberry (*Gaylussacia dumosa*). The herbaceous layer is primarily grasses, including wiregrass (*Aristida stricta* var. *beyrichiana*), dropseeds (*Sporobolus* spp.), panicgrasses (*Dicanthelium* spp.), and broomsedge (*Andropogon virginicus*). This community has minimal topographic relief normally, and the soils contain a hardpan layer within a few feet of the surface that impedes percolation. Due to these factors, water saturates the sandy surface soils for extended periods during the wet season, but lengthy droughts commonly occur during the dry season. Invasive exotic plant species cover is five percent or less. The Optimal Fire Return Interval for this community is 1-3 years, with burns implemented during growing season.

Description and assessment: There are roughly 853 acres that resemble the vegetative structure and functions of this community type, and, ultimately, over 2,750 acres could become mesic flatwoods by implementing standard resource management strategies and some grazing (see also the DFC discussions in the descriptions for Invasive Exotic Monoculture, Abandoned Field, Restoration Natural Community, and Successional Hardwood Forest). The current condition assessment is generally Poor, with some areas on the west side of the park that are Fair. The topography is too disturbed to match the “flat” in flatwoods, large areas of the hardpan have been disturbed and the cover of bahiagrass (*Paspalum notatum*) is high, but the relevant native species and diversity associated with this community are finding their way into these acres. A few pockets still have the original soil types, though most of the acres are now Arents

soils. On the east side of the park, a number of the acres for this community type are currently included in a grazing contract on the east side of the park; as discussed in other parts of the plan, this is to assist with the early steps of restoration.

Prescribed fire at proper return intervals is needed. In some areas, supplemental tree plantings and understory seeding will be needed to enhance the community. In other areas, a bit of selective timbering will develop and maintain the expected open canopy. Thinning is needed where pines -- mostly slash, but also longleaf and some less-than-desirable loblolly -- were planted in tight patches scattered throughout. These plantings were done to meet reclamation sign-off requirements for the mining company; trees placed in tight clusters developed heights more quickly and were easier to water and count. Many of these patches would benefit from thinning, but there is welcome species recruitment happening outside the plantings. Sherman fox squirrels (*Sciurus niger shermanii*) have been seen near the edges of several of these pine plantings.

For many of these acres, it is useful to note that the last management plan designated Upland Mixed Forest as the community to apply to areas of “well-drained hammock-like upland community” that “separated the pinelands from mesic riverine forest in places” (ARSP 2004; Clewell 1982). Although many of these acres were acknowledged to be, in part, a result of fire suppression, they were considered “a permanent displacement” of pineland and subsequent restoration and planning efforts were geared to encourage continuance and expansion of “Upland Mixed Forest” (ARSP 2004). Thus, most of these acres were considered non-pyric. This Plan makes a significant shift from this. Not only does the Upland Mixed Forest designation not apply this far south, but this land will benefit from prescribed fire, the reduction or removal of successional hardwoods and the replacement of lost pinelands.

In addition to the history of fire suppression, the greatest threats to overcome for the mesic flatwoods are the bahiagrass, which is

exotic, and the invasive exotic plant species. Hundreds of these acres are dominated by exotics, mostly cogongrass (*Imperata cylindrica*), but also found here are rose natalgrass, Caesarweed (*Urena lobata*), Chinese tallow (*Sapium sebiferum*) and chinaberry tree (*Melia azederach*).

General management measures: Begin developing prescribed fire intervals to as close to one to three years as the existing vegetation will allow. Continue to control invasive exotic species. Assess and establish a selective timbering plan to thin the scattered dense patches of pines (AR-37, for example). Reduce or remove any grazing contract acres where, and as, the community condition improves.

Mesic Hammock

Desired future condition: Mesic hammock is a well-developed evergreen hardwood or palm forest which can occur, with variation, through much of peninsular Florida. Mesic hammocks generally contain sandy soils with organic materials and may have a thick layer of leaf litter at the surface. They may be inundated on occasion, but this is rare. The canopy is typically dominated by live oak (*Quercus virginiana*) with cabbage palm (*Sabal palmetto*) mixed into the understory. Southern magnolia (*Magnolia grandiflora*) and pignut hickory (*Carya glabra*) can be common components in the subcanopy as well. The shrubby understory may be dense or open, tall or short, and is typically composed of saw palmetto, beautyberry (*Callicarpa americana*), American holly (*Ilex opaca*), gallberry and sparkleberry (*Vaccinium arboreum*). The groundcover may be sparse and patchy but generally contains panicgrasses (*Panicum* spp.), switchgrass (*Panicum virgatum*), sedges, as well as various ferns and forbs. Abundant vines and epiphytes occur on live oaks, cabbage palms, and sub-canopy trees. Invasive exotic plant species cover is five percent or less. Mesic hammocks are not considered to be fire-adapted communities, but they do benefit from adjacent fire being allowed to burn into the edges.

Description and assessment: This community occupies a little more than 436 acres at ARSP

currently but will be nearly 630 acres as the DFC is met. As with Mesic Flatwoods, these acres were generally mapped as Upland Mixed Hardwood in the last management plan. Between later FNAI community definition revisions, the fact that the location of this park is too far south for most of the indicative species, and the clear presence of saw palmetto, the classification of Mesic Hammock is now being applied where more appropriate. Several restoration suggestions in the last plan that encouraged further expansion of hammock included mesic hammock species, such as live oak, cabbage palm and magnolia.

The mesic hammock at ARSP is most likely a result of hardwood invasion into historic pine communities due to fire suppression and is thus a relatively young hammock. The frequency of water oak (*Quercus nigra*) and laurel oak (*Q. laurifolia*), as well as the scattered patches of sweetgum (*Liquidambar styraciflua*), slash pine, coastalplain staggerbush (*Lyonia fruticosa*), shiny blueberry, blue huckleberry (*Gaylussacia frondosa*), and even the occasional turkey oak (*Quercus laevis*), indicate this probability. As an emerging mesic hammock, it is in Good to Excellent condition and worth maintaining at this succession level. The diversity of the vegetation provides a good live example of the description for this community in FNAI's Guide, including the blueberries, grasses, partridgeberry (*Mitchella repens*), sugarberry (*Celtis laevigata*) and sweetgum listed therein. There is also an occasional red cedar (*Juniperus virginiana*). The invasive exotic plants tend to be few (at or under five percent cover) except where clustered at edges, in patches near trails, or occasionally recruiting as a few individuals in naturally disturbed areas. Two native "cherries," Carolina laurelcherry (*Prunus caroliniana*) and black cherry (*P. serotina*), threaten to become inappropriately dense in this park due to the ground disturbance and fire suppression history.

General management measures: Include control of the Carolina laurelcherry and black cherry trees and shrubs when working on the exotic woody species. Where this community abuts pyric communities, do not place firebreaks in the ecotone between the two

systems; mesic hammock benefits from the occasional fire allowed to burn into it and burn plans should accommodate this feature. Continue to manage for exotic invasive plants. Monitor areas where visitor use might impact hydrology. Manage the grazing contract acres such that Mesic Hammock acres are not included.

Sandhill

Desired Future Condition: The dominant pine of sandhill, depending on region of state, is usually longleaf pine or South Florida slash pine. Herbaceous cover is dense, typically of wiregrass, and low in stature. Most of the plant diversity is contained in the herbaceous layer, including other three-awn grasses (*Aristida* spp.), pineywoods dropseed (*Sporobolus junceus*), lopsided Indian grass (*Sorghastrum secundum*), bluestems (*Andropogon* spp.) and little bluestem (*Schizachyrium scoparium*). In addition to groundcover and pines, there are scattered individual trees, clumps, or ridges of onsite oak species, usually turkey oaks and sand post oak (*Quercus margarettae*). Invasive exotic plant species cover is five percent or less. The Optimal Fire Return Interval for this community is 1-3 years, with burns implemented during growing season.

Description and assessment: In this plan, 87 acres are mapped as sandhill, and are in Poor or altered conditions (See also Altered: Abandoned Field/Abandoned Pasture). Some of these acres still have pockets of the proper elevations and soil types, such as Candler, Orlando, and Zolfo soils. Sandhill community is expected to cover about 1,038 acres eventually, with appropriate management, as these areas were historically described as sandhill and do have type native species re-establishing.

General management measures: Begin applying prescribed fire at intervals as close to one to three years as the existing vegetation will allow. Continue to control invasive exotic species. See Management Objectives for further reclamation efforts useful for sandhill management. Reduce or remove any grazing contract acres where, and as, the community condition improves.

Scrub

Desired future condition: Within scrub habitats, the dominant species include scrub oak (*Quercus inopina*), sand live oak (*Quercus geminata*), myrtle oak (*Quercus myrtifolia*), Chapman's oak (*Quercus chapmanii*), saw palmetto, and rusty staggerbush (*Lyonia ferruginea*). The oak canopy varies height from three to eight feet. There are a variety of oak age classes and heights between different scrub patches. There are scattered openings in the canopy, with bare patches of sand that support many imperiled or endemic plant species; these species are regularly flowering and replenishing their seed banks. Sand pine (*Pinus clausa*), where present, is usually not dominant in abundance, percent cover, or height; however, areas of mature sand pine do occasionally occur. Invasive exotic plant species cover is five percent or less. The Optimal Fire Return Interval for this community varies by region and dominant species' composition; typically, 4-15 year intervals produce the desired mosaic of open sand, reduced sand pine densities, and burned and unburned areas.

Description and assessment: The 14 acres of scrub in AR-01 could also be designated Restoration Natural Community. There were restoration experiments in this area in the mid-1980s. Scrub species were planted, including imperiled species such as Florida goldenaster (*Chrysopsis floridana*), Britton's beargrass (*Nolina brittoniana*), scrub pinweed (*Lechea cernua*), and endemics such as silk bay (*Persea borbonia* var. *humilis*), and then monitored for a few years (Segal, 2001; Gilbert, 1987). Since then, the introduced plants have naturalized and spread, along with other native scrub species, across patches of what is mostly Archbold fine sand. In general, the areas fall within scrub oak and sand pine scrub community designations and are in Fair to Good condition.

The larger of the two areas is in the central part of AR-01, historically referred to as the MUR site. This was mined, later scraped clean of re-established vegetation, and then covered with translocated native soil (Archbold fine sand) from a now-mined site

north of Walter Hunter Road (Environmental and Permitting Services, Inc. 2000). The intention of the translocation was to demonstrate reclamation of viable upland habitat. In addition to the rare plants mentioned above, other scrub plants and seeds were introduced. Until mid-2016, Mosaic ecologists coordinated resource management of these plots with Hillsborough County, without burning nor reducing the sand pine. With the naturalizing of the planted species and the establishment of sand live oak, saw palmetto, capillary hairsedge (*Bulbostylis ciliatifolia*), and other xeric shrubs, grasses and forbs, standard maintenance management will keep this area as scrub. The rose natalgrass (*Melinis repens*) and cogongrass are the primary threats.

The smaller patch, located in the northwest corner of AR-01, was scraped of re-established vegetation in the 1980s before it was planted with an experimental suite of scrub species (Gilbert 1982). Many of the introduced scrub species are persisting and spreading well. This area is in Fair to Poor condition, struggling with bahiagrass, rose natalgrass, cogongrass, equipment traffic, and too much oak and sand pine canopy.

Most of zone AR-01 is threatened by human impact, as people often breach the fences to get to the mine property to the east of the park, and occasionally the area is used as a dumping ground. Also, if or when outside agencies are working on this project, it is important that park management monitor all activity, to verify that there is no damage to the rare species or interference with desired ecological development.

There is a 20-acre area in the middle of AR-16 that should be managed as scrub. It is currently designated as scrubby flatwoods. Surrounded by exotic invasive monoculture, mostly cogongrass, it is an island of Archbold fine sand, with gopher tortoises and a scattered ground cover of xeric native plants.

AR-03 (old Unit 28) was described as “reference scrub community” in the last Plan, but it does not meet the FNAI criteria for this designation. It more closely represents scrubby flatwood or sandhill that is

succeeding to xeric hammock and it is discussed under Scrubby flatwoods.

General management measures: Continue to address the invasive exotic plant threat. Apply restoration burn intervals in AR-16 as needed to encourage scrub species. Consider collecting scrub species’ seed in AR-01 to plant or scatter in the white sands in AR-16.

Scrubby Flatwoods

Desired future condition: The dominant canopy tree species of the interior of scrubby flatwoods are usually longleaf pine and south Florida slash pine. The trees are widely spaced, creating an open canopy. Mature sand pines are typically not present. There is a diverse shrubby understory, often with patches of bare white sand. Dominant shrubs include sand live oak, myrtle oak, Chapman’s oak, saw palmetto, rusty staggerbush, and tarflower (*Bejaria racemosa*). The oak sub-canopy varies in height from three to eight feet. Cover from herbaceous species is often below 40%. Cover from invasive exotic plant species is five percent or less. The Optimal Fire Return Interval is regionally variable; typically, five- to fifteen-year intervals with variable season burns, produce a mosaic of burned and unburned areas.

Description and assessment: There are roughly 131 acres that meet the criteria for this community type, most are in and around AR-04A on the west side of the river. There is potential for a little over 400 acres of scrubby flatwoods, most on the east side of the river, as the park progresses with resources management. On the other hand, 20 of the current 122 acres, located in AR-16, are likely to revert to Scrub with only a little restoration management.

The scrubby flatwoods in AR-04A is in Fair to Good condition; it contains a good representation of the plant species typical of this community as listed above, as well as skyblue lupine (*Lupinus diffusus*) and wild pennyroyal (*Piloblephis rigida*).

Evidence suggests that most of AR-03 is scrubby flatwoods succeeding to xeric hammock. Scrubby flatwoods species are

present, such as South Florida slash pine, sand live oak, hogplum (*Ximenia americana*) and grass leaved aster (*Pityopsis graminifolia*). While desirable ground cover species are spreading south from this zone, hardwood is now encroaching, particularly Carolina laurelcherry. Cogongrass and other aggressive exotic plants are a threat.

General management measures: For the ten years of this plan or until the shrub subcanopy height and density are reduced, consider implementing fire at Restoration Return intervals. Reduce or remove any grazing contract acres where, and as, the community condition improves. Continue to manage the invasive exotic plants.

Xeric Hammock

Desired future condition: This community is typically considered a late successional stage of scrub, scrubby flatwoods, or sandhill. It usually occurs in small isolated patches on deep sand substrate with excessively well-drained soils. Vegetation consists of low, closed canopy dominated by evergreen species, especially sand live oak, that provide shady conditions. Typical plant species may include Chapman's oak, live oak, and a minor component of sand pine, slash pine, or longleaf pine. Understory species include saw palmetto, fetterbush, myrtle oak, yaupon holly (*Ilex vomitoria*), Hercules' club (*Zanthoxylum clava-herculis*), and possibly Florida rosemary (*Ceratiola ericoides*). A sparse groundcover layer of wiregrass and other herbaceous species may exist but is typically absent. A continuous leaf litter layer may be present. Cover from invasive exotic plant species is five percent or less. Xeric hammock is not generally considered a pyric community.

Description and assessment: At ARSP, the currently identified pocket of xeric hammock is in AR-36B, roughly 18 acres. This is probably overgrown scrubby flatwoods. Sand live oak trees dominate with an understory of younger oaks, occasional saw palmetto, sparkleberry, hog plum and remnant forbs such as Feay's palafox (*Palafoxia feayi*) and sandyfield beaksedge (*Rhynchospora megalocarpa*). Wild olive (*Cartrema*

americana) is also found here. This area could be left at this successional stage, or park management may choose to help it revert to scrubby flatwoods. While there are problems with invasive exotics, including wild hogs (*Sus scrofa*), the condition of the xeric hammock is Fair to Good.

General management measures: Continue to control invasive exotic species. Seek more or improved assistance in reducing wild hog numbers.

Baygall

Desired future condition: Baygall consists of a wet, densely forested, peat-filled depression, typically near the base of a slope. Seepage from adjacent uplands maintains saturated conditions. Medium to tall trees mainly include sweetbay (*Magnolia virginiana*), loblolly bay (*Gordonia lasianthus*), and swamp bay (*Persea palustris*). Occasional sparse pines may also exist. The thick understory typically consists of gallberry, dahoon (*Ilex cassine*), fetterbush, and red maple (*Acer rubrum*), with climbing vines such as greenbrier (*Smilax* spp.) and native grapes (*Vitis* spp.) often abundant. The invasive exotic plants cover is five percent or less. Fire in this community destroys the canopy and may ignite the peat layer; however, an Optimal Fire Return Interval of 25-100 years may be observed, especially along the edges, to manage density of undergrowth and minimize encroachment into other communities.

Description and assessment: Baygall communities at the park take up about 160 acres. Most are in very narrow strips or patches adjacent to the various branches feeding the South Prong, with one larger area found along the eastern-most end of McMullen Branch, and in areas that lack well-defined stream channels, which are seepage wetlands. Almost all the baygall areas quickly transition upslope into hydric or mesic hammock. There are very few dense stands of just evergreen bay trees. In a few pockets, such as along Pollard Branch in AR-16, the trees are not very large and these may be more recently developed baygall or possibly second-growth. Generally, the baygall in

areas not disturbed by mining operations retain a good, natural distribution of the native species associated with this community type, such as sweetbay, loblolly bay, and swamp bay, are in Good condition. Grazing must be kept out of these areas. Invasive plants are generally at less than 5% cover, with some dense patches of Caesarweed near the more open edges of the community or along hog trails, and the occasional Japanese climbing fern (*Lygodium japonicum*) or skunkvine (*Paederia foetida*) patches.

A few baygall areas, such as in AR-38A, are impoundment islands and boundaries. These are in Poor condition, primarily due to the impact of clay deposits from mining and the invasive plant infestations.

General management measures: Baygall communities are best managed by maintaining quality adjacent natural uplands and upland-wetland ecotones. Fires from adjacent communities are to be allowed to enter the baygall, where they will extinguish naturally at the edge; the grazing contract needs to specify this, as well. Continue to survey for and treat invasive plants to maintain the current low presence of exotics.

Bottomland Forest

Desired future condition: Bottomland forest is a mesic to hydric community prone to periodic flooding. When bordering smaller blackwater streams, the water table is high. Vegetation consists of a mature closed canopy of deciduous and evergreen trees. Overstory species may include sweetgum, sweetbay, loblolly bay, water oak, laurel oak, live oak, loblolly pine (*Pinus taeda*). Red maple and bald cypress (*Taxodium distichum*) may also be present. The understory can be open or dense and usually includes wax myrtle (*Myrica cerifera*), dwarf palmetto (*Sabal minor*), highbush blueberry (*Vaccinium corymbosum*), and swamp dogwood (*Cornus foemina*). Groundcover varies and may consist of witchgrass, woodoats (*Chasmanthium* spp.) and various sedges. Invasive exotic plants cover is five percent or less. Bottomland forest is not pyric, but it benefits from fire allowed to enter its edges.

Description and assessment: The bottomland forest community comprises about 830 acres at ARSP and is generally found immediately along the blackwater system of the river and its tributary branches. At ARSP, the bottomland forest areas are mostly open, have a fair diversity of native species, and are generally in Good condition. The ground cover includes shiny woodoats (*Chasmanthium nitidum*), a variety of ferns, and even the occasional jack-in-the-pulpit (*Arisaema triphyllum*). Several airplant species (*Tillandsia* spp.) are found in the lower canopy areas. The canopy includes the species listed in "Desired Future Conditions" as well as American elm (*Ulmus americana*), and sugarberry (*Celtis laevigata*). Because of the frequent changes in topology, the bottomland forest community often grades into patches of hydric hammock, mesic hammock and floodplain swamp, most of which are generally too small to map independently but are evident by the presence of American hornbeam (*Carpinus caroliniana*), water hickory (*Carya aquatica*), water locust (*Gleditsia aquatica*), needle palm (*Rhapidophyllum hystrix*), and the occasional swamp tupelo (*Nyssa sylvatica* var. *biflora*). It is possible that ARSP has the State-endangered broadleaf noddycaps (*Triphora amazonica*) in its bottomland forests, in association with the needle palms; a vouchered specimen from nearby Picnic is recorded at the New York Herbarium. Exotic species include Caesarweed, skunkvine and occasionally climbing ferns, but the overall cover of exotics is low, around 5-8%. The denser infestations are along the edges, where there has been an opening in the canopy, or along hog trails. Black cherry and Carolina laurelcherry threaten to be weedy in these areas, too.

General management measures: Continue to monitor and control the invasive exotic species in those areas where they are encroaching. Include the Carolina laurelcherry and black cherry species in this control effort, although cover of the two species does not need to be as tightly monitored.

Floodplain Swamp

Desired future condition: Floodplain swamp is a frequently or permanently flooded community in low-lying areas along streams and rivers. Soils consist of a mixture of sand, organics, and alluvial materials. The closed canopy commonly includes tupelo species (at ARSP these would be swamp tupelo), as well as water hickory, and red maple. In mature floodplain swamp, the tree bases are typically buttressed. Understory and groundcover are typically sparse. Invasive exotic plants cover is five percent or less.

Description and assessment: Most of the 135 acres of this community type are found just south of Hurrah Lake. The area is mostly in Fair to Good condition, with a representative diversity of the species found in this community, including pop ash (*Fraxinus caroliniana*) and coastalplain willow (*Salix caroliniana*). A few areas with this community designation transition in and out of bottomland forest, but the buttressed tupelo provide a good indicator for the type. In some pockets the wax myrtle is too dense. Exotic invasive plants are a threat, though probably at 5-8% cover overall; cogongrass shows up in patches even here.

General management measures: Continue to monitor and control the invasive exotic species in those areas where they are encroaching. Include the Carolina laurelcherry and black cherry species in this control effort.

Hydric Hammock

Desired future condition: Hydric hammock is a closed canopy, evergreen hardwood or palm forest, on soils that are poorly drained and have hydroperiods seldom over 60 days per year. The typical canopy species are laurel oak, cabbage palm, live oak, sweetbay, swamp tupelo, American elm, red maple and other hydrophytic tree species. The understory is variable, but is usually dominated by palms, with sparse to moderate ground cover of grasses and ferns. Invasive exotic plants cover is five percent or less. Hydric hammock benefits from occasional fire but does not have a defined FRI; adjacent fire

occasionally moves across ecotones and into the hammock.

Description and assessment: About 31 acres are mapped as Hydric Hammock, but portions of the areas currently mapped as Spoil Area or as Successional Hardwood Forest will become Hydric Hammock with minimal management effort; this community could encompass 70 acres or more. In addition, there are many small islands of hydric hammock scattered throughout the park in areas too small to map, usually falling within, or near, areas mapped as Bottomland Forest, Mesic Hammock, and Baygall. This is especially true where the blackwater streams have cut three-to-five-foot banks in the bottomland forest, such as in AR-22B, or where the rolling topography creates a slight depression in the upland above the mesic hammock, such as along the McMullen Branch at the north end of AR-16. This grading between community types is typical for hydric hammock, as described in the FNAI Guide. Generally, the hydric hammock pockets at ARSP are in Good condition, with the native species diversity and recruitment described for this community type, including swamp dogwood. There is encroachment from invasive exotic species, particularly along edges or in naturally disturbed patches; some of the invasive exotic species include Asian sword fern (*Nephrolepis brownii*) and Japanese climbing fern among the others generally found in the park.

The largest patch of this community type is in AR-25 and it is generally in Good condition, too, based on species type and diversity. There are invasive exotic species such as lantana (*Lantana camara*), and the ubiquitous cogongrass. This area would benefit from the occasional fire allowed to burn into its edges; where this community is not adjacent to a pyric zone, other means of protecting the hammock from hardwood encroachment, such as mechanical or manual removal, should be considered.

The hydric hammock along the north side of the McMullen Branch is in Poor condition. Plantings, old plowlines, and poor grazing management are all serving to disrupt the natural transition that should be happening in

the wetter upslopes of the mesic hammock. There is a near-monoculture of wax myrtle in wetland, sitting between long strips of oaks planted in rows where little natural structure or recruitment is happening.

General management measures: Where hydric hammock abuts pyric communities, structure the firelines so that fires may occasionally burn into the edges of the hammock. Where it does not abut pyric communities, manage to minimize the density of hardwood encroachment along the edges of the hammock. Where grazing is causing erosion, move fences; for example, move the grazing fence to the north side of the hammock in AR-16. Continue to manage for invasive species, wild hogs as well as plants.

Blackwater Stream

Desired future condition: Blackwater stream can be characterized as perennial or intermittent watercourses originating in lowlands where extensive wetlands with organic soils collect rainfall and runoff, discharging it slowly to the stream. The stained waters will be laden with tannins, particulates, and dissolved minerals and organic matter derived from drainage through adjacent swamps resulting in sandy bottoms overlain by organic matter. Emergent and floating vegetation such as golden club (*Orontium aquaticum*) or smartweeds (*Polygonum* spp.), and grasses and sedges, may occur, but vegetation is often limited by steep banks and dramatic seasonal fluctuations in water levels. Because of their associated topology, the adjacent wetland communities necessary to assist with filtering the water that enters the streams may be limited. Desired conditions include good water clarity and quality with minimized disturbances and alterations. Invasive exotic plants, aquatic or terrestrial, will have an average cover of five percent or less.

Description and assessment: Blackwater stream community is currently mapped to cover about 35 acres at ARSP, but this probably a low count as nearly all the branches, large and small, as well as most of South Prong Alafia, are of this type. Generally, the waters are clear. However,

their overall assessment is Fair to Good based on the water quality reports discussed in the Hydrology section and on the various disturbances. There are culverts installed on Jameson Branch, McMullen Branch, Pollard Branch, and Boggy Branch, where berms or roads had been installed before the park was acquired. Not all culverts are functioning properly and there are a few places where the flow has been disrupted and the water is murky, such as at the eastern end of Pollard Branch. Also, the grazing areas occasionally come too close to the streams with too narrow a band of mesic hammock or bottomland forest to protect the stream from erosion and increased nutrient and bacteria loads, such as in the pasture area immediately north of McMullen Branch in AR-16 and AR-15.

While the portion of the South Prong south of Thatcher Road bridge is open and navigable by non-motorized watercraft, the portion north of the bridge is generally blocked from such use; the blockage is primarily due to hurricane and windstorm treefall.

General management measures: Monitor culvert areas for flow quality and erosion management. Remove debris that blocks navigation along the South Prong. Coordinate with relevant agencies to acquire water quality metrics throughout the park, to determine overall condition of the park's blackwater streams and to help with planning more appropriate boundaries for such activities as grazing. Monitor impacts from human use of the rivers and streams. Monitor hydrology and manage as needed to control localized erosion or to keep from impeding the natural flow of water or the flow of water that is most likely to support appropriate community restoration.

Altered Landcover Types

Abandoned Field/Abandoned Pasture

Desired future condition: See Sandhill and Scrubby Flatwoods.

Description and assessment: Abandoned Field/Abandoned Pasture in this plan comprises about 203 acres. Those areas in the northwest corner, in AR-06 and AR-01, could serve well as sandhill or as scrubby flatwoods. The old grove trees in AR-01 have been removed. In addition to the grassy exotics, this area of the park is threatened by traffic from people ignoring the park boundaries to get to the mine nearby. The acres in AR-18 and -19C still show signs of having been groves or pasture, but that have had some restoration work done, specifically removal of dead citrus trees and burning.

Except for the bahia, smutgrass (*Sporobolus indicus*) and cogongrass, most acres are beginning to show enough facsimile characteristics to natural communities to include them in the relevant routine management services. There is a dense cover of cogongrass along the east side of AR-01 and across most of AR-06.

General management measures: Active prescribed fire and invasive plant control is needed. Consider including these acres in a Restoration plan. Prescribed fire should be at Restoration intervals.

Developed

Desired future condition: The developed areas within the park will be managed to minimize their effect on adjacent natural areas. Priority invasive plant species (EPPC Category I and II species) will be removed from all developed areas, and overall invasive exotics cover will be less than five percent. Black cherry and Carolina laurelcherry will have less than 10% cover. Landscaping or other plantings in developed areas will use only those species that are native and found to be occurring naturally in the park. Hydrology is monitored and managed as needed to control localized erosion or to keep structures or landscaping from impeding the natural flow of water or

the flow of water that is most likely to support appropriate community restoration.

Description and assessment: The 109 acres in this category at the park include the entrance station, shop area, parking lots, picnic areas, equestrian barn, buildings, recreation and residential areas, “lawns” maintained as part of recreational or residential areas, campgrounds and roads. Invasive plant cover is problematic in these areas. As discussed in other parts of the Plan, there will be a few areas of development added over the next 10 years.

General management measures: Continue management and control of invasive exotic species. Where mowing is used, establish mowing schedules to allow for best recruitment and maintenance of the native plant species that occur or “volunteer” in these areas, and use such as part of interpretive programs. Monitor and manage the black cherry and Carolina laurelcherry to minimize encroachment. Establish a phytosanitation plan for equipment entering and exiting the area. Other management measures include proper stormwater management and development guidelines that are compatible with prescribed fire management in adjacent natural areas.

Impoundment/Artificial Pond

Desired future condition: The artificial lakes and water-filled borrow pits (impoundments) will have been improved to simulate depression or basin wetlands or flatwoods upland lakes, as appropriate. Proper contouring will have created more naturally sloping littoral shelves, resembling marsh or swamp wetland edges. Although water levels may fluctuate significantly, water will typically be present year-round. Typical vegetation will include emergent and floating aquatic plants, with hydrophytic transitional species along the edges, such as big floatingheart (*Nymphoides aquatica*), alligatorflag (*Thalia geniculata*), pickerelweed (*Pontederia cordata*), arrowheads (*Sagittaria* spp.), bladderworts (*Utricularia* spp.), sawgrass (*Cladium jamaicense*), meadow beauty (*Rhexia* spp.), St. John's wort (*Hypericum fasciculatum*), creeping primrosewillow

(*Ludwigia repens*), coastalplain willow, and buttonbush (*Cephalanthus occidentalis*). Terrestrial and aquatic invasive plants will represent less than five percent cover.

Description and assessment: Artificial ponds and impoundment areas are depressions resulting from human activities, which, in this park, are from mining operations. They tend to stay wet, exist as ponds and lakes that can vary in depth, have little soil structure, have water levels that are rain-dependent, and usually lack a littoral shelf or natural wetland edges. There are 95 or more of these scattered throughout nearly all management zones, encompassing at least 583 acres. Although a few of the smaller ponds do have some healthy littoral community developing (such as found in AR-34), most of the lakes and larger ponds are in Poor condition, as they are steep-sided, deep, atrophic, and unable to sustain life other than a variety of aquatic invasive exotic species. These include hydrilla (*Hydrilla verticillata*), water-lettuce (*Pistia stratioides*), and spotted duckweed (*Landoltia punctata*), and some of the hardier fish species. A few impoundment areas are deep enough to have “dead zones,” with no oxygen. Since the area was mined and “reclaimed” by the mining companies before conditions for post-mining requirements were put in place, the access slopes are frequently composed of overburden or even old clay slurry, left so steep as to be unsafe to climb in places. The 2004 management plan discusses the need to have an engineer evaluate the potential instability of the lake in old unit 7 (currently northern AR-30), and this may still need to be monitored. No motorized boats are permitted on any of the lakes or ponds, but visitors use several lakes for canoeing and kayaking.

The lakes in AR-11, AR-30, AR-31 and AR-38A, were stocked with fish, such as largemouth bass (*Micropterus salmoides*) and channel catfish (*Ictalurus punctatus*), donated from Hillsborough County’s C. W. Bill Young Regional Reservoir during the reservoir’s drain-down events between 2009 and 2012 (Helms 2013, phone conversation). The “Old Agrico” pits on the west side of the park (old unit 4, now AR-04A-D, AR-31B, AR-34, AR 36B) are surrounded by steep ridges of cast

spoils, which have since become forested through natural seed dispersal and recruitment, and these pits contain game fish.

In the 2004 management plan, improvements to these areas were discussed as “shorelines” within the various units. At that time, the assumed goal was “mixed hardwood forestation.” This is no longer an assumed goal for these shorelines. Until the associated community type is more clearly defined, or until specific littoral shelf or wetland restoration projects are introduced, there are no plantings recommended for these areas. The lake at the west corner of AR-36A was used for a Tampa Bay Water Authority mitigation project and now has roughly two acres of created wetland (Shea 2013).

General management considerations: Include the artificial ponds and borrow area lakes in the parks’ hydrology assessment. Devise a study for methods, and determine the priorities, to begin establishing littoral shelf or other wetland development for the more significant of these ponds and lakes. Continue to control invasive exotic aquatic plants; this includes developing decontamination sites for watercraft, both coming and going, and continuing to work with FWC to determine the feasibility of using sterile triploid grass carp (*Ctenopharyngodon idella*) to assist with this effort.

Invasive Exotic Monoculture

Desired future condition: Invasive exotics cross multiple natural community types at the park. See Mesic Flatwoods, Mesic Hammock, Sandhill, Scrubby Flatwoods and Successional Hardwood Forest already described, and see also the discussions below for Depression Marsh and Basin Swamp. In all cases, the goal for cover of invasive exotic plants is five percent or less.

Description and assessment: Zones AR-13 through AR-19A-C and AR-28 have more than 70% cover of invasive plant species. Cogongrass meadows dominate and any species “diversity” is only from the variety of other invasive plants in the mix. About 1,351 acres are mapped as invasive plant monoculture, but many of the smaller patches

within other communities are not mapped as such. Past restoration and improvement efforts for uplands and lowlands in these communities were not sufficient to outcompete the exotic species. Some early restoration efforts even introduced them.

The resources now required to have any impact on the cogongrass meadows are huge, although the park efforts over the past couple of years is showing some success. The current grazing contract is helping to curtail the cogongrass dominance on many acres and serves to assist as a first step toward natural communities' improvement or restoration. While cattle will not eat mature cogongrass, as it contains too much silica (which is what makes the grass' "clickety" sound in the wind), cattle will eat the younger, green sprouts. They graze the new shoots along the edges of a cogongrass patch and they eat the new shoots that the plant sends up immediately after a fire. Grazing rotations and bringing cattle to a cogongrass area within the first few weeks of a burn are useful and cost-effective tools to help manage this problem.

General management measures: Continue to compel rancher's compliance with the terms of the grazing contract regarding exotics removal. Continue to seek additional resources to address this problematic community, such as the local CISMA, FWC Uplands programs and Florida Conservation Corps teams; see Management Objectives. Continue to encourage the rancher to burn the cogongrass and shift rotations as needed when there is a burn. Implement selective timber removal in areas designated Mesic Flatwoods and Sandhill DFC (e.g., AR-13, AR-17)

Pasture Semi-improved

Desired future condition: See the discussions for Sandhill and Mesic Flatwoods.

Description and assessment: Roughly 504 acres are Pasture – Semi-improved, and most of those are still being used for grazing, or for haying to support the grazing management at the park. Based on the non-Arents soils still present in those acres, such as Zolfo fine

sands and Orlando fine sands, 0 – 5% slope, these areas are expected to eventually be restored to sandhill or mesic flatwoods, as appropriate.

The west side of zone AR-23, the zone with the most haying activity, has an important archaeological site. The site was severely disturbed years ago through looting and through the planting of a citrus grove. Inspection after recent haying operation shows no further disturbance to the site. Having the haying operation in place helps mitigate uncontrolled fire potential by keeping the grasses low in a wildland urban interface. It also provides hay for the park grazing operations that is unlikely to bring new exotic species to the park. As the need for grazing and hay at the park is reduced over time, this pasture can be managed so that it eventually will have the natural communities used by earlier cultures.

General management measures: Verify exotic plants removal requirements are being met in the grazing areas, per the grazing contract. Continue monitoring activities on the cultural site. Continue working with contractor to arrange prescription burns.

Pine Plantation

Desired future condition: See Mesic Flatwoods and Sandhill.

Description and assessment: The "Pine Plantation" community designation at ARSP does not strictly follow FNAI definitions, as there is no indication that soils have been negatively altered by silviculture practices, and it's possible that these plantings may turn out to be more beneficial than harmful. This designation is used to help identify a few of the various squares where pines have been planted in tight clusters or rows; whether these were part of a silviculture plan, restoration efforts, or simply a means to meet "sign-off requirements" for number of trees planted, is unclear. Some of the plantings have included loblolly pine, whose natural southern range is two counties north of Hillsborough County. The loblolly has since naturalized in the area, but new recruitment

may be minimized as prescribed fire begins to be re-introduced into these areas.

The plantation in management zone AR-07 appears long abandoned but is still dominated by linear plantings of South Florida slash pine and possibly loblolly pine. Numerous hardwood species such as sweetgum, American elm, Carolina laurelcherry, red maple and loblolly bay have established and there are several low areas where hydrophytic species have recruited, showing a trend toward depression marsh or basin swamp. All ground cover is dominated by cogongrass, Caesarweed and Asian sword fern.

In other areas, such as in AR-20A, AR-28 and AR-39, there are patches of planted pines that provide better habitat for wildlife than would otherwise exist in those locations and that could provide some potential pine starts for areas that should become flatwoods or sandhill. For this reason, and because many of them are too small to map, most of these acres have not been mapped as Pine Plantation, but instead included as part of adjacent community type. Approximately 25 acres are mapped as Pine Plantation.

General management measures: A low-temperature burn during the dormant period is recommended as an initial prescription for AR-07. Implement selective timber removal. See management discussion under Altered: Spoil Area.

Restoration Natural Community

Desired future condition: There are two restoration communities included in this category; the desired future condition for each depends on the restoration goals for the specific area or project worked. As these areas become more clearly matched to more natural communities, the desired future condition would be the same as for the natural community type. In general, all restoration natural community projects will present less than five percent cover of invasive exotic plants species.

Description and assessment: According to the summary in the 2004 ARSP Unit Management

Plan, approximately 140 acres were considered restored; however, for this plan only about 27 acres are currently mapped as such. The restoration sites once included Hall's Branch (old unit 13; currently AR-09), Dogleg Branch (old unit 36; currently southern AR-17), South Fork McMullen Branch (AR-15), the scrub experiment in AR-01 and the wetland littoral shelf and bank on the impoundment pond in west AR-36A. For several of these efforts, topsoil was brought in from other areas. In others, trees and herbs were planted, sometimes after first scraping the soil, sometimes not. Occasionally, the plantings included some species that, though native, were not previously found in the park area, such as the cypresses (*Taxodium ascendens* and *T. distichum*), or loblolly pines, but most of the plants that have succeeded from these restoration plantings are of species taken locally as recruits (e.g., cabbage palms, wax myrtle), or as cuttings or seeds (e.g., acorns). Considering the natural success of the planted local native species, and using today's FNAI guidelines, the goal is to maintain what is now healthy scrub, mesic and hydric hammocks, and blackwater stream communities.

The sites for the scrub, Hall's Branch, South Fork McMullen Branch, and the created wetlands projects have habitat in Good condition, with a diversity representative of their natural communities and with recruitment at an appropriate pace. In this plan, the scrub, Hall's Branch and South Fork McMullen Branch sites are now mapped as their respective natural community since they are ready for standard management operations. But, as there are currently no equivalent wetland communities mapped at the park, the littoral zone wetland restoration maintains the designation of Restoration Natural Community.

The Dogleg Branch restoration site is in Poor condition. This project was implemented in 1982 for "stream replacement and forest restoration," as a wetland damage-mitigation project aiming to replace the original stream and seepage hydrology and to set a forest restoration goal of "988 trees at least four feet tall per hectare." The site is potentially

Mesic Hammock. A decade or so ago, the site was reported in Good condition, but it has not been maintained and is currently trending towards cogongrass monoculture.

General management measures: Continue invasive exotics management and prescription burns as relevant. Since the Dogleg Branch is on the east side of the river and not part of the current invasive species treatment priorities, the park might seek assistance in managing the exotic invasive plants here, either through FWC's Invasive Plants Management Section or DRP's Park Projects Management Tracking System (PPMTS).

Spoil Area

Desired future condition: See Mesic Flatwoods, Mesic Hammock, Hydric Hammock and Baygall. Also, Depression Marsh and Basin Swamp are likely to emerge in some places; here are the Desired Future Condition descriptions for those two communities:

DFC Depression Marsh: This is relatively shallow wetland that is surrounded by pyric communities, where water levels are weather dependent, and the vegetation is frequently removed by fire. There are low, emergent herbaceous and shrub species, open vistas, and the soil surface is often visible through the vegetation during times of low water. Trees, if present, are few and occur primarily in the deeper portions of the wetland. Dominant vegetation can include maidencane (*Panicum hemitomon*), panic grasses, cutgrass (*Leersia* sp.), pickerelweed, arrowheads, buttonbush, St. John's wort, and coastalplain willow. Invasive exotics plant species cover five percent or less. The Optimal Fire Return Interval is 2-10 years depending on fire frequency of adjacent communities, and fires in adjacent communities should be allowed to burn into or through the marsh.

Three acres, or more, of Depression Marsh is expected to develop in AR-20A. There should be no grazing in the depression marsh.

DFC Basin Swamp: This is forested basin wetland that varies in size, shape and species composition, and holds water most days of

the year. The dominant canopy trees are pond cypress and swamp tupelo. Other canopy species can include slash pine, red maple, dahoon holly, sweetbay, loblolly bay, and sweetgum. Depending on fire history and hydroperiod, the understory shrub component may be throughout or concentrated around the perimeter. Shrub species include Virginia willow (*Itea virginica*), swamp dogwood, wax myrtle, and titi (*Cyrilla racemiflora*). The herbaceous component is variable and may include maidencane, ferns, arrowheads, lizard's tail (*Saururus cernuus*), false nettle (*Boehmeria cylindrica*), and sphagnum moss (*Sphagnum* spp.). Soils are typically acidic, nutrient-poor peat, often overlying a clay lens or other impervious layer. Fire in adjacent pyric communities that can burn into the edges of this community will minimize succession to baygall.

Basin Swamp is expected to develop over roughly 160 acres in AR-19A and AR-20A, as prescribed fire is implemented at restoration intervals for the surrounding communities.

Description and assessment: Spoil Area designation at ARSP is the default assigned to areas of Arents soils, whether from dredge or spoils deposition activities, and where the conditions were simply too poor to assign any other designation for now. This currently includes about 1,462 acres. DFC have been assigned based on current topography, hydrology, the native plants that have introduced themselves, and adjacent known communities.

General management measures: Implement prescription burns, where applicable, at restoration interval rates. Continue to remove invasive exotic species and monitor encroaching cherry species.

Successional Hardwood Forest

Desired future condition: Some areas are already trending to Mesic Hammock and even Mesic Flatwoods, but the desired future condition of other areas is yet to be determined. Further scrutiny is needed to delineate which areas of successional hardwood forest should remain as such and which can ultimately be classified and

managed as a reasonable facsimile of our natural communities.

Description and assessment: In Florida, fire suppression is man-made and creates a “false” successional community where oaks and shrubby woody plants encroach. The last management plan discussion considered the results of this dynamic to not only be permanent and unchangeable, but also a desirable climax community. This plan, however, assumes that a more natural fire regime introduced into the park will begin slowing or redirecting the hardwood succession, ultimately returning more area to the natural Florida communities that existed before suppression and mining. With this precept, and the high cover of a diversity of invasive exotic plants, including Japanese climbing fern, skunkvine, and lead tree (*Leucanea leucocephala*), useful resource management evaluation and practices would consider most of the successional hardwood forest to be in Poor condition.

Where successional hardwood forest is already clearly trending toward other, identifiable communities during the writing of this plan, those areas have been reassigned to their new community type, such as Mesic Hammock, Mesic Flatwoods and Scrubby Flatwoods, and included in those descriptions. For this plan, around 513 acres are mapped as Successional Hardwood Forest.

General management measures: Begin establishing appropriate fire return intervals. Continue to manage invasive exotic species. Thin the black and Carolina cherry when feasible. Investigate potential for selective timbering, especially in AR-16 and AR-40.

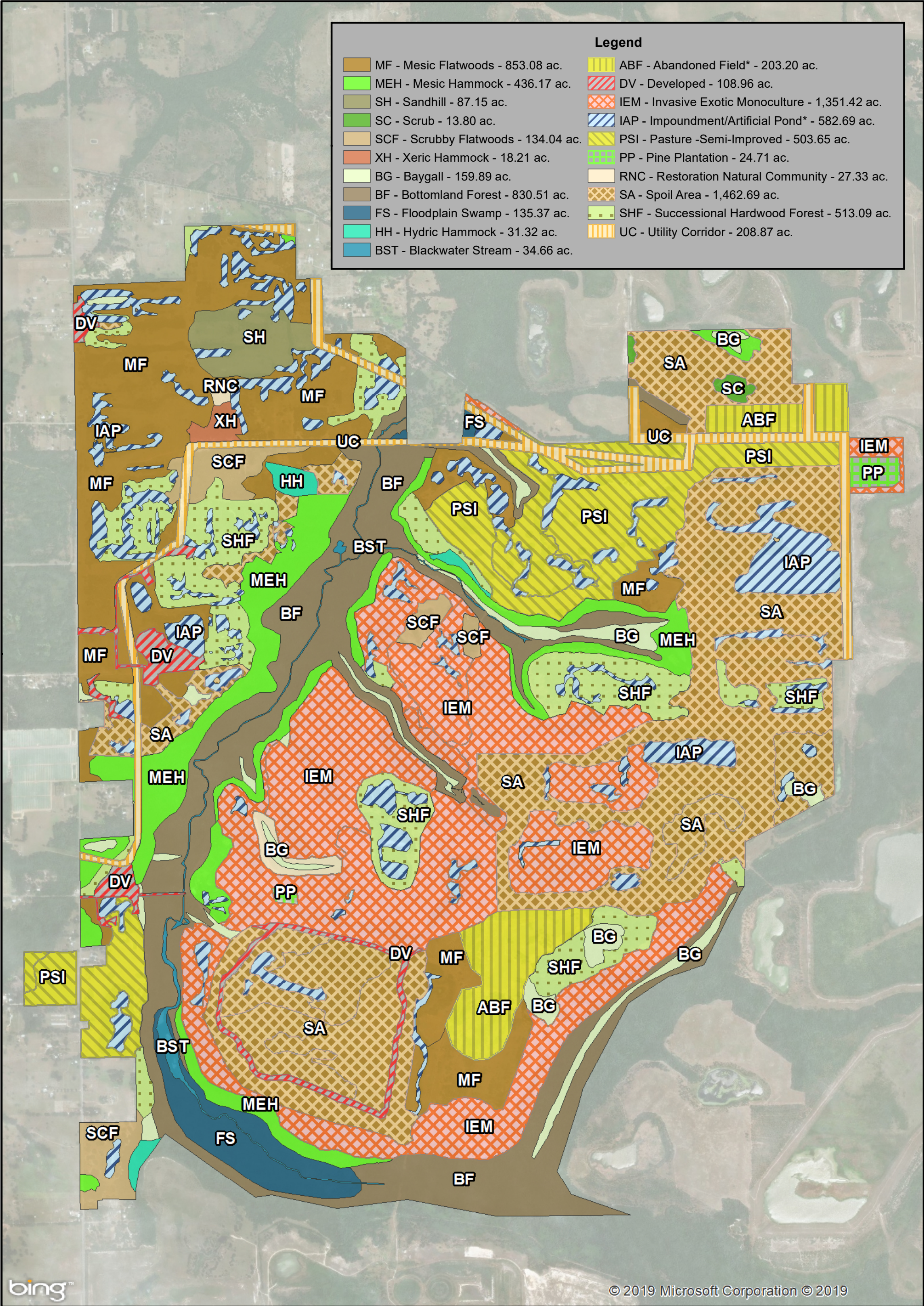
Utility Corridor

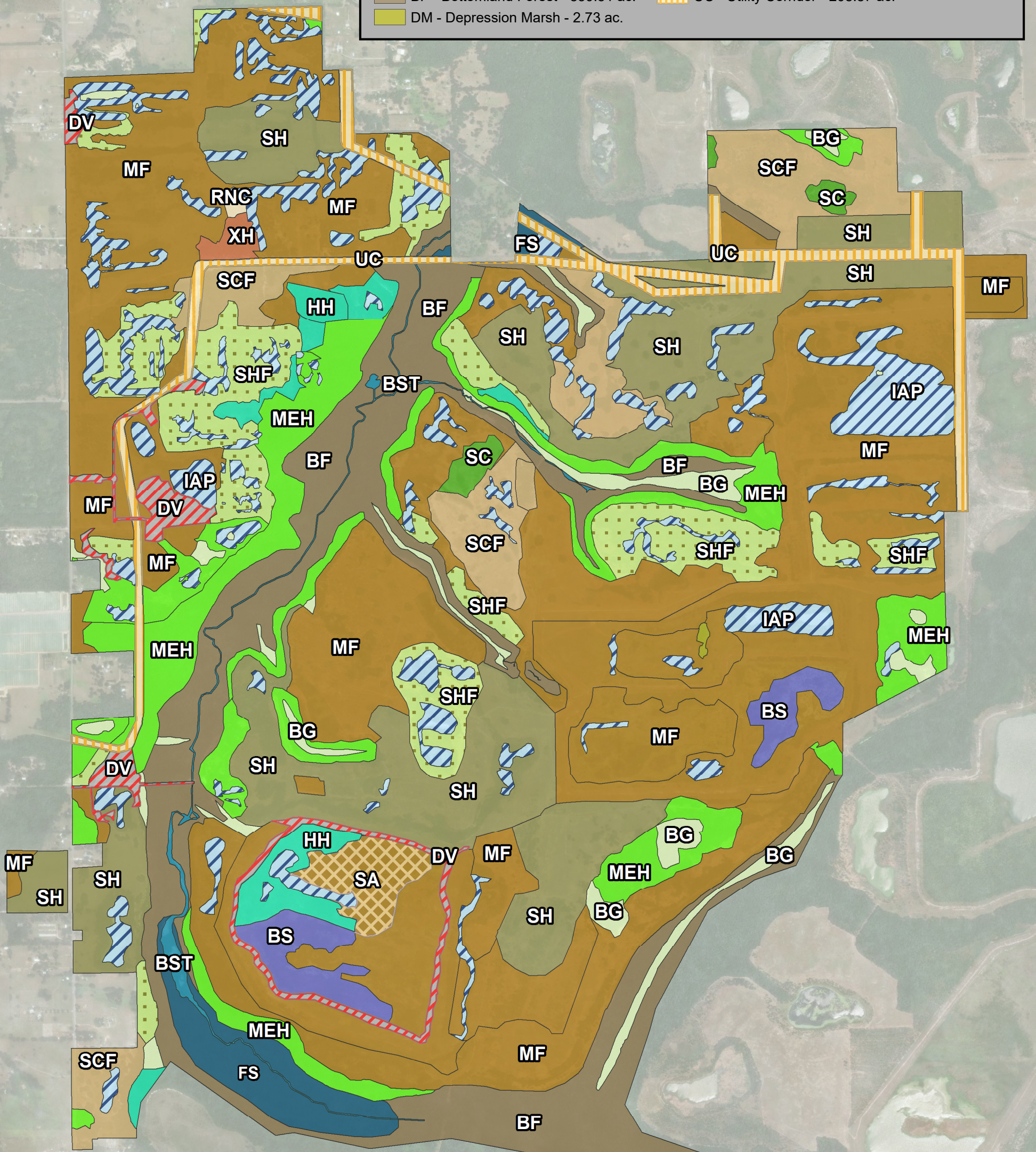
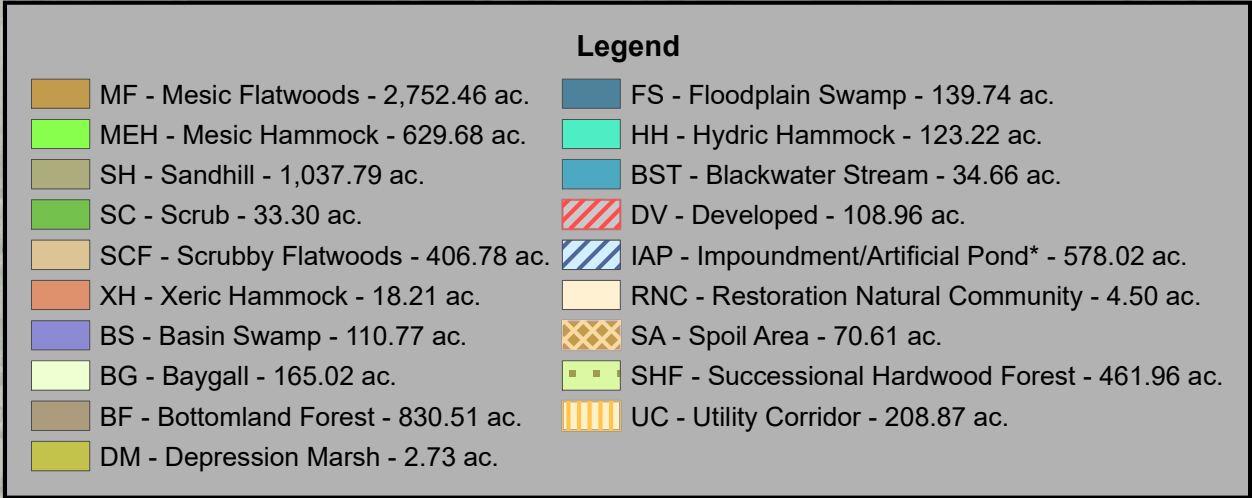
Desired future condition: ARSP staff will work with utilities staff to minimize the negative impacts of the utility corridor on underlying and adjacent natural areas. Landscaping or other plantings in these areas will use only those species that are native and found to be occurring naturally in the park. Mowing will follow schedules that encourage and support native plant seeding patterns. Other management measures include proper

stormwater and other related hydrological management, and development of guidelines that are compatible with prescribed fire management in adjacent natural areas. Priority invasive plant species (FLEPPC Category I and II species) will be removed from corridor areas and overall invasive exotic plants cover will be five percent or less.

Description and assessment: Around 209 acres are in this category at the park; this includes electric, gas and telephone rights-of-way. Although the last management plan recommended that proposed 200KV electric lines not be added to the park’s utility corridors, these lines do now cross the park, west to east from AR-02B to AR-07. The current contracts allow a 200’ right-of-way (ROW) for utility corridors and the ROW was traditionally mowed at least once each year. The mowing patterns and lack of basic natural resources management in these areas has resulted in large visual and process interruptions in the natural communities that could or should be present. Invasive plants are probably close to 25-30% cover, overall, with some areas much higher. In many areas, fire could be implemented, when appropriate safety measures are taken.

General management measures: Continue working with the utility companies to devise improvement and restoration work on the corridors so that the corridors fit in more naturally with each community they transect. Improve hydrology as needed to control localized erosion or to keep structures or landscaping from impeding natural flow of water. Continue control of invasive exotic species.





Natural Communities Management

Goal: Restore and maintain the natural communities/habitats of the park.

The DRP practices natural systems management. In most cases, this entails returning fire to its natural role in fire-dependent natural communities. Other methods to implement this goal include large-scale restoration projects as well as smaller scale natural communities' improvements. Following are the natural community management objectives and actions recommended for the state park.

Prescribed Fire Management

Prescribed fire is used to mimic natural lightning-set fires, which are one of the primary natural forces that shaped Florida's ecosystem. Prescribed burning increases the abundance and health of many wildlife species. Many of Florida's imperiled species of plants and animals are dependent on periodic fire for their continued existence. Fire-dependent natural communities gradually accumulate flammable vegetation; therefore, prescribed fire reduces wildfire hazards by reducing these wild land fuels.

All prescribed burns in the Florida state park system are conducted with authorization from the FDACS Florida Forest Service (FFS). Wildfire suppression activities in the park are coordinated with the FFS. DRP staff are required to follow the guidelines established by Chapter 590 Forestry Protection, FFS, and Chapter 51-2 Open Burning, FAC.

A *maintenance* Fire Return Interval (FRI) may differ from the *restoration* FRI for the same natural community, so the condition of the community should drive the planning for best burn intervals. This is a critical consideration at ARSP, as so many acres are in poor condition and require restoration FRI as the optimum interval to eventually reach their desired future condition. This also means that many communities not officially considered pyric as they currently exist, such as abandoned pasture and spoil area, have many acres that must be burned, and burned at the restoration interval and season. Also,

ecological success of a burn can be dependent on burn season and local conditions; suggestions for the best season and conditions for many of the zones are included in the discussions of the natural communities.

Table 2 contains a list of all fire-dependent natural communities found within the park, their associated DFC acreage, optimal fire return intervals, and then the annual average targets of acres to be burned if FRI are maintained throughout the 10-year period. Note that the table includes all pyric acres, even those that may be under contract for grazing.

Table 2. Prescribed Fire Management		
Natural Communities	Acres	Optimal FRI (years)
Maintenance		
Mesic Flatwoods	500	1 – 4
Scrub	14	4 – 20
Scrubby Flatwoods	135	3 – 10
Restoration		
Depression Marsh	3	1 – 3
Mesic Flatwoods	2,250	1 – 3
Sandhill	1,038	1 – 3
Scrub	20	4 – 10
Scrubby Flatwoods	305	1 – 3
Total Pyric Acres	4,265	
Annual Target Acres	1,355 – 4,265	

Objective A: Within 10 years, have at least 2,400 acres of the park maintained within the optimum fire return interval.

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| Action 1 | Develop or update annual burn plan; include grazing contract annual requirements for burning; manage fire-dependent communities by burning 800 – 1,800 acres annually. |
| Action 2 | Engage user groups, stakeholders, and volunteers in supporting prescription burning at the park, whether by helping with education and outreach, or by active participation where feasible. |

This objective is intended to acknowledge resources challenges while still pushing the needle forward on the DFC goals for the park.

The numbers presented allow for establishing a recurring three-year FRI, at minimum, for the 2,400-acres. Park management can work with the District to determine which areas will have priority for this aspect of the Plan. Where there is grazing on the target acres, the contractor is expected to work with park staff to help implement burning and to arrange annual burn goals and prescriptions.

To track fire management activities, the DRP maintains a statewide burn database. The database allows staff to track various aspects of each park's fire management program. For most parks, existing community acreage within each management zone is listed, with acreage and fire type; however, for ARSP, the community acreage in each management zone must be based on DFC community acres, as most existing altered communities, such as spoil areas and abandoned pastures, are normally considered non-pyric. The database also includes individual burn zone histories and fire return intervals, staff training and experience, backlog, and other related data. The database is also used to document fire management goals and objectives on an annual basis. Each quarter, the database is updated, and reports are produced that track progress towards meeting annual burn objectives.

Prescribed fire is planned for each burn zone on the appropriate interval, using data tracked in the database. Again, ARSP zones must use the DFC community designations, or pyric acres will be severely understated. The park's burn plan is updated annually because fire management is a dynamic process. To provide adaptive responses to changing conditions, fire management requires careful planning based on annual and very specific burn objectives. Each annual burn plan is developed to support and implement the broader objectives and actions outlined in this ten-year management plan.

As prescribed fire implementation approaches maintenance stage, the natural communities in the park will more clearly take some typical character and species diversity. All the rare upland plants discussed in the Imperiled Species section will show significant improvement in their health and spread when

fire is included in management. Without fire, shrub and tree density, canopy cover and leaf litter increase, which chokes out the habitat needs of the gopher tortoise, Sherman's fox squirrel, and Southeastern American kestrel.

Objective B: Establish new fire breaks as needed to bring fire into mesic and hydric community edges and to accommodate new optimal fire return goals.

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| Action 1 | Evaluate firebreaks for ecotone disruption and whether any inadvertently cause unwanted fire suppression in any communities. |
| Action 2 | Correct lines, as needed and adjust Management Zone boundaries accordingly. |

Evaluate the firebreaks on the park's west side, restructure as needed so that fire may burn into the edges of the mesic and hydric communities. Communities with longer FRI, such as baygall at 25-100 years, are not specifically included in this burn plan, but good management practices dictate that such communities be allowed to have fire on occasion, especially at the edges. The most appropriate way to do this is to allow fire from adjacent pyric communities to burn into the baygall, mesic hammock or hydric hammocks they border. This requires that firelines not be placed in such transitional areas or ecotones. Most of the healthiest natural communities at ARSP follow the drainage lines of the South Prong and its tributaries and they are well worth protecting and preserving in this manner. Also, with this plan also comes a much larger assignment of pyric communities and the need for a more relevant Management Zones map.

In general, perimeter and internal firebreaks should be maintained and established according to agency policy. While supporting ecological goals, firebreaks should provide for adequate park protection and safe prescribed fire application. The complexity of the burn unit, including the structure and height of the fuel within the zone and the receptiveness of fuels adjacent to the zone, should be taken into account when preparing the firebreaks. A

fire line twice as wide as the fuel heights adjacent to the fireline is a general guideline for fire line preparation. Mechanical treatment of fuels adjacent to the firebreak may be needed to burn the zone safely. Perimeter lines need to be wide enough for defense and to allow a Type 6 fire engine to move safely down the line. When widening the firebreaks, the vegetation along the boundary/fence line should be removed first to allow the perimeter break to function as such; the presence of wetlands, large native trees or protected plant species that pose no line defense threat may be an exception. Any additional widening can then be made on the zone side of the firebreak.

Natural Community Restoration

In some cases, the reintroduction and maintenance of natural processes is not enough to reach the desired future conditions for natural communities in the park, and active restoration programs are required. Restoration of altered natural communities to healthy, fully functioning natural landscapes often requires substantial efforts that may include mechanical treatment of vegetation or soils and reintroduction or augmentation of native plants and animals. For the purposes of this management plan, restoration is defined as the process of assisting the recovery and natural functioning of degraded natural communities to desired future condition, including the re-establishment of biodiversity, ecological processes, vegetation structure and physical characters.

Examples that would qualify as natural community restoration, requiring annual restoration plans, include large wetland damage mitigation projects, large-scale hardwood removal and timbering activities, roller-chopping and other large-scale vegetative modifications. The key concept is that restoration projects will go beyond management activities routinely done as standard operating procedures such as routine mowing, the reintroduction of fire as a natural process, spot treatments of exotic plants, and small-scale vegetation management.

For ARSP, the concept of “restoration” in the traditional sense does not generally apply. In areas so deeply altered, and so haphazardly “reclaimed,” many restoration and natural community experts apply the term “reconstruction” to more fully represent the work needed to rebuild good, functioning systems of native species (McDonald 2016; Ware 2016). In this park, large-scale restoration or early reconstruction assistance is required for any level of control over the cogongrass meadows on the east side of the park, and for any encouragement of emerging native grasses and forbs. For this, cattle grazing is being implemented as a first-step restoration management tool. Grazing is used only in areas where any other approach for such control and improvement is cost prohibitive, and grazing is stopped in areas that can readily continue to improve using more standard management procedures. The ecological goals of the park have priority over cattle management routines or needs.

Objective C: Maintain contracted, prescribed cattle grazing as needed, using ecological grazing best management practices, to assist in improving 2,400 acres of altered community

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| Action 1 | Define the metrics that determine which acres would benefit from grazing and which acres should be exempt from grazing. |
| Action 2 | Provide a grazing contract that include the metrics and engage a contractor. |

With respect to natural resource management, the contract will have terms for:

1. Hay: Hay may be used when needed to supplement low-growth periods. Months for hay use may be specified. Using hay from within the park reduces the likelihood of introducing new exotic species into new areas. A portion of the grazing contract acres may be dedicated to hay production.
2. Fodder heights. Overgrazing will be defined by minimum grass height,

determined by heights that promote native plant emergence and growth.

3. Seeding or fertilizing. The contractor must never fertilize, lime or add seed. The park is not obligated to provide fodder. A seeding exception may be made if seed is a native grass appropriate for the park's restoration goals, and park and District staff give written approval.
4. Max cow units/acre. Use current FWC standards for conservation areas, then reduce by one fourth to allow for low fodder availability due to cogongrass.
5. Wetland restrictions. Follow NRCS guidelines.
6. Evaluation guide for acreage release.
7. Annual Plan. Update each year:
 - a. Grazing rotation plan. Rotating the cattle placement is required to avoid overgrazing, reduce erosion in water-access areas, and address the cogongrass patches.
 - b. Exotics removal. Contractor is expected to manage invasive exotic species in the contracted area. ARSP provides an annual list of plant species the contractor is expected to address.
 - c. Fire management.
 - d. In-kind services. Determine which will best support annual resource management and other park goals.

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| Action 3 | Supervise contract requirements and maintain communication with the contractor and NRCS. |
| Action 4 | Evaluate grazed lands for level of improvement. Before any contract is signed or renewed, all grazed lands are evaluated for level of improvement. Adjust annual plans and contract amendments accordingly. Those acres that meet the improvement goals are no longer put under contract. |

Research regarding the use of cattle grazing in severely altered areas, when properly managed, shows that the normal rate of expansion of cogongrass can be limited, even reduced, and that pioneer native plant populations increase (NRCS 2015). Grazing areas at the park are chosen solely by restoration and exotic plant management

need, and all grazing management activities are clearly specified so that compliance is easily verified. A "scoring sheet" is needed to determine which elements are to be assessed, and how to rank the assessments, that will define areas that benefit from prescribed grazing and areas ready to be exempted from grazing.

Provide a contract and engage a contractor. Verify that the grazing contract uses FWC, FDACS and NRCS guidelines as they relate to the park, and that the conditions of and for grazing acreage reduction over time are clear. Meet with County FWC and NRCS agents to evaluate best cattle management practices for ecologic improvement and to review any current agreements NRCS may have with the park's grazing contractor. Update *Prescribed Grazing Plan* as needed (NRCS 2015) and use this information to determine contract terms. The 2014-2019 contract offers a good template for this.

But even a well-planned contract requires supervision. This includes verifying that the grazing contractor knows, understands and follows the contract and reviewing each year's new plan. It also includes implementing annual surveys for exotics species management and collecting data for exotic species treatment activities; collecting data for any burns; and checking for erosion and overgrazing issues or potential. Staying in touch with the NRCS agent and having the agent assist with annual surveys or inspections will help manage the supervision of grazing activities. Some grazing may be needed beyond the 10 years of this plan, but the acres will be reduced over time.

Objective D: Test for the presence and levels of heavy metals in at least two areas of remnant mine tailings.

Coordinate with local water quality, soils assessment, and grazing authorities for assistance in testing for heavy metals in areas where there are mine tailings. At a minimum, the areas to be tested are the slickens in zones AR-13, AR-20A, and the settling area in zone AR-19A. Heavy metal testing includes, but is not limited to, arsenic, lead, cadmium and zinc.

Natural Community Improvement

Improvements are like restoration but on a smaller, less intense scale. This typically includes small-scale vegetative management activities or minor habitat manipulation. Following are the natural community/habitat improvement actions recommended at the park.

Objective E: Conduct natural community/habitat improvement activities on 500 acres of natural and altered communities.

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| Action 1 | In all Developed acres, set mowing schedules to allow for optimum recruitment and maintenance of the native plant species that occur or "volunteer;" all landscaping planting include only species found in the park. |
| Action 2 | For all Utility Corridor acres, approach the utilities to develop a natural communities improvement plan. |
| Action 3 | In at least 200 acres of the flatwoods-type acres (see AR-28, AR-36A, AR38B and AR-39), bring Mesic Flatwoods from Fair to Good condition through fire and exotics control/plantings. |
| Action 4 | Bring at least 8 acres of Hydric Hammock community (see AR-16, north of McMullen Branch) to Good condition by moving the grazing fence line and by grading the existing plow-line so that surface water can flow through the community and fire can move appropriately along its edges. |
| Action 5 | Bring at least 14 acres of scrub to Excellent maintenance condition by reducing sand pines and following FRI (note placement of firelines discussion under Imperiled Species, below). |
| Action 6 | Bring at least 20 acres of Pine Plantation (see AR-07) to Mesic Hammock/Mesic Flatwoods community in Fair to Good condition |

Imperiled Species

Imperiled species are those that are (1) tracked by FNAI as critically imperiled (G1, S1) or imperiled (G2, S2); or (2) listed by the U.S. Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FWC) or the Florida Department of Agriculture and Consumer Services (FDACS) as endangered, threatened or of special concern.

Despite the extent of disturbance, imperiled plant species have been documented as occurring at the park. Those of the lowland, unmined habitats are naturally occurring and represent an accurate contribution to the known distribution of these species. Comb polypody (*Pecluma ptilota* var. *bourgeauana*), wild pine (*Tillandsia fasciculata*), spreading or giant airplant (*Tillandsia utriculata*) and angularfruit milkvine (*Gonolobus suberosus*) have all been documented in the preserved lowland habitats. Other notable species, though not listed as imperiled, include butterfly orchid (*Encyclia tampensis*), greenfly orchid (*Epidendrum conopseum*), needle palm (*Rhapidophyllum hystrix*) and the endemic Florida airplant (*Tillandsia simulata*). These plants require no targeted management at this time, aside from preservation of their associated natural communities. When observed, the plant locations should be recorded, and accessible plants should be protected from poaching or other anthropogenic disturbance. Continued removal of wild hogs throughout the park will certainly benefit the terrestrial species.

Except for giant orchid (*Orthochilus ecristatus*), all imperiled plants documented in the upland habitats, classified for purposes of this plan as either Scrub or Restoration Natural Community, have been introduced on site and are not known to occur naturally at the park. In the late 1980's, a study was undertaken in the areas now included in management zone AR-01 to experiment with planting scrub species to determine survivability on reclaimed soil (Segal 2001; Gilbert unpublished). A suite of scrub species, including several now designated as imperiled, were planted or seeded in the park. Two planted areas remain, one area is on

mined soil that closely resembles native soil and one is on native soil, scraped of vegetation but not mined. At present, many of those species are still surviving and some have established well and are continuing to spread. To facilitate post strip-mining upland reclamation, native topsoil from the property just north of Walter Hunter Road slated for mining was translocated to AR-01 adjacent to several of the experimental planting sites in 1999 (Environmental and Permitting Services, Inc. 2000). The translocated topsoil has provided a base of native soil for spread of several of the planted natives.

To date, targeted monitoring has been done for Florida goldenaster, Britton's beargrass and garberia (*Garberia heterophylla*), especially in the old unit 14 area. The last monitoring, in 2009, found Florida goldenaster to be thriving and spreading prolifically. Nodding pinweed (*Lechea cernua*), scrub plum (*Prunus geniculata*) and Ashe's calamint have also been documented from the historical planting sites. Subsequent monitoring efforts should seek to locate these plants and document their status and condition. Scrub plum and Ashe's calamint were planted and recorded for the park but are not documented to occur in Hillsborough County and represent an artificial expansion of their historic range. Regardless of the source of the imperiled plants, the ones now present will be protected and proactively managed.

The upland portions of AR-01 not included in the historical planting study or the 1999 topsoil relocation area are highly disturbed and dominated by bahiagrass, cogongrass, hairy indigo and rose natalgrass. These aggressive dominants and other weedy species are heavily encroaching on the edges of the scrub and should be treated. Several prescribed burns have been conducted in AR-01 but to date no fire has been allowed to carry through the imperiled plant areas. These scrub areas should be included in subsequent burns though care must be taken to avoid imperiled plants during ground disturbing activities such as installation of firebreaks. Vehicular traffic currently passes through the scrub in the northwest corner of AR-01 and should be redirected.

Many imperiled animals have been documented in the park; most documented species are birds. While most of the manmade lakes provide little wading bird habitat due to lack of littoral shelves, some of the shallower impoundments do provide some wading habitat. Also, the South Prong of the Alafia River and its associated tributaries have wading habitat, as do the adjacent lowland communities. Species such as limpkin (*Aramus guarauna*), white ibis (*Eudocimus albus*), woodstork (*Mycteria americana*) and roseate spoonbill (*Platalea ajaja*) are not uncommon.

It is unlikely that there are any listed fish in the impoundments, but it's possible that there may be in the South Prong. To date, there has not been exhaustive research for this possibility.

Though highly disturbed, the uplands of the park also provide excellent habitat for birds preferring more open habitat, such as Florida sandhill crane (*Grus canadensis pratensis*) and Southeastern American kestrel (*Falco sparverius paulus*). Nest boxes for Southeastern American kestrel have been installed in parts of the semi-improved pasture on the east side of the river but no formal monitoring program has been instituted to determine if the boxes are properly placed or if the birds are using them, or what the population is at the park. Park staff should work with partner agencies such as FWC and conservation groups such as Audubon to develop a monitoring protocol that park staff and volunteers will be able to reasonably institute. The existing nest boxes should be evaluated for proper height, spacing and the amount of adjacent kestrel habitat.

No southern bald eagle (*Haliaeetus leucocephalus*) nests have been documented to occur in the park though several are relatively close. The nearest is west of Lake Hurrah, across CR39 (FWC 2012). If an eagle nest is established in the park, all guidelines of the Bald Eagle Management Plan will be followed (FWC 2008).

There has been some gopher tortoise (*Gopherus polyphemus*) monitoring in the

park. In 2006, district biology staff began systematic surveys for gopher tortoise burrows. Survey priority was given to unmined sites of appropriate habitat. The area known as Eagle Scrub, now designated AR-04A - B and AR-36, were surveyed, but no active burrows were found on the interior of these zones. Rather, numerous burrows were found in the open white sand borders of the zones. Subsequent monitoring was done over most of the northwest portion of the park but found no burrows. Although not part of a systematic survey, active burrows have been found in AR-16. Gopher tortoise burrow surveying should continue. All monitoring and management actions will be in keeping with the Gopher Tortoise Management Plan (FWC 2012).

Florida panther (*Puma concolor coryi*) is known to make use of areas of the park. A photo and video of one was captured in March 2018, in the southeast corner of the park. The panther is an important “umbrella” species in Florida, protecting many other plants and animals by helping to keep raccoon and other prey populations balanced and healthy. They can also assist with feral hog management.

Sherman's fox squirrels have been observed at the park. The population number is unknown, but sightings should be documented through District Wildlife Reports.

This information guides efforts needed to foster appropriate habitat. Where necessary, park staff will consult with FWC staff on appropriate resource management actions. American alligators (*Alligator mississippiensis*) are common in the river, especially south of the Thatcher Road bridge and into Lake Hurrah. No targeted management is called for at this time, other than being mindful of nuisance behaviors. Some alligators have learned that people-in-boats means *food* and they will grab fish from rods, no matter how close the fish is to the boat or people. Also, the bridge is a common use area and visitors have periodically been observed feeding alligators.

All element occurrence data of imperiled species should be submitted routinely to FNAI for inclusion in a statewide tracking database.

Table 3 contains a list of all known imperiled species within the park and identifies their status as defined by various entities. It also identifies the types of management actions that are currently being taken by DRP staff or others and identifies the current level of monitoring effort. The codes used under the column headings for management actions and monitoring level are defined following the table. Explanations for federal and state status as well as FNAI global and state rank are provided in Addendum 5.

Table 3. Imperiled Species Inventory						
Common Name <i>Scientific Name</i>	Imperiled Species Status				Management Actions	Monitoring Level
	FWC	USFWS	FDACS	FNAI		
PLANTS						
Ashe's calamint <i>Calamintha ashei</i>			LT	G3 S3	1, 2, 10, 13	Tier 1
Florida goldenaster <i>Chrysopsis floridana</i>		LE	LE	G1 S1	1, 2, 10, 13	Tier 2
Garberia <i>Garberia heterophylla</i>			LT		1, 2, 10, 13	Tier 1
Angularfruit milkvine <i>Gonolobus suberosus</i>			LT		2, 4, 8, 13	Tier 1
Nodding pinweed <i>Lechea cernua</i>			LT	G3 S3	1, 2, 10, 13	Tier 1

Table 3. Imperiled Species Inventory

Common Name Scientific Name	Imperiled Species Status				Management Actions	Monitoring Level
	FWC	USFWS	FDACS	FNAI		
Britton's beargrass <i>Nolina brittoniana</i>		LE	LE	G3 S3	1, 2, 10, 13	Tier 2
Comb polypody <i>Pecluma ptilota</i> var. <i>bourgeauana</i>			LE	G5? S2	2, 4, 8, 13	Tier 1
Scrub plum <i>Prunus geniculata</i>		LE	LE	G3 S3	1, 2, 10, 13	Tier 2
Giant orchid <i>Orthochilus ecristatus</i>			LT		1, 2, 8, 10, 13	Tier 1
Wild pine <i>Tillandsia fasciculata</i>			LE		2, 4, 13	Tier 1
Spreading airplant <i>Tillandsia utriculata</i>			LE		2, 4, 13	Tier 1
AMPHIBIANS						
Gopher frog <i>Lithobates capito</i>		SSC		G3 S3	1, 2, 10, 12, 13	Tier 1
REPTILES						
American alligator <i>Alligator mississippiensis</i>	FT (S/A)	FT(S/A)		G5 S4	4, 10, 13	Tier 1
Eastern indigo snake <i>Drymarchon couperi</i>	FT	LT		G3 S3	1, 2, 8, 10, 13	Tier 1
Gopher tortoise <i>Gopherus polyphemus</i>	ST	C		G3 S3	1, 2, 10, 12, 13	Tier 3
BIRDS						
Limpkin <i>Aramus guarauna</i>				G5 S3	2, 4, 9, 10, 13	Tier 1
Little blue heron <i>Egretta caerulea</i>	ST			G5 S4	2, 4, 9, 10, 13	Tier 1
Snowy egret <i>Egretta thula</i>				G5 S3	2, 4, 9, 10, 13	Tier 1
Tricolored heron <i>Egretta tricolor</i>	ST			G5 S4	2, 4, 9, 10, 13	Tier 1
Swallow-tailed kite <i>Elanoides forficatus</i>				G5 S2	1, 2, 10, 13	Tier 1
White ibis <i>Eudocimus albus</i>				G5 S4	2, 4, 9, 10, 13	Tier 1
Southeastern American kestrel <i>Falco sparverius paulus</i>	ST			G5T4 S3	1, 2, 5, 8, 10, 13	Tier 2
Gull-billed tern <i>Gelochelidon nilotica</i>				G5 S2	2, 4, 9, 10, 13	Tier 1
Florida sandhill crane <i>Grus canadensis pratensis</i>	ST			G5T2T3 S2S3	1, 2, 4, 8, 10, 13	Tier 1

Table 3. Imperiled Species Inventory						
Common Name Scientific Name	Imperiled Species Status				Management Actions	Monitoring Level
	FWC	USFWS	FDACS	FNAI		
Caspian tern <i>Hydroprogne caspia</i>				G5 S2	2, 4, 9, 10, 13	Tier 1
Wood stork <i>Mycteria americana</i>	FT	LT		G4 S2	2, 4, 9, 10, 13	Tier 1
Brown pelican <i>Pelecanus occidentalis</i>				G4 S3	2, 4, 9, 10, 13	Tier 1
Roseate spoonbill <i>Platalea ajaja</i>	ST			G5 S2	2, 4, 9, 10, 13	Tier 1
Black skimmer <i>Rynchops niger</i>	ST			G5 S2	2, 4, 9, 10, 13	Tier 1
Sandwich tern <i>Thalasseus sandvicensis</i>				G5 S2	2, 4, 9, 10, 13	Tier 1
MAMMALS						
Florida mouse <i>Podomys floridanus</i>				G3 S3	1, 2, 8, 10, 13	Tier 1
Florida panther <i>Puma concolor coryi</i>	FE	LE		G5T1 S1	1, 2	Tier 1
Sherman's fox squirrel <i>Sciurus niger shermanii</i>				G5T3 S3	1, 2, 8, 10, 13	Tier1

Management Actions:

1. Prescribed Fire
2. Exotic Plant Removal
3. Population Translocation/Augmentation/Restocking
4. Hydrological Maintenance/Restoration
5. Nest Boxes/Artificial Cavities
6. Hardwood Removal
7. Mechanical Treatment
8. Predator Control
9. Erosion Control
10. Protection from visitor impacts (establish buffers)/law enforcement
11. Decoys (shorebirds)
12. Vegetation planting
13. Outreach and Education
14. Other

Monitoring Level:

- Tier 1. Non-Targeted Observation/Documentation: includes documentation of species presence through casual/passive observation during routine park activities (i.e. not conducting species-specific searches). Documentation may be in the form of Wildlife Observation Forms, or other district specific methods used to communicate observations.
- Tier 2. Targeted Presence/Absence: includes monitoring methods/activities that are specifically intended to document presence/absence of a particular species or suite of species.
- Tier 3. Population Estimate/Index: an approximation of the true population size or population index based on a widely accepted method of sampling.
- Tier 4. Population Census: A complete count of an entire population with demographic analysis, including mortality, reproduction, emigration, and immigration.
- Tier 5. Other: may include habitat assessments for a particular species or suite of species or any other specific methods used as indicators to gather information about a particular species.

Imperiled Species Management

Goal: Maintain, improve or restore imperiled species populations and habitats in the park.

The DRP strives to maintain and restore viable populations of imperiled plant and animal species primarily by implementing effective management of natural systems. Single species management is appropriate in state parks when the maintenance, recovery or restoration of a species or population is complicated due to constraints associated with long-term restoration efforts, unnaturally high mortality or insufficient habitat. Single species management should be compatible with the maintenance and restoration of natural processes and should not imperil other native species or seriously compromise park values.

In the preparation of this management plan, DRP staff consulted with staff of the FWC's Imperiled Species Management or that agency's Regional Biologist and other appropriate federal, state and local agencies for assistance in developing imperiled animal species management objectives and actions. Likewise, for imperiled plant species, DRP staff consulted with FDACS. Data collected by the USFWS, FWC, FDACS and FNAI as part of their ongoing research and monitoring programs will be reviewed by park staff periodically to inform management of decisions that may have an impact on imperiled species at the park.

Ongoing inventory and monitoring of imperiled species in the state park system is necessary to meet the DRP's mission. Long-term monitoring is also essential to ensure the effectiveness of resource management programs. Monitoring efforts must be prioritized so that the data collected provides information that can be used to improve or confirm the effectiveness of management actions on conservation priorities. Monitoring intensity must at least be at a level that provides the minimum data needed to make informed decisions to meet conservation goals. Not all imperiled species require intensive monitoring efforts on a regular interval. Priority must be given to those

species that can provide valuable data to guide adaptive management practices. Those species selected for specific management action and those that will provide management guidance through regular monitoring are addressed in the objectives below.

Objective A: Develop/Update baseline imperiled species occurrence inventory lists for plants and animals.

- | | |
|----------|--|
| Action 1 | Continue to send monthly wildlife reports, plant queries or observations to the District Biology office, including suspected imperiled species and their locations. Assessments completed for Objective B, Community Improvements, will add to all species data. |
| Action 2 | District Biology office continues to confirm species' identification, updates species data lists, including herbarium accession records, and updates FNAI imperiled species data. |

Objective B: Monitor and document two imperiled animal species in the park.

- | | |
|----------|--|
| Action 1 | Adopt FWC monitoring protocols for the southeastern American kestrel and the gopher tortoise. |
| Action 2 | Implement monitoring protocols. Once for baseline, and then subsequently repeat as recommended by FWC protocols. Monitoring results documentation should include management guidelines, as needed. |

Work with FWC and Audubon to develop and maintain protocols for monitoring, documenting, and preserving southeastern American kestrel and gopher tortoise populations.

Objective C: Monitor and document eight imperiled plant species in the park.

- Action 1 Develop monitoring protocols for four imperiled lowland plant species: comb polypody, wild pine, spreading airplant, and angularfruit milkvine.
- Action 2 Implement monitoring for four species in Action 1. Monitoring results report/documentation should include management guidelines, as needed.
- Action 3 Implement monitoring for four scrub species, Florida goldenaster, nodding pinweed, scrub plum and Britton's beargrass. Monitoring results report/documentation should include management guidelines, as needed.

There are no protocols in place for monitoring and documenting the comb polypody, wild pine, spreading airplant, angularfruit milkvine. The protocols do not need to be complex and could simply consist of two-year surveys for the species, with locations and counts recorded; consult with FNAI for help with this. These four species tend to be in the areas that were not severely altered by mining, generally land adjacent to, and rising from, river and tributaries. Note that access to such areas is difficult on the west side of the park, as there are grazing fences with no gates or other entry points.

There are existing protocols for surveying and monitoring the scrub imperiled species, Florida goldenaster, nodding pinweed, and Britton's beargrass (Bok 2010; Rowe 2018). Staff from Bok Tower Gardens, Hillsborough County, or members of the local chapter of the Florida Native Plant Society could be invited to participate (and help train) in these activities.

Exotic and Nuisance Species

Exotic species are plants or animals not native to Florida. Invasive exotic species are those that out-compete, displace or destroy native species and their habitats, often because they are free of the natural controls

of their native range, such as diseases or predatory insects. If left unchecked, invasive exotic plants and animals alter the character, productivity and conservation values of the natural areas they invade.

Exotic animal species include non-native wildlife species, free-ranging domesticated pets or livestock, and feral animals. Because of the negative impacts to natural systems attributed to exotic animals, the DRP actively removes exotic animals from state parks, with priority being given to those species causing the greatest ecological damage. ARSP has a problem with wild hog and the current rate of capture at the park is not enough to manage the problem. Other invasive exotic wildlife includes domestic cats (*Felis catus*), red fox (*Vulpes vulpes*), Cuban treefrog (*Osteopilus septentrionalis*), Cuban brown anole (*Anolis sagrei*) and invasive fish such as brown hoplo (*Hoplosternum littorale*), and walking catfish (*Clarias batrachus*).

In some cases, native wildlife may also pose management problems or nuisances within state parks. A nuisance animal is an individual native animal whose presence or activities create special management problems. Examples of animal species from which nuisance cases may arise include venomous snakes or raccoons and the alligators that are in public areas such as the bridge. Nuisance animals are dealt with on a case-by-case basis in accordance with the DRP's Nuisance and Exotic Animal Removal Standard. At ARSP, the migration of the coyote (*Canis latrans*) throughout Florida certainly includes ARSP. Recent observations of tracks, scat and animals confirm an increase in coyote populations; these will need to be monitored and an action plan developed to control numbers or impact, should the need arise.

Also, native plants pose management problems or nuisances within state parks. A nuisance plant is a native species that acts as an invasive and requires treatment to control; usually, this only happens in altered or fire-suppressed communities. At ARSP, two native cherry species, laurelcherry and black cherry, are pioneers in the more severely altered areas and have the potential to negatively impact prescribed burns and to outcompete

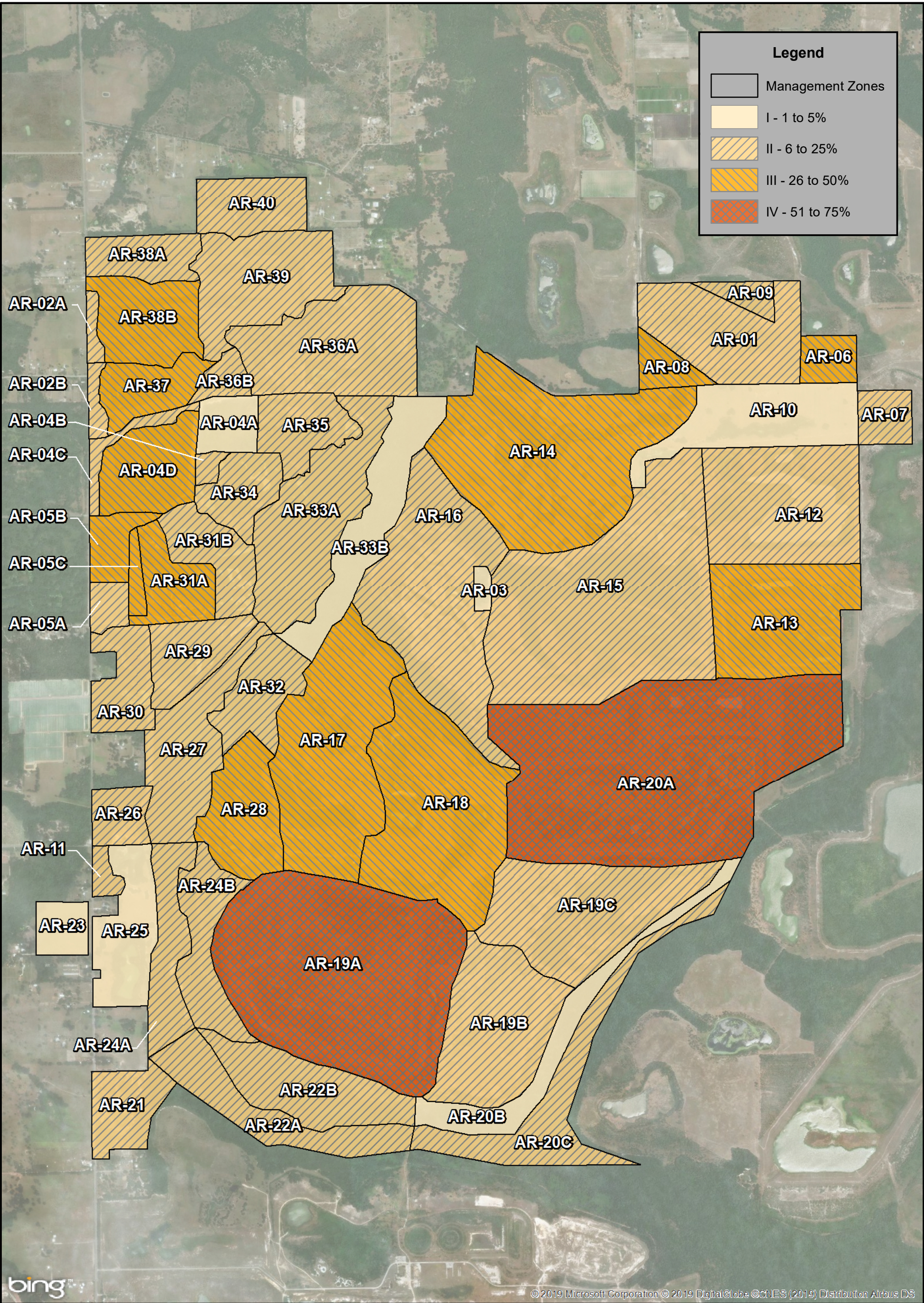
other, desired native plants. As the natural communities improve at the park, these two species will need to be thinned or completely removed.

The invasion of exotic plant species is the greatest resource management threat at ARSP. Every one of its 56 management zones has one or more invasive exotic plant species. In April 2013, per the state database, the overall cover of FLEPPC-listed invasive plants was over 40% of the park. Since 2013, park staff has actively engaged in this battle. Using special resource management project funds in 2016 and the annual contracted work provided through the FWC Uplands Invasive Plant Management program, the entire park uplands areas have been treated once and many areas have had repeated treatments. Aquatic plant species are also addressed; in addition to staff efforts, a program with the South Florida Natural History Museum harvests aquatic exotic plants to feed their rescued manatees. The February 2019 Current Conditions Report for Exotics Plant Management, which is based on survey records in the state's Natural Resource Tracking System (NRTS), shows a FLEPPC-listed species cover of closer to 29%. While this is good news, vigilance and constant re-treatments continue to be necessary to maintain this level and continue the reduction. See Invasive Plant Distribution map.

The most commonly seen FLEPPC-listed plants in the park are cogongrass, Japanese climbing fern, rose natalgrass and skunkvine; running a close second in dominance are Brazilian peppertree (*Schinus terebinthifolia*), Caesarweed, lantana, and rosary pea. But most of the central Florida FLEPPC species are here, including air potato (*Dioscorea bulbifera*), balsampear (*Momordica charantia*), camphortree (*Cinnamomum camphora*), catclaw or black mimosa (*Mimosa pigra*), chinaberry, Chinese tallow, coral vine (*Antigonon leptopus*), elephant ear (*Xanthosoma sagittifolium*), lead tree, Marianna maiden fern (*Macrothelypteris torresiana*), Napiergrass (*Cenchrus purpureus*), Old World climbing fern (*Lygodium microphyllum*), peruvian primrosewillow (*Ludwigia peruviana*), tropical

soda apple (*Solanum viarum*), tuberous sword fern (*Nephrolepis cordifolia*), wild bushbean (*Macroptilium lathyroides*) and winged yam (*Dioscorea alata*). Aquatic invasive plants on the current FLEPPC list include hydrilla, spotted duckweed, and water lettuce. Many of the species, including climbing fern and cogongrass, use wind for dispersion. Birds eat seeds and drop them in new places. A few species are coming in through the waterways. Invasive plants showing up on the old mining water holes are being distributed by birds and by the occasional boat. The predominant introduction sites are on and along mining-damaged areas and near vehicle access points.

Other than maintaining decontamination protocols on park and contractor equipment, the only exotic plant prevention tool available to staff is known as "Early Detection and Rapid Response." Early detection of any non-native plant that does not belong at the park, and a rapid control response, is always the most efficient approach and is more likely to result in eradication of the problem. None of the cover class designations nor the species discussed earlier include the infestations of non-native plants newly emerging as invasive, and yet survey and treatment efforts for these are just as essential. Some examples of the "non-FLEPPC" invasive exotic plants being removed at the park include showy and smooth rattleboxes (*Crotalaria rotundifolia* and *C. pallida*), tropical bushmint (*Hyptis mutabilis*), and Brazilian vervain (*Verbena brasiliensis*). An encroaching aquatic exotic plant is Cuban bulrush (*Oxycaryum cubense*). Also, there are several longstanding non-native plants that obstruct restoration processes and require resources for deliberate removal efforts, but they are not assigned FLEPPC status. These include bahiagrass, bermudagrass (*Cynodon dactylon*), "feral" citrus trees (e.g., *Citrus x aurantium*) and smutgrass. If all invasive exotic species were included in the infestation data, the average cover class for the park would be closer to 50 percent or more.



To support staff efforts to learn which plants do not belong at the park, there are several state and federal programs that offer identification materials and that are working to develop better Early Detection and Rapid Response (EDRR) information. Exotic species can begin to be identified *before* they are the management problems that make them FLEPPC Category I and II species. The USDA Animal and Plant Health Inspection Service (APHIS) and the University of Florida's Institute of Food and Agricultural Sciences (IFAS) have become increasingly active in using predictive Weed Risk Assessment tools and provide websites with updates on exotic species newly being considered as threats. Also, ARSP is in Florida's Suncoast Cooperative Invasive Species Management Area (CISMA); by working with this group, staff can obtain information on invasive species currently threatening their local area as well as assistance in managing them.

There are many treatment challenges at the park. The unpredictable topology left behind from the mines, the varying degrees of sand, rock and clay surfaces, and the necessity for four-wheel drive vehicles, combine to provide daily access challenges for surveying and for treatment work. The overwhelming cover and the sheer size and ages of the major infestations are treatment challenges, as well. For example, some research shows that patch eradication of cogongrass can be achieved if the patch is treated twice a year for three years (Aulakh 2014). But the age and scale of the cogongrass fields on the east side of the park may be beyond the scope of this approach; more research into effective techniques for large-scale control is needed.

Treatment work to date has been done in-house, by staff and volunteers, and by independent contractors; the latter have mostly been through the FWC Uplands Invasive Plant Management program. More than 3,000 acres have been treated or re-treated, over the past ten years, but the "number of acres treated" across areas too gross to get appropriate re-treatment is an irrelevant number. Staff's decision to focus their efforts along the western side of the park is appropriate and commendable, as their continuous re-treatment efforts there

are beginning to show a visible reduction in cover classes. This strategy for prioritizing treatment work is to be continued.

Treatment techniques follow the current Best Management Practices as published by FWC and IFAS. Park staff is expected to stay current with: the FLEPPC invasive species lists and plant identification; the BMPs for control techniques for the different species (these are usually available through IFAS or through FLEPPC); and the proper training and supervision of volunteers and others on the identification and treatment of invasive plant species. Verify that contractors working in areas with imperiled species can properly ID the invasive plant species they are treating and the imperiled plants. At the time of writing this plan, all known exotic invasive plants at the park can be managed by using herbicides that do not require a special applicator license. Proper protective personal equipment (PPE) required by the product label is to be worn every time herbicide product is being handled. Material Safety Data Sheets are to be kept up to date, readable, and within easy reach of all herbicide handling activities.

Exotic pests and pathogens also pose a threat to natural communities. Laurel wilt is a fatal disease of trees in the Laurel family, which includes redbay, swamp bay, and avocado. This disease is an exotic pathogen (a *Raffaelea* species of fungus) introduced into trees by an exotic pest, the redbay ambrosia beetle (*Xyleborus glabratus*); the redbay ambrosia beetle has been reported for Hillsborough County. Several prickly pear plants, in various zones in the park, display the destructive presence of the Cactus moth (*Cactoblastis cactorum*). North of the northern boundary of the park, cabbage palm trees along the south side of Jameson Road are dying, presenting symptoms of either palm weevil (*Rhynchophorus ferrugineus*) or of palm borer beetle (*Dinapate wrighti*) infestation; USDA or FDACS staff should be contacted to help survey the park for the extent of these invasions and to provide management actions that could minimize their impact.

Exotic Species Management

Goal: Remove exotic and invasive plants and animals from the park and conduct needed maintenance control.

The DRP actively removes invasive exotic species from state parks, with priority being given to those causing ecological damage. Removal techniques may include mechanical treatment, herbicides, or biocontrol agents.

Objective A: Annually treat at least 680 gross acres infested with exotic plant species in the park.

- Action 1 Annually evaluate rotation plan status and develop/update exotic plant management work plan.
- Action 2 Implement annual work plan and continue maintenance and follow-up treatments, as needed. Seek outside assistance to meet these goals.
- Action 3 Verify that grazing contract acres are included in this number and are being treated by the rancher.
- Action 4 Develop and implement plan to address exotic aquatic plants.

An overall rotation plan is proposed for the park, based on a three-year cycle (see Rotation Map; note that Year 3 acres were worked 2016 through 2018). This sets overall Management Zone priorities for treatment planning, although some re-treatment of species not in the same cycle year will still be expected, such as is needed for cogongrass. Gross acres are used for the plan, since these count the area that must be traversed to implement 100% treatment, and generally exclude those acres that are not available for infestations, such as roads or parking lots or the like. The park has roughly 6,800 acres available for infestations. An annual goal to treat at least 680 gross acres should be feasible, given adequate resources. Continue to work with FWC and other agencies for assistance where possible, including ways to address the infested acres with aquatic species. Management of the grazing contract includes verifying that the contractor is treating exotics in the grazing acres within the plan cycles; this requires regular

inspections of the contractor's treatment of exotics in the grazing areas, and regular updates of the contractor's treatment work in the exotics management database.

Objective B: Implement control measures on one nuisance and exotic animal species in the park.

- Action 1 Annually develop, improve and implement exotic animal management work plan for wild hogs; seek outside assistance as needed.

There is potential for at least 300 hogs living comfortably at ARSP, and with that number a huge potential for significant destruction, particularly in the wetland communities that are today the main remaining natural communities at the park. Staff is encouraged to continue with hog removal, but outside assistance in the form of contracted services may help keep the numbers from creeping up. Different approaches to removal must be rotated biennially over the next ten years, as hogs quickly learn how to avoid each technique; most parks are already experiencing a decrease in numbers in traps while seeing an increase in damage from increasing populations at large.

It is possible that with further research, the large presence of coyote at the park may need to be directly addressed. There are currently no population impact studies or removal suggestions from FWC, but this could change in the next ten years.

Although not set up as a Plan Objective, it is important to note that there are a number of small-animal pests threatening the health of species at the park, such as palm and cactus borers attacking the sabal palms and the prickly pear cactus. Invite USDA Division of Plant Industry (DPI) and FDACS experts to the park to assess the pest types and extent and provide suggestions for control; they can also train staff on ID and control steps.

Cultural Resources

This section addresses the cultural resources present in the park that may include archaeological sites, historic buildings and structures, cultural landscapes and collections. The Florida Department of State (FDOS) maintains the master inventory of such resources through the Florida Master Site File (FMSF). State law requires that all state agencies locate, inventory and evaluate cultural resources that appear to be eligible for listing in the National Register of Historic Places. Addendum 6 contains the FDOS, Division of Historical Resources (DHR) management procedures for archaeological and historical sites and properties on state-owned or controlled properties; the criteria used for evaluating eligibility for listing in the National Register of Historic Places, and the Secretary of Interior's definitions for the various preservation treatments (restoration, rehabilitation, stabilization and preservation). For the purposes of this plan, significant archaeological site, significant structure and significant landscape means those cultural resources listed or eligible for listing in the National Register of Historic Places. The terms archaeological site, historic structure or historic landscape refer to all resources that will become 50 years old during the term of this plan.

Condition Assessment

Evaluating the condition of cultural resources is accomplished using a three-part evaluation scale, expressed as good, fair and poor. These terms describe the present condition, rather than comparing what exists to the ideal condition. Good describes a condition of structural stability and physical wholeness, where no obvious deterioration other than normal occurs. Fair describes a condition in which there is a discernible decline in condition between inspections, and the wholeness or physical integrity is and continues to be threatened by factors other than normal wear. A fair assessment is usually a cause for concern. Poor describes an unstable condition where there is palpable, accelerating decline, and physical integrity is being compromised quickly. A resource in poor condition suffers obvious declines in

physical integrity from year to year. A poor condition suggests immediate action is needed to reestablish physical stability.

Level of Significance

Applying the criteria for listing in the National Register of Historic Places involves the use of contexts as well as an evaluation of integrity of the site. A cultural resource's significance derives from its historical, architectural, ethnographic or archaeological context. Evaluation of cultural resources will result in a designation of NRL (National Register or National Landmark Listed or located in an NR district), NR (National Register eligible), NE (not evaluated) or NS (not significant) as indicated in the table at the end of this section.

There are no criteria for determining the significance of collections or archival material. Usually, significance of a collection is based on what or whom it may represent. For instance, a collection of furniture from a single family and a particular era in connection with a significant historic site would be considered highly significant. In the same way, a high-quality collection of artifacts from a significant archaeological site would be of important significance. A large herbarium collected from a specific park over many decades could be valuable to resource management efforts. Archival records are most significant as a research source. Any records depicting critical events in the park's history, including construction and resource management efforts, would all be significant.

The University of South Florida's Alliance for Integrated Spatial Technologies (AIST) conducted a project to study archaeological resources in Florida State Parks; the project included ARSP, which they surveyed in 2013. The AIST State Parks project comprised of first running an archaeological resource sensitivity model to identify and rate areas likely to have cultural significance, which was then followed by a site visit to the park, where field work included GPS work and prospecting in areas of potential site locales. The AIST report document also provides a summary of all known previous archaeological and historical surveys on the property (AIST

2014). The following is a summary of the FMSF inventory. In addition, this inventory contains the evaluation of significance.

Prehistoric and Historic Archaeological Sites

Desired future condition: All significant archaeological sites within the park that represent Florida's cultural periods or significant historic events or persons are preserved in good condition in perpetuity, protected from physical threats and interpreted to the public.

Description: ARSP has 29 archaeological sites, two historical cemeteries and one resource group recorded in the FMSF. From the reports of the 2007 and 2013 surveys, nine sites may be considered destroyed: HI00354, HI00577, HI01043, HI05370, HI05372, HI05373, HI05374, HI05379, and HI09688. Most of the sites have been lost to flooding, agriculture, and phosphate mining. The greatest historic impact on these lands has been that of strip-mining for phosphates (Rollison 2007). There are currently no programs related to the park's historic structures and landscapes.

Of the park's recorded 29 archaeological sites, seventeen of the remaining records are designated archaeological sites with fifteen of these resulting from reports of surface-scattered stone, ceramic and lithic finds. A few were dated some time during 700 B.C. to 700 A.D.; most are undated but considered aboriginal. AIST found three pieces of chert on the ground surface at HI05378.

The one archaeological site that may be eligible for National Register is Picnic ("Picknick") Mound HI00003, sometimes referred to as the Thatcher Mound. Register criteria D might be applicable, as this is for sites having yielded or likely to yield information important in history or prehistory. This mound was heavily excavated in the mid-1930s; the collection from the mound is housed at the Florida State Museum in Gainesville. The excavated items include whole and partial ceramic vessels and exotic materials that are associated with European contact. During the AIST fieldwork, the boundary for the site was corrected to include

the remaining mound material still visible at the park, and also to include boundaries for what is expected to be part of a village. HI00003 is of high cultural sensitivity and is thus still worth protecting from depredation and potentially worth further study.

ARSP has two historic cemeteries recorded in the FMSF, HI6881 and HI09687; AIST lists only one, HI1048, even though their report shows a picture of a cemetery marker, with the caption that it is associated with HI9687 (not mapped and not included in the report list). HI1048 was recorded in the FMSF as an archaeological site in conjunction with a historic settlement. In the FMSF documentation for HI6881, there is mention of a 1903 grave that, when the site was recorded in 1974, needed to be moved or protected, but no reports were found on if this was done; there are no GIS coordinates for this site.

The park contains one recorded resource group, HI12152, Carter Road and Bridge Remains. The resource group was recorded by AIST in 2013 and consists of the remains of two wooden bridges connected by a dirt road. This linear resource is believed to be associated with HI01047, the Carter Road House Site.

Condition assessment: Picnic Mound HI3 is in Fair to Poor condition, with some erosion, vegetation intrusion, minor looting, and haying on the village area.

Level of significance: Picnic Mound (HI00003) is potentially eligible for the National Register eligibility (under Criteria D) by AIST, but the site has not been formally evaluated by the State Historic Preservation Officer (SHPO). Eleven archaeological sites were not considered National Register eligible by the surveyors who originally recorded them: HI342, HI344, HI348, HI351, HI354, HI1043, HI1047, HI1048, HI4041, HI4042, HI5343. Only three of these (HI4041, HI4042 and HI5343) have been officially evaluated and found ineligible for the National Register by the State Historic Preservation Officer (SHPO).

General management measures: Other than the Picnic Mound and the newly recorded Carter Bridge site, the parks' FMSF records are only kept now as a means to maintain the historical data and to help inform any collections records the Florida Museum of Natural History (FMNH) has yet to compile. The Picnic Mound HI00003 warrants preservation and interpretive work, as well as protection from further looting and other damage. The table below identifies which treatments (stabilization or preservation) will be applied in general to significant archaeological sites. These treatments refer specifically to sections of the Secretary of the Interior's Standards. Preservation includes protection from damage from resource

management, natural causes, construction or human damage including looting. Stabilization techniques include the use of protective vegetation, use of filter cloth or other methods to prevent erosion, removal of large trees or burial of the site.

Table 4 contains the name, reference number, culture or period, and brief description of all the cultural sites within the park that are listed in the Florida Master Site File. The table also summarizes each site's level of significance, existing condition and recommended management treatment. An explanation of the codes is provided following the table.

Table 4. Cultural Sites Listed in the Florida Master Site File

Site Name FMSF Number	Culture / Period	Description	Significance	Condition	Treatment
Picnic Mound (Thatcher Mound) HI00003	Prehistoric; Safety Harbor, A.D. 1000-1500, Weeden Island	Archaeological Site	NE	P	ST
Halls Branch 1 HI00342	Prehistoric, ceramic	Archaeological Site	NE	NE	NA
Cabbage Ford HI00344	Late Archaic	Archaeological Site	NE	NE	NA
Hurrah Lake 1 HI00347	Late Archaic	Archaeological Site	NE	NE	NA
Hurrah Lake 2 HI00348	Late Archaic	Archaeological Site	NE	NE	NA
Hurrah Lake 3 HI00351	Late Archaic	Archaeological Site	NE	NE	NA
Boggy Branch HI00354	Manasota 700 B.C.–A.D 700	Archaeological Site	NE	D	NA
CAL 1 HI00575	Unknown	Archaeological Site	NE	NE	NA
CAL 2 HI00576	Unknown	Archaeological Site	NE	NE	NA
CAL 3 HI00577	Unknown	Archaeological Site	NE	D	NA
CAL 4 HI00582	Unknown	Archaeological Site	NE	NE	NA
Boggy Branch House site HI01043	1866 - 1920	Archaeological Site	NE	D	NA
Bugbee House sites HI01045	1866 - 1920	Archaeological Site	NE	NE	NA

Table 4. Cultural Sites Listed in the Florida Master Site File					
Site Name <i>FMSF Number</i>	Culture / Period	Description	Significance	Condition	Treatment
Carter Road House site <i>HI01047</i>	Late 1800s – early 1900s	Archaeological Site	NE	NE	NA
Lillibridge settlement/cemetery <i>HI01048</i>	Prehistoric - Unspecified	Archaeological Site	NE	NE	NA
Carter Road/Bridge Remains <i>HI12152</i>	Late 1800s – early 1900s	Resource Group	NE	NE	NA
Picnic <i>HI04041</i>	Prehistoric - Aceramic	Archaeological Site	NI	NE	NA
Lookout Tower <i>HI04042</i>	Unknown	Archaeological Site	NI	NE	NA
East Church <i>HI05343</i>	Prehistoric	Archaeological Site	NI	NE	NA
McMullen Branch 1 <i>HI05370</i>	Unknown	Archaeological Site	NE	D	NA
McMullen Branch 2 <i>HI05371</i>	Unknown	Archaeological Site	NE	NE	NA
McMullen Branch 3 <i>HI05372</i>	Unknown	Archaeological Site	NE	D	NA
McMullen Branch 4 <i>HI05373</i>	Unknown	Archaeological Site	NE	D	NA
McMullen Branch 5 <i>HI05374</i>	Unknown	Archaeological Site	NE	D	NA
DJ-4 <i>HI05378</i>	Unknown	Archaeological Site	NE	NE	NA
DJ-5 <i>HI05379</i>	Unknown	Archaeological Site	NE	D	NA
DJ-6 <i>HI05380</i>	Unknown	Archaeological Site	NE	NE	NA
DJ-7 <i>HI05381</i>	1866 - 1920	Archaeological Site	NE	NE	NA
Bugbee Cemetery John Armwood Grave <i>HI06881</i>	1898 - 1920	Historic Cemetery	NE	NE	NA
Alafia River State Rec Area Cemetery <i>HI09687</i>	Historic/Unspecified	Historic Cemetery	NE	NE	NA
Alafia River State Rec Area <i>HI09688</i>	1900s	Archaeological Site	NE	D	NA

Significance

NRL National Register listed
 NR National Register eligible
 NI National Register ineligible
 NE not evaluated
 NS not significant

Condition

G Good
 F Fair
 P Poor
 NA Not accessible
 D Destroyed

Recommended Treatment

RS Restoration
 RH Rehabilitation
 ST Stabilization
 P Preservation
 R Removal
 N/A Not applicable

Cultural Resource Management

The DRP will implement the following goals, objectives and actions, as funding becomes available, to preserve the cultural resources found in ARSP.

Goal: Protect, preserve and maintain the cultural resources of the park.

Cultural resources are irreplaceable and extremely vulnerable to disturbances. The advice of historical and archaeological experts is required in this effort. All activities related to land clearing, ground disturbing activities, major repairs or additions to historic structures listed or eligible for listing in the National Register of Historic Places must be submitted to the FDOS, Division of Historical Resources (DHR) for review and comment prior to undertaking the proposed project. Recommendations may include, but are not limited to, concurrence with 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 effect. In addition, any demolition or substantial alteration to any historic structure or resource must be submitted to the DHR for consultation and the DRP must demonstrate that there is no feasible alternative to removal and must provide a strategy for documentation or salvage of the resource. Florida law further requires that DRP consider the reuse of historic buildings in the park in lieu of new construction and must undertake a cost comparison of new development versus rehabilitation of a building before electing to construct a new or replacement building. DRP will seek DHR assistance with this analysis.

Objective A: Implement a maintenance program for the Picnic/Thatcher Mound site and submit a formal National Register application.

Action 1 Establish a maintenance program for the Picnic/Thatcher Mound, (HI00003), to implement restoration, rehabilitation, stabilization and preservation.

Action 2 Work with DHR, AIST and SHPO to implement the application process. If the site qualifies, complete the registration and begin developing an interpretive plan.

Objective B: Locate and assess all recorded sites in the park that are still in need of a full evaluation.

Use the completed predictive model and notes, as well as DHR, to locate sites and to complete evaluations. Work with BNCR to have assessments/evaluations completed.

Special Management Considerations

Timber Management Analysis

Chapters 253 and 259, Florida Statutes, require an assessment of the feasibility of managing timber in land management plans for parcels greater than 1,000 acres if the lead agency determines that timber management is not in conflict with the primary management objectives of the land. The feasibility of harvesting timber at this park during the period covered by this plan was considered in context of the DRP's statutory responsibilities and an analysis of the park's resource needs and values. The long-term management goal for forest communities in the state park system is to maintain or re-establish old-growth characteristics to the degree practicable, except those communities specifically managed as early successional.

Alafia River State Park is designated as a single-use park. As such, timber management is only permitted as a method of natural community restoration and maintenance rather than as an ongoing extractive activity. The feasibility of managing/harvesting timber at Alafia River during the period covered by the UMP was considered pursuant to the DRP statutory responsibilities to analyze the park's resource needs and values. The long-term management goal for forest communities in the state park system is to maintain or re-establish natural characteristics to the degree practicable, except in those natural communities specifically managed for a

structure that differs from that described in the timber assessment found at reference sites for those communities established by the Florida Natural Areas Inventory (FNAI). In the case of imperiled species, the management of certain natural communities may differ from standard treatments to provide optimum habitat conditions within the park.

Most natural communities evaluated at Alafia River had overstory pine stocking levels within or slightly below the range identified for corresponding FNAI Reference Sites. Conversely, hardwood overstory stocking levels were above the upper limits identified for corresponding FNAI Reference Sites. The Timber Management Analysis found in Addendum 7 provides additional details. Overstory thinning is a management tool that may be used in areas which have overstocked conditions. However, the specific management goals and objectives related to timber management are noted in the natural community discussions. Activities related to stand improvement, including palmetto and midstory reduction, are ongoing in many areas, as well.

Arthropod Control Plan

All DRP lands are designated as “environmentally sensitive and biologically highly productive” in accordance with Ch. 388 and Ch. 388.4111 Florida Statutes. If a local mosquito control district proposes a treatment plan, the DRP works with the local mosquito control district to achieve consensus. Treatment methods including larviciding and ground adulticiding (truck spraying in public use areas) are typically allowed. Aerial adulticiding can be allowed through an agreed upon control plan. The DRP does not authorize new physical alterations of marshes through ditching or water control structures. Mosquito control plans temporarily may be set aside under declared threats to public or animal health, or during a Governor’s Emergency Proclamation.

Land Management Review

Section 259.036, Florida Statutes, established land management review teams to determine whether conservation, preservation, and recreation lands titled in the name of the Board of Trustees are being managed for the purposes for which they were acquired and in accordance with their approved land management plans. The DRP considered recommendations of the land management review team and updated this plan accordingly (Addendum 8).

ARSP was subject to land management review on August 10, 2015. The review team made the following determinations:

- The land is being managed for the purpose for which it was acquired.
- The actual management practices, including public access, complied with the management plan for this site.

For the field reviews, the team generally assigned high marks in the categories evaluated and commended the DRP and the park management for using outside sources to manage and maintain the bicycle and horse trails; the continued use of cattle grazing as an interim land management activity; and the level of work accomplished on restoration and management of the natural communities, considering how many resources are committed to recreation. Items requiring improved actions in the field included the need to increase restoration of altered areas; the need to increase monitoring, prevention and control of the non-native, invasive species; the need to increase management resources, specifically staff and funding.

Recommendations from the team included utilizing an integrated approach to exotic species control and restoration could include silviculture as well as expanding the use of grazing, herbicide, and prescribed fire. Other recommendations included a complete hydrologic assessment; increased resource protection, such as boundary surveys, gates, and fencing; and more documentation and survey guidance with respect to listed species, especially the gopher tortoise, Florida goldenaster and Britton’s beargrass.

Land Use Component



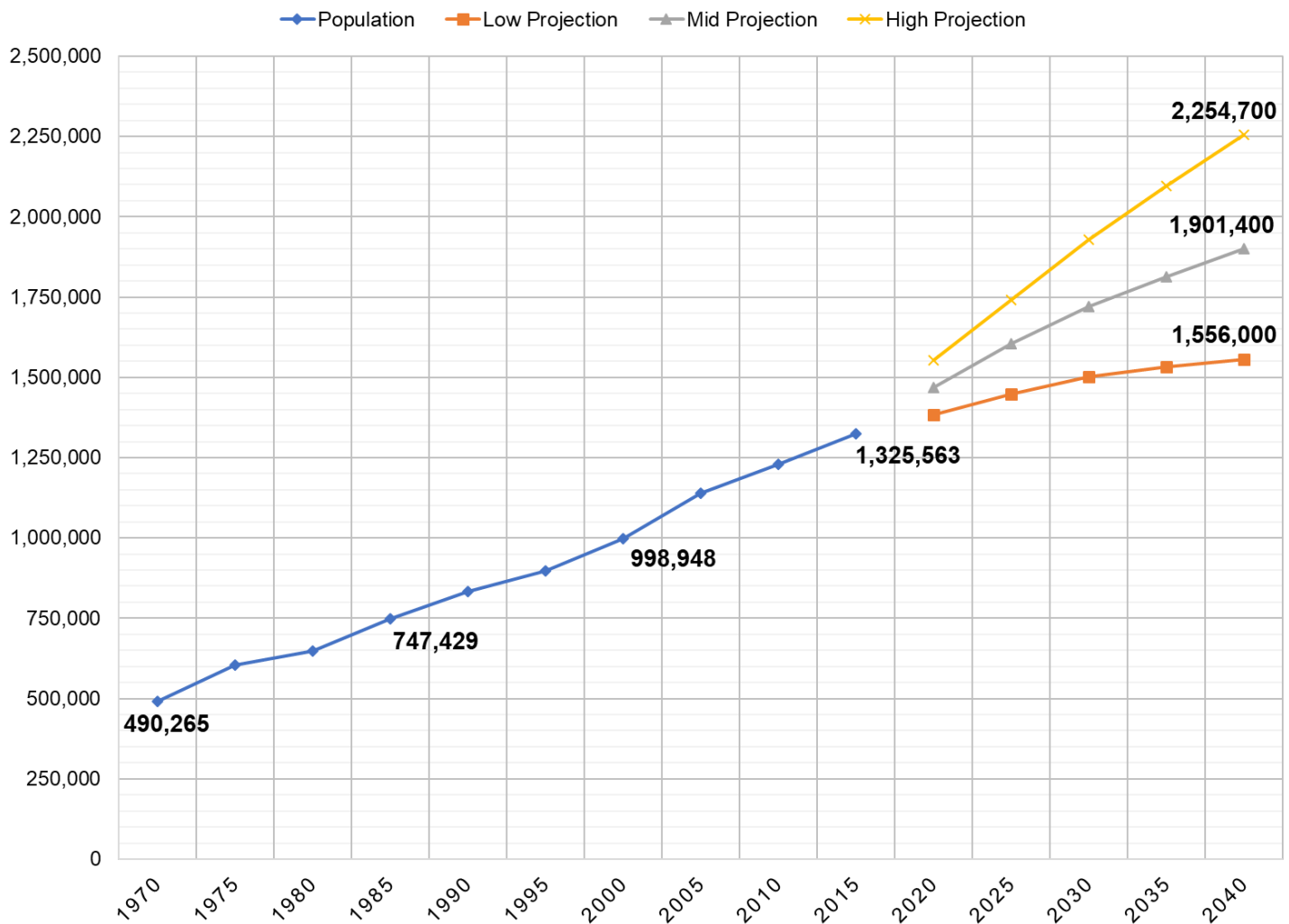
Demographics

Hillsborough County

Alafia River State Park is located in southeastern Hillsborough County, about 28 miles southeast of Tampa, 18 miles southeast of Brandon, and 19 miles south of Plant City. According to the U.S. Census Data (2017), approximately 50% of residents in the county identify as black, Hispanic or Latino, or another minority group. About 36% of residents classify as youth or seniors, and about 64% of the population is between 16 and 65 years of age (ACS 2017). Hillsborough County ranked 17th statewide in per capita personal income at \$44,709, below the statewide average of \$47,684 (BEA 2017). The following table shows the current population of Hillsborough County, with a comparison of its surrounding counties, urban centers, and unincorporated areas.

Table 5. Current Populations*		
Hillsborough County		
Incorporated	Unincorporated	Total
443,981	964,883	1,408,864
Urban Centers		
Plant City	Temple Terrace	Tampa
38,938	26,512	378,531
Metropolitan Area Counties		
Hernando	Pasco	Pinellas
185,604	515,077	970,532

Hillsborough County Population Projections



Regional Population Growth

Hillsborough County is one of four counties that comprises the Tampa-St. Petersburg-Clearwater metropolitan statistical area (Tampa MSA or metro area). The other three counties are Hernando, Pasco, and Pinellas. These four counties and their residents are highly connected to the three urban cores of the metro area through commuting and economic ties. The total population of this MSA is 3,080,077, with Hillsborough County accounting for nearly 46% of the total (*EDR 2018). The Tampa MSA is the second largest metro area behind the Miami-Ft. Lauderdale-Pompano Beach MSA, which has 6.1 million residents.

Over the past 20 years, the Tampa MSA has grown by almost 30% increasing from 2.4 million residents to nearly 3.1 million. Median population projections suggest the total population could potentially grow by 28% to 3.8 million residents by 2040 (BEBR 2018). High growth projections for the metro area estimates the total population closer to 4.6 million. In either scenario, population growth in the Tampa MSA could take place in expanding suburban areas such as Brandon and Riverview. Growth in these communities could have implications for attendance at Alafia River State Park.

Land Use and Zoning

An assessment of the conditions that exist beyond the boundaries of the unit can identify any special development problems or opportunities that exist because of the unit's unique setting or environment. This also provides an opportunity to deal systematically with various planning issues such as location, regional demographics, adjacent land uses and park interaction with other facilities.

Existing Use of Adjacent Lands

County Road 39 runs along the western edge of the park, with the majority of the property lying to its east. Jameson Road runs parallel to the northern boundary, and in some instances, serves as the boundary. North of County Road 39 is the Alafia River Corridor, managed by Hillsborough County.

Along County Road 39 and north of Jameson Road the surrounding land uses are low-density residential, agriculture/rural, and agriculture/mining. The low-density residential and agriculture/rural designations allow agricultural uses and residential development up to one unit per 5 acres and one unit per 10 acres, respectively. The agriculture/mining designation combines agricultural uses with mining at a ratio of one mined acre per 20 acres. Mining remains the main land use along the eastern and southern boundaries.

Planned Use of Adjacent Lands

Adjacent lands to Alafia River State Park are designated predominantly for agricultural uses. Mining activities continue to the south and east of the park. Rural densities can be found to the north. Estate districts are identified to the west for single-family residential development. To the west, there is a public/quasi-public parcel where the Hillsborough Real Estate Department is located. Alafia River State Park is surrounded primarily by agricultural activities. To the west are low-density rural uses. Hendry Estates, Wendell Wood, and Holland Acres subdivisions all border the park. Agricultural mining can be found to the south, east, and northeast of the park boundary. The mining district diverts agricultural lands from development and allows phosphate mining and other extractive activities.

Future Land Use Designation of the Park

The DRP works with local governments to establish designations that provide both consistency between comprehensive plans and zoning codes and permit typical state park uses and facilities necessary for the provision of resource-based recreation.

The current future land use designation is Natural Preservation (N), which protects lands of significant environmental importance for conservation purposes. The current zoning designation for the entire park is agricultural mining (AM), which allows phosphate mining on site.

Regional Conservation and Recreation

Table 6 and its corresponding map shows the resource-based recreational opportunities in the region surrounding Alafia River State Park.

Florida Greenways and Trails System

The Florida Greenways and Trails System (FGTS) is made up of existing, planned, and conceptual non-motorized trails and ecological greenways that form a connected, integrated statewide network. The FGTS serves as a green infrastructure plan for Florida, tying together the greenways and trails plans and planning activities of communities, agencies and non-profit organizations throughout Florida. Trails include paddling, hiking, biking, multi-use and equestrian trails. The Office of Greenways and Trails maintains a priority trails map and gap analysis for the FGTS to focus attention and resources on closing key gaps in the system.

The Alafia River is a 10-mile Florida Designated Paddling Trail with publicly designated access points at Alderman's Ford County Park or Lithia Springs County Park. The Alafia River South Prong runs to the north of the park providing equestrian trails. To the south, the Little Manatee River is designated an Outstanding Florida waterbody with paddling trail opportunities.

Statewide Comprehensive Outdoor Recreation Plan

The Statewide Comprehensive Outdoor Recreation Plan (SCORP) analyzes both resource-based and user-based recreation opportunities throughout the state, with the state divided up into eight planning regions. Alafia River State Park falls within the Central West region, which includes Citrus, Hernando, Hillsborough, Pasco, and Pinellas County.

An economic analysis conducted as a part of the SCORP process (2019 draft) found that residents of the Central West region spent approximately \$1.7 billion on outdoor recreation in 2017, compared to \$6.2 billion spent by visitors to the region. The top five recreational activities for residents and visitors are as follows:

Residents

1. Walking/jogging
2. Beach activities
3. Hiking
4. Bicycling
5. Golfing

Visitors

1. Beach activities
2. Walking/jogging
3. Hiking
4. Picnicking
5. Wildlife viewing

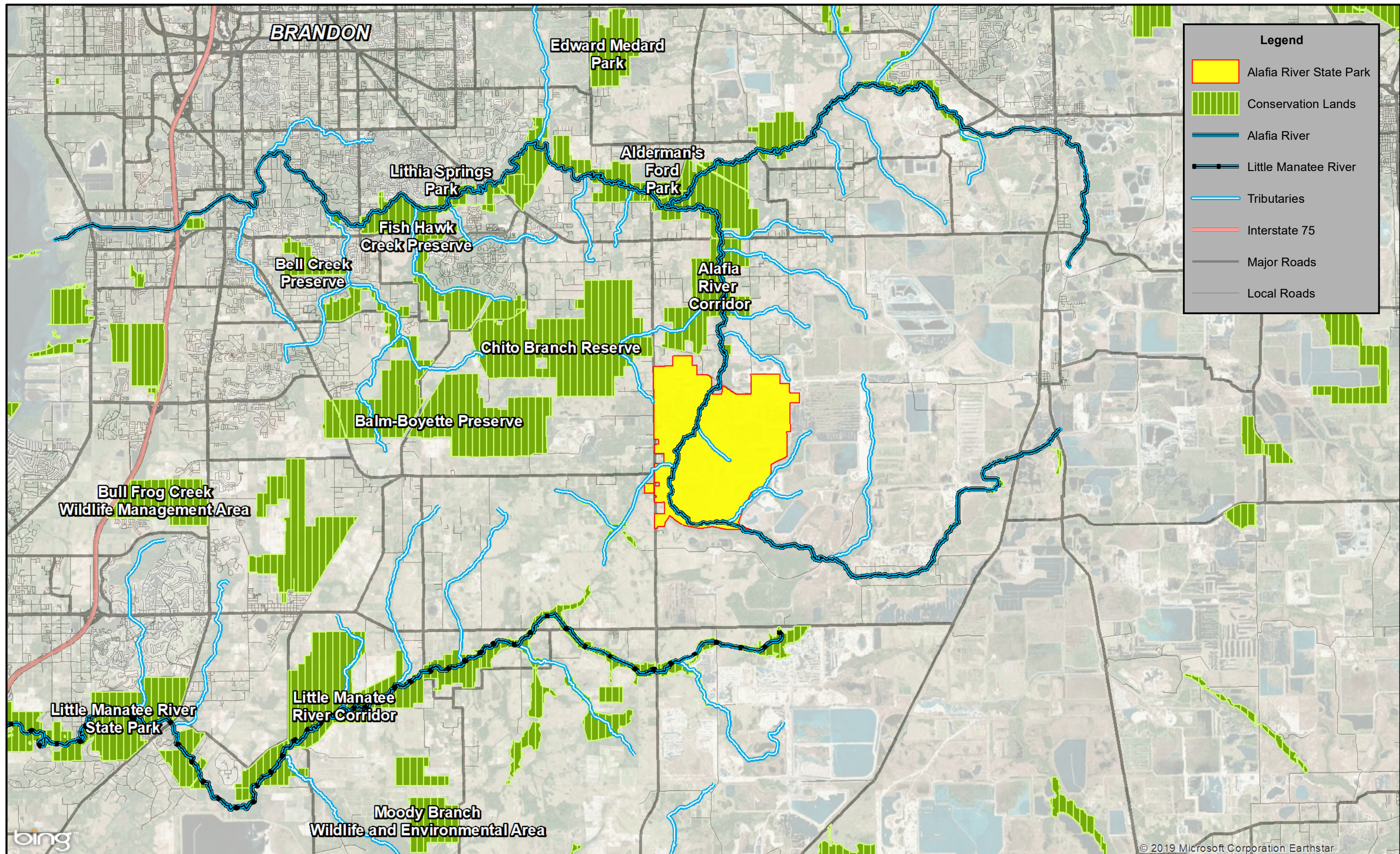
According to the SCORP update, the Central West region is below the statewide median in beach activities, boat ramp amenities, unpaved bike trails, hiking trails, equestrian trails, picnicking facilities, tent camping, and hunting areas.

Table 6. Regional Resource-Based Recreational Opportunities

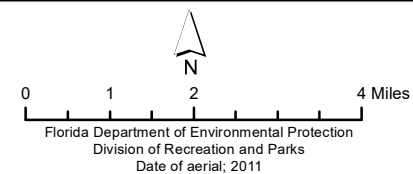
Name	Biking	Hiking	Equestrian	Swimming	Beach Access	Boating	Paddling	Picnicking	Interpretation	Fishing	Camping	Hunting
Florida Fish and Wildlife Conservation Commission												
Bull Frog Creek Wildlife Management Area	✓	✓	✓			✓	✓			✓	✓	✓
Moody Branch Wildlife and Environmental Area		✓	✓									

Table 6. Regional Resource-Based Recreational Opportunities

Name	Biking	Hiking	Equestrian	Swimming	Beach Access	Boating	Paddling	Picnicking	Interpretation	Fishing	Camping	Hunting
Florida State Parks												
Hillsborough River State Park	✓	✓		✓			✓	✓	✓	✓	✓	
Little Manatee River State Park	✓	✓	✓				✓	✓	✓	✓	✓	
Southfork (Baker) State Park		✓										
Hillsborough County												
Alafia River Corridor		✓	✓							✓	✓	
Alderman's Ford Park	✓						✓			✓	✓	
Balm-Boyette Preserve	✓	✓								✓		
Bell Creek Preserve		✓								✓		
Edward Medard Park		✓				✓	✓				✓	
Fish Hawk Creek Preserve		✓						✓				
Lithia Springs Park		✓		✓							✓	
Little Manatee River Corridor		✓					✓	✓		✓		
Rhodine Scrub Preserve		✓										
Triple Creek Nature Preserve		✓										
Manatee County												
Duette Preserve	✓	✓	✓						✓	✓	✓	✓
Southwest Florida Water Management District												
Chito Branch Reserve	✓	✓	✓									
Edward Chance Reserve	✓	✓	✓							✓		
Little Manatee River (Upper/Southfork Tracts)		✓					✓			✓		
Lower Hillsborough Wilderness Preserve	✓	✓	✓			✓	✓	✓		✓	✓	✓



ALAFIA RIVER STATE PARK



CONSERVATION AND RECREATION LANDS MAP

Assessment of Use

All legal boundaries, significant natural features, structures, facilities, roads and trails existing in the unit are delineated on the base map (see Base Map). Specific uses made of the unit are briefly described in the following sections.

Past Uses

Cytec Brewster Phosphates, Inc. (Cytec) donated this site to the State in 1996. Prior to acquisition, the property was a phosphate mine called Lonesome Mine, named after the nearby community of Fort Lonesome which itself was named after a frontier outpost of the US Army during the Third Seminole War. The vast majority of this land has been reclaimed in a "Land and Lakes" formation. Cytec and later Mosaic (formerly IMC-Agrico Company) allowed some minor agricultural uses, such as cattle pasture and citrus leases, on the reclaimed areas.

Other Uses

Tampa Electric Company (TECO) has three power line easements located within this property. Of these, two are in use and provide electricity to Lonesome Mine (operated by Mosaic). Florida Power Corporation (FPC) has three gas lines crossing the northern portion of the park along Jameson Road and one gas line crossing Hurrah Lake.

Current Uses

The current recreational opportunities available at Alafia River State Park include picnicking, fishing, canoeing/kayaking, RV/tent camping, horse camping, 16.5 miles of single-track and double-track bicycling for all skill levels, 22 miles of equestrian/hiking trails, and an additional half-mile of nature trail. There is also an unimproved boat ramp at the bridge on Thatcher Road.

Existing Facilities

The North Trailhead Area is located in the northwest corner of the property. It served as the original park entrance and trailhead area when the park first opened to the public in 1998. Since the development of the new park entrance, this area still serves as a trailhead and remains popular with equestrian riders. Facilities include a parking area, picnic shelters, grills, and composting toilet. The camping area, adjacent to Lake Alafia, was built with the equestrian user in mind. The facilities in this area include standard campsites, a bathhouse, picnic pavilions, and a horse stable. A hike-in primitive group camp can accommodate up to 30 campers. The Main Day Use/Trailhead Area is located at the junction of three old Agrico pits and serves as the main trailhead to the extensive network of off-road mountain biking, hiking, and equestrian trails. The facilities in this area include picnic pavilions, a restroom, and a playground. The park's concessionaire operates from this main trailhead and provides bike rentals, as well as other trail related goods. There is an unimproved boat launch at the bridge on Thatcher Road. Support facilities include staff residences, a 3-bay shop, an equipment shelter, and a storage building (see Base Map). The main shop area is located along Thatcher Road, while the staff residence area is situated near the developed campground.

Recreation Facilities

Main Day Use Area/Trailheads

Large picnic shelters (2)
Restroom
Playground
Paved parking (40 spaces)
Trailer parking area (30 spaces)

Campground

30 campsites
Bathhouse
Large pavilions (2)
Horse barn/paddocks

Trails

Biking (16.5 miles)
Shared-use (22 miles)
Nature (0.5 miles)

Recreation Facilities Cont.

North Trailhead Area

- Picnic shelters (2)
- Picnic tables and barbecue grills
- Portable toilet (1)
- Unpaved parking area
- Trailer parking

Thatcher Road Boat Access Area

- Unimproved boat launch

Support Facilities

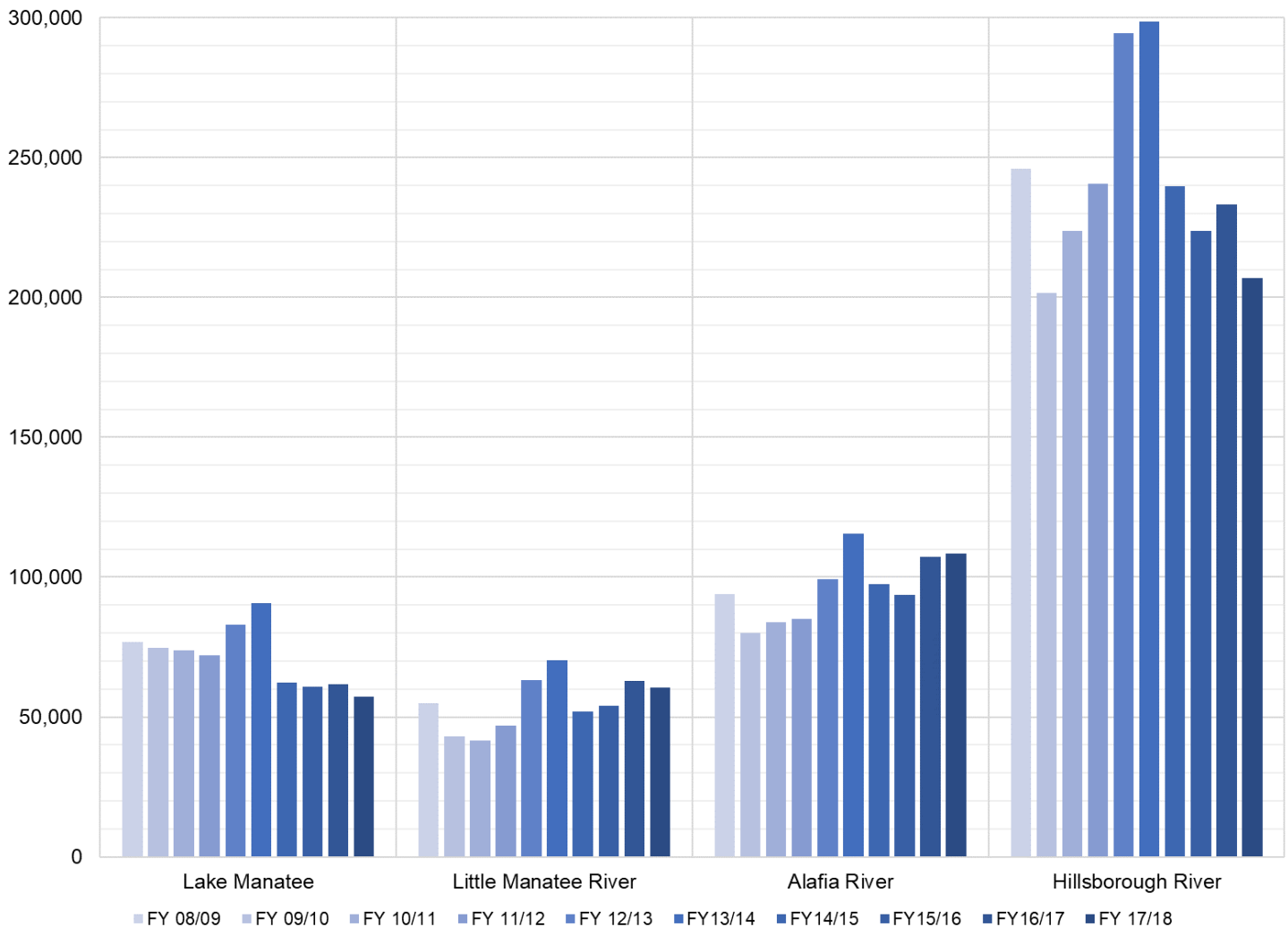
Shop Area

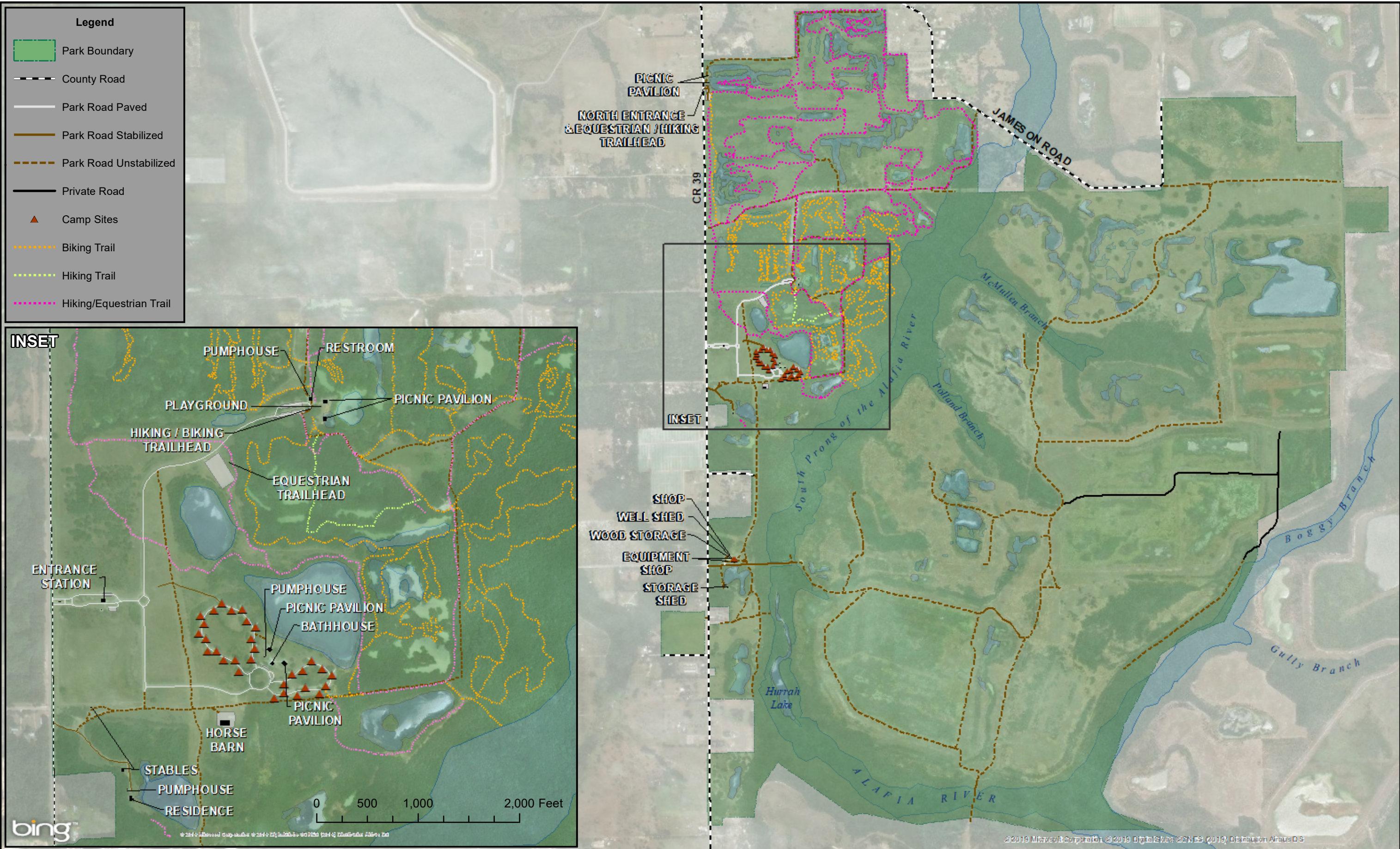
- 3-bay shop
- Equipment shelter
- Barrack-type building
- Staff residences

Attendance Analysis

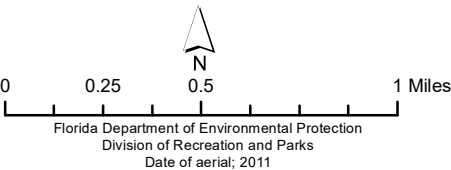
The chart below shows annual attendance at Alafia River State Park over the past 10 years, as compared to other state parks in the region. Alafia River State Park recorded 108,425 visitors in FY 2017/2018. By DRP estimates, the FY 2017/2018 visitors contributed \$9.2 million in direct economic impact, the equivalent of adding 129 jobs to the local economy (FDEP 2018). The park's busy season is between November and April, with December and March being the busiest months of the year. During this 6-month period, the park experiences about 62% of its annual visitation. The park's average annual campground occupancy rate has steadily increased from 51% to 66% over the past 10 years. The months of January to March had campground occupancies of 96% to 98% in FY 17/18, compared to 80% to 81% in November, December, and April.

Regional State Park Attendance





ALAFIA RIVER STATE PARK



BASE MAP

Recreational Carrying Capacity

Recreational carrying capacity is an estimate of the number of visitors each recreational use area can accommodate. The recreational carrying capacity for Alafia River State Park has been determined by identifying the recreational uses and activities available to visitors, approximating the physical constraints associated with accessing those uses, and applying a median number of visitors per unit of measurement. This calculation establishes a “visitors at one time” number for each recreational use area. The one-time number is then multiplied by a daily turnover rate that estimates how often an area will be used by different groups of visitors throughout the day. The totals for each use area are added together to determine total visitors at one time and total daily visitors. These calculations have been conducted for the recreational uses at the park, and the results are shown in Table 7.

Table 7 inventories all of the existing recreational use areas, as well as the use areas that are proposed in this plan. For these categories, the physical or operational constraints of accessing and utilizing the use areas are the constant, non-variable inputs of the recreational carrying capacity equation. Parking spaces are the constants for day use areas and trailheads, while the number of

campsites is considered for overnight uses. These constants are then multiplied by visitors per vehicle/site to determine the visitors at one time estimate, and the one-time estimate is multiplied by the turnover rate to calculate estimated daily visitors. The visitors per vehicle/site and the turnover rate are considered variable inputs that are determined by an established assumption. For the visitors per vehicle/site, the established assumption is each vehicle and campsite contain four visitors. It is known that some vehicles and campsites will have one or two visitors while others contain six to eight. Likewise, it is assumed that day use visitors will spend around three to four hours in the park and non-overnight trail users will hike or ride for two to three hours. It is also acknowledged that these use areas are not mutually exclusive, and, for example, an overnight camper may hike on the trails and picnic in the same day. However, parking spaces are considered physical constraints that only allow a certain number of visitors to access a use area at one time. Those parking spaces cannot be used simultaneously by multiple vehicles. Although vehicles can contain a variable number of visitors, the number of parking spaces physically limits the number of vehicles, and thus visitors, that can access a given use area.

Table 7. Recreational Carrying Capacity Estimates

Existing Use Areas	Parking / Campsites	Visitors per Vehicle / Site	Visitors at One Time	Turnover Rate	Daily Visitors
<i>Main Trailhead</i>	40	4	160	4	640
<i>Equestrian Trailer Area</i>	30	4	120	4	480
<i>Campground</i>	30	4	120	1	120
Proposed Use Areas	Parking / Campsites	Visitors per Vehicle / Site	Visitors at One Time	Turnover Rate	Daily Visitors
<i>Three Finger Lake</i>	30	4	120	3	360
<i>Thatcher Road Day Use</i>	20	4	80	3	240
<i>Primitive Campground</i>	30	4	120	1	120
<i>Cabin Area</i>	6	4	24	1	24

Use Areas	Visitors at One Time	Daily Visitors
<i>Existing Use Areas</i>	400	1,240
<i>Proposed Use Areas</i>	344	744
Park Total	744	1,984

Conceptual Land Use Plan

The following narrative represents the current conceptual land use proposal for this park. The conceptual land use plan is the long-term, optimal development plan for the park, based on current conditions and knowledge of the park's resources, landscape and social setting. The conceptual land use plan is modified or amended, as new information becomes available. The acquisition of new parkland may provide opportunities for alternative or expanded land uses. The DRP develops a detailed development plan for the park and a site plan for specific facilities based on this conceptual land use plan, as funding becomes available.

During the development of the conceptual land use plan, the DRP assessed the potential impact of proposed uses or development on the park resources and applied that analysis to determine the future physical plan of the park as well as the scale and character of proposed development. Potential resource impacts are also identified and assessed as part of the site planning process once funding is available for facility development. At that stage, design elements (such as existing topography and vegetation, sewage disposal and stormwater management) and design constraints (such as imperiled species or cultural site locations) are investigated in greater detail. Municipal sewer connections, advanced wastewater treatment or best available technology systems are applied for on-site sewage disposal.

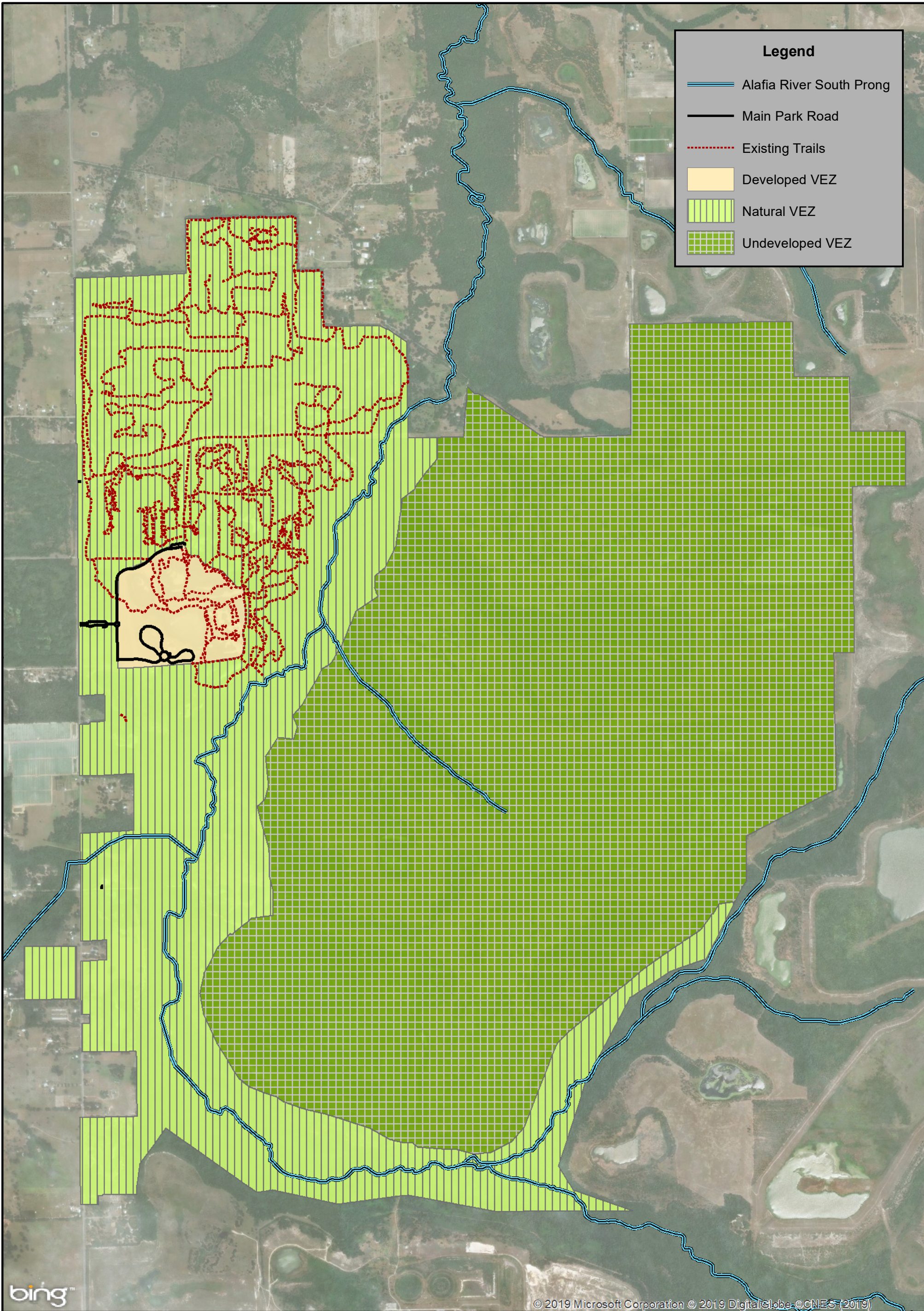
Creation of impervious surfaces is minimized to the greatest extent feasible in order to limit the need for stormwater management systems, and all facilities are designed and constructed using best management practices to limit and avoid resource impacts. Federal, state and local permit and regulatory requirements are addressed during facility development. This includes the design of all new park facilities consistent with the universal access requirements of the Americans with Disabilities Act (ADA). After new facilities are constructed, park staff monitors conditions to ensure that impacts remain within acceptable levels.

Vision for Land use and Recreation

Alafia River State Park is a premier destination for off-road mountain biking and horseback riding, with nearly 40 miles of trail throughout the northwestern portion of the property. The vision for the park is to continue to promote and expand the extensive trail network, while also providing additional day use and overnight facilities. The major infrastructure proposal for this management plan is to create a unified entrance for the park. Currently, there are three access points: the northern trailhead, main entrance/ranger station, and Thatcher Road. In the event that this plan's objectives are achieved, visitors will enter through the main entrance/ranger station where they can then choose to recreate at the existing trailhead and campground, or venture to one of the new recreational use areas that will be developed at Three Fingers Lake, Lake Heron, and Thatcher Road. Access to these new use areas will branch off north and south from the existing paved park road. When resource management objectives are realized in the western portion of the park, this area could provide excellent primitive experiences.

Visitor Experience Zones

The Visitor Experience Zones (VEZ) are a series of geographic designations that will help guide future land use and recreation management decision-making. These designations will shape the types of recreation opportunities offered within an area and help determine the contextual design of recreational facilities in each area. This allows DRP to improve communication with stakeholders by providing facility improvement and development guidelines based on five designations: urban, developed, natural, undeveloped, and wilderness. Only three designations (developed, natural, undeveloped) are used for Alafia River State Park. The VEZ designations established by DRP can help guide management of visitor use patterns, facility design and placement, and recreational carrying capacity, while also working to ensure a diversity of recreational opportunities and experiences. Management zones are used to delineate designations (see VEZ map).



Legend

Alafia River South Prong

Main Park Road

Existing Trails

Developed VEZ

Natural VEZ

Undeveloped VEZ

Developed

This is where the majority of conventional state park recreation activities are focused. The developed areas include the large majority of day-use and support areas within parks. Recreation infrastructure (including parking, roads, picnic areas, campgrounds) are paved and provide a standard level of visitor comfort associated with conventional day-use and overnight activities in a modified natural setting. Socialization within and outside one's group is typical, and the presence of other visitors is expected. The developed area is typically attractive for day-use by weekend visitors from nearby communities, campground users, and groups within a day's drive. This designation typically incorporates a primarily automobile-oriented site layout with substantial parking and meandering roads. There is an obvious and highly visible management presence with signage, restrooms, and trashcans throughout the visitor areas with groupings of support buildings including staff housing, shop buildings, and equipment storage separated from the main visitor use areas.

Natural

The natural designation is most often associated with a scenic transportation corridor such as a main park drive. It is the area between developed use areas and the more primitive experience associated with the undeveloped designation. The average park user will experience this setting from a vehicle travelling to a use area along a park road. Socialization with others outside one's group is not very important, although the presence of others is expected and tolerated. Most visitor activities are limited to passive day-use recreation opportunities including hiking, biking, paddling, and wildlife viewing. Other than paved park roads, the majority of park facilities under the natural designation, including trailheads and kayak launches, are unpaved in order to minimize impacts to natural resources. Occasional support facilities are found in the natural area. The natural area can enhance the overall visitor experience by facilitating the distinction and natural buffer from adjacent land uses.

Undeveloped

A sense of independence, freedom, tranquility, relaxation, appreciation of nature, testing of outdoor skills, and responsibility for resource stewardship is typical. The opportunity to experience a natural ecosystem with little human imprint, a sense of challenge, adventure, risk, self-reliance, and a feeling of solitude are all important characteristics of the undeveloped designation. This is where longer distance hiking trails and primitive camping opportunities are located. It is an area of limited development with any development utilizing permeable surfaces and prioritizing the minimization of human impact visually and physically to help create as austere and rustic of a visitor experience as is practical. There is little evidence of management presence with a leave-no-trace policy promoted. Park visitors in this area are likely to stay overnight in the park due to the time and effort needed to experience this level of solitude in a natural environment. With the exception of service roads and firebreaks, support facilities are rare to non-existent.

Recreation Management Program

Goal: Provide public access and recreational opportunities in the park.

The existing recreational activities and programs of this state park are appropriate to the natural and cultural resources contained in the park and should be continued. New and improved activities and programs are also recommended and discussed below.

Objective A: Expand the park's recreational carrying capacity by 344 users per day.

The park will continue to provide opportunities for camping, hiking, biking, horseback riding, paddling, and fishing. Interpretive signage and displays will continue to be offered.

At Alafia River State Park camping opportunities will be expanded with the addition of a campground, vacation cabins, and a primitive group camp. Boating will be

enhanced with improvements to the existing boat launch on the Alafia River and the addition of paddling launches on some of the park lakes and ponds. Nature study and wildlife observation will be enhanced with the addition of observation structures at the Campground and Main Day Use/Trailhead Area.

Objective B: Continue, improve, and develop new interpretive programs.

Three types of interpretive programs are currently offered to park visitors. These include a semi-regular camper coffee program during which rangers answer questions about the park or give more structured interpretive programs on various topics pertaining to the park. Visitors can also attend after-hours campfire programs with topics ranging from night-active wildlife to proper campfire cooking techniques. The park has also recently begun to offer guided night hikes and guided night rides for both equestrian and bicyclists, allowing visitors to experience the surrounding dark night skies and learn more about fascinating nocturnal wildlife common to the park.

The park is also host to many events ranging from bicycle and foot races and relays to mountain biking skill demonstrations, live music and learning opportunities, and the Fat Tire Festival, which is a multi-day mountain biking oriented festival with vendors, bike demos, skill drills and coordinated trail rides. These events attract clientele that that may not previously have visited the park and give visitors a sense of ownership of public lands, as well as providing learning opportunities.

The park plans to implement more programs in the future to appeal to user groups that are not currently attending interpretive programs and events. Events and programs that target school-aged children are being developed. The park's junior ranger program is currently not very active; plans are in place to develop more interpretive programming focused towards getting kids involved with the junior ranger program. Beginning by meeting with schools to plan field trips, the park will implement a regular schedule of junior ranger interpretive programs that give children the

opportunity to complete junior ranger activities and learn about various aspects of Florida's natural and cultural history.

Another new program that the park will develop is a fishing clinic to get kids and their parents out in the park and teach them the basics of environmentally minded fishing in Florida, including a basic overview of fishing regulations and aquatic animals found in the park. The park will work with other agencies, especially FWC, to get multiple perspectives on fishing in Florida and make these programs informative and successful.

Goal: Develop and maintain the capital facilities and infrastructure.

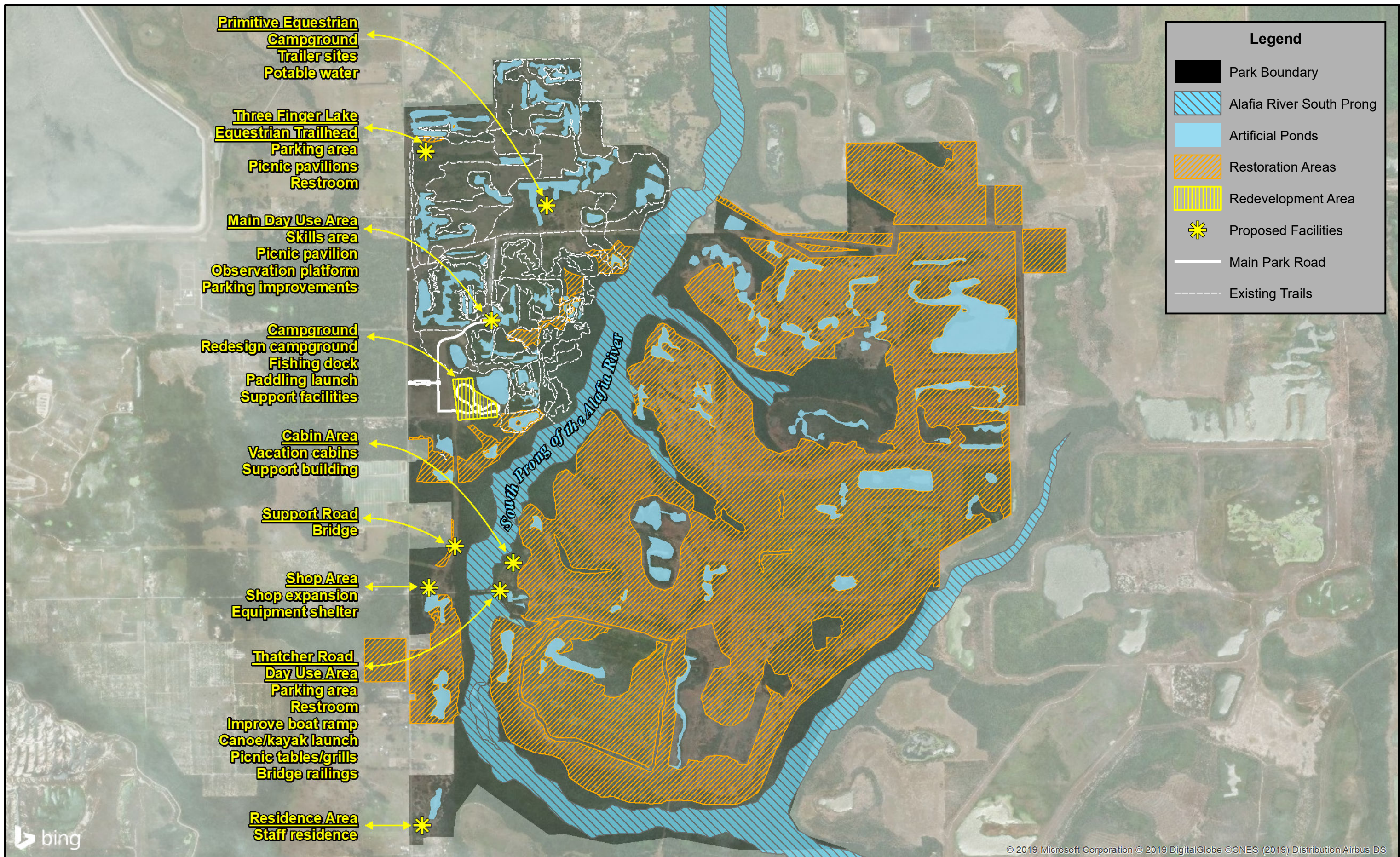
The existing facilities of this state park are appropriate to the natural and cultural resources contained in the park and should be maintained. New construction, as discussed further below, is recommended to improve the quality and safety of the recreational opportunities, to improve the protection of park resources, and to streamline the efficiency of park operations. The following is a summary of improved and new facilities needed to implement the conceptual land use plan for Alafia River State Park:

Objective A: Maintain all public and support facilities in the park.

All capital facilities, trails and roads within the park will be kept in proper condition through the daily or regular work of park staff and/or contracted help.

Objective B: Improve/repair 5 existing use areas.

Major repair projects for park facilities may be accomplished within the ten-year term of this management plan, if funding is made available. These include the modification of existing park facilities to bring them into compliance with the Americans with Disabilities Act (a top priority for all facilities maintained by DRP). The following discussion of other recommended improvements and repairs are organized by use area within the park.



Main Day Use/Trailhead Area

Recommended improvements for this area include the addition of two small picnic pavilions to provide more picnicking options. A bike skills area should be considered. The addition of an observation platform on the pond adjacent to the picnic area will enhance wildlife viewing opportunities. The improvement and expansion of the parking area is also recommended.

Campground Area

The existing campground should be redesigned to improve the configuration of the overnight use area and expand the number of sites. The addition of a fishing dock and paddling launch is proposed for the shoreline of Lake Alafia to enhance fishing and wildlife viewing opportunities for campers. A small equipment storage building is also recommended for this area.

Three Finger Lake Equestrian Trailhead

Due to highway noise, safety concerns, and operational issues, the current equestrian trailhead at the North Trailhead on County Road 39 area will be moved slightly interior of its current location and a road from the main park road will be developed to provide access from the main park entrance. The paddling, fishing, and picnicking uses currently provided at the North Trailhead Area will be reestablished on Three Finger Lake to enhance and improve the visitor experience. Amenities to be provided at this new picnic area include parking, restroom, small picnic pavilions, and scattered picnic tables.

Thatcher Road Day Use Area

This area provides the park's primary access to the South Prong of the Alafia River. Given its scenic location on the river, this area has the potential to become a very desirable day use area for fishing, picnicking, boating, and paddling. Proposed improvements include an improved boat ramp, a paddling launch, designated parking for 10-15 vehicles, a restroom, picnic tables and grills, and railing improvements on the old bridge for visitor safety. Due to safety and operational issues,

this area should be improved only with the closure of the Thatcher Road entrance and the establishment of a new stabilized park drive following the existing service road in the transmission line corridor. The intent is to have all park visitors come through the main gate.

Shop/Residence Area

The existing shop building should be enlarged with the addition of two more bays. A 4-bay pole barn for large equipment is also proposed for this area. An additional staff residence is needed.

Objective C: Construct 2 new use areas and 4.5 miles of road.

Primitive Equestrian Campground

A primitive equestrian campground should be developed to the south of Lake Heron in an area that does not disrupt the surrounding equestrian trails. This campground will be reserved for equestrian overnight use and reservations will be made through the park.

Cabin Area

Cabin camping opportunities will be provided to diversify the overnight experiences at this park. Up to six vacation style cabins are proposed to be constructed to the north of the proposed Thatcher Road Day Use Area on the east side of the South Prong of the Alafia River. A cabin support building should be provided in this area for maintenance purposes.

Parkwide

A park road will need to be extended from the Main Day Use Area to the proposed primitive equestrian campground. A road is also proposed from the new campground to the Three Finger Lake Equestrian Trailhead. One mile of road is also needed from the existing campground to the Shop Area and the proposed Thatcher Road Day Use Area.

Facilities Development

Preliminary cost estimates for these recommended facilities and improvements are provided in the Ten-Year Cost Estimates section of this plan. These cost estimates are based on the most cost-effective construction standards available at this time. The preliminary estimates are provided to assist DRP in budgeting future park improvements and may be revised as more information is collected through the planning and design processes. New facilities and improvements to existing facilities recommended by the plan include:

Main Day Use/Trailhead Area

- Bike skills area
- Small picnic pavilion (2)
- Observation platform
- Parking improvements/expansion

Campground Area

- Redesign campground
- Fishing dock
- Canoe/kayak launch
- Equipment storage building

Three Finger Lake Equestrian Trailhead

- Parking area
- Restroom
- Picnic pavilions (2)

Thatcher Road Day Use Area

- Parking area
- Restroom
- Bridge improvements
- Boat ramp improvements
- Canoe/kayak launch
- Picnic tables and grills

Primitive Equestrian Campground

- Trailer sites
- Potable water

Cabin Area

- Vacation cabins (6)
- Cabin support building

Shop/Residence Area

- Shop building expansion (add 2 bays)
- Equipment shelter (4 bay)
- Staff residence

Parkwide

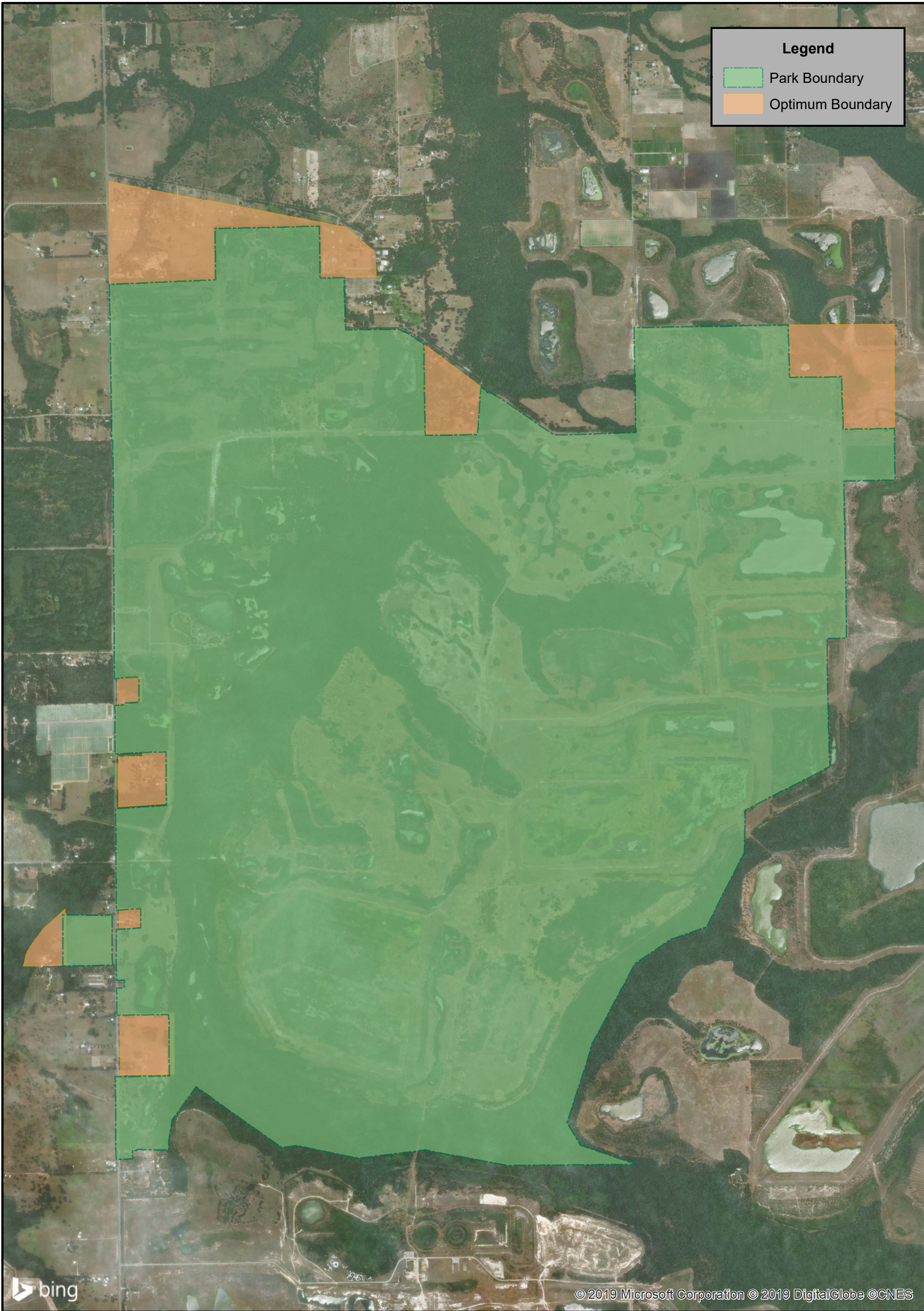
- Park road extensions
- Support road bridge

Optimum Boundary

The optimum boundary map reflects lands considered desirable for direct management by the DRP as part of the state park. These parcels may include public or privately-owned land that would improve the continuity of existing parklands, provide the most efficient boundary configuration, improve access to the park, provide additional natural and cultural resource protection or allow for future expansion of recreational activities. Parklands that are potentially surplus to the management needs of DRP are also identified. As additional needs are identified through park use, development, and research, and as land use changes on adjacent property, modification of the park's optimum boundary may be necessary.

Identification of parcels on the optimum boundary map is intended solely for planning purposes. It is not to be used in connection with any regulatory purposes. Any party or governmental entity should not use a property's identification on the optimum boundary map to reduce or restrict the lawful rights of private landowners. Identification on the map does not empower or suggest that any government entity should impose additional or more restrictive environmental land use or zoning regulations. Identification should not be used as the basis for permit denial or the imposition of permit conditions.

The optimum boundary for Alafia River State Park includes approximately 450 acres in areas along the park's northern and western boundary. The acquisition of these properties would serve to better protect the Alafia River corridor and improve overall park operations and management. The acquisition would also provide a greenway connection to Hillsborough County conservation lands to the north (See Optimum Boundary Map).



Legend

Park Boundary

Optimum Boundary



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ALAFIA RIVER STATE PARK

N

00.250.51 Miles

Florida Department of Environmental Protection
Division of Recreation and Parks
Date of aerial, 2016

OPTIMUM BOUNDARY MAP

Addendum 1 — Acquisition History

Alafia River State Park Acquisition History

LAND ACQUISITION HISTORY REPORT					
Park Name	Alafia River State Park				
Date Updated	5/10/2016				
County	Hillsborough County, Florida				
Trustees Lease Number	Lease No. 4168				
Legal Description	A legal description is available upon request to the Department of Environmental Protection				
Current Park Size	7,717.81 acres				
Purpose of Acquisition	The State of Florida acquired Alafia River State park to use it for public park and recreation.				
Acquisition History					
Parcel Name or Parcel DM-ID	Date Acquired	Initial Seller	Initial Purchaser	Size in acres	Instrument Type
MDID 301672	12/18/1996	Cytec Brewster Phosphates, Inc.	The Board of Trustees of the Internal Improvement Trust Fund of the State Florida (Trustees)	6,041.21	Trustee's Deed
MDID 10791	6/18/1996	Cytec Brewster Phosphates, Inc.	Trustees	39.949	Special Warranty Deed
MDID 11245	6/18/1996	Cytec Brewster Phosphates, Inc.	Trustees	19.559	Special Warranty Deed
Parcel Name or Lease Number	Date Leased	Initial Lessor	Initial Lessee	Current Term	Expiration Date
Lease No. 4168	1/23/1998	The Board of Trustees of the Internal Improvement Trust Fund of the State of Florida	The State of Florida Department of Environmental Protection, Division of Recreation and Parks	50 years	1/22/2048
Outstanding Issue	Type of Instrument	Brief Description of the Outstanding Issue		Term of the Outstanding Issue	
Reverter	Trustee's Deed	If said lands are not used for public and recreational purposes, the title will revert back to Cytec Brewster Phosphates, Inc.		Perpetuity	

Addendum 2 — References Cited

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Addendum 3 — Soil Descriptions

Alafia River State Park Soils Descriptions

Adamsville fine sand. [2, 1989]

The Adamsville series consists of deep, somewhat poorly drained soils. Adamsville fine sand soil is nearly level and poorly drained. The slope is less than 2 percent. These soils formed in sandy marine sediment. They are on broad ridges on the flatwoods. A seasonal high water table is at a depth of 20 to 40 inches for 2 to 6 months, and recedes to a depth of 60 inches during prolonged dry periods. Permeability is rapid. The available water capacity is low. These soils are hyperthermic, uncoated, Aquic Quartzipsamments.

Typically, this soil has a surface layer of very dark gray sand about 6 inches thick. The underlying material, to a depth of about 30 inches, is brown fine sand. Reaction ranges from very strongly acid to mildly alkaline throughout. Silt and clay make up less than 5 percent of the 10- to 40-inch control section. The texture is fine sand or sand. In most areas, this soil is used for improved pasture, citrus crops, or homesite or urban development. In a few areas, this soil is used for cultivated crops, or it is left in natural vegetation, which consists of bluejack oak, turkey oak, longleaf pine, and slash pine (mostly sandhill associations). The understory includes broomsedge bluestem, lopsided indiagrass, saw palmetto, and pineland threeawn.

Adamsville soils are closely associated on the landscape with Lochloosa, Pomello, Tavares and Zolfo soils. Lochloosa soils have an argillic horizon; Pomello and Zolfo soils have a spodic horizon. Pomello and Tavares soils are moderately well drained.

Archbold fine sand. [3, 1989]

The Archbold series consists of deep, moderately well-drained soils. These soils formed in sandy marine sediment. They are on low ridges on the flatwoods. The slope is less than 2 percent. In most years a seasonal high water table is at a depth of 42 to 60 inches for about 6 months; this recedes to a depth of 60 to 80 inches during prolonged dry periods. Permeability is rapid. The available water capacity is very low. These soils are hyperthermic, uncoated, Typic Quartzipsamments.

Typically, this soil has a surface layer of light gray fine sand about 2 inches thick. The underlying material is white fine sand to a depth of about 80 inches. In places, similar soils included in this mapping have a black or very dark brown subsoil. Other similar soils, in higher parts, are well drained. Reaction ranges from extremely acid to strongly acid throughout. Silt and clay make up less than 2 percent of the 10- to 40-inch control section.

In most areas, this soil has been left idle in "scrub" forest. A few areas are used for pasture or for homesite or urban development. The fine sand texture of the surface layer limits the use of equipment. The natural vegetation consists of sand pines. The understory includes pineland threeawn, pricklypear cactus, and saw palmetto.

This Archbold soil is in capability subclass VIs, in woodland group3S, and in the Sand Pine-Scrub Oak range site.

Arents, nearly level. [4, 1989]

This consists of nearly level, heterogeneous soil material. This material has been excavated, reworked and reshaped by earthmoving equipment. Arents are near urban centers, phosphate-mining operations, major highways and sanitary landfills.

Arents does not have an orderly sequence of soil layers. This map unit is not associated with or confined to a particular kind of soil. It is variable and contains discontinuous lenses, pockets or streaks of black, gray, grayish brown, brown or yellowish brown sandy or loamy fill material. The thickness of the fill material ranges from 30 to 80 inches or more. Also included are small areas of soil that has slope that ranges from 0 to 5 percent. Most soil properties are variable. The depth to the seasonal high water table varies with the amount of fill material and artificial drainage. Permeability and the available water capacity vary widely from one area to another. In most areas, the soil in the map unit has been left idle or is used for home sites, recreation and urban development. In a few areas, the soil is used for pasture. Where reclamation has been attempted, the overburden soils tend to be compacted from the heavy machinery used. Surface layers tend to become encrusted upon drying, preventing root penetration by young trees in the spring and fall dry seasons. Compaction further hinders water and root penetration. An individual assessment of each site is necessary to determine its potential for different uses. The soils in this map unit have not been assigned to a capability subclass, a woodland group, or range site.

Arents, very steep. [39, 1989]

This map unit consists of mounds of very steep, heterogenous soil material. These arents are the accumulation of material from phosphate mining operations. It is not associated with or confined to a particular kind of soil. Arents do not have an orderly sequence of soil layers. They are variable and contain discontinuous lenses, pockets or streaks of black, gray, grayish brown, brown or yellowish brown sandy or loamy excavated material. The thickness of the excavated material ranges from 3 to 15 feet or more. Included in this map unit are small areas of water. Most soil properties of Arents are variable. The depth to the seasonal high water table will vary with the amount of excavated material and artificial drainage. The permeability and the available water capacity vary widely from one area to another. Phosphate mining operations are inactive in most areas. Present land use and slope precludes the use of this map unit for cultivated crops, pasture, commercial trees, or building site development. An individual assessment of each site is necessary to determine its potential for different uses. The soils in the map unit have not been assigned to a capability subclass, to a woodland group, or to a range site.

Basinger, Holopaw and Samsula, depressional. [5, 1989]

The Basinger series consists of deep, very poorly drained soils. These soils formed in sandy marine sediment. They are in swamps and depressions and along drainages in the flatwoods, along the exterior of swamps or in shallow

Alafia River State Park Soils Descriptions

depressions. A seasonal high water table is within 10 inches of the surface. The slope is less than 2 percent. These soils are siliceous, hyperthermic Spodic Psammaquents. Basinger soils are closely associated on the landscape with Holopaw, Myakka, Ona and Samsula. Holopaw soils have an argillic horizon. Myakka and Ona soils have a spodic horizon and are poorly drained. Samsula soils are organic. Reaction ranges from extremely acid to neutral throughout. Typically, the texture of the A horizon is fine sand, but the range includes muck or mucky fine sand. In Hillsborough county, often associated with cutthroat grass communities.

Candler fine sand, 0 to 5 percent slopes. [7, 1989]

The Candler series consists of deep, excessively drained soils. These soils formed in sandy marine sediment. They are on the uplands. The slope ranges from 0 to 12 percent. A seasonal water table is at a depth of more than 80 inches. Permeability is rapid. The available water capacity is very low. These soils are hyperthermic, uncoated Typic Quartzipsamments.

Typically, this soil has a surface layer of dark gray fine sand about 6 inches thick. Light yellowish brown fine sand is in the subsurface layer, to a depth of about 35 inches. Generally, the solum goes to 80 inches, consisting of fine sand, single grained, and few fine and medium roots. Reaction ranges from very strongly acid to medium acid throughout.

In most areas, this Candler soil is used for citrus crops. In a few areas, it is used for pasture or for homesite or urban development. The natural vegetation consists of bluejack oak, Chapman oak, scrub live oak, and turkey oak. The understory includes indiagrass, hairy panicum, panicum, and running oak.

This soil is moderately suited to pasture. The very low available water capacity limits the production of plants during extended dry periods. Proper stocking, pasture rotation, and timely deferment of grazing help keep the pasture in good condition.

The main management concerns for producing and harvesting timber are seedling mortality and equipment use limitations. The fine sand texture of the surface layer limits the use of equipment.

Candler soil is in capability subclass Vls, in woodland group 8S, and in the Longleaf Pine-Turkey Oak Hills range (mostly sandhill associations). These soils are closely associated on the landscape with Kendrick, Millhopper and Tavares soils. (Kendrick and Millhopper soils have an argillic horizon. Tavares soils are moderately well-drained.)

Felda fine sand, 0 to 5 % slopes. [16, 1989]

This soil is nearly level and poorly drained. It is on low terraces of major rivers and streams. It is flooded for very long periods following prolonged intense rains. The slope is 0 to 2 percent.

Alafia River State Park Soils Descriptions

Typically, this soil has a surface layer of dark gray fine sand about 6 inches thick. The upper part of the subsurface layer, to a depth of about 12 inches, is grayish brown fine sand. The lower part, to a depth of about 22 inches, is light gray, mottled fine sand. The subsoil, to a depth of about 38 inches, is gray, mottled sandy clay loam. The substratum to a depth of about 80 inches is light brownish gray, mottled loamy sand.

In most years, a seasonal high water table fluctuates from the soil surface to a depth of about 10 inches for 2 to 6 months. Permeability is rapid in the surface and subsurface layers and is moderate to moderately rapid in the subsoil. The available water capacity is moderate.

In most areas, this Felda soil has been left idle in natural vegetation. In a few areas, it is used for pasture. The natural vegetation consists of red maple, cabbage palm, slash pine, and sweetgum. The understory includes saw palmetto, pineland threeawn, and waxmyrtle.

This Felda soil is in capability subclass IVw, in woodland group 10W, and in the Freshwater Marshes and Ponds range site. Reaction ranges from strongly acid to mildly alkaline in the A horizon and from slightly acid to moderately alkaline in the E, Bt, and C horizons.

Fort Meade loamy fine sand, 0 to 5 percent slopes. [18, 1989]

The Fort Meade series consists of deep, well-drained to excessively drained soils. These soils formed in sandy marine sediment. They are in the uplands. A seasonal high water table is at a depth of more than 72 inches. Permeability is rapid. The available water capacity is very low. The slope is nearly level to gently sloping, ranging from 0 to 5 percent. These soils are sandy siliceous, hyperthermic Quartzipsammentic Haplumbrepts.

Reaction ranges from strongly acid to neutral in the A horizon, and from very strongly acid to medium acid in the C horizon. Typically, surface layer is about 26 inc thick. The upper 7 inc is very dark gray loamy fine sand. The lower 19 inc is very dark grayish brown loamy sand. Underlying material is yellowish brown loamy sand to a depth of about 58 inches, and light yellowish brown loamy sand to 80 inches.

In most areas, Fort Meade soil is used for citrus or cultivated crops, or pasture. This soil may be suited to pasture if proper stocking, pasture rotations, and timely deferment of grazing are applied. The potential of this soil for production of slash pines is moderately high; the low to moderate available water capacity generally influences seedling survival in areas where understory plants are numerous. The natural vegetation consists of bluejack oak, live oak, turkey oak and slash pine(usually sandhill associations). The understory includes lopsided indiagrass, panicum, and pineland threeawn.

This Fort Meade soil is in capability subclass IIIs, in woodland group 10S, and in the Upland Hardwood Hammocks range site.

Alafia River State Park Soils Descriptions

Immokalee fine sand. [21, 1989]

This soil is nearly level and poorly drained. It is on broad plains on the flatwoods. The slope is 0 to 2 percent. Typically, this soil has a surface layer of very dark gray fine sand about 8 inches thick. The subsurface layer, to a depth of 36 inches, is light gray fine sand. The upper part of the subsoil, to a depth of about 46 inches, is black fine sand. The middle part, to a depth of about 52 inches, is dark reddish brown fine sand. The lower part to a depth of about 80 inches is dark brown fine sand.

In most years, a seasonal high water table fluctuates from the soil surface to a depth of 10 inches for more than 2 months and recedes to a depth of 10 to 40 inches for 8 months or more. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil. The available water capacity is low.

In most areas, this Immokalee soil is used for native pasture. In a few areas, it is used for cultivated crops, improved pasture, or citrus crops or for homesite or urban development. The natural vegetation consists of longleaf pine and slash pine. The understory includes creeping bluestem, lopsided indiagrass, saw palmetto, pineland threeawn, and wax myrtle (usually mesic flatwoods associations).

The potential of this soil for the production of slash pines moderate. Equipment use limitations and seedling mortality are the main limitations. Planting and harvesting operations should be scheduled during dry periods. Water-tolerant trees should be planted. Bedding of rows helps to minimize the excessive wetness limitations.

This Immokalee soil is in capability subclass IVw, in woodland group 8W, and in the South Florida Flatwoods range site. Reaction ranges from extremely acid to medium acid throughout.

Lake fine sand, 0 to 5% slopes. [25, 1989]

This soil is nearly level to gently sloping and excessively drained. Typically, this soil has a surface layer of dark grayish brown fine sand about 4 inches thick. The underlying material extends to a depth of about 80 inches. The upper 24 inches is strong brown fine sand. The next 40 inches is reddish yellow fine sand. The lower 12 inches is strong brown fine sand.

A seasonal high water table is at a depth of more than 80 inches. Permeability is rapid. The available water capacity is very low or low.

In most areas, this Lake soil is used for citrus crops. The natural vegetation consists of bluejack oak, Chapman oak, scrub oak, live oak, and turkey oak. The understory includes lopsided indiagrass, running oak, and pineland threeawn.

Alafia River State Park Soils Descriptions

This soil is moderately suited to pasture. The very low or low available water capacity of the soil limits production of plants during extended dry periods. Proper stocking, pasture rotation, and timely deferment of grazing help keep the pasture in good condition. The potential of this soil for the production of slash pines is moderately high. The main management concerns are the equipment use limitations and seedling mortality.

This Lake soil is in capability subclass IVs, in woodland group 10S, and in the Longleaf Pine-Turkey Oak Hills range site. Reaction is very strongly acid or strongly acid throughout.

Leon fine sand. [Ls, 1918]

Leon fine sand consists of a light-gray, fine-textured sand, grading within a few inches into a lighter colored fine sand. This type is characterized by a dark-brown layer, locally called a "hard-pan" consisting of organic matter mixed with fine sand and some iron compounds. This hardpan layer ranges from 6-15 inches in thickness and is encountered within the 3-ft section, usually at a depth of 15-20 inches. It is underlain by a yellowish fine sand, which becomes lighter in color with depth, grading finally into white, compact fine sand. The color of the surface soil is affected by even slight differences in elevation and drainage, and in some of the lower lying positions it is dark gray to almost black owing to the accumulation of organic matter. Leon fine sand is one of the most widely distributed and extensive soil types in the county and is the principal flatwoods type. It is most extensive in the low flatwoods surrounding the bay shores and extending several miles inland. Large areas also occur in the northern and southern parts of the county. The elevation of the type ranges from a few inches or a few feet above sea level near the bay to considerably more in the interior of the county. The surface is generally flat, with numerous depressions of varying size. In the southern part of the county the depressions consist of shallow, grassy ponds, and in the northern part of cypress ponds. Except where the larger streams pass through the type, the surface drainage is carried by intermittent streams or slough-like depressions. The flat surface hinders the run-off and more or less impervious hardpan retards percolation, consequently during wet spells water stands on the surface for a time. In dry seasons, the soil becomes very dry as the hardpan prevents the upward movement of moisture from the substratum. As a rule, without artificial drainage and irrigation, crops are uncertain.

Most of the type support a typical flatwoods growth of longleaf pine, scrub saw palmetto, wiregrass and broomsedge. The undergrowth includes some huckleberry and gallberry bushes and shrubby oaks. The pine trees as a rule are rather sparse and of small size. The scrub saw palmetto is small. The main use of the type is for turpentine collection and as a range for live stock. It affords good grazing, especially in the spring.

Malabar fine sand [27, 1989]

This soil is nearly level and poorly drained. It is in low-lying sloughs and shallow depressions on the flatwoods. The slope is 0 to 2 percent.

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Typically, this soil has a surface layer of dark gray fine sand about 4 inches thick. The subsurface layer, to a depth of about 12 inches, is light brownish gray fine sand. The upper part of the subsoil, to a depth of about 30 inches, is brownish yellow fine sand. The next layer, to a depth of about 50 inches, is pale brown fine sand. The lower part, to a depth of about 66 inches, is gray, mottled fine sandy loam. The substratum to a depth of about 80 inches is grayish brown fine sand.

In most years, a seasonal high water table fluctuates from the soil surface to a depth of about 10 inches for 2 to 6 months. Permeability is rapid in the surface and subsurface layers, slow in the subsoil, and moderately rapid or rapid in the substratum. The available water capacity is very low or low. The depressions are subject to shallow flooding during heavy rains.

In most areas, this Malabar soil has been left idle in native vegetation. In some areas, the soil has been drained and is used for cultivated crops or pasture or for homesite or urban development. The natural vegetation consists of cabbage palm, longleaf pine, and slash pine. The understory includes broomsedge, bluestem, inkberry, maidencane, saw palmetto, and waxmyrtle.

The potential of this soil for the production of slash pines is moderately high. Seedling mortality and the equipment use limitation are the main limitations. Water-tolerant trees should be planted. Planting and harvesting operations should be scheduled during dry periods. Bedding of rows helps to minimize the excessive wetness limitation. Wetness limits the use of equipment.

This Malabar soil is in capability subclass IVw, in woodland group 10W, and in the Slough range site. Reaction ranges from strongly acid to moderately alkaline throughout.

Myakka fine sand [29, 1989]

This soil is nearly level and poorly drained. It is on broad plains on the flatwoods. The slope is 0 to 2 percent. Typically, this soil has a surface layer of very dark gray fine sand about 5 inches thick. The subsurface layer, to a depth of about 20 inches, is gray fine sand. The upper part of the subsoil, to a depth of about 25 inches, is black fine sand. The middle part, to a depth of 30 inches, is dark reddish brown fine sand. The lower part, to a depth of about 38 inches, is brownish yellow fine sand. The upper part of the substratum, to a depth of about 55 inches, is very pale brown fine sand. The lower part to a depth of about 80 inches is dark grayish brown fine sand.

In most years, a seasonal high water table fluctuates from the soil surface to a depth of 10 inches for 1 to 4 months and recedes to a depth of 40 inches during prolonged dry periods. Permeability is rapid in the surface and subsurface layers, moderate or moderately rapid in the subsoil, and rapid in the substratum. The available water capacity is low.

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In most areas, this Myakka soil is used for native pasture or cultivated crops. In a few areas, it is used for improved pasture or citrus crops, or it is used for homesite or urban development. The natural vegetation consists of longleaf pine and slash pine. The understory includes gallberry, running oak, saw palmetto, pineland threeawn and waxmyrtle (usually mesic flatwoods associations).

The potential of this soil for the production of slash pines is moderate. The management concerns for producing and harvesting timber are the equipment use limitations and seedling mortality.

This Myakka soil is in capability subclass IVw, in woodland group 8W, and in the South Florida Flatwoods range site. Reaction ranges from extremely acid to slightly acid.

Norfolk fine sand (with hammock and scrub phases). **[Ns, 1918]**

Norfolk fine sand consists of light-gray to yellow-gray fine sand, about 6 inches deep, grading into a pale-yellow to bright-yellow fine sand, which extends to a depth of more than 3 feet. In some of the lower lying spots the surface soil is darker gray in color to a depth of about 12 inches and in some of the flatter areas both soil and subsoil are lighter colored than usual. The material is slightly coherent when moist, but is loose and incoherent when dry. The texture is uniform. Norfolk is one of the most extensive soils in Hillsborough county, and occupies the greater part of the uplands, main in an almost continuous belt several miles wide extending through the central part of the county in a NW – SE direction.

The topography is undulating, with ridges and hummocks, and occasionally gently undulating to nearly flat areas. The surface is marked by numerous depressions or sink holes, some of which are occupied by ponds and lakes. The topography is generally favorable to cultivation. Drainage is excessive, the loose, porous structure of the type permitting rain water to percolate rapidly to lower levels. Seepage places or springs are numerous at the foot of the slopes to the flatwoods and along the banks of streams. Crops are apt to suffer from lack of moisture even in ordinary dry periods.

The forest growth consists mainly of longleaf pine and forked-leaf blackjack, turkey and water oak, with some live oak; scattering of saw palmetto. Parts of the type support an open forest of longleaf pine. The surface usually is covered with wiregrass and generally fits today's description of a sandhill mosaic; when the pine is removed, blackjack oak and turkey oak spread over the land.

Norfolk fine sand, scrub phase, supports a scrub growth similar to that of the St. Lucie fine sand, with scrub live oak, a shrub known as "rosemary" and some saw palmetto. Wiregrass is lacking. The surface soil to a depth of an inch or two is gray to brownish-gray fine sand, which extends to great depths with no essential difference between the lower stratum of the soil and the subsoil. The material is loose and incoherent. There are a few areas in the central part of the county and two along the Alafia River. The latter support a

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mixed scrub and hammock vegetation. The phase is excessively drained and droughty, moisture passing through it rapidly to lower levels.

Norfolk fine sand, hammock phase, soil material consists of a slightly loamy fine sand, dark gray or brownish gray to light gray to a depth of 6-10 inches and pale yellow or amber yellow below. The surface soil in cultivated soils frequently has a brownish tinge, approaching the color of Gainesville fine sand. It is probably that a substratum of clay, limestone or hardpan occurs at no great depth. This phase occurs in scattered areas associated with the main type bordering lakes and streams through the uplands. It lies at elevations ranging from 1ft to 20 ft above water level. The natural drainage is good. Owing to the proximity of the phase to bodies of water and its slight elevation, the permanent water-table is not far below the 3-ft soil section. Uncleared areas support a heavy hammock growth consisting mainly of live oak, hickory and magnolia, with some Sabal, longleaf pine and other trees, and usually have a rather thick undergrowth of shrubs.

Orlando fine, 0 to 5 % slopes. [35, 1989]

This soil is nearly level to gently sloping and well drained. It is on the uplands. Typically, this soil has a surface layer that is about 20 inches thick. The upper 8 inches is black fine sand. The lower 12 inches is very dark gray fine sand. The next layer, to a depth of about 22 inches, is dark grayish brown fine sand. The upper part of the underlying material, to a depth of about 60 inches, is yellowish brown fine sand. The lower part to a depth of about 80 inches is pale brown fine sand.

A seasonal high water table is below a depth of more than 72 inches. Permeability is rapid. The available water capacity is low.

In most areas, this Orlando soil is used for cultivated crops or citrus crops. In a few areas, it is used for pasture or for homesite or urban development. The natural vegetation consists of bluejack oak, live oak, turkey oak, and slash pine. The understory includes panicums, saw palmetto, and pineland threeawn.

The potential of this soil for the production of slash pine trees is moderately high. This soil has few limitations for woodland use and management. The low available water capacity adversely affects seedling survival in areas where understory plants are numerous. After harvesting, reforestation must be carefully managed to reduce competition from undesirable understory plants.

This Orlando soil is in capability subclass IIIs, in woodland group 10S, and in the Longleaf Pine-Turkey Oak Hills range site. Reaction ranges from very strongly acid to slightly acid in the A horizon and from very strongly acid to medium acid in the C horizon.

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Orsino fine, 0 to 5 % slopes. [36, 1989]

This soil is nearly level to gently sloping and moderately well drained. It is on the uplands and along slope breaks to stream channels.

Typically, this soil has a surface layer of gray fine sand about 2 inches thick. The upper part of the subsurface layer, to a depth of about 15 inches, is light gray fine sand. The lower part, to a depth of about 31 inches, is white fine sand. The upper part of the subsoil, to a depth of about 48 inches, is brownish yellow and very dark grayish brown fine sand. The lower part, to a depth of 72 inches, is yellow, mottled fine sand. The substratum to a depth of about 80 inches is pale brown fine sand.

In most years, a seasonal high water table is at a depth of 40 to 60 inches for more than 6 months and recedes to a depth of more than 60 inches during prolonged dry periods. Permeability is very rapid. The available water capacity is low or very low.

In most areas, this Orsino soil is used for pasture. In a few areas, it is used for homesite or urban development or is left in natural vegetation. The natural vegetation consists of turkey oak, sand pine, and slash pine. The understory includes sand heath, pineland threeawn, saw palmetto, and pricklypear cactus.

This Orsino soil is in capability subclass IVs, in woodland group 8S, and in the Sand Pine Scrub range site. Reaction ranges from extremely acid to medium acid throughout.

Pomello fine sand, 0 to 5 % slopes. [41, 1989]

This soil is nearly level to gently sloping and moderately well drained. It is on low ridges on the flatwoods. Typically, this soil has a surface layer of very dark gray fine sand about 3 inches thick. The subsurface layer, to a depth of about 43 inches is light gray fine sand. The upper part of the subsoil, to a depth of about 46 inches, is dark brown fine sand. The lower part, to a depth of about 55 inches, is brown fine sand. The substratum to a depth of about 80 inches is grayish brown fine sand. Similar soils included in mapping, in some places, have a subsoil within 30 inches of the surface.

In most years, a seasonal high water table is at a depth of 24 to 40 inches for 1 to 4 months and recedes to a depth of 40 to 60 inches during dry periods. Permeability is very rapid in the surface and subsurface layers, moderately rapid in the subsoil, and rapid in the substratum. The available water capacity is very low.

In most areas, this Pomello soil is used for native pasture. The natural vegetation consists of longleaf pine, sand pine and slash pine. The understory includes creeping bluestem, lopsided indiagrass, running oak, saw palmetto and pineland threeawn. This soil is poorly suited to pasture.

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The potential of this soil for the production of sand pines and slash pines is moderate. The main management concerns for producing and harvesting timber are the equipment use limitations and seedling mortality.

This Pomello soil is in capability subclass VI_s, in woodland group 8S, and in the Sand Pine Scrub range site. Reaction ranges from very strongly acid to medium acid throughout.

Portsmouth fine sand (Hammock and prairie phase). [Ps, 1918]

The surface soil of the Portsmouth fine sand consists of a black fine sand 4-12 inches deep, containing a high percentage of organic matter – enough in places to give it a mucky texture. This is underlain, as a rule, by light-gray to nearly white fine sand. Within 3 ft of the surface, usually between 12 and 24 inches, there is a compact stratum of brown or black fine sand containing considerable organic matter and iron compounds and resembling a hardpan. Below this compact layer the material consists of a brownish-yellow or dark-gray to nearly white, compact, water-soaked in sand extending to considerable depth. The hardpan layer may occur at any depth within the 3-foot section. In places it directly underlies the dark surface soil and in others it lies below the 3-ft section. This soil occurs throughout the flatwoods section of the county, being most extensive in the southern and eastern parts. It is typically a flatwoods soil and is associated with the Leon fine sand, occupying the lower and more poorly drained positions. It is also associated with Scranton fine sand in the eastern part of the county, where it occupies lower slopes. The areas in the flatwoods have an almost perfectly flat and level surface. The type frequently occurs in strips around ponds and lakes and along streams or related stream depressions. Owing to the flat surface, the drainage is poor. Water stands on the surface after rains and is removed very slowly by lateral seepage and evaporation. The soil is dry during short periods, and as the hardpan substratum prevents the rise of capillary water, crops are likely to suffer for lack of moisture at times. The larger part of this type is not cleared (in 1916) and supports a growth of longleaf pine, saw palmetto, gallberry, and broomsedge, with some wiregrass in the higher areas. Pine and saw palmetto attain a larger size than on the Leon fine sand. Gallberry is a characteristic growth and the type is locally referred to as “gallberry flatwoods.” It constitutes some of the best natural grazing land in the flatwoods.

Portsmouth fine sand, hammock phase, consists of a black, more or less mucky fine sand, 8-12 inches deep, underlain by a gray, compact fine sand which becomes lighter in color with depth. In places, a compact stratum resembling hardpan is encountered an inch or two below the surface. This phase is not extensive and is developed mainly in the eastern and central parts of the county. It occurs as narrow areas along stream depressions or along small streams. The drainage is naturally poor. It supports a hammock growth consisting mainly of oak, magnolia, bay and cabbage palm with some pine and an undergrowth of shrubs.

Seffner fine sand. [47, 1989]

This soil is nearly level and somewhat poorly drained. It is on the rims of depressions and on broad, low ridges on the flatwoods. The slope is 0 to 2 percent.

per 9 inches is very dark gray fine sand, and the lower 4 inches is very dark gray, mottled fine sand. A transitional layer, to a depth of about 21 inches, is dark gray, mottled fine sand. The upper part of the underlying material, to a depth of about 35 inches, is very pale brown, mottled fine sand. The middle part, to a depth of about 63 inches, is light gray, mottled fine sand. The lower part to a depth of 80 inches is white, mottled fine sand.

In most years, a seasonal high water table is at a depth of 20 to 40 inches for 2 to 6 months and recedes to a depth of less than 60 inches during prolonged dry periods. Permeability is rapid. The available water capacity is low or moderate.

In most areas, this Seffner soil is used for cultivated crops or pasture or for homesite and urban development. In a few areas, it is used for citrus crops or has been left idle in natural vegetation. The natural vegetation consists of longleaf pine, slash pine, and laurel oak. The understory includes creeping bluestem, grassleaf goldaster, lopsided indiagrass, saw palmetto, and pineland threeawn.

This Seffner soil is in capability subclass IIIw, in woodland group 10W, and in the Oak Hammocks range site. The texture is sand or fine sand to a depth of 80 inches or more. Reaction ranges from very strongly acid to neutral throughout.

Slickens. [50, 1989]

This miscellaneous area consists of level, very poorly drained accumulations of fine-textured material from phosphate mining operations. Slickens generally are confined in specially constructed basins or holding ponds. The basins are designed to allow water to flow through a series of holding ponds and allow the slickens to settle out. These areas are ponded for very long periods. The slope is less than 1 percent.

Slickens do not have an orderly sequence of soil layers. Typically, the slickens are gray or light gray and have mottles in various hues, values and chromas. Slickens are clayey and contain about 88 percent clay, 8 percent silt, and 4 percent sand. The clay mainly is montmorillonite but includes kaolinite, illite and attapulgite. The clayey material is fluid or very fluid throughout except, in some places, the upper few inches are firm.

In most years, undrained areas are ponded except during extended dry periods. A seasonal high water table fluctuates from the soil surface to a depth of about 10 inches. Permeability is very slow. The available water capacity is high.

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Most areas in this map unit have been left idle. Slickens generally do not support vegetation. They also are too soft and boggy to support livestock. Slickens are not suited to cultivated crops, pasture or commercial trees. An individual assessment of each site is necessary to determine its potential for different uses.

The soils in this unit have not been assigned to a capability subclass, to a woodland group or to a range site.

Smyrna fine sand. [52, 1989]

This soil is nearly level and poorly drained. It is on broad, low-lying, convex swells on the flatwoods. The slope is 0 to 2 percent. Typically, the soil has a surface layer of very dark gray fine sand about 4 inches thick. The subsurface layer, to a depth of about 12 inches, is gray fine sand. The upper part of the subsoil, to a depth of about 15 inches, is dark brown fine sand. The lower part, to a depth of about 20 inches, is very dark grayish brown fine sand. The upper part of the substratum, to a depth of about 45 inches, is light brownish gray, mottled fine sand. The lower part to a depth of about 80 inches is brown fine sand. Similar soils included in mapping, in some areas, have a surface layer that is more than 8 inches thick.

In most years, a seasonal high water table fluctuates from the soil surface to a depth of 10 inches for more than 2 months and recedes to a depth of 10 to 40 inches for 6 months or more. Permeability is rapid in the surface and subsurface layers, moderate or moderately rapid in the subsoil, and rapid in the substratum. The available water capacity is low.

In most areas, this Smyrna soil is used for native pasture. The natural vegetation consists of longleaf pine and slash pine. The understory includes gallberry, running oak, saw palmetto, pineland threeawn and waxmyrtle.

The potential of this soil for the production of slash pines is moderately high. Equipment use limitations and seedling mortality are the main limitations. Water-tolerant trees should be planted. Planting and harvesting operations should be scheduled during dry periods. Bedding of rows helps to minimize the excessive wetness limitation.

This Smyrna soil is in capability subclass IVw, in woodland group 10W, and in the South Florida Flatwoods range site. The combined thickness of the A and E horizons is less than 20 inches. Reaction ranges from extremely acid to neutral in the A, E, and Bh horizons except where limed and is very strongly acid or strongly acid in the C horizon.

St. Johns fine sand. [46, 1989]

This soil is nearly level and poorly drained. It is on low-lying plains on the flatwoods. The slope is 0 to 2 percent. Typically, the upper part of the surface layer is black fine sand about 6 inches thick. The lower part, to a depth of about 12 inches, is very dark grayish brown fine sand. The subsurface layer,

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to a depth of about 29 inches, is light brownish gray fine sand. The upper part of the subsoil, to a depth of about 36 inches, is black fine sand. The middle part, to a depth of about 46 inches, is dark reddish brown fine sand. The lower part, to a depth of about 50 inches, is dark yellowish brown fine sand. The substratum to a depth of about 80 inches is light brownish gray fine sand.

In most years, a seasonal high water table fluctuates from the soil surface to a depth of 15 inches for 2 to 6 months and recedes to a depth of 15 to 30 inches during prolonged dry periods. Permeability is rapid in the surface and subsurface layers, moderately slow or moderate in the subsoil, and rapid in the substratum. The available water capacity is moderate. In most areas, this St. Johns soil is used for native pasture.

The natural vegetation consists of longleaf pine and slash pine. The understory includes gallberry, running oak, saw palmetto, pineland threeawn and waxmyrtle.

The potential of this soil for the production of slash pines is moderately high. Equipment use limitations and seedling mortality are the main limitations.

This St. Johns soil is in capability subclass IIIw, in woodland group 10W, and in the South Florida Flatwoods range site. Reaction ranges from extremely acid to strongly acid throughout.

St. Lucie fine sand (including Flatwoods phase). Ss, 1918]

St. Lucie sand consists of a light-gray to nearly white fine sand of considerable depth. The immediate surface may be slightly grayish, owing to the presence of a small percentage of organic matter. Where the type merges into Leon fine sand and in flat areas, the hardpan typical of the Leon series may be encountered within or just below the 3-foot section, more often below. In places at relatively high elevations an orange-yellow sand underlies the type and occasionally it is encountered within 36 inches of the surface. A characteristic of the type is the glittering white appearance of the surface when dry and the soil is called locally "white sand." It occurs in a number of areas ranging in size from a few acres to a square mile or more throughout the central and southern parts of the county. The topography prevails with ridges and hummocks; the ridges usually being smooth and rounded. The natural drainage is excessive, the loose sandy character of the material permitting the rapid percolation of water. The soil is droughty, as indicated by the vegetation it supports. It is of no importance agriculturally, though on the east side of Florida this soil is used for growing pineapples. The forest growth is in marked contrast to that of other soils of the county, consisting mainly of spruce pine [??], with an undergrowth of scrub evergreen oak, rosemary, and saw palmetto. There is a sparse growth of wiregrass. The type is sometimes referred to as "scrub."

St. Lucie fine sand, flatwoods phase. This is identical with that of the main type except that a hardpan layer similar to that underlying the Leon fine sand is usually encountered at a depth of 40 to 60 inches, and occasionally with the

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3-foot section. The phase represents a near approach to Leon fine sand. The phase is not extensive. It occurs in the southern and south-central parts of the county, closely associated with the St. Lucie and Leon fine sands. The surface is flat to slightly ridges, lying somewhat higher than the typical flatwoods. The phase has good to excessive drainage, but is not quite so droughty as the typical soil. The native vegetation is similar to that on the Leon fine sand, consisting mainly of longleaf pine with an undergrowth of dwarf saw palmetto and a cover of wiregrass and broomsedge. There are a few scattered clumps of scrub evergreen oak, which occasionally reach tree size. The longleaf pine growth is rather sparse but the trees are usually larger than on Leon fine sand.

Tavares-Millhopper fine sands, 0 to 5% slope. [53, 1989]

The soils in this map unit are nearly level to gently sloping and moderately well drained. They are in low-lying areas on the uplands and on low ridges on the flatwoods. Typically, the surface layer of the Tavares soil is dark grayish brown fine sand about 6 inches thick. The upper part of the underlying material, to a depth of about 32 inches, is pale brown fine sand. The middle part, to a depth of about 40 inches, is very pale brown fine sand. The lower part to a depth of about 80 inches is light gray fine sand.

Typically, the surface layer of the Millhopper soil is dark gray fine sand about 4 inches thick. The upper part of the subsurface layer, to a depth of about 9 inches, is brown fine sand. The next layer, to a depth of about 25 inches, is light yellowish brown fine sand. The next layer, to a depth of about 48 inches, is light gray, mottled fine sand. The lower part, to a depth of about 57 inches, is light gray fine sand. The upper part of the subsoil, to a depth of about 62 inches, is very pale brown, mottled sandy clay loam. The lower part to a depth of about 80 inches is gray, mottled sandy clay loam.

Tavares soil has a seasonal high water table at a depth of 40 to 80 inches for more than 6 months, and it recedes to a depth of more than 80 inches during prolonged dry periods. Millhopper soil has a seasonal high water table at a depth of 40 to 60 inches for 1 to 4 months, and it recedes to a depth of 60 to 72 inches for 2 to 4 months. Permeability of Tavares soil is rapid. Permeability of Millhopper soil is rapid in the surface and subsurface layers and moderate in the subsoil. The available water capacity is very low in Tavares soil and low in Millhopper soil.

In most areas, the soils in this map unit are used for pasture or homesite and urban development. In a few areas, they are used for cultivated crops or citrus crops or are left in natural vegetation. The natural vegetation consists of bluejack oak, turkey oak, live oak, and longleaf pine. The understory includes creeping bluestem, lopsided indiagrass, panicums and pineland threeawn.

The soils in this map unit are well suited to pasture. The very low or low available water capacity of the soils limits production of plants during extended dry periods. Proper stocking, pasture rotation and timely deferment of grazing help keep the pasture in good condition.

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The potential of these soils for the production of slash pines is moderately high. The main management concerns for producing and harvesting timber are the equipment use limitations and seedling mortality. The fine sand texture of the surface layer limits the use of equipment. The very low or low available water capacity adversely affects seedling survival in areas where understory plants are numerous.

The soils in this map unit are in capability subclass IIIs, in woodland group 10S, and in the Longleaf Pine-Turkey Oak Hills range site. Soil reaction ranges from extremely acid to medium acid throughout. Silt and clay totals 5 percent or less between depths of 10 and 40 inches.

Winder fine sand, frequently flooded. [60, 1989]

This soil is nearly level and poorly drained. It is on the flood plains. This soil is flooded for very long periods following prolonged intense rain. Many areas are isolated by stream channels and steep escarpments. The slope is 0 to 2 percent.

Typically, this soil has a surface layer of black fine sand about 5 inches thick. The subsurface layer, to a depth of about 14 inches, is grayish brown fine sand. The upper part of the subsoil, to a depth of about 18 inches, is gray sandy clay loam and white fine sand. The lower part of the subsoil, to a depth of about 34 inches, is grayish brown, mottled sandy clay loam. The substratum, to a depth of about 80 inches, is light brownish gray fine sand.

In most years, a seasonal high water table fluctuates from the soil surface to a depth of about 10 inches for 2 to 6 months. Permeability is rapid in the surface and subsurface layers, slow or very slow in the subsoil, and rapid in the substratum. The available water capacity is moderate.

In most areas, this Winder soil has been left idle in natural vegetation. In a few areas, it is used as pasture. The natural vegetation consists of Coastal Plain willow, red maple, cabbage palm and sweetgum. The understory includes buttonbush, maidencane, sawgrass, smartweed and sedges. In its natural state, this soil is generally not suited to cultivated crops or pasture.

This soil is generally not suited to the production of pines because of flooding or extended wetness. It may be suited to the production of cypress and hardwoods through natural regeneration.

This Winder soil is in capability subclass Vw and in woodland group 11W. This soil has not been assigned to a range site.

In the A to B/E horizons, reaction ranges from medium acid to mildly alkaline. In the Btg horizon, reaction ranges from neutral to moderately alkaline. In the 2Cg horizon, reaction is mildly alkaline or moderately alkaline.

Zolfo fine sand. [61, 1989]

This soil is nearly level and somewhat poorly drained. It is on broad, low ridges on the flatwoods. The slope is 0 to 2 percent. Typically, this soil has a surface layer of very dark gray fine sand about 3 inches thick. The upper part of the subsurface layer, to a depth of about 15 inches, is grayish brown, mottled fine sand. The middle part, to a depth of about 51 inches, is light gray, mottled fine sand. The lower part, to a depth of about 60 inches, is grayish brown fine sand. The subsoil to a depth of about 80 inches is dark brown fine sand.

In most years, a seasonal high water table is at a depth of 24 to 40 inches for more than 2 to 6 months and recedes to a depth of 60 inches during prolonged dry periods. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil. The available water capacity is low.

In most areas, this Zolfo soil is used for citrus crops or pasture or for homesite or urban development. In a few areas, it is used for the cultivated crops or is left in natural vegetation. The natural vegetation consists of live oak, turkey oak, longleaf pine, and slash pine. The understory includes broomsedge, bluestem, lopsided indiagrass, saw palmetto and pineland threeawn.

This soil is moderately well suited to pasture. Proper stocking, pasture rotation, and timely deferment of grazing help keep the pasture in good condition.

The potential of this soil for the production of slash pines is moderately high. This soil has few limitations for woodland use and management. This Zolfo soil is in capability subclass IIIw, in woodland group 10W, and in the Upland Hardwood Hammocks range site. Reaction ranges from very strongly acid to neutral in the A and E horizons and from extremely acid to slightly acid in the Bh horizon.

Addendum 4 — Plant and Animal List

Alafia River State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
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MYCOTES

Earth star *Astraeus hygrometricus*

LICHENS

Evans' reindeer lichen *Cladina evansii*
 Reindeer lichen..... *Cladina subtenuis*
 Cup lichen..... *Cladonia leporina*

PTERIDOPHYTES

Ebony spleenwort *Asplenium platyneuron*
 Carolina mosquito fern *Azolla caroliniana*
 Toothed midsorus fern..... *Blechnum serrulatum*
 Southern grape-fern..... *Botrychium biternatum*
 Florida shield fern *Dryopteris ludoviciana*
 Flakelet fern; Bramble fern *Hypolepis repens*
 Japanese climbing fern* *Lygodium japonicum*
 Old World climbing fern* *Lygodium microphyllum*
 Mariana maiden fern *..... *Macrothelypteris torresiana*
 Asian sword fern* *Nephrolepis brownii*
 Wild Boston fern *Nephrolepis exaltata*
 Adder's tongue fern..... *Ophioglossum petiolatum*
 Golden club..... *Orontium aquaticum*
 Cinnamon fern..... *Osmunda cinnamomea*
 Royal fern *Osmunda regalis* var. *spectabilis*
 Comb polypoidy *Pecluma ptilodon* var. *caespitosa* BF, BG
 Golden polypody *Phlebodium aureum*
 Resurrection fern *Pleopeltis polypodioides* var. *michauxianum*
 Whisk-fern *Psilotum nudum*
 Bracken fern *Pteridium aquilinum*
 Tailed bracken *Pteridium aquilinum* var. *pseudocaudatum*
 Meadow spike-moss *Selaginella apoda*
 Downy maiden fern *Thelypteris dentata*
 Hairy maiden fern *Thelypteris hispidula* var. *versicolor*
 Willdenow's maiden fern *Thelypteris interrupta*
 Widespread maiden fern *Thelypteris kunthii*
 Marsh fern *Thelypteris palustris*
 Marsh fern *Thelypteris palustris* var. *pubescens*
 Shoestring fern..... *Vittaria lineata*
 Netted chain fern *Woodwardia areolata*
 Virginia chain fern..... *Woodwardia virginica*

Alafia River State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
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GYMNOSPERMS

Eastern redcedar	<i>Juniperus virginiana</i>
Sand pine	<i>Pinus clausa</i>
Slash pine	<i>Pinus elliotii</i>
Bald-cypress	<i>Taxodium distichum</i>

ANGIOSPERMS

Monocots

Purple bluestem	<i>Andropogon glomeratus</i> var. <i>glaucopsis</i>
Bushy bluestem	<i>Andropogon glomeratus</i> var. <i>hirsutior</i>
Broomsedge bluestem	<i>Andropogon virginicus</i>
Chalky bluestem	<i>Andropogon virginicus</i> var. <i>glaucus</i>
Green silkyscale	<i>Anthaenania villosa</i>
Nodding nixie	<i>Aptera aphylla</i>
Jack-in-the-pulpit	<i>Arisaema triphyllum</i>
Corkscrew threeawn	<i>Aristida gyrans</i>
Bottlebrush threeawn	<i>Aristida spiciformis</i>
Common carpetgrass	<i>Axonopus affinis</i>
Common carpetgrass	<i>Axonopus fissifolius</i>
Watergrass	<i>Bulbostylis barbata</i>
Capillary hairsedge	<i>Bulbostylis ciliatifolia</i>
Sandyfield hairsedge	<i>Bulbostylis stenophylla</i>
Ware's hairsedge	<i>Bulbostylis warei</i>
Florida scrub roseling	<i>Callisia ornata</i>
Golden canna	<i>Canna flaccida</i>
Greenwhite sedge	<i>Carex albolutescens</i>
Mohr's sedge	<i>Carex atlantica</i> subsp. <i>capillacea</i>
Brome-like sedge	<i>Carex bromoides</i>
Godfrey's sedge	<i>Carex godfreyi</i>
False hop sedge	<i>Carex lupuliformis</i>
Hop sedge	<i>Carex lupulina</i>
Coastal sandspur	<i>Cenchrus spinifex</i>
Spadeleaf coinwort	<i>Centella asiatica</i>
Shiny wood oats	<i>Chasmanthium nitidum</i>
Wild taro*	<i>Colocasia esculenta</i>
Common dayflower	<i>Commelina diffusa</i>
Erect dayflower	<i>Commelina erecta</i>
Seven-sisters	<i>Crinum americanum</i>
Bermudagrass	<i>Cynodon dactylon</i>
Poorland flatsedge	<i>Cyperus compressus</i>
Baldwin's flatsedge	<i>Cyperus croceus</i>
Marshland flatsedge	<i>Cyperus distinctus</i>
Sheathed flatsedge	<i>Cyperus haspan</i>

* Non-native Species

Alafia River State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Epiphytic flatsedge	<i>Cyperus lanceolatus</i>	
Rusty flatsedge	<i>Cyperus odoratus</i>	
Manyspike flatsedge	<i>Cyperus polystachyos</i>	
Pinebarren flatsedge	<i>Cyperus retrorsus</i>	
Straw-color flatsedge	<i>Cyperus strigosus</i>	
Tropica flatsedge	<i>Cyperus surinamensis</i>	
Four-angle flatsedge	<i>Cyperus tetragonus</i>	
Needle-leaf witchgrass	<i>Dichantherium aciculare</i>	
Variable witchgrass	<i>Dichantherium commutatum</i>	
Cypress witchgrass	<i>Dichantherium dichotomum</i>	
Dwarf cypress witchgrass.....	<i>Dichantherium ensifolium</i> var. <i>breve</i>	
Lax-flower witchgrass.....	<i>Dichantherium laxiflorum</i>	
Hemlock witchgrass	<i>Dichantherium portoricense</i>	
Southern crabgrass.....	<i>Digitaria ciliaris</i>	
Reclining crabgrass	<i>Digitaria pentzii</i>	
Blanket crabgrass	<i>Digitaria serotina</i>	
Air potato*	<i>Dioscorea bulbifera</i>	
Florida yam	<i>Dioscorea floridana</i>	
Water hyacinth *	<i>Eichhornia crassipes</i>	
Road grass.....	<i>Eleocharis baldwinii</i>	
Yellow spikerush	<i>Eleocharis flavescens</i>	
Viviparous spikerush	<i>Eleocharis vivipara</i>	
Indian goosegrass*	<i>Eleusine indica</i>	
Butterfly orchid.....	<i>Encyclia tampensis</i>	
Greenfly orchid	<i>Epidendrum conopseum</i>	
Elliott lovegrass	<i>Eragrostis elliottii</i>	
Purple lovegrass	<i>Eragrostis spectabilis</i>	
Coastal lovegrass.....	<i>Eragrostis virginica</i>	
Centipedegrass*	<i>Eremochloa ophiuroides</i>	
Saltmarsh fingergrass	<i>Eustachys glauca</i>	
Pinewoods fingergrass	<i>Eustachys petraea</i>	
Slendy fimbry	<i>Fimbristylis autumnalis</i>	
Carolina fimbry	<i>Fimbristylis caroliniana</i>	
Forked fimbry	<i>Fimbristylis dichotoma</i>	
Hairy fimbry	<i>Fimbristylis puberula</i>	
Saltmarsh umbrellasedge.....	<i>Fuirena breviseta</i>	
Dwarf umbrellasedge	<i>Fuirena pumila</i>	
Green-cross orchid.....	<i>Habenaria floribunda</i>	
Waterspider false reinorchid	<i>Habenaria repens</i>	
Needleroot airplant orchid	<i>Harrisella porrecta</i>	
Hydrilla*	<i>Hydrilla verticillata</i>	
Georgia spider-lily	<i>Hymenocallis crassifolia</i>	
Alligator-lily	<i>Hymenocallis palmeri</i>	
Yellow stargrass	<i>Hypoxis curtissii</i>	
Cogongrass*	<i>Imperata cylindrica</i>	
Prairie iris	<i>Iris hexagona</i>	

Alafia River State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Leathery rush	<i>Juncus coriaceus</i>	
Forked rush.....	<i>Juncus dichotomus</i>	
Soft rush	<i>Juncus effusus</i> subsp. <i>solutus</i>	
Grassleaf rush	<i>Juncus marginatus</i>	
Many-head rush.....	<i>Juncus polycephalus</i>	
Needlepod rush	<i>Juncus scirpoides</i>	
Short-leaf flatsedge.....	<i>Kyllinga brevifolia</i>	
Slender-leaved flatsedge	<i>Kyllinga pumila</i>	
Bloodroot.....	<i>Lachnanthes caroliana</i>	
Whitehead bogbutton	<i>Lachnocaulon anceps</i>	
Southern cutgrass.....	<i>Leersia hexandra</i>	
Lesser duckweed	<i>Lemna aequinoctialis</i>	
Little duckweed	<i>Lemna obscura</i>	
Valdivia duckweed	<i>Lemna valdiviana</i>	
Southern Watergrass.....	<i>Luziola fluitans</i>	
Natalgrass*	<i>Melinis repens</i>	
Parrot's-feather *	<i>Myriophyllum aquaticum</i>	
Britton's beargrass.....	<i>Nolina brittoniana</i>	SC, RNC
Woodsgrass	<i>Oplismenus hirtellus</i>	
Beaked panicum	<i>Panicum anceps</i>	
Maidencane.....	<i>Panicum hemitomon</i>	
Torpedograss*.....	<i>Panicum repens</i>	
Redtop panicum.....	<i>Panicum rigidulum</i>	
Warty panicum	<i>Panicum verrucosum</i>	
Switchgrass	<i>Panicum virgatum</i>	
Sour paspalum	<i>Paspalum conjugatum</i>	
Seashore paspalum.....	<i>Paspalum distichum</i>	
Bahiagrass*	<i>Paspalum notatum</i>	
Thin paspalum.....	<i>Paspalum setaceum</i>	
Vasey grass*.....	<i>Paspalum urvillei</i>	
Spoonflower.....	<i>Peltandra sagittifolia</i>	
Green arrow arum	<i>Peltandra virginica</i>	
Savannah panicum.....	<i>Phanopyrum gymnocarpon</i>	
Water lettuce*.....	<i>Pistia stratiotes</i>	
Pickerelweed	<i>Pontederia cordata</i>	
Giant orchid	<i>Pteroglossaspis ecristata</i>	SIP
Needle palm	<i>Rhapidophyllum hystrix</i>	
Falling beak sedge	<i>Rhynchospora caduca</i>	
Bunched beak sedge	<i>Rhynchospora cephalantha</i>	
Beaksedge	<i>Rhynchospora chalarocephala</i>	
Fringed beaksedge	<i>Rhynchospora ciliaris</i>	
Shortbristle horned beaksedge	<i>Rhynchospora corniculata</i>	
Fascicled beaksedge	<i>Rhynchospora fascicularis</i>	
Sandyfield beaksedge.....	<i>Rhynchospora megalocarpa</i>	
Bunched beaksedge	<i>Rhynchospora microcephala</i>	
Millet beaksedge	<i>Rhynchospora miliacea</i>	

Alafia River State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Scrub palmetto	<i>Sabal etonia</i>	
Cabbage palm	<i>Sabal palmetto</i>	
Silver plumegrass	<i>Saccharum alopecuroides</i>	
India cupscale *	<i>Sacciolepis indica</i>	
American cupscale	<i>Sacciolepis striata</i>	
Little bluestem	<i>Schizachyrium scoparium</i>	
Giant bulrush	<i>Schoenoplectus californicus</i>	
Cuban bulrush	<i>Scirpus cubensis</i>	
Fringed nutrush	<i>Scleria ciliata</i>	
Netted nutrush	<i>Scleria reticularis</i>	
Tall nutgrass	<i>Scleria triglomerata</i>	
Saw palmetto	<i>Serenoa repens</i>	
Coastal bristleglass.....	<i>Setaria corrugata</i>	
Yellow bristleglass	<i>Setaria parviflora</i>	
Jeweled blue-eyed grass.....	<i>Sisyrinchium xerophyllum</i>	
Ear-leaf greenbrier.....	<i>Smilax auriculata</i>	
Saw greenbrier.....	<i>Smilax bona-nox</i>	
Saw-brier.....	<i>Smilax glauca</i>	
Laurel greenbrier	<i>Smilax laurifolia</i>	
Sarsaparilla vine	<i>Smilax pumila</i>	
Coral greenbrier	<i>Smilax walteri</i>	
Lopsided indiagrass.....	<i>Sorghastrum secundum</i>	
American burr-reed.....	<i>Sparganium americanum</i>	
Nodding ladies' tresses	<i>Spiranthes cernua</i>	
Smutgrass*	<i>Sporobolus indicus</i>	
Cowpea witchweed.....	<i>Striga gesnerioides</i>	
Bantam-buttons.....	<i>Syngonanthus flavidulus</i>	
Alligatorflag	<i>Thalia geniculata</i>	
Wild pine	<i>Tillandsia fasciculata</i>	HH, BF
Ballmoss.....	<i>Tillandsia recurvata</i>	
Southern needleleaf	<i>Tillandsia setacea</i>	
Florida airplant	<i>Tillandsia simulata</i>	
Spanish moss	<i>Tillandsia usneoides</i>	
Spreading airplant	<i>Tillandsia utriculata</i>	HH, BF
Purpletop tridens	<i>Tridens flavus</i> var. <i>flavus</i>	
Narrow-leaved cattail	<i>Typha latifolia</i>	
Tropical signalgrass.....	<i>Urochloa distachya</i>	
Paragrass *	<i>Urochloa mutica</i>	
Arrowleaf elephant ear*.....	<i>Xanthosoma sagittifolium</i>	
Short-leaf yellow-eyed grass ...	<i>Xyris brevifolia</i>	
Carolina yellow-eyed grass.....	<i>Xyris caroliniana</i>	
Elliott's yellow-eyed grass.....	<i>Xyris elliotii</i>	
Richard's yellow-eyed grass	<i>Xyris jupicai</i>	
Tall yellow-eyed grass	<i>Xyris platylepis</i>	
Spanish bayonet	<i>Yucca aloifolia</i>	
Adam's needle	<i>Yucca filamentosa</i>	

Alafia River State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Dicots		
Rosary pea*	<i>Abrus precatorius</i>	
Three-seeded mercury	<i>Acalypha gracilens</i>	
Red maple	<i>Acer rubrum</i>	
Creeping spotflower	<i>Acmella oppositifolia</i> var. <i>repens</i>	
Shy-leaf	<i>Aeschynomene americana</i>	
Small-leaf thoroughwort	<i>Ageratina jucunda</i>	
Bluemink	<i>Ageratum houstonianum</i>	
False moneywort	<i>Alysicarpus ovalifolius</i>	
Alyce-clover	<i>Alysicarpus vaginalis</i>	
Common ragweed	<i>Ambrosia artemisiifolia</i>	
Bastard indigo	<i>Amorpha fruticosa</i>	
Pepper-vine	<i>Ampelopsis arborea</i>	
Groundnut	<i>Apios americana</i>	
Devil's walking stick	<i>Aralia spinosa</i>	
Japanese ardisia*	<i>Ardisia japonica</i>	
Snake root	<i>Aristolochia serpentaria</i>	
Scarlet milkweed*	<i>Asclepias curassavica</i>	
Aquatic milkweed	<i>Asclepias perennis</i>	
Flag pawpaw	<i>Asimina obovata</i>	
Smallflower pawpaw	<i>Asimina parviflora</i>	
Netted pawpaw	<i>Asimina reticulata</i>	
Silverling	<i>Baccharis glomeruliflora</i>	
Saltbush	<i>Baccharis halimifolia</i>	
Coastalplain honeycombhead	<i>Balduina angustifolia</i>	
Tarflower	<i>Bejaria racemosa</i>	
Rattan-vine; supplejack	<i>Berchemia scandens</i>	
Beggarticks	<i>Bidens alba</i>	
Spanish needles	<i>Bidens bipinnata</i>	
Begger-ticks	<i>Bidens mitis</i>	
False-nettle	<i>Boehmeria cylindrica</i>	
India mustard; leaf mustard	<i>Brassica juncea</i>	
American bluehearts	<i>Buchnera americana</i>	
Ashe's calamint	<i>Calamintha ashei</i>	SC, RNC
American beautyberry	<i>Callicarpa americana</i>	
Trumpet creeper	<i>Campsis radicans</i>	
Hairy bittergrass *	<i>Cardamine hirsuta</i>	
Florida paintbrush	<i>Carphephorus corymbosus</i>	
American hornbeam	<i>Carpinus caroliniana</i>	
Wild olive	<i>Cartrema americana</i>	
Water hickory	<i>Carya aquatica</i>	
Pignut hickory	<i>Carya glabra</i>	
Sugarberry	<i>Celtis laevigata</i>	
Butterfly pea	<i>Centrosema virginianum</i>	
Buttonbush	<i>Cephalanthus occidentalis</i>	
Partridge pea	<i>Chamaecrista fasciculata</i>	

Alafia River State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Sensitive pea	<i>Chamaecrista nictitans</i> var. <i>aspera</i>	
Florida alicia.....	<i>Chapmannia floridana</i>	
Mexican tea*	<i>Chenopodium ambrosiodes</i>	
Fringe tree.....	<i>Chionanthus virginicus</i>	
Florida goldenaster	<i>Chrysopsis floridana</i>	SC, RNC
Coastalplain goldenaster	<i>Chrysopsis scabrella</i>	
Water hemlock	<i>Cicuta maculata</i>	
Camphor tree *	<i>Cinnamomum camphora</i>	
Purple thistle.....	<i>Cirsium horridulum</i>	
Nuttall's thistle	<i>Cirsium nuttallii</i>	
Tangerine *.....	<i>Citrus reticulata</i>	
Grapefruit, sweet orange *	<i>Citrus xaurantium</i>	
Swamp leatherflower.....	<i>Clematis crispa</i>	
Virgin's bower	<i>Clematis virginiana</i>	
Turk's turban*	<i>Clerodendrum indicum</i>	
Blue mistflower.....	<i>Conoclinium coelestinum</i>	
Short-leaved rosemary	<i>Conradina brevifolia</i>	
Dwarf Canadian horseweed	<i>Conyza canadensis</i> var. <i>pusilla</i>	
Florida coreopsis.....	<i>Coreopsis floridana</i>	
Dogwood	<i>Cornus florida</i>	
Swamp dogwood	<i>Cornus foemina</i>	
(Pale) smooth rattlebox	<i>Crotalaria pallida</i> var. <i>obovata</i>	
Rabbit-bells; Rattlebox	<i>Crotalaria purshii</i>	
Rabbitbells	<i>Crotalaria rotundifolia</i>	
Showy rattlebox	<i>Crotalaria spectabilis</i>	
Wooly croton.....	<i>Croton glandulosus</i>	
Titi.....	<i>Cyrilla racemiflora</i>	
Zarabacoa comun.....	<i>Desmodium incanum</i>	
Panicked tick-trefoil	<i>Desmodium paniculatum</i>	
Threeflower ticktrefoil.....	<i>Desmodium triflorum</i>	
Carolina ponysfoot	<i>Dichondra caroliniensis</i>	
Poor Joe	<i>Diodia teres</i>	
Virginia buttonweed	<i>Diodia virginiana</i>	
Persimmon.....	<i>Diospyros virginiana</i>	
West Indian chickweed	<i>Drymaria cordata</i>	
Swamp twinflower	<i>Dyschoriste humistrata</i>	
Yerba de-tago	<i>Eclipta alba</i>	
Tall elephantsfoot	<i>Elephantopus elatus</i>	
Carolina scalystem	<i>Elytraria caroliniensis</i> var. <i>caroliniensis</i>	
Florida tasselflower	<i>Emilia fosbergii</i>	
Lilac tassel flower	<i>Emilia sonchifolia</i>	
Fireweed.....	<i>Erechtites hieraciifolius</i>	
Southern fleabane.....	<i>Erigeron quercifolius</i>	
Prairie fleabane	<i>Erigeron strigosus</i>	
Fragrant eryngo.....	<i>Eryngium aromaticum</i>	
Baldwin's eryngo	<i>Eryngium baldwinii</i>	

Alafia River State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Snakeroot.....	<i>Eryngium prostratum</i>	
Rattlesnake master	<i>Eryngium yuccifolium</i>	
Southeastern coralbean	<i>Erythrina herbacea</i>	
Hearts-a-busting.....	<i>Euonymus americana</i>	
Dogfennel	<i>Eupatorium capillifolium</i>	
Yankee weed.....	<i>Eupatorium compositifolium</i>	
Mohr's thoroughwort	<i>Eupatorium mohrii</i>	
False hoarhound	<i>Eupatorium rotundifolium</i>	
Slender flattopped goldenrod ..	<i>Euthamia caroliniana</i>	
Pop ash; Carolina ash.....	<i>Fraxinus caroliniana</i>	
Pumpkin ash	<i>Fraxinus pennsylvanica</i>	
Drug fumitory.....	<i>Fumaria officinalis</i>	
Elliott's milkpea	<i>Galactia elliotii</i>	
Soft milkpea.....	<i>Galactia mollis</i>	
Downy milkpea.....	<i>Galactia regularis</i>	
Eastern milkpea.....	<i>Galactia volubilis</i>	
Hairy bedstraw	<i>Galium pilosum</i>	
Stiff marsh bedstraw	<i>Galium tinctorium</i>	
Garberia	<i>Garberia heterophylla</i>	SC, RNC
Dwarf huckleberry.....	<i>Gaylussacia dumosa</i>	
Blue huckleberry.....	<i>Gaylussacia frondosa</i> var. <i>tomentosa</i>	
Yellow jessamine	<i>Gelsemium sempervirens</i>	
Wild geranium:Cranesbill	<i>Geranium carolinianum</i>	
Water locust.....	<i>Gleditsia aquatica</i>	
Angular fruit milkvine	<i>Gonolobus suberosus</i>	MH, HH
Loblolly-bay	<i>Gordonia lasianthus</i>	
Rough hedge-hyssop.....	<i>Gratiola hispida</i>	
Scrub hedge-hyssop.....	<i>Gratiola virginiana</i>	
Witch hazel	<i>Hamamelis virginiana</i>	
Innocence	<i>Hedyotis procumbens</i>	
Hedyotis	<i>Hedyotis uniflora</i>	
Pinebarren frostweed	<i>Helianthemum corymbosum</i>	
Florida scrub frostweed.....	<i>Helianthemum nashii</i>	
Camphorweed	<i>Heterotheca subaxillaris</i>	
Hawkweed	<i>Hieracium gronovii</i>	
Round-leaf bluet	<i>Houstonia procumbens</i>	
Manyflower Marshpennywort ...	<i>Hydrocotyle umbellata</i>	
Whorled marsh pennywort	<i>Hydrocotyle verticillata</i>	
Sky flower	<i>Hydrolea corymbosum</i>	
Indian swampweed	<i>Hygrophila polysperma</i>	
St. John's-wort	<i>Hypericum cistifolium</i>	
St. Andrew's-cross	<i>Hypericum hypericoides</i>	
Dwarf St. John's-wort.....	<i>Hypericum mutilum</i>	
St. John's-wort	<i>Hypericum myrtifolium</i>	
Atlantic St. John's-wort.....	<i>Hypericum reductum</i>	
Fourpetal St. John's-wort.....	<i>Hypericum tetrapetalum</i>	

Alafia River State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Musky mint; Cluster bushmint	<i>Hyptis alata</i>	
Tropical bittermint *	<i>Hyptis mutabilis</i>	
John Charles bittermint *	<i>Hyptis verticillata</i>	
Carolina holly	<i>Ilex ambigua</i>	
Dahoon holly	<i>Ilex cassine</i>	
Possum haw; Deciduous holly	<i>Ilex decidua</i>	
Inkberry; Gallberry	<i>Ilex glabra</i>	
American holly	<i>Ilex opaca</i>	
Hairy indigo*	<i>Indigofera hirsuta</i>	
Tievine	<i>Ipomoea cordatotriloba</i>	
Cypress vine*	<i>Ipomoea quamoclit</i>	
Little bell*	<i>Ipomoea triloba</i>	
Juba's bush	<i>Iresine diffusa</i>	
Virginia-willow	<i>Itea virginica</i>	
Looseflower waterwillow	<i>Justicia ovata</i>	
Japanese clover *	<i>Kummerowia striata</i>	
Wild lettuce	<i>Lactuca floridana</i>	
Grass-leaf lettuce	<i>Lactuca graminifolia</i>	
Spotted duckweed*	<i>Landoltia punctata</i>	
Shrub verbena*	<i>Lantana camara</i>	
Nodding pinweed	<i>Lechea cernua</i>	SC, RNC
Deckert's pinweed	<i>Lechea deckertii</i>	
Thymeleaf pinweed	<i>Lechea minor</i>	
Pineland pinweed	<i>Lechea sessiliflora</i>	
Piedmont pinweed	<i>Lechea torreyi</i>	
Virginia pepperweed	<i>Lepidium virginicum</i>	
Lead tree*	<i>Leucaena leucocephala</i>	
Chapman's blazing-star	<i>Liatris chapmanii</i>	
Slender blazing-star	<i>Liatris gracilis</i>	
Scrub blazing-star	<i>Liatris ohlingerae</i>	
Shortleaf blazing-star	<i>Liatris tenuifolia</i> var. <i>quadriflora</i>	
Gopher apple	<i>Licania michauxii</i>	
Canadian toadflax	<i>Linaria canadensis</i>	
Malaysian false pimpernel *	<i>Lindernia crustacea</i>	
Savannah false-pimpernel	<i>Lindernia grandiflora</i>	
Sweetgum	<i>Liquidambar styraciflua</i>	
Cardinal flower	<i>Lobelia cardinalis</i>	
Coral honeysuckle	<i>Lonicera sempervirens</i>	
Upright primrose-willow	<i>Ludwigia decurrens</i>	
River primrose-willow	<i>Ludwigia leptocarpa</i>	
Seaside primrosewillow	<i>Ludwigia maritima</i>	
Mexican primrosewillow	<i>Ludwigia octovalvis</i>	
Marsh primrose-willow	<i>Ludwigia palustris</i>	
Peruvian primrosewillow*	<i>Ludwigia peruviana</i>	
Hairy primrose-willow	<i>Ludwigia pilosa</i>	
Creeping primrose-willow	<i>Ludwigia repens</i>	

Alafia River State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Shrubby primrose-willow	<i>Ludwigia suffruticosa</i>	
Skyblue lupine.....	<i>Lupinus diffusus</i>	
Water hoarhound.....	<i>Lycopus rubellus</i>	
Rusty staggerbush	<i>Lyonia ferruginea</i>	
Coastalplain staggerbush	<i>Lyonia fruticosa</i>	
Maleberry	<i>Lyonia ligustrina</i> var. <i>foliosiflora</i>	
Fetterbush	<i>Lyonia lucida</i>	
Southern magnolia.....	<i>Magnolia grandiflora</i>	
Sweetbay.....	<i>Magnolia virginiana</i>	
Snow squarestem	<i>Melanthera nivea</i>	
Chinaberry*	<i>Melia azedarach</i>	
Indian sweetclover	<i>Melilotus indicus</i>	
Creeping cucumber	<i>Melothria pendula</i>	
Shade mulflower.....	<i>Micranthemum glomeratum</i>	
Florida Key hempvine	<i>Mikania cordifolia</i>	
Climbing hempvine	<i>Mikania scandens</i>	
American partridgeberry	<i>Mitchella repens</i>	
Miterwort	<i>Mitreola petiolata</i>	
Indian chickweed	<i>Mollugo verticillata</i>	
Balsam pear*	<i>Momordica charantia</i>	
Spotted beebalm	<i>Monarda punctata</i>	
Red mulberry	<i>Morus rubra</i>	
Naked-stem dewflower *	<i>Murdannia nudiflora</i>	
Wax myrtle	<i>Myrica cerifera</i>	
Spatterdock	<i>Nuphar advena</i>	
Lotus lily; American lotus.....	<i>Nuphar lutea</i> subsp. <i>advena</i>	
Swamp tupelo	<i>Nyssa sylvatica</i> var. <i>biflora</i>	
Pine-barren white-top aster.....	<i>Oclemena reticulata</i>	
Sea beach eveningprimrose	<i>Oenothera humifusa</i>	
Cut-leaf evening primrose.....	<i>Oenothera laciniata</i>	
Flat-top mille graines	<i>Oldenlandia corymbosa</i>	
Clustered mille graines	<i>Oldenlandia uniflora</i>	
Prickly pear	<i>Opuntia humifusa</i>	
Common yellow woodsorrel.....	<i>Oxalis corniculata</i>	
Butterweed	<i>Packera glabella</i>	
Skunk-vine*	<i>Paederia foetida</i>	
Feay's palafox	<i>Palafoxia feayi</i>	
Florida pellitory	<i>Parietaria floridana</i>	
Virginia creeper	<i>Parthenocissus quinquefolia</i>	
Purple passionflower	<i>Passiflora incarnata</i>	
Low peperomia.....	<i>Peperomia humilis</i>	
Redbay	<i>Persea borbonia</i>	
Silk bay	<i>Persea borbonia</i> var. <i>humilis</i>	
Swamp bay	<i>Persea palustris</i>	
Mistletoe.....	<i>Phoradendron serotinum</i>	
Red chokeberry	<i>Photinia pyrifolia</i>	

Alafia River State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Chamber-bitter *	<i>Phyllanthus urinaria</i>	
Cut-leaf ground cherry	<i>Physalis angulata</i>	
Slenderleaf false dragonhead	<i>Physostegia leptophylla</i>	
Pokeweed	<i>Phytolacca americana</i>	
Wild pennyroyal	<i>Piloblephis rigida</i>	
Narrowleaf goldenaster	<i>Pityopsis graminifolia</i>	
Virginia plantain	<i>Plantago virginica</i>	
Stinking camphorweed	<i>Pluchea foetida</i>	
Rosy camphorweed	<i>Pluchea longifolia</i>	
Scrubby camphorweed	<i>Pluchea odorata</i>	
Milkwort	<i>Polygala grandiflora</i>	
October flower	<i>Polygonella polygama</i>	
Large-flower jointweed	<i>Polygonella robusta</i>	
Swamp smartweed	<i>Polygonum hydropiperoides</i>	
Dotted smartweed	<i>Polygonum punctatum</i>	
Smartweed	<i>Polygonum setaceum</i>	
Rustweed	<i>Polypremum procumbens</i>	
Parguayan purslane*	<i>Portulaca amilis</i>	
Pink purslane	<i>Portulaca pilosa</i>	
Marsh mermaidweed	<i>Proserpinaca palustris</i>	
Carolina laurel-cherry	<i>Prunus caroliniana</i>	
Scrub plum	<i>Prunus geniculata</i>	RNC
Black cherry	<i>Prunus serotina</i>	
Flatwoods plum	<i>Prunus umbellata</i>	
Sweet everlasting	<i>Pseudognaphalium obtusifolium</i>	
Blackroot	<i>Pterocaulon pycnostachyum</i>	
Mock bishopsweed	<i>Ptilimnium capillaceum</i>	
Chapman's oak	<i>Quercus chapmanii</i>	
Sand live oak	<i>Quercus geminata</i>	
Bluejack oak	<i>Quercus incana</i>	
Laurel oak; diamond oak	<i>Quercus laurifolia</i>	
Myrtle oak	<i>Quercus myrtifolia</i>	
Water oak	<i>Quercus nigra</i>	
Live oak	<i>Quercus virginiana</i>	
Pale meadow beauty	<i>Rhexia mariana</i>	
Meadow beauty	<i>Rhexia petiolata</i>	
Swamp honeysuckle	<i>Rhododendron viscosum</i>	
Winged sumac	<i>Rhus copallinum</i>	
One-leaf rhynchosia	<i>Rhynchosia michauxii</i>	
Tropical Mexican-clover*	<i>Richardia brasiliensis</i>	
Rough Mexican-clover*	<i>Richardia scabra</i>	
Rouge plant	<i>Rivina humilis</i>	
Blackberry	<i>Rubus argutus</i>	
Sand blackberry	<i>Rubus cuneifolius</i>	
Southern dewberry	<i>Rubus trivialis</i>	
Carolina wild petunia	<i>Ruellia caroliniensis</i>	

Alafia River State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Heartwing dock	<i>Rumex hastatulus</i>	
Swamp dock	<i>Rumex verticillatus</i>	
Shortleaf rosegentian	<i>Sabatia brevifolia</i>	
Coastal rosegentian.....	<i>Sabatia calycina</i>	
Lanceleaf rosegentian.....	<i>Sabatia difformis</i>	
Carolina willow	<i>Salix caroliniana</i>	
Lyre-leaf sage	<i>Salvia lyrata</i>	
Florida key sedge.....	<i>Salvia riparia</i>	
Elderberry.....	<i>Sambucus nigra</i> subsp. <i>canadensis</i>	
Water pimpernel.....	<i>Samolus ebracteatus</i>	
Pineland pimpernel	<i>Samolus verlanderi</i> var. <i>parviflorus</i>	
Snakeroot.....	<i>Sanicula canadensis</i>	
Lizard's-tail	<i>Saururus cernuus</i>	
Brazilian pepper*	<i>Schinus terebinthifolius</i>	
Sweetbroom; licorice-weed	<i>Scoparia dulcis</i>	
Florid scrub skullcap.....	<i>Scutellaria arenicola</i>	
Rough skullcap	<i>Scutellaria integrifolia</i>	
Sicklepod *	<i>Senna obtusifolia</i>	
Coffee senna*	<i>Senna occidentalis</i>	
White-topped aster	<i>Seriocarpus tortifolius</i>	
Bladderpod	<i>Sesbania vesicaria</i>	
Indian hemp	<i>Sida rhombifolia</i>	
Common wireweed.....	<i>Sida ulmifolia</i>	
Florida bully	<i>Sideroxylon reclinatum</i>	
Scrub-buckthorn.....	<i>Sideroxylon tenax</i>	
Common nightshade	<i>Solanum americanum</i>	
Soda-apple; Cockroach-berry ..	<i>Solanum capsicoides</i>	
Tropical soda-apple*	<i>Solanum viarum</i>	
Hollow goldenrod	<i>Solidago fistulosa</i>	
Wand goldenrod	<i>Solidago stricta</i>	
Spiny-leaf sow-thistle*	<i>Sonchus asper</i>	
Florida hedgenettle	<i>Stachys floridana</i>	
Common chickweed	<i>Stellaria media</i>	
Queen's delight	<i>Stillingia sylvatica</i>	
Pineland scalypink.....	<i>Stipulicida setacea</i>	
American snowbell	<i>Styrax americana</i>	
Climbing aster	<i>Symphyotrichum carolinianum</i>	
Rice-button aster	<i>Symphyotrichum dumosum</i>	
Saltmarsh aster	<i>Symphyotrichum subulatum</i>	
Wavyleaf aster	<i>Symphyotrichum undulatum</i>	
Eastern poison ivy.....	<i>Toxicodendron radicans</i>	
Marsh St. John's wort.....	<i>Triadenum virginicum</i>	
Forked bluecurls	<i>Trichostema dichotomum</i>	
White clover.....	<i>Trifolium repens</i>	
Five-stamen burrbark*	<i>Triumfetta pentandra</i>	
American elm; Florida elm	<i>Ulmus americana</i>	

Alafia River State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Caesarweed*	<i>Urena lobata</i>	
Sparkleberry	<i>Vaccinium arboreum</i>	
Highbush blueberry	<i>Vaccinium corymbosum</i>	
Shiny blueberry	<i>Vaccinium myrsinites</i>	
Deerberry	<i>Vaccinium stamineum</i>	
Florida valerian.....	<i>Valeriana scandens</i>	
Brazilian vervain	<i>Verbena brasiliensis</i>	
Frostweed.....	<i>Verbesina virginica</i>	
Possum haw.....	<i>Viburnum nudum</i>	
Walter's viburnum.....	<i>Viburnum obovatum</i>	
Hairypod cowpea	<i>Vigna luteola</i>	
Long-leaf violet.....	<i>Viola lanceolata</i>	
Swamp white violet.....	<i>Viola primulifolia</i>	
Florida violet	<i>Viola sororia</i>	
Summer grape	<i>Vitis aestivalis</i>	
Muscadine; fox grape	<i>Vitis rotundifolia</i>	
Southern rockbell.....	<i>Wahlenbergia marginata</i>	
Tallowwood; hog-plum	<i>Ximenia americana</i>	
Oriental false hawksbeard*	<i>Youngia japonica</i>	
Hercules'-club	<i>Zanthoxylum clava-herculis</i>	

Alafia River State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
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FISH

Yellow bullhead.....	<i>Ameiurus natalis</i>	BST, IAP
Brown bullhead.....	<i>Ameiurus nebulosus</i>	BST, IAP
Walking catfish*	<i>Clarias batrachus</i>	BST, IAP
American gizzard shad.....	<i>Dorosoma cepedianum</i>	BST
Threadfin shad	<i>Dorosoma petenense</i>	BST
Everglades pygmy sunfish.....	<i>Elassoma evergladei</i>	BST, FS
Lake chubsucker	<i>Erimyzon sucetta</i>	IAP
Swamp darter	<i>Etheostoma fusiforme</i>	IAP
Golden topminnow	<i>Fundulus chrysotus</i>	BST
Seminole killifish.....	<i>Fundulus seminolis</i>	IAP
Eastern mosquitofish	<i>Gambusia holbrooki</i>	IAP, BST
Least killifish	<i>Heterandria formosa</i>	IAP
Brown hoplo*	<i>Hoplosternum littorale</i>	IAP
Suckermouth catfish*	<i>Hypostomus</i> sp.	IAP
Channel catfish	<i>Ictalurus punctatus</i>	BST, IAP
Flagfish	<i>Jordanella floridae</i>	IAP
Florida gar	<i>Lepisosteus platyrhincus</i>	BST
Warmouth.....	<i>Lepomis gulosus</i>	BST, IAP
Bluegill	<i>Lepomis macrochirus</i>	BST, IAP
Dollar sunfish	<i>Lepomis marginatus</i>	BST
Redear sunfish	<i>Lepomis microlophus</i>	BST, IAP
Spotted sunfish	<i>Lepomis punctatus</i>	BST, IAP
Bluefin killifish	<i>Lucania goodei</i>	IAP
Largemouth bass	<i>Micropterus salmoides</i>	BST
Pugnose minnow.....	<i>Notropis emiliae</i>	BST, IAP
Taillight shiner.....	<i>Notropis maculatus</i>	BST
Coastal shiner	<i>Notropis petersoni</i>	BST
Blue tilapia*	<i>Oreochromis aureus</i>	IAP
Sailfin molly	<i>Poecilia latipinna</i>	BST, IAP
Black crappie.....	<i>Pomoxis nigromaculatus</i>	BST, IAP

AMPHIBIANS

Florida cricket frog	<i>Acris gryllus dorsalis</i>	HH
Oak toad	<i>Anaxyrus quercicus</i>	SFW
Southern toad	<i>Anaxyrus terrestris</i>	IAP
Greenhouse frog*	<i>Eleutherodactylus planirostris</i>	MTC
Eastern narrowmouth toad.....	<i>Gastrophryne carolinensis</i>	HH, BF
Green treefrog.....	<i>Hyla cinerea</i>	MEH, HH, BF
Squirrel treefrog	<i>Hyla squirella</i>	MEH, HH, BF
Gopher frog	<i>Lithobates capito</i>	SFW, RNC, SIP
Bullfrog	<i>Lithobates catesbeianus</i>	IAP
Pig frog	<i>Lithobates grylio</i>	IAP
Southern leopard frog	<i>Lithobates sphenoccephalus</i>	HH, BF
Eastern spadefoot	<i>Scaphiopus holbrookii</i>	HH, BF

Alafia River State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
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REPTILES

Florida cottonmouth	<i>Agkistrodon piscivorus conanti</i> ...	BF, FS
American alligator	<i>Alligator mississippiensis</i>	BST, IAP
Green anole	<i>Anolis carolinensis</i>	HH
Cuban brown anole*	<i>Anolis sagrei</i>	MTC
Florida softshell	<i>Apalone ferox</i>	BST, FS, IAP
Six-lined racerunner	<i>Aspidoscelis sexlineata</i>	SC, RNC, SFW
Florida snapping turtle.....	<i>Chelydra serpentina osceola</i>	BST
Southern black racer	<i>Coluber constrictor priapus</i>	MTC
Eastern diamondback rattlesnake.....	<i>Crotalus adamanteus</i>	SC, RNC, SFW
Southern ring-necked snake....	<i>Diadophis punctatus punctatus</i> ...	MEH
Eastern indigo snake	<i>Drymarchon couperi</i>	SC
Gopher tortoise	<i>Gopherus polyphemus</i>	SFW, RNC, SIP
Striped mud turtle	<i>Kinosternon baurii</i>	HH
Eastern kingsnake.....	<i>Lampropeltis getula getula</i>	MEH
Eastern coral snake.....	<i>Micrurus fulvius</i>	MEH
Florida water snake.....	<i>Nerodia fasciata pictiventris</i>	BST, IAP
Florida green water snake	<i>Nerodia floridana</i>	BST, IAP
Eastern corn snake	<i>Pantherophis guttatus</i>	MEH, SFW
Common five-lined skink.....	<i>Plestiodon fasciatus</i>	SFW, RNC, MEH
Southeastern five-lined skink ..	<i>Plestiodon inexpectatus</i>	SFW, RNC
Peninsula cooter	<i>Pseudemys peninsularis</i>	BST
Argentine black and white tegu*	<i>Salvator</i> <i>merianae</i>	SIP, DV
Ground skink.....	<i>Scincella lateralis</i>	RNC, XH
Swamp snake	<i>Seminatrix pygaea</i>	BF, FS
Eastern garter snake	<i>Thamnophis sirtalis sirtalis</i>	MEH

BIRDS

Red-winged blackbird	<i>Agelaius phoeniceus</i>	IAP
Ruby-throated hummingbird ...	<i>Archilochus colubris</i>	MTC
Tufted titmouse	<i>Baeolophus bicolor</i>	MEH, HH
Cedar waxwing	<i>Bombycilla cedrorum</i>	OF
Northern cardinal.....	<i>Cardinalis cardinalis</i>	MTC
Northern flicker	<i>Colaptes auratus</i>	MTC
Gray catbird	<i>Dumetella carolinensis</i>	MEH
Florida sandhill crane	<i>Grus canadensis pratensis</i>	SIP
Loggerhead shrike	<i>Lanius ludovicianus</i>	SIP
Northern mockingbird.....	<i>Mimus polyglottos</i>	MTC
Wood stork	<i>Mycteria americana</i>	BF, FS, BST, IAP
Great crested flycatcher.....	<i>Myiarchus crinitus</i>	MTC
Indigo bunting	<i>Passerina cyanea</i>	MEH, HH, SHF
Eastern towhee	<i>Pipilo erythrophthalmus</i>	SFW

Alafia River State Park Animals

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Summer tanager.....	<i>Piranga rubra</i>	MEH, SHF
Purple martin	<i>Progne subis</i>	OF
Ruby-crowned kinglet.....	<i>Regulus calendula</i>	MEH, SHF
Eastern bluebird	<i>Sialia sia</i>	SIP
Brown-headed nuthatch.....	<i>Sitta pusilla</i>	SHF
Eastern meadowlark.....	<i>Sturnella magna</i>	SIP
European starling*	<i>Sturnus vulgaris</i>	SIP, DV
Brown thrasher.....	<i>Toxostoma rufum</i>	MEH, SHF, SFW
Eastern kingbird	<i>Tyrannus tyrannus</i>	MTC
White-eyed vireo	<i>Vireo griseus</i>	BG, BF
Red-eyed vireo	<i>Vireo olivaceus</i>	BG, BF
Blue-headed vireo	<i>Vireo solitarius</i>	BG, BF
American pipit	<i>Anthus rubescens</i>	SIP
Chimney swift	<i>Bombycilla cedrorum</i>	OF
American crow.....	<i>Corvus brachyrhynchos</i>	MTC
Fish crow	<i>Corvus ossifragus</i>	MTC
Blue jay	<i>Cyanocitta cristata</i>	MTC
Brown-headed cowbird	<i>Molothrus ater</i>	SIP
Boat-tailed grackle.....	<i>Quiscalus major</i>	MTC
Common grackle.....	<i>Quiscalus quiscula</i>	MTC
Wood duck.....	<i>Aix sponsa</i>	IAP, BST
Northern pintail	<i>Anas acuta</i>	IAP, BST
Blue-winged teal.....	<i>Anas discors</i>	IAP, BST
Mottled duck	<i>Anas fulvigula</i>	IAP, BST
Anhinga.....	<i>Anhinga anhinga</i>	IAP, BST
Muscovy duck.....	<i>Cairina moschata</i>	IAP, BST
Black-bellied whistling duck.....	<i>Dendrocygna autumnalis</i>	IAP, BST
Common moorhen	<i>Gallinula chloropus -ck</i>	IAP, BST
Double-crested cormorant.....	<i>Phalacrocorax auritus</i>	IAP, BST
Pied-billed grebe.....	<i>Podilymbus podiceps</i>	IAP, BST
Rock dove.....	<i>Columba livia</i>	SIP, DV
Common ground-dove	<i>Columbina passerina</i>	MTC
Eurasian collared dove.....	<i>Streptopelia decaocto</i>	MTC
White-winged dove	<i>Zenaida asiatica</i>	MTC
Mourning dove	<i>Zenaida macroura</i>	MTC
Blue-gray gnatcatcher	<i>Polioptila caerulea</i>	MTC
Cooper's hawk.....	<i>Accipiter cooperii</i>	SIP
Sharp-shinned hawk	<i>Accipiter striatus</i>	SIP
Red-tailed hawk.....	<i>Buteo jamaicensis</i>	OF
Red-shouldered hawk	<i>Buteo lineatus</i>	BG
Northern harrier	<i>Circus cyaneus</i>	IAP
Swallow-tailed kite.....	<i>Elanoides forficatus</i>	SIP
American kestrel.....	<i>Falco sparverius</i>	SIP
Southeastern American kestrel.....	<i>Falco sparverius paulus</i>	SIP
Bald eagle.....	<i>Haliaeetus leucocephalus</i>	MTC
Osprey	<i>Pandion haliaetus</i>	SIP, UC

* Non-native Species

Alafia River State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Belted kingfisher.....	<i>Megaceryle alcyon</i>	IAP, BST
Great horned owl.....	<i>Bubo virginianus</i>	MEH, BG, BF, HH
Eastern screech-owl.....	<i>Megascops asio</i>	BF, SHF
Barred owl.....	<i>Strix varia</i>	HH, BF
Barn owl.....	<i>Tyto alba</i>	SHF
Great egret.....	<i>Ardea alba</i>	IAP, BST
Great blue heron	<i>Ardea herodias</i>	IAP, BST
American bittern.....	<i>Botaurus lentiginosus</i>	IAP, BST
Cattle egret.....	<i>Bubulcus ibis</i>	SIP
Green heron.....	<i>Butorides virescens</i>	IAP, BST
Little blue heron	<i>Egretta caerulea</i>	IAP, BST
Snowy egret.....	<i>Egretta thula</i>	IAP, BST
Tricolored heron	<i>Egretta tricolor</i>	IAP, BST
Black-crowned night-heron	<i>Nycticorax nycticorax</i>	IAP, BST
White ibis	<i>Eudocimus albus</i>	IAP, BST
Least bittern	<i>Ixobrychus exilis</i>	IAP, BST
American white pelican.....	<i>Pelecanus erythrorhynchos</i>	OF
Brown pelican.....	<i>Pelecanus occidentalis</i>	OF
Roseate spoonbill.....	<i>Platalea ajaja</i>	IAP, BST, BF
Glossy ibis	<i>Plegadis falcinellus</i>	IAP, BST, BF
Chuck-will's-widow.....	<i>Antrostomus carolinensis</i>	SIP, MEH
Common nighthawk	<i>Chordeiles minor</i>	MEH
Northern bobwhite	<i>Colinus virginianus</i>	SIP, PP, MEH
Bobolink	<i>Dolichonyx oryzivorus</i>	SIP
Wild turkey	<i>Meleagris gallopavo</i>	SIP, MEH
Limpkin	<i>Aramus guarauna</i>	IAP, BST
American coot	<i>Fulica americana</i>	IAP, BST
Common gallinule	<i>Gallinula galeata</i>	IAP, BST
Black rail	<i>Laterallus jamaicensis</i>	IAP, BST
Purple gallinule.....	<i>Porphyrio martinicus</i>	IAP, BST
King rail.....	<i>Rallus elegans</i>	IAP, BST
Least sandpiper	<i>Calidris minutilla</i>	IAP
Killdeer	<i>Charadrius vociferus</i>	SIP
Gull-billed tern	<i>Gelochelidon nilotica</i>	OF
Black-necked stilt	<i>Himantopus mexicanus</i>	IAP
Caspian tern.....	<i>Hydroprogne caspia</i>	OF
Ring-billed gull	<i>Larus delawarensis</i>	OF
Laughing gull	<i>Leucophaeus atricilla</i>	OF
Black-crowned night heron.....	<i>Nycticorax nycticorax</i>	IAP, BST
Black skimmer.....	<i>Rynchops niger</i>	OF
Common tern	<i>Sterna hirundo</i>	OF
Least tern	<i>Sternula antillarum</i>	OF
Royal tern.....	<i>Thalasseus maximus</i>	OF
Sandwich tern	<i>Thalasseus sandvicensis</i>	OF
Lesser yellowlegs.....	<i>Tringa flavipes</i>	IAP
Greater yellowlegs	<i>Tringa melanoleuca</i>	IAP

Alafia River State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Solitary sandpiper	<i>Tringa solitaria</i>	IAP
Bachman's sparrow	<i>Aimophila aestivalis</i>	SHF, MEH
Savannah sparrow	<i>Passerculus sandwichensis</i>	SHF, MEH
Barn swallow	<i>Hirundo rustica</i>	OF
Northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>	OF
Tree swallow	<i>Tachycineta bicolor</i>	OF
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	HH, BF
Turkey vulture	<i>Cathartes aura</i>	OF
Black vulture	<i>Coragyps atratus</i>	OF
Common yellowthroat	<i>Geothlypis trichas</i>	MEH, SHF, HH
Black and white warbler	<i>Mniotilta varia</i>	MEH, SHF, HH
Northern waterthrush	<i>Parkesia noveboracensis</i>	BST, IAP
Northern parula	<i>Setophaga americana</i>	MEH, SHF, HH
Prairie warbler	<i>Setophaga discolor</i>	MEH, SHF, HH
Yellow-throated warbler	<i>Setophaga dominica</i>	MEH, SHF, HH
Palm warbler	<i>Setophaga palmarum</i>	MEH, SHF, HH
Yellow warbler	<i>Setophaga petechia</i>	MEH, SHF, HH
Pine warbler	<i>Setophaga pinus</i>	MEH, SHF, HH
American redstart	<i>Setophaga ruticilla</i>	MEH, SHF, HH
Pileated woodpecker	<i>Dryocopus pileatus</i>	MEH, SHF, HH
Red-bellied woodpecker	<i>Melanerpes carolinus</i>	MEH, SHF, HH
Red-headed woodpecker	<i>Melanerpes erythrocephalus</i>	MEH, SHF, HH
Downy woodpecker	<i>Picoides pubescens</i>	MEH, SHF, HH
Carolina wren	<i>Thryothorus ludovicianus</i>	MTC
House wren	<i>Troglodytes aedon</i>	SHF

MAMMALS

Southern short-tailed shrew	<i>Blarina carolinensis</i>	MEH, SHF
Dog	<i>Canis familiaris</i>	DV, SIP
Coyote	<i>Canis latrans</i>	SIP
Least shrew	<i>Cryptotis parva</i>	MEH, SHF
Nine-banded armadillo	<i>Dasypus novemcinctus</i>	MTC
Virginia opossum	<i>Didelphis virginiana</i>	MTC
Domestic cat*	<i>Felis catus</i>	DV
Southeastern pocket gopher	<i>Geomys pinetis</i>	SIP
River otter	<i>Lontra canadensis</i>	BST
Bobcat	<i>Lynx rufus</i>	MEH
White-tailed deer	<i>Odocoileus virginianus</i>	MTC
Cotton mouse	<i>Peromyscus gossypinus</i>	MEH
Florida mouse	<i>Podomys floridanus</i>	SFW
Raccoon	<i>Procyon lotor</i>	MTC
Gray squirrel	<i>Sciurus carolinensis</i>	MTC
Sherman's fox squirrel	<i>Sciurus niger shermanii</i>	MH, SHF
Hispid cotton rat	<i>Sigmodon hispidus</i>	MTC

* Non-native Species

Alafia River State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for imperiled species)
Wild hog*	<i>Sus scrofa</i>	MTC
Eastern cottontail	<i>Sylvilagus floridanus</i>	SC, MEH, XH
Marsh rabbit	<i>Sylvilagus palustris</i>	HH
Gray fox	<i>Urocyon cinereoargenteus</i>	MTC
Red fox*	<i>Vulpes vulpes</i>	MTC

Primary Habitat Codes

TERRESTRIAL

Beach Dune.....	BD
Coastal Berm.....	CB
Coastal Grassland	CG
Coastal Strand.....	CS
Dry Prairie	DP
Keys Cactus Barren	KCB
Limestone Outcrop	LO
Maritime Hammock	MAH
Mesic Flatwoods.....	MF
Mesic Hammock.....	MEH
Pine Rockland	PR
Rockland Hammock.....	RH
Sandhill	SH
Scrub	SC
Scrubby Flatwoods	SCF
Shell Mound	SHM
Sinkhole	SK
Slope Forest	SPF
Upland Glade.....	UG
Upland Hardwood Forest.....	UHF
Upland Mixed Woodland.....	UMW
Upland Pine.....	UP
Wet Flatwoods	WF
Xeric Hammock	XH

PALUSTRINE

Alluvial Forest.....	AF
Basin Marsh	BM
Basin Swamp.....	BS
Baygall	BG
Bottomland Forest.....	BF
Coastal Interdunal Swale	CIS
Depression Marsh	DM
Dome Swamp.....	DS
Floodplain Marsh	FM
Floodplain Swamp.....	FS
Glades Marsh.....	GM
Hydric Hammock.....	HH
Keys Tidal Rock Barren	KTRB
Mangrove Swamp	MS
Marl Prairie.....	MP
Salt Marsh.....	SAM
Seepage Slope.....	SSL
Shrub Bog.....	SHB
Slough.....	SLO
Slough Marsh	SLM
Strand Swamp.....	STS

Primary Habitat Codes

Wet Prairie WP

LACUSTRINE

Clastic Upland Lake CULK

Coastal Dune Lake CDLK

Coastal Rockland Lake CRLK

Flatwoods/Prairie FPLK

Marsh Lake MLK

River Floodplain Lake RFLK

Sandhill Upland Lake SULK

Sinkhole Lake SKLK

Swamp Lake SWLK

RIVERINE

Alluvial Stream AST

Blackwater Stream BST

Seepage Stream SST

Spring-run Stream SRST

SUBTERRANEAN

Aquatic Cave ACV

Terrestrial Cave TCV

ESTUARINE

Algal Bed EAB

Composite Substrate ECPS

Consolidated Substrate ECNS

Coral Reef ECR

Mollusk Reef EMR

Octocoral Bed EOB

Seagrass Bed ESGB

Sponge Bed ESPB

Unconsolidated Substrate EUS

Worm Reef EWR

Primary Habitat Codes

MARINE

Algal Bed	MAB
Composite Substrate	MCPS
Consolidated Substrate	MCNS
Coral Reef	MCR
Mollusk Reef	MMR
Octocoral Bed	MOB
Seagrass Bed	MSGB
Sponge Bed	MSPB
Unconsolidated Substrate	MUS
Worm Reef	MWR

ALTERED LANDCOVER TYPES

Abandoned field/ Abandoned pasture	AFP
Agriculture	AG
Artificial pond	AP
Borrow Area	BA
Canal/ditch	CD
Clearcut pine plantation	CPP
Clearing	CL
Developed	DV
Impoundment	IM
Invasive exotic monoculture	IEM
Pasture - improved	PI
Pasture - semi-improved	PSI
Pine plantation	PP
Restoration natural community	RNC
Road	RD
Spoil area	SA
Successional hardwood forest	SHF
Utility corridor	UC

MISCELLANEOUS

Many Types of Communities	MTC
Overflying	OF

Addendum 5 — Imperiled Species Ranking Definitions

Imperiled Species Ranking Definitions

The Nature Conservancy and the Natural Heritage Program Network (of which FNAI is a part) define an element as any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave or other ecological feature. An element occurrence (EO) is a single extant habitat that sustains or otherwise contributes to the survival of a population or a distinct, self-sustaining example of a particular element.

Using a ranking system developed by The Nature Conservancy and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks to each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element occurrences, estimated abundance (number of individuals for species; area for natural communities), range, estimated adequately protected EOs, relative threat of destruction, and ecological fragility.

Federal and State status information is from the U.S. Fish and Wildlife Service; and the Florida Fish and Wildlife Conservation Commission (animals), and the Florida Department of Agriculture and Consumer Services (plants), respectively.

FNAI GLOBAL RANK DEFINITIONS

- G1Critically 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 fabricated factor.
- G2Imperiled 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.
- G3Either very rare or local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.
- G4apparently secure globally (may be rare in parts of range)
- G5demonstrably secure globally
- GHof historical occurrence throughout its range may be rediscovered (e.g., ivory-billed woodpecker)
- GXbelieved to be extinct throughout range
- GXCextirpated 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 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.

Imperiled Species Ranking Definitions

- GU due to lack of information, no rank or range can be assigned (e.g., GUT2).
- G?..... Not yet ranked (temporary)
- 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 or local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.
- S4..... apparently secure in Florida (may be rare in parts of range)
- S5..... demonstrably secure in Florida
- SH of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
- SX..... believed to be extinct throughout range
- SA..... accidental in Florida, i.e., not part of the established biota
- SE..... an exotic species established in Florida may be native elsewhere in North America
- SN regularly occurring but widely and unreliably distributed; sites for conservation hard to determine
- SU due to lack of information, no rank or range can be assigned (e.g., SUT2).
- S?..... Not yet ranked (temporary)
- N Not currently listed, nor currently being considered for listing, by state or federal agencies.

LEGAL STATUS

FEDERAL

(Listed by the U. S. Fish and Wildlife Service - USFWS)

- LE Listed as Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species that is in danger of extinction throughout all or a significant portion of its range.
- PE Proposed for addition to the List of Endangered and Threatened Wildlife and Plants as Endangered Species.
- LT Listed as Threatened Species. Defined as any species that is likely to become an endangered species within the near future throughout all or a significant portion of its range.
- PT Proposed for listing as Threatened Species.
- C Candidate Species for addition to the list of Endangered and Threatened Wildlife and Plants. Defined as those species for which the USFWS currently has on file sufficient information on biological vulnerability and threats to support proposing to list the species as endangered or threatened.

Imperiled Species Ranking Definitions

E(S/A) Endangered due to similarity of appearance.

T(S/A) Threatened due to similarity of appearance.

EXPE, XE..... Experimental essential population. A species listed as experimental and essential.

EXPN, XN.... Experimental non-essential population. A species listed as experimental and non-essential. Experimental, nonessential populations of endangered species are treated as threatened species on public land, for consultation purposes.

STATE

ANIMALS .. (Listed by the Florida Fish and Wildlife Conservation Commission - FWC)

FE Federally-designated Endangered

FT Federally-designated Threatened

FXN Federally-designated Threatened Nonessential Experimental Population

FT(S/A) Federally-designated Threatened species due to similarity of appearance

ST..... Listed as Threatened Species by the FWC. Defined as a species, subspecies, or isolated population, which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat, is decreasing in area at a rapid rate and therefore is destined or very likely to become an endangered species within the near future.

SSC..... Listed as Species of Special Concern by the FWC. Defined as a population which warrants special protection, recognition or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance or substantial human exploitation that, in the near future, may result in its becoming a threatened species.

PLANTS (Listed by the Florida Department of Agriculture and Consumer Services - FDACS)

LE Listed as Endangered Plants in the Preservation of Native Flora of Florida Act. Defined as species of plants native to the state that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973, as amended.

LT Listed as Threatened Plants in the Preservation of Native Flora of Florida Act. Defined as 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.

Addendum 6 – Cultural Information

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 at:
<http://www.flheritage.com/preservation/compliance/guidelines.cfm>

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.

Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Properties (revised March 2013)

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, 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, certain information must be submitted for comments and recommendations. The minimum review documentation requirements can be found at:

http://www.flheritage.com/preservation/compliance/docs/minimum_review_documentation_requirements.pdf .

* * *

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

Deena S. Woodward
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) 245-6425
Toll Free: (800) 847-7278
Fax: (850) 245-6435

Eligibility Criteria for National Register of Historic Places

The criteria to be used for evaluating eligibility for listing in the National Register of Historic Places are as follows:

- 1)** Districts, sites, buildings, structures, and objects may be considered to have significance in American history, architecture, archaeology, engineering, and/or culture if they possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:
 - a)** are associated with events that have made a significant contribution to the broad patterns of our history; and/or
 - b)** are associated with the lives of persons significant in our past; and/or
 - c)** embody the distinctive characteristics of type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; and/or
 - d)** have yielded, or may be likely to yield, information important in prehistory or history.

- 2)** Ordinarily cemeteries, birthplaces, or graves of historical figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; properties primarily commemorative in nature; and properties that have achieved significance within the past 50 years shall not be considered eligible for the *National Register*. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:
 - a)** a religious property deriving its primary significance from architectural or artistic distinction or historical importance; or
 - b)** a building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or
 - c)** a birthplace or grave of an historical figure of outstanding importance if there is no appropriate site or building directly associated with his productive life; or
 - d)** a cemetery which derives its primary significance from graves of persons of transcendent importance, from age, distinctive design features, or association with historic events; or a reconstructed building, when it is accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and no other building or structure with the same association has survived; or a property primarily commemorative in intent, if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or
 - e)** a property achieving significance within the past 50 years, if it is of exceptional importance.

Restoration is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations and additions while preserving those portions or features that convey its historical, cultural or architectural values.

Stabilization is defined as the act or process of applying measures designed to reestablish a weather resistant enclosure and the structural stability of an unsafe or deteriorated property while maintaining the essential form as it exists at present.

Preservation is defined as the act or process of applying measures necessary to sustain the existing form, integrity and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

Addendum 7 — Timber Management Analysis

1. Management Context and Best Management Practices

Timber management at Alafia River State Park (Alafia River) is based on the desired future condition (DFC) of a management zone or natural community (NatCom) as determined by the DRP Unit Management Plans, along with guidelines developed by the FNAI. In most cases, the DFC will be closely related to the historic NatCom. However, it is important to note, that in areas where the historic community has been severely altered by past land use practices, the DFC may not always be the same as the historic NatCom. All timber management activities undertaken will adhere to or exceed the current Florida Silvicultural Best Management Practices (BMPs) and Florida Forestry Wildlife BMPs for State Imperiled Species. DRP shall take all measures necessary to protect water quality and wildlife species of concern while conducting timber management activities. DRP has contracted with a private sector, professional forest management firm to complete this timber assessment: F4 Tech.

2. Purpose of Timber Management Activities

Timber management activities may be conducted to help improve or maintain current conditions to achieve the associated DFC. Timber management will primarily be conducted in upland NatComs. Candidate upland NatCom types may include mesic flatwoods, wet flatwoods, sandhill, upland pine, and upland mixed woodland along with scrubby flatwoods, scrub, and altered landcover types where DFC has been established, i.e. pine plantations. There will likely be no scheduled timber management activities in historically hardwood-dominated or wetland NatCom types, e.g., upland hardwood forest, hydric hammock, and slope forest. In some circumstances, timber management may include the harvesting and removal of overstory invasive/exotic trees. Descriptions of community types are detailed in the in the Resource Management Component.

3. Potential Silvicultural Treatments

Several silvicultural treatments may be considered and utilized over the next ten years. The various types of timber harvests may include pine thinning, targeted hardwood overstory removal, and clearcutting. Silvicultural treatments will be selectively implemented to minimize potential impacts to water and soil resources, non-target vegetation, and wildlife (see BMPs). Depending upon the condition and marketability of the timber being manipulated, it is possible to generate revenue from the harvest. It is also possible the timber removal could be a cost to DRP. In all decisions, the mission of preserving and restoring natural communities will be the guiding factor.

Thinning is conducted to reduce the basal area (BA) or density of trees/stems in a stand to improve forest health and growth conditions for residual trees. Allowing trees more room to grow has the potential to increase tree and forest vigor, which helps mitigate the potential for damaging insect and disease outbreaks. Most tree harvesting/removals also increase sunlight reaching the forest floor and fine fuels that facilitate consistent fire return intervals and responses, which can benefit

groundcover vegetation abundance, species richness, and overall ecological diversity. The disruption of natural fire regimes and fire return intervals can often result in the need to remove undesirable or overstocked hardwood stems that currently occupy growing space in the canopy and sub-canopy. Clearcutting may be used to support restoration goals by removing off-site pine or hardwood species and is a precursor to establishing site-appropriate species. It can also be used to control insect infestations that are damaging or threatening to forest resources and ecosystem conditions.

On occasion, salvage cuts may need to be conducted to remove small volumes of wood damaged by fire, wind storm, insect or other natural causes. The decision to harvest the affected timber will depend on the threat to the surrounding stands, risk of collateral ecological damage, and the volume/value of the trees involved. For example, small, isolated lightning-strike and beetle kills are a natural part of a healthy ecosystem and normally would not be cut. However, if a drought caused the insect infestation to spread, the affected trees and buffer zone might have to be removed to prevent significant damage.

4. Inventory Data and Potential Actions per Management Zone

A total of 4,109 acres associated with three (3) upland NatCom types that are potential candidates for timber management were assessed. From June to July 2018, an inventory based on field plots was conducted across and within these areas to quantify overstory, midstory and understory conditions. Various park-level and NatCom-level summary statistics can be found in the following tables.

This timber assessment was based on management zone and NatCom boundary GIS data provided by DRP in September 2018. It is not intended to be prescriptive. Stakeholders and DRP staff are encouraged to view this timber assessment and inventory data as supplemental information for future consideration. Given the dynamic nature of property ownership and land management activities at Alafia River, together with the timeframe required to create or update a UMP, it is possible that some tabular data may be dated. Therefore, NatCom acreages and recent treatments that occurred after the September 2018 period may not be reflected in the following tables.

Table 1. General Summary Statistics	
Number of management zones	57
Upland natural community acres	4,109

Mesic Flatwoods (2,675.1 acres)

Longleaf pine (*Pinus palustris*) is the preferred overstory pine species in the region. The FNAI reference site in this region for mesic flatwoods contains longleaf pine at a basal area (BA) of 10 to 50 square feet per acre with non-pine at a density of 0 trees per acre (TPA). The following table shows the overstory condition for this natural community at Alafia River and target overstory condition for mesic flatwoods in this region

Alafia River State Park Timber Management Analysis

MZ ID	Mesic Flatwoods (Acres)	Current Average Overstory Conditions							Target Overstory Conditions	
		Pine BA (ft2 / ac)	Pine TPA	Pine Volume (tons / ac)	Non-Pine BA (ft2 / ac)	Non-Pine TPA	Non-Pine Volume (tons / ac)	Total Pine and Non-Pine Volume (tons / ac)	FNAI Reference Condition Pine BA Range (ft2 / ac)	FNAI Reference Condition Non-Pine TPA Range
AR-02A	12.1	--	--	--	--	--	--	--	--	--
AR-02B	12.1	--	--	--	--	--	--	--	--	--
AR-03	0.3	--	--	--	--	--	--	--	--	--
AR-04A	0.3	--	--	--	--	--	--	--	--	--
AR-04C	12.3	--	--	--	--	--	--	--	--	--
AR-04D	21.0	0.0	0.0	0.0	65.0	112.0	24.3	24.3	10 - 50	0 - 0
AR-05A	18.0	--	--	--	--	--	--	--	--	--
AR-05B	25.7	15.0	21.5	10.8	25.0	33.1	0.0	10.8	10 - 50	0 - 0
AR-05C	7.5	--	--	--	--	--	--	--	--	--
AR-07	39.5	140.0	354.3	74.9	4.0	13.5	2.9	77.8	10 - 50	0 - 0
AR-08	6.5	--	--	--	--	--	--	--	--	--
AR-10	46.3	0.0	0.0	0.0	90.0	84.7	72.9	72.9	10 - 50	0 - 0
AR-11	6.7	5.0	2.3	4.6	40.0	114.1	20.2	24.8	10 - 50	0 - 0
AR-12	134.5	32.5	46.2	20.4	38.8	31.7	4.3	24.7	10 - 50	0 - 0
AR-13	144.1	87.5	125.6	63.3	0.0	0.0	0.0	63.3	10 - 50	0 - 0
AR-14	33.5	42.5	49.0	29.8	40.0	205.2	5.5	35.3	10 - 50	0 - 0
AR-15	168.8	6.7	34.4	3.8	30.0	68.7	15.9	19.8	10 - 50	0 - 0
AR-16	83.3	23.8	35.6	16.5	6.3	34.4	0.0	16.5	10 - 50	0 - 0
AR-17	199.0	26.0	44.7	17.0	20.0	91.2	7.8	24.8	10 - 50	0 - 0
AR-18	48.0	0.0	0.0	0.0	85.0	337.9	18.3	18.3	10 - 50	0 - 0
AR-19A	49.9	0.0	0.0	0.0	30.0	67.8	24.3	24.3	10 - 50	0 - 0
AR-19B	153.9	23.8	26.8	16.8	41.3	74.2	14.4	31.2	10 - 50	0 - 0
AR-19C	42.0	--	--	--	--	--	--	--	--	--

Alafia River State Park Timber Management Analysis

MZ ID	Mesic Flatwoods (Acres)	Current Average Overstory Conditions							Target Overstory Conditions	
		Pine BA (ft2 / ac)	Pine TPA	Pine Volume (tons / ac)	Non-Pine BA (ft2 / ac)	Non-Pine TPA	Non-Pine Volume (tons / ac)	Total Pine and Non-Pine Volume (tons / ac)	FNAI Reference Condition Pine BA Range (ft2 / ac)	FNAI Reference Condition Non-Pine TPA Range
AR-20A	21.6	0.0	0.0	0.0	30.0	32.5	27.5	27.5	10 - 50	0 - 0
AR-20B	6.3	--	--	--	--	--	--	--	--	--
AR-22B	10.0	--	--	--	--	--	--	--	--	--
AR-23	7.2	--	--	--	--	--	--	--	--	--
AR-24B	16.6	--	--	--	--	--	--	--	--	--
AR-25	0.9	--	--	--	--	--	--	--	--	--
AR-29	22.3	0.0	0.0	0.0	15.0	20.4	12.4	12.4	10 - 50	0 - 0
AR-30	14.6	0.0	0.0	0.0	105.0	229.4	63.6	63.6	10 - 50	0 - 0
AR-31A	23.5	0.0	0.0	0.0	80.0	188.2	54.3	54.3	10 - 50	0 - 0
AR-31B	6.9	--	--	--	--	--	--	--	--	--
AR-32	2.6	--	--	--	--	--	--	--	--	--
AR-33A	1.7	--	--	--	--	--	--	--	--	--
AR-33B	3.6	--	--	--	--	--	--	--	--	--
AR-35	21.4	--	--	--	--	--	--	--	--	--
AR-36A	109.1	36.7	41.6	26.9	45.6	88.8	3.4	30.2	10 - 50	0 - 0
AR-36B	5.0	--	--	--	--	--	--	--	--	--
AR-37	51.1	60.0	70.2	37.9	25.0	107.5	7.9	45.8	10 - 50	0 - 0
AR-38A	37.6	17.5	36.5	11.4	50.0	105.0	13.0	24.5	10 - 50	0 - 0
AR-38B	95.4	32.5	32.8	19.7	40.0	168.5	14.6	34.3	10 - 50	0 - 0
AR-39	52.2	45.0	60.5	27.3	35.0	83.9	6.3	33.6	10 - 50	0 - 0
AR-40	49.6	0.0	0.0	0.0	77.5	135.4	15.7	15.7	10 - 50	0 - 0
Not Identified*	850.5	--	--	--	--	--	--	--	--	--
Total	2,675.1									

*Management Zone boundaries are mapped but alpha-numeric identifiers are missing.

Alafia River State Park Timber Management Analysis

Sandhill (1,002.4 acres)

Longleaf pine (*Pinus palustris*) is the preferred overstory pine species in the region. The FNAI reference site in this region for sandhill contains longleaf pine at a basal area (BA) of 20 to 60 square feet per acre with non-pine species at between 0 and 79 trees per acre (TPA). The following table shows the overstory condition for this natural community at Alafia River and target overstory condition for sandhill in this region.

MZ ID	Sandhill (Acres)	Current Average Overstory Conditions							Target Overstory Conditions	
		Pine BA (ft ² / ac)	Pine TPA	Pine Volume (tons / ac)	Non-Pine BA (ft ² / ac)	Non-Pine TPA	Non-Pine Volume (tons / ac)	Total Pine and Non-Pine Volume (tons / ac)	FNAI Reference Condition Pine BA Range (ft ² / ac)	FNAI Reference Condition Non-Pine TPA Range
AR-01	22.6	--	--	--	--	--	--	--	--	--
AR-06	22.5	--	--	--	--	--	--	--	--	--
AR-10	66.4	--	--	--	--	--	--	--	--	--
AR-14	161.9	0.0	0.0	0.0	70.0	106.0	14.3	14.3	20 - 60	0 - 79
AR-15	54.7	--	--	--	--	--	--	--	--	--
AR-16	1.2	--	--	--	--	--	--	--	--	--
AR-17	48.6	60.0	116.7	37.4	30.0	148.2	7.0	44.5	20 - 60	0 - 79
AR-18	160.3	35.0	43.9	24.7	32.5	74.9	1.0	25.7	20 - 60	0 - 79
AR-19B	47.7	35.0	28.9	24.3	25.0	26.8	1.7	26.0	20 - 60	0 - 79
AR-19C	61.3	--	--	--	--	--	--	--	--	--
AR-23	30.0	--	--	--	--	--	--	--	--	--
AR-24A	3.3	--	--	--	--	--	--	--	--	--
AR-24B	0.2	--	--	--	--	--	--	--	--	--
AR-25	84.5	14.0	13.6	9.9	66.0	83.5	12.9	22.8	20 - 60	0 - 79
AR-28	66.1	6.0	6.4	4.0	68.0	140.4	4.0	8.0	20 - 60	0 - 79
AR-32	4.1	--	--	--	--	--	--	--	--	--
AR-36A	3.5	--	--	--	--	--	--	--	--	--
AR-39	83.6	42.0	96.0	23.1	36.0	89.8	5.1	28.2	20 - 60	0 - 79

Alafia River State Park Timber Management Analysis

MZ ID	Sandhill (Acres)	Current Average Overstory Conditions							Target Overstory Conditions	
		Pine BA (ft ² /ac)	Pine TPA	Pine Volume (tons/ac)	Non- Pine BA (ft ² /ac)	Non- Pine TPA	Non-Pine Volume (tons/ac)	Total Pine and Non- Pine Volume (tons/ac)	FNAI Reference Condition Pine BA Range (ft ² /ac)	FNAI Reference Condition Non-Pine TPA Range
Not Identified*	80.1	--	--	--	--	--	--	--	--	--
Total	1,002.4									

*Management Zone boundaries are mapped but alpha-numeric identifiers are missing.

Scrubby Flatwoods (398.9 acres)

Longleaf pine (*Pinus palustris*) is the preferred overstory pine species in the region. The FNAI reference site in this region for scrubby flatwoods contains longleaf pine at a basal area (BA) of 10 to 60 square feet per acre with non-pine at a density of between 0 and 26 trees per acre (TPA). The following table shows the overstory condition for this natural community at Alafia River and target overstory condition for scrubby flatwoods in this region.

MZ ID	Scrubby Flatwoods (Acres)	Current Average Overstory Conditions							Target Overstory Conditions	
		Pine BA (ft ² /ac)	Pine TPA	Pine Volume (tons/ac)	Non- Pine BA (ft ² /ac)	Non- Pine TPA	Non-Pine Volume (tons/ac)	Total Pine and Non- Pine Volume (tons/ac)	FNAI Reference Condition Pine BA Range (ft ² /ac)	FNAI Reference Condition Non-Pine TPA Range
AR-01	120.3	0.0	0.0	0.0	14.3	68.9	3.4	3.4	20 - 60	0 - 26
AR-03	9.8	0.0	0.0	0.0	50.0	146.9	4.4	4.4	20 - 60	0 - 26
AR-04A	33.7	3.3	22.0	0.7	11.7	12.6	0.0	0.7	20 - 60	0 - 26
AR-04B	0.3	--	--	--	--	--	--	--	--	--
AR-04C	0.2	--	--	--	--	--	--	--	--	--
AR-04D	5.7	0.0	0.0	0.0	160.0	520.0	0.0	0.0	20 - 60	0 - 26
AR-06	3.0	--	--	--	--	--	--	--	--	--
AR-08	1.8	--	--	--	--	--	--	--	--	--
AR-09	6.6	0.0	0.0	0.0	40.0	199.9	0.0	0.0	20 - 60	0 - 26
AR-14	70.0	13.3	11.9	11.1	103.3	128.1	3.2	14.3	20 - 60	0 - 26

Alafia River State Park Timber Management Analysis

MZ ID	Scrubby Flatwoods (Acres)	Current Average Overstory Conditions							Target Overstory Conditions	
		Pine BA (ft2 / ac)	Pine TPA	Pine Volume (tons / ac)	Non-Pine BA (ft2 / ac)	Non-Pine TPA	Non-Pine Volume (tons / ac)	Total Pine and Non-Pine Volume (tons / ac)	FNAI Reference Condition Pine BA Range (ft2 / ac)	FNAI Reference Condition Non-Pine TPA Range
AR-15	2.6	--	--	--	--	--	--	--	--	--
AR-16	82.2	0.0	0.0	0.0	10.0	58.5	0.0	0.0	20 - 60	0 - 26
AR-21	51.4	13.3	11.5	10.9	83.3	113.9	18.5	29.3	20 - 60	0 - 26
AR-35	11.4	--	--	--	--	--	--	--	--	--
Total	398.9									

Addendum 8 — Land Management Review

**FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION**

MEMORANDUM

TO: Aric Larson, Governmental Operations Consultant III
Division of State Lands

FROM: Parks Small, Chief, Bureau of Natural and Cultural Resources
Division of Recreation and Parks

 Digitally signed by Howell_C
Date: 2015.11.17 14:35:38
-05'00'

Sine Murray, Chief, Office of Park Planning
Division of Recreation and Parks

 Digitally signed by Murray_SM
Date: 2015.11.20 16:57:27
-05'00'

SUBJECT: Response to Draft Land Management Review (LMR)
Alafia River State Park

The Land Management Review draft report provided to Division of Recreation and Parks (DRP) determined that management of Alafia River State Park by the DRP met the two tests prescribed by law. Namely, the review team concluded that the land is being managed for the purposes for which it was acquired and in accordance with the land management plan.

Attached is DRP's Managing Agency Response to the draft LMR report. The responses were prepared via a coordinated effort of the park, district office, and our offices.

Thank you for your attention.

2015 Land Management Review Team Report for Alafia River State Park

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1. Introduction

Section 259.036, F.S. requires a periodic on-site review of conservation and recreation lands titled in the name of the Board of Trustees to determine (1) whether the lands are being managed for the purposes for which they were acquired and (2) whether they are being managed in accordance with their land management plan adopted pursuant to s. 259.032, F.S. In case where the managed areas exceed 1,000 acres in size, such a review must be scheduled at least every five years. In conducting this review, a statutorily constructed review team “shall evaluate the extent to which the existing management plan provides sufficient protection to threatened or endangered species, unique or important natural or physical features, geological or hydrological functions or archaeological features. The review shall also evaluate the extent to which the land is being managed for the purposes for which it was acquired and the degree to which actual management practices, including public access, are in compliance with the adopted management plan.”

The land management review teams are coordinated by the Division of State Lands and consist of representatives from the Division of Recreation and Parks (DEP), the Florida Forest Service (DACS), the Fish and Wildlife Conservation Commission, the local government in which the property is located, the DEP District in which the parcel is located, the local soil and water conservation district, a conservation organization member, and a local private land manager.

Each Land Management Review Report is divided into three sections. Section 1 provides the details of the property being reviewed as well as the overall results of the report. Section 2 provides details of the Field Review, in which the Review Team inspects the results of management actions on the site. Section 3 provides details of the Land Management Plan Review, in which the team determines the extent to which the Management Plan provides for and documents adequate natural and recreational resource protection.

Finally, each report may also contain an Appendix that lists individual team member comments. This is a compilation of feedback, concerns or other thoughts raised by individual team members, but not necessarily indicative of the final consensus reached by the Land Management Review Team.

1.1. Property Reviewed in this Report

Name of Site: Alafia River State Park

Managed by: DRP

Acres: 6,314.90

County: Hillsborough County

Purpose(s) for Acquisition: To be managed for the protection and preservation of natural and cultural resources, and to provide compatible outdoor natural resource based recreational opportunities.

Acquisition Program(s): Donation

Original Acquisition Date: 12/19/96

Area Reviewed: Entire Property

Last Management Plan Approval Date: 10/15/04

Review Date: 8/10/15

Agency Manager and Key Staff Present:

- Coy Helms, Park Manager

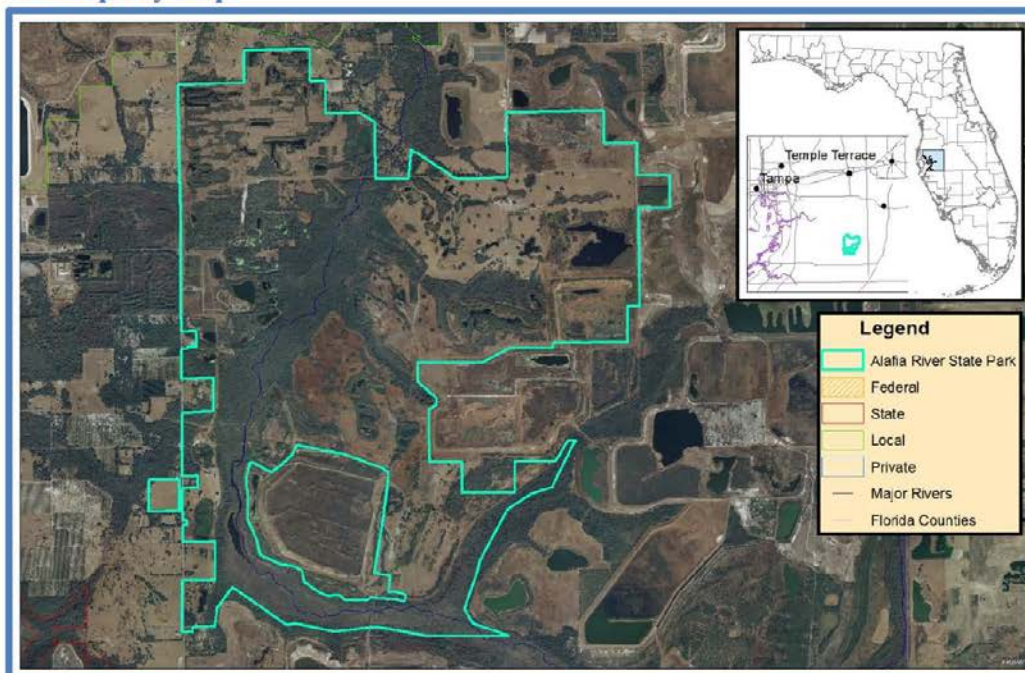
Review Team Members Present (voting)

- DRP: Rosalind Rowe
- FWC: Victor Echaves
- FFS: Walter Mallett
- DEP: Kevin MacLachlan (not present)
- SWCD:
- Local gov't: Ken Bradshaw
- Conservation organization: Michael Bubb
- Private land manager:

Other Non-Team Members Present (attending)

- Aric Larson, DEP/DSL

1.2 Property Map



1.3. Overview of Land Management Review Results

Is the property managed in accordance with the purposes for which it was acquired?

Yes = 5, No = 0

Are the management practices, including public access, in compliance with the management plan?

Yes = 5, No = 0

Table 1 shows the average scores received for each applicable category of review. *Field Review* scores refer to the adequacy of management actions in the field, while *Management Plan Review* scores refer to adequacy of discussion of these topics in the management plan. Scores range from 1 to 5 with 5 signifying excellence. For a more detailed key to the scores, please see Appendix A.

Table 1: Results at a glance.

Major Land Management Categories	Field Review	Management Plan Review
Natural Communities / Forest Management	2.65	2.08
Prescribed Fire / Habitat Restoration	3.53	1.93
Hydrology	3.09	1.97
Imperiled Species	2.40	1.80
Exotic / Invasive Species	3.23	2.33
Cultural Resources	3.30	2.65
Public Access / Education / Law Enforcement	3.37	2.36
Infrastructure / Equipment / Staffing	2.17	N/A

Color Code (See Appendix A for detail)

Excellent	Above Average	Below Average	Poor
-----------	---------------	---------------	------

1.3.1 Consensus Commendations for the Managing Agency

The following commendations resulted from discussion and vote of the review team members:

1. The team commends DRP for diligence with exotic plant control on the western portion of the park. (5+, 0-)
2. The team commends DRP for utilization of wetland damage mitigation as a means for restoring the littoral shelf on impoundment banks. (5+, 0-)

1.3.2. Consensus Recommendations to the Managing Agency

The following recommendations resulted from a discussion and vote of review team members. The next management plan update should include information about how these recommendations have been addressed:

1. The team recommends that DRP seek improvements in the ability to distribute exotic plant locations/coverages and treatment status to field staff (e.g. GIS, hardcopy maps, etc.). (5+, 0-)

Managing Agency Response: Agree. A new database (Natural Resource Tracking System) was developed for DRP, and is now being implemented for tracking exotic plant locations, coverages, and treatment status. Field staff training is currently underway so they can access the

information they need on exotics in the park. The database is linked to a mapping tool. District Biologist will continue to assist with surveys, mapping, and provide hardcopy maps to staff.

2. The team recommends that DRP coordinate with FFS to obtain a comprehensive timber assessment with appropriate recommendations. (5+, 0-)

Managing Agency Response: *Agree. Park management will work to obtain and implement a comprehensive timber assessment with appropriate recommendations.*

3. The team recommends that DRP explore funding opportunities for the expansion of the bathhouse facility in the campground area to meet current and future demand. (5+, 0-)

Managing Agency Response: *Agree. An expansion to the campground bathhouse has been funded and has gone out to bid.*

4. The team recommends that DRP explore alternate strategies for the proper disposal of recreational vehicle (RV) waste. (5+, 0-)

Managing Agency Response: *Agree. Options are being explored to separate the RV dump station from the bathhouse septic system.*

5. The team recommends that DRP develop a short-term goal to address immediate concerns associated with the culvert failure in AR31B. (5+, 0-)

Managing Agency Response: *Agree. The culvert is being re-engineered and designed to prevent a similar failure in the future. Contractors are being sought for installation.*

6. The team recommends that DRP develop a long-term goal to complete a comprehensive park-wide hydrologic assessment, and explore cooperative opportunities to obtain funding. (5+, 0-)

Managing Agency Response: *Agree. This goal has been explicitly stated in the draft management plan update, and a proposed project for its implementation has been identified and included for future funding. However, Division funding is appropriated annually by the Florida Legislature. This funding is allocated at the Division and District levels in order to best meet annual operational and resource management needs.*

2. Field Review Details

2.1 Field Review Checklist Findings

The following items received high scores on the review team checklist, which indicates that management actions exceeded expectations.

1. **Natural Communities; specifically baygall, bottomland forest, floodplain swamp, and blackwater stream:**

2. Environmental Education & Outreach, specifically recreational opportunities:

2.2. Items Requiring Improvement Actions in the Field

The following items received low scores on the review team checklist, which indicates that management actions noted during the Field Review were not considered sufficient (less than 3.0 score on average). Please note that overall good scores do not preclude specific recommendations by the review team requiring remediation. **The management plan update should include information on how these items have been addressed:**

1. **Listed species, specifically listed animal and plant species in general, received below average scores. The review team is asked to evaluate, based on their perspective, whether management actions are sufficient for protection and preservation of the species.**

Managing Agency Response: Agree. Additional listed species monitoring will be pursued by park staff and District Biologists. Priorities will include species of the undisturbed floodplain, scrub species, and those who would benefit from habitat enhancement activities through exotic plant treatment, prescribed fire, and wetland restoration.

2. **Natural Resources Survey; specifically sport fish or their habitat monitoring, listed species or their habitat monitoring, other non-game species or their habitat monitoring, fire effects monitoring, and other habitat management effects monitoring, received below average scores. The review team is asked to evaluate, based on information provided by the managing agency, whether survey and monitoring of the resources or their habitats are sufficient.**

Managing Agency Response: Agree. Primary inventory and monitoring focus must be on species that require special management attention. An all-species inventory generally must be a lower priority than actually conducting actions to manage habitats. As needed, costs for an inventory will be included in the Unit Management Plan, but can only be allocated as funds become available on a statewide priority needs basis.

3. **Forest Management; specifically timber inventory, timber harvesting, reforestation/afforestation, and site preparation, received below average scores. The review team is asked to evaluate, based on information provided by the managing agency, whether forest management is sufficient.**

Managing Agency Response: Agree. The park has scattered patches of old pine plantation and experimental tree plantings, and large areas of successional hardwood forest that should all be evaluated for their timber potential. Park management will work with foresters to implement a full assessment and will incorporate subsequent recommendations in the next park plan.

4. **Hydrologic/Geologic function (Hydro-Alteration); specifically roads/culverts, ditches, hydro-period alteration, and dams, reservoirs or other impoundments, received below average**

Alafia River State Park Land Management Review – DRP Response

scores. The review team is asked to evaluate, based on information provided by the managing agency, whether consideration of past and present hydrologic and geologic functions are sufficient.

Managing Agency Response: *Agree. Resources are required to provide a full-park hydrology assessment and set of recommendations for proper reclamation and management of the disturbances at the park. Hundreds of acres are in Impoundment/Artificial Pond water areas, most of which lack the normal topography and benefits of natural wetlands, and further are not safe to access. However, Division funding is appropriated annually by the Florida Legislature. This funding is allocated at the Division and District levels in order to best meet annual operational and resource management needs. Any deemed increase in Division Budget/staffing will follow the established legislative budget request process.*

5. **Public Access, specifically parking,** received a below average score. The review team is asked to evaluate, based on information provided by the managing agency, whether public access is sufficient.

Managing Agency Response: *Agree. The parking area at the picnic area could benefit from a redesigned layout that would increase parking and provide improved access to park visitors.*

6. **Management Resources, specifically waste disposal, sanitary facilities, buildings, equipment, staff and funding,** received below average scores. The review team is asked to evaluate, based on information provided by the managing agency, whether management resources are sufficient.

Managing Agency Response: *Agree. Work to improve the waste disposal for RVs at the campground is being investigated.*

2.3. Field Review Checklist and Scores

Field Review Item	Reference #	Anonymous Team Members								Average
		1	2	3	4	5	6	7	8	
Natural Communities (I.A)										
Mesic Hammock	I.A.2	4	4	4	4	3				3.80
Xeric Hammock	I.A.3	3	4	4	4	3				3.60
Baygall	I.A.4	4	X	X	X	4				4.00
Bottomland Forest	I.A.5	4	4	4	3	5				4.00
Floodplain Swamp	I.A.6	4	4	4	3	5				4.00
Hydric Hammock	I.A.7	4	4	3	3	4				3.60
Blackwater Stream	I.A.8	4	4	4	4	5				4.20
Natural Communities Average Score										3.89
Listed Species: Protection & Preservation (I.B)										
Animals (in general)	I.B.1	3	3	3	1	3				2.60

Alafia River State Park Land Management Review – DRP Response

Plants (in general)	I.B.2	3	3	3	2	3				2.80
Listed Species Average Score										2.70
Natural Resources Survey/Monitoring Resources (I.C)										
Sport fish or their habitat monitoring	I.C.1	2	2	2	1	4				2.20
Listed species or their habitat monitoring	I.C.2	3	2	2	1	4				2.40
Other non-game species or their habitat monitoring	I.C.3	2	2	2	1	4				2.20
Fire effects monitoring	I.C.4	2	2	3	1	3				2.20
Other habitat management effects monitoring	I.C.5	3	2	2	1	4				2.40
Invasive species survey / monitoring	I.C.6	4	3		1	5				3.25
Cultural Resources (Archeological & Historic sites) (II.A, II.B)										
Cultural Res. Survey	II.A	4	3	4	3	4				3.60
Protection and preservation	II.B	4		3	1	4				3.00
Cultural Resources Average Score										3.30
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A1	3	4	4	2	2				3.00
Frequency	III.A.2	4	4	4	2	4				3.60
Quality	III.A.3	4	4	5	X	2				3.75
Resource Management, Prescribed Fire Average Score										3.45
Restoration (III.B)										
Tampa Bay Site	III.B.1	4	4	4	2	4				3.60
Restoration Average Score										3.60
Forest Management (III.C)										
Timber Inventory	III.C.1	1	1	1	1	3				1.40
Timber Harvesting	III.C.2	X	1	1	1	3				1.50
Reforestation/Afforestation	III.C.3	X	1	1	1	2				1.25
Site Preparation	III.C.4	X	1	1	1	3				1.50
Forest Management Average Score										1.41
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.D.1.a	4	4	3	1	4				3.20
prevention - animals	III.D.1.b	3	3	4	2	4				3.20
prevention - pests/pathogens	III.D.1.c	3	1	4	X	5				3.25
Control										
control - plants	III.D.2.a	4	3	2		4				3.25
control - animals	III.D.2.b	3	4	3		4				3.50
control - pest/pathogens	III.D.2.c	3	1	4		4				3.00
Non-Native, Invasive & Problem Species Average Score										3.23
Hydrologic/Geologic function Hydro-Alteration (III.E.1)										
Roads/culverts	III.E.1.a	4	3	3	2	2				2.80
Ditches	III.E.1.b	3	3	4	2	2				2.80
Hydro-period Alteration	III.E.1.c	3	2	3	2	2				2.40
Dams, Reservoirs or other impoundments	III.E.1.e	2	1	3	X	3				2.25
Hydrologic/Geologic function, Hydro-Alteration Average Score										2.56

Alafia River State Park Land Management Review – DRP Response

Ground Water Monitoring (III.E.2)										
Ground water quality	III.E.2.a	3	3	4	3	3				3.20
Ground water quantity	III.E.2.b	3	3	4	3	2				3.00
Ground Water Monitoring Average Score										3.10
Surface Water Monitoring (III.E.3)										
Surface water quality	III.E.3.a	4	4	5	3	2				3.60
Surface water quantity	III.F.3.b	4	4	5	3	2				3.60
Surface Water Monitoring Average Score										3.60
Resource Protection (III.F)										
Boundary survey	III.F.1	3	3	3	3	3				3.00
Gates & fencing	III.F.2	3	2	3	3	5				3.20
Signage	III.F.3	3	3	4	3	3				3.20
Law enforcement presence	III.F.4	3	3	4	X	5				3.75
Resource Protection Average Score										3.29
Adjacent Property Concerns (III.G)										
Land Use										
Expanding development	III.G.1.a	3	3	4	X	3				3.25
Inholdings/additions	III.G.2		3	4	3	4				3.50
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	3	3	3	4	4				3.40
Parking	IV.1.b	2	2	2	1	4				2.20
Environmental Education & Outreach										
Wildlife	IV.2.a	4	4	4	3	4				3.80
Invasive Species	IV.2.b	4	3	4	3	4				3.60
Habitat Management Activities	IV.2.c	4	3	4	3	3				3.40
Interpretive facilities and signs	IV.3	3	3	4	4	5				3.80
Recreational Opportunities	IV.4	4	4	4	4	5				4.20
Management of Visitor Impacts	IV.5	3	3	3	3	4				3.20
Public Access & Education Average Score										3.45
Management Resources (V.1, V.2, V.3, V.4)										
Maintenance										
Waste disposal	V.1.a	2	3	2	1	3				2.20
Sanitary facilities	V.1.b	2	2	3	2	3				2.40
Infrastructure										
Buildings	V.2.a	3	2	4	2	3				2.80
Equipment	V.2.b	1	2	3	1	3				2.00
Staff	V.3	1	2	3	1	4				2.20
Funding	V.4	1	2	1	1	2				1.40
Management Resources Average Score										2.17

Color Code:

Excellent	Above Average	Below Average	Poor
	Missing Vote	Insufficient Information	

See Appendix A for detail

3. Land Management Plan Review Details

3.1 Items Requiring Improvements in the Management Plan

The following items received low scores on the review team checklist, which indicates that the text noted in the Management Plan Review does not sufficiently address this issue (less than 3.0 score on average.). Please note that overall good scores do not preclude specific recommendations by the review team requiring remediation. The next management plan update should address the checklist items identified below:

1. **Natural Communities; specifically mesic hammock, baygall, bottomland forest, floodplain swamp, hydric hammock and blackwater stream, received below average scores. This is an indication that the management plan does not sufficiently address current or desired condition and/or future management actions to protect or restore.**

Managing Agency Response: Agree. The Unit Management Plan is currently being revised. The draft Plan addresses natural communities more completely.

2. **Listed species Protection & Preservation, specifically for animal and plant species in general, received a below average score. This is an indication that the management plan does not sufficiently address protection and preservation of species.**

Managing Agency Response: Agree. The next Plan draft addresses listed species more completely.

3. **Natural Resources Survey and Monitoring Resources, specifically sport fish or their habitat monitoring, listed species or their habitat monitoring, other non-game species or their habitat monitoring, fire effects monitoring, other habitat management effects monitoring, and invasive species survey/monitoring, received below average scores. This is an indication that the management plan does not sufficiently address survey or monitoring.**

Managing Agency Response: Agree. The next Plan draft addresses natural resource survey and monitoring more completely.

4. **Cultural Resources, specifically cultural resource survey, and protection and preservation, received below average scores. This is an indication that the management plan does not sufficiently address survey or protection and preservation of cultural resources.**

Managing Agency Response: Agree. The next Plan draft addresses cultural resources more completely.

5. **Resource Management, Prescribed Fire; specifically area being burned, frequency, and quality, received below average scores. This is an indication that the management plan does not sufficiently address current or desired condition and/or future management actions to protect or restore.**

Managing Agency Response: Agree. The next Plan draft addresses prescribed fire more completely.

6. Restoration, specifically of the Tampa Bay site, received a below average score. This is an indication that the management plan does not sufficiently address restoration.

Managing Agency Response: Agree. The next Plan draft addresses restoration including the Tampa Bay site more completely.

7. Forest Management; specifically timber inventory, timber harvesting, reforestation/afforestation, and site preparation, received below average scores. This is an indication that the management plan does not sufficiently address forest management.

Managing Agency Response: Agree. The next Plan draft addresses forest management more completely.

8. Non-native, Invasive & Problem Species; specifically prevention of plants, animals, pests/pathogens and control of pests/pathogens, received below average scores. This is an indication that the management plan does not sufficiently address prevention and control of non-native, invasive and problem species.

Managing Agency Response: Agree. The next Plan draft addresses non-native, invasive and problem species more completely.

9. Hydrologic/Geologic function, Hydro-Alteration; specifically roads/culverts, ditches, hydro-period alteration, and dams, reservoirs or other impoundments, received below average scores. This is an indication that the management plan does not sufficiently address hydrologic and geologic function.

Managing Agency Response: Agree. The next Plan draft addresses hydrology more completely.

10. Ground Water Monitoring, specifically ground water quality and quantity, received a below average score. This is an indication that the management plan does not sufficiently address ground water quality and quantity.

Managing Agency Response: Agree. The next Plan draft addresses ground water monitoring more completely.

11. Surface Water Monitoring, specifically quality and quantity, received a below average score. This is an indication that the management plan does not sufficiently address surface water quality monitoring.

Managing Agency Response: Agree. The next Plan draft addresses surface water monitoring more completely.

Alafia River State Park Land Management Review – DRP Response

12. Resource Protection, specifically boundary survey, gates & fencing, signage, and law enforcement presence, received below average scores. This is an indication that the management plan does not sufficiently address resource protection.

Managing Agency Response: Agree. The next Plan draft addresses resource protection more completely.

13. Adjacent Property Concerns; specifically expanding development, inholdings/additions, discussion of potential surplus land determination and surplus lands identified, received below average scores. This is an indication that the management plan does not sufficiently address adjacent property concerns.

Managing Agency Response: Agree. The next Plan draft addresses adjacent property concerns more completely.

14. Public Access, specifically roads and parking, received below average scores. This is an indication that the management plan does not sufficiently address public access.

Managing Agency Response: Disagree. Public access improvements are adequately addressed in the current plan and will be addressed in the Unit Management Plan currently being revised. Division funding for facility development is appropriated annually by the Florida Legislature. This funding is allocated at the Division and District levels in order to best meet annual operational and resource management needs.

15. Environmental Education & Outreach; specifically pertaining to wildlife, invasive species, habitat management activities, interpretive facilities and signs, and management of visitor impacts, received below average scores. This is an indication that the management plan does not sufficiently address environmental education and outreach.

Managing Agency Response: Agree. The next Plan draft will address environmental education and outreach more completely.

3.2 Management Plan Review Checklist and Scores

Plan Review Item	Reference #	Anonymous Team Members								Average
		1	2	3	4	5	6	7	8	
Natural Communities (I.A)										
Mesic Hammock	I.A.2	2	4	2	3	2				2.60
Xeric Hammock	I.A.3	2	4	2	3	4				3.00
Baygall	I.A.4	2	3	2	2	4				2.60
Bottomland Forest	I.A.5	2	3	2	2	4				2.60
Floodplain Swamp	I.A.6	2	3	2	3	4				2.80
Hydric Hammock	I.A.7	2	3	2	2	4				2.60
Blackwater Stream	I.A.8	2	3	2	2	5				2.80

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Alafia River State Park Land Management Review – DRP Response

Natural Communities Average Score										2.71
Listed Species: Protection & Preservation (I.B)										
Animals (in general)	I.B.1	1	3	2	2	1				1.80
Plants (in general)	I.B.2	1	3	2	2	1				1.80
Listed Species Average Score										1.80
Natural Resources Survey/Monitoring Resources (I.C)										
Sport fish or their habitat monitoring	I.C.1	1	2	1	1	1				1.20
Listed species or their habitat monitoring	I.C.2	1	2	1	1	1				1.20
Other non-game species or their habitat monitoring	I.C.3	1	2	1	1	1				1.20
Fire effects monitoring	I.C.4	1	2	1	1	1				1.20
Other habitat management effects monitoring	I.C.5	1	2	1	1	3				1.60
Invasive species survey / monitoring	I.C.6	1	3	1	1	3				1.80
Cultural Resources (Archeological & Historic sites) (II.A,II.B)										
Cultural Resource Survey	II.A	1	4	3	2	4				2.80
Protection and preservation	II.B	1		3	2	4				2.50
Cultural Resources Average Score										2.65
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	1	2	1	2	2				1.60
Frequency	III.A.2	1	2	1	2	2				1.60
Quality	III.A.3	1	2	1	2	2				1.60
Resource Management, Prescribed Fire Average Score										1.60
Restoration (III.B)										
Tampa Bay Site	III.B.1	1	3		1	4				2.25
Restoration Average Score										2.25
Forest Management (III.C)										
Timber Inventory	III.C.1	1	1	1	1	2				1.20
Timber Harvesting	III.C.2	1	1	1	1	2				1.20
Reforestation/Afforestation	III.C.3	1	1	1	1	4				1.60
Site Preparation	III.C.4	1	1	1		4				1.75
Forest Management Average Score										1.44
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.E.1.a	1	3	1	2	4				2.20
prevention - animals	III.E.1.b	1	3	1	2	3				2.00
prevention - pests/pathogens	III.E.1.c	1	2	1	1	4				1.80
Control										
control - plants	III.E.2.a		3	2		4				3.00
control - animals	III.E.2.b		3	2		4				3.00
control - pest/pathogens	III.E.2.c		1	1		4				2.00
Non-Native, Invasive & Problem Species Average Score										2.33
Hydrologic/Geologic function, Hydro-Alteration (III.E.1)										
Roads/culverts	III.F.1.a	1	3	1	3	4				2.40

Alafia River State Park Land Management Review – DRP Response

Ditches	III.F.1.b	1	3	1	3	4				2.40
Hydro-period Alteration	III.F.1.c	1	2	1	2	3				1.80
Dams, Reservoirs or other impoundments	III.F.1.e	1	1	1	1	1				1.00
Hydrologic/Geologic function, Hydro-Alteration Average Score										1.90
Ground Water Monitoring (III.E.2)										
Ground water quality	III.F.2.a	1	3	1	4	2				2.20
Ground water quantity	III.F.2.b	1	3	1	4	1				2.00
Ground Water Monitoring Average Score										2.10
Surface Water Monitoring (III.E.3)										
Surface water quality	III.F.3.a	1	3	1	3	2				2.00
Surface water quantity	III.F.3.b	1	3	1	3	1				1.80
Surface Water Monitoring Average Score										1.90
Resource Protection (III.F)										
Boundary survey	III.G.1	1	3	1	2	4				2.20
Gates & fencing	III.G.2	1	3	1	2	4				2.20
Signage	III.G.3	1	3	1	2	4				2.20
Law enforcement presence	III.G.4	1	3	1	1	4				2.00
Resource Protection Average Score										2.15
Adjacent Property Concerns (III.G)										
Land Use										
Expanding development	III.H.1.a	1	3	2	2	4				2.40
Inholdings/additions	III.H.2	1	3	1	2					1.75
Discussion of Potential Surplus Land Determination	III.H.3	1	3	1		2				1.75
Surplus Lands Identified?	III.H.4	1	1	5		2				2.25
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	1	3	3	2	4				2.60
Parking	IV.1.b	1	3	3	2	3				2.40
Environmental Education & Outreach										
Wildlife	IV.2.a	1	3	2	2	4				2.40
Invasive Species	IV.2.b	1	3	2	2	3				2.20
Habitat Management Activities	IV.2.c	1	3	2	2	4				2.40
Interpretive facilities and signs	IV.3	1	3	3	3	4				2.80
Recreational Opportunities	IV.4	1	3	4	3	5				3.20
Management of Visitor Impacts	IV.5	1	2	2	3	5				2.60
Public Access & Education Average Score										2.58
Managed Area Uses (VI.A, VI.B)										
Existing Uses										
Camping	VI.A.1	5	5	5	5	5				5.00
Fishing	VI.A.2	5	5	5	5	5				5.00
Wildlife Viewing	VI.A.3	5	5	5	5	5				5.00
Environmental Education	VI.A.4	5	5	4	5	5				4.80
Picnicking	VI.A.5	5	5	5	5	5				5.00

Alafia River State Park Land Management Review – DRP Response

Boating	VI.A.6	4	5	5	5	5				4.80
Hiking	VI.A.7	5	5	5	5	5				5.00
Bicycling	VI.A.8	4	4	5	5	5				4.60
Horseback Riding	VI.A.9	4	5	5	5	5				4.80
Cattle Grazing	VI.A.10	3	4	5	4	5				4.20
Proposed Uses										
Concessions	VI.B.1	3	4	5	4	5				4.20

Color Code:

Excellent	Above Average	Below Average	Poor
	Missing Vote	Insufficient Information	

See
Appendix A
for detail

Appendix A: Scoring System Detail

Explanation of Consensus Commendations:

Often, the exceptional condition of some of the property's attributes impress review team members. In those instances, team members are encouraged to offer positive feedback to the managing agency in the form of a commendation. The teams develop commendations generally by standard consensus processes or by majority vote if they cannot obtain a true consensus.

Explanation of Consensus Recommendations:

Subsection 259.036(2), F.S., specifically states that the managing entity shall consider the findings and recommendations of the land management review. We ask team members to provide general recommendations for improving the management or public access and use of the property. The teams discuss these recommendations and develop consensus recommendations as described above. We provide these recommendations to the managing agency to consider when finalizing the required ten-year management plan update. We encourage the manager to respond directly to these recommendations and include their responses in the final report when received in a timely manner.

Explanation of Field Review Checklist and Scores, and Management Plan Review Checklist and Scores:

We provide team members with a checklist to fill out during the evaluation workshop phase of the Land Management Review. The checklist is the uniform tool used to evaluate both the management actions and condition of the managed area, and the sufficiency of the management plan elements. During the evaluation workshop, team members individually provide scores on each issue on the checklist, from their individual perspective. Team members also base their evaluations on information provided by the managing agency staff as well as other team member discussions. Staff averages these scores to evaluate the overall conditions on the ground, and how the management plan addresses the issues. Team members must score each management issue 1 to 5: 1 being the management practices are clearly insufficient, and 5 being that the management practices are excellent. Members may choose to abstain if they have inadequate expertise or information to make a cardinal numeric choice, as indicated by an "X" on the checklist scores, or they may not provide a vote for other unknown reasons, as indicated by a blank. If a majority of members failed to vote on any issue, that issue is determined to be irrelevant to management of that property or it was inadequately reviewed by the team to make an intelligent choice. In either case staff eliminated the issue from the report to the manager.

Average scores are interpreted as follows:

Scores 4.0 to 5.0 are *Excellent*

Scores 3.0 to 3.99 are *Above Average*

Scores 2.0 to 2.99 are *Below Average*

Scores 1.0 to 1.99 are considered *Poor*

Addendum 9—Advisory Group Summary and Public Comments

**Alafia River State Park
Advisory Group Members**

Local Government Representative

The Honorable Lesley Miller Jr., Chair
Hillsborough County
Board of County Commissioners

Agency Representatives

Bryon Maxwell, Park Manager
Division of Recreation and Parks
Alafia River State Park

Michael Edwards
Florida Forest Service

Danon Moxley
Florida Fish and Wildlife
Conservation Commission

Jason O'Donoughue
Florida Department of State
Division of Historical Resources

Colleen Kruk
Southwest Florida
Water Management District

Betty Jo Tompkins
Hillsborough County
Soil and Water Conservation District

Jason Chilson
Hillsborough County
Environmental Lands Program

Marilyn Hett
Hillsborough County
Tourist Development Council

Local Private Property Owners

Kyle Varum
Local Resident

**Environmental and Conservation
Group Representative**

Mable Patterson
Florida Native Plant Society
Suncoast Chapter

Anne Whitehall
Eagle Audubon Society

**Recreational User Group
Representatives**

Shane Richeson
Swamp Mountain Bike Club

Jaqueline Vizzie
Myakka River Riders

Angelo Giambrone
Alafia Trail Crew

Subject Matter Expert

Steven Richardson, Director
Reclamation Research
Florida Polytechnic University

Citizen Support Organization

LeRoy Dennison, President
Friends of Alafia

Park Concessionaire

Carlos Mirabel
UBC Bikes

Alafia River State Park Advisory Group Summary Report

The advisory group meeting to review the proposed unit management plan (UMP) for Alafia River State Park was held at the Bloomingdale Regional Public Library on March 28, 2019 at 10:30 am.

Lesley Miller, Jason O'Donoughue, Colleen Kruk, Marilyn Hett, Kyle Varnum, Anne Whitehall, and Jackie Vizzie were not in attendance. LeRoy Dennison, Jackie Vizzie, Jason O'Donoughue, and Michael Edwards provided written comments prior to the meeting, which are summarized below. All other appointed advisory group members were present. Attending staff were Bryon Maxwell, Chris Becker, Rosalind Rowe, and Tyler Maldonado.

Mr. Maldonado began the meeting by explaining the purpose of the advisory group and reviewing the meeting agenda. He provided a brief overview of the Division of Recreation and Parks' (DRP) planning process and summarized public comments received during the previous evening's public meeting. Mr. Maldonado then asked each member of the advisory group to express his or her comments on the plan.

During the two-week public comment period following the advisory group meeting, numerous comments were submitted to DRP from members of the public on the draft UMP for Alafia River State Park. The major themes of these comments are as follows:

- Most of the comments received referenced the proposed RV campground and cabin area, and the comments were generally opposed to those concepts. Frequent visitors to the park, particularly equestrian users, were concerned that these developments could potentially disrupt equestrian trails and increased usage of these trails by non-equestrian users could cause conflicts.

Summary of Advisory Group Comments

Danon Moxley (*Florida Fish and Wildlife Conservation Commission*) stated that he reviewed the management plan by first reviewing the Land Management Review (LMR) addendum. He wanted to see if and how the LMR comments were implemented in the management plan update. He commented that it was difficult to determine if the LMR suggestions were implemented and stated that the LMR comments should be the guide for developing the management plan update. He suggested including an advisory group cover page that showed where and how the LMR comments were included in the management plan update. He asked about imperiled species monitoring efforts and what they entailed. He noted inadequate discussion in the plan about aquatic exotic species and suggested considering aquatic exotic species harvest events or contracts as a source of additional revenue for the park. He pointed out incorrect condition assessment categories in the cultural resources inventory table. He found nothing to address LMR comments about monitoring sport fish and other non-game species or about monitoring fire and other habitat management effects. He noted that plan does not address ground water monitoring. He pointed out that the LMR low scores and comments regarding protection through fencing, signage, and law enforcement were not addressed beyond a sentence or two in the discussion of the scrub communities.

Alafia River State Park Advisory Group Summary Report

Shane Richeson (*Swamp Mountain Bike Club*) commented on the progress of trail development at the park and in the community in general. He stated that many are beginning to understand the economic impact of trail connectivity and cited examples of other successful trail destinations that have become economic engines for their community. He talked about efforts being made to develop a land trail connection between the Balm Boyette Nature Preserve and Alafia River State Park, as well as broader trail connectivity aspirations. He stated that he plans to work with Hillsborough County on an easement to establish the Boyette-Alafia connectivity and hopes to work with the park to develop safe and efficient trail access.

Jason Chilson (*Hillsborough County Conservation and Environmental Lands*) indicated his willingness to work with the state park in areas such as resource management when possible.

Steven Richardson (*Florida Polytechnic University*) expressed slight concern with cattle grazing taking place at the park, but also noted that it is a recognized vegetation and invasive species management technique. He acknowledged the exotic and invasive plant species management objectives, stating that they were broad objectives and the details would need to be worked out at a later date when resources are allocated to implement the necessary large-scale restoration efforts.

Carlos Mirabel (*UBC Bikes*) stated that he would like to see expanded recreational opportunities at the park. He encouraged additional refinement and improvement of the park's recreational amenities. He expressed his belief that the park could continue to grow in popularity and suggested the park could become a fishing destination similar to Tenoroc Fish Management Area in Lakeland.

Mable Patterson (*Florida Native Plant Society, Suncoast Chapter*) commented that she was impressed with the prescribed fire objectives and the progress made at the park. She expressed concern that the park does not have a dedicated biologist given the scale of resource management needs. It was stated that the Park Service Specialist at the park leads restoration and resource management efforts and collaborates regularly with district biologists on projects. She urged the park to avoid impacts to native species. She agreed that it would be imperative to monitor the progress of the cattle grazing activities and asked about any research that shows the benefit of such land management techniques. She encouraged the park to coordinate with the Florida Native Plant Society on volunteer opportunities.

Betty Jo Tompkins (*Hillsborough Soil and Water Conservation District*) stated that she is focused on the educational aspect of conservation and encouraged the park to improve and expand educational opportunities available to visitors and volunteers. She mentioned that high school students often need volunteer hours for scholarship eligibility and the park would be great place for young students to get involved in their local community. She commented on the need to increase funding for conservation and recreation. She urged advisory group members to engage in outreach opportunities and advocate for conservation efforts.

Alafia River State Park Advisory Group Summary Report

Michael Edwards (*Florida Forest Service*) expressed concerns with the management plan similar to Mr. Moxley and the unclear way in which LMR comments were incorporated in the plan. He suggested incorporating groundwater monitoring protocols to address the LMR comment. He commented on the timber management assessment conducted for the park. He stated that some areas could be thinned, and other understocked areas could benefit from tree planting. He suggested including burnable acres per management zone and total burnable acres, as well as smoke management protocols, to address LMR comments. Mr. Edwards also submitted written comments after the advisory group meeting, which are summarized below.

LeRoy Dennison (*Friends of Alafia*) stated that as the President of the Friends of Alafia, his main job is to support the park. He mentioned that the Citizen Support Organization (CSO) helps overcome the park's staffing and funding deficiencies by coordinating volunteers and fundraising. He acknowledged that the park has multiple categories of users, and it is important to minimize negative interactions between the users. Mr. Dennison also submitted written comments prior to the advisory group meeting, which are summarized below.

Angelo Giambrone (*Alafia Trail Crew*) commented that he hopes to contribute to Alafia becoming the number one mountain biking destination and noted that the park is already nationally ranked. He suggested that mountain biking is the park's main attraction and encouraged the park to improve amenities to attract additional visitors. He recommended developing ADA-accessible trails and marketing the trails as a new activity at the park. He noted that the park has growth potential, stating that new activities and amenities are needed. He expressed his support for the development proposals in the draft management plan but expressed some concern with the future implementation of the proposed unified entrance to the park.

Summary of Advisory Group Written Comments

LeRoy Dennison (*Friends of Alafia*) provided numerous comments on the content of the management plan. He noted that the biking trail skill levels should range from beginning, intermediate, advanced, and expert. He pointed out inconsistencies in the naming of the South Prong of the Alafia River (South Prong of the Alafia River vs. Alafia River). He identified that the Swamp Mountain Biking group changed its name (formerly SWAMP) and transferred its responsibilities to the Friends of Alafia. He suggested including Manatee and Polk County in the demographic analysis. He noted a correction in the adjacent conservation lands and the amenities that are offered. He disagreed with the recreational amenity analysis offered by the Statewide Comprehensive Outdoor Recreation Plan, which suggests that unpaved bike trails in Hillsborough County are below the statewide median. He pointed out inconsistent recreational facility inventory and trail mileage data. He suggested adding parcels to the optimum boundary map. Mr. Dennison provided comments in the main document, so his comments cannot be attached to this summary.

Alafia River State Park Advisory Group Summary Report

Jason O'Donoghue (*Department of State, Division of Historical Resources*) noted discrepancies in the number of archaeological sites recorded in the management plan and stated that three sites need to be added to the park's inventory. He wrote that the "Significance" reported for several cultural resources should be revised. He suggested revisions to the management plan's cultural resource objectives. The written comments submitted by Mr. O'Donoghue are attached below.

Jaqueline Vizzie (*Myakka River Riders*) provided written comments that she collected from members of the equestrian group. She wrote that the equestrian day use parking area does not have water for the horses to drink or cool off. She commented that the main equestrian entrance at the north of the park is getting difficult to enter and exit because of heavy traffic from the County Road. She suggested moving the whole parking lot near the barn, close to areas that have water. She noted that the campground that was once intended for equestrian users has become a destination for RV camping and equestrians now have difficulty reserving a campsite. She stated that many members voiced dissatisfaction with Reserve America, both in procedures and pricing. She also noted that there have been complaints that the water by the barn is not clean enough for horses to drink. The written comments submitted by Ms. Vizzie are attached below.

Michael Edwards (*Florida Forest Service*) summarized the comments he gave during the advisory group meeting and provided those comments in writing after the meeting. Only the additional comments that were not included above are included here. He wrote that each natural community needs specific goals and objectives describing how the desired future conditions will be accomplished. He recommended including specifically how threatened and endangered species will be monitored. He wrote the management plan should describe specific goals and objectives for monitoring and surveying natural resources. He commented that appropriate staff should be required to be up-to-date on Archaeological Research and Monitoring trainings. He stated the management plan needs to state how the park plans to address the control of pests and pathogens. He wrote the management plan needs to state the process for determining if the park has any lands that should be declared as surplus. The written comments provided by Mr. Edwards are attached below.

Staff Recommendations

The staff recommends approval of the proposed management plans for Alafia River State Park as presented, with the following significant changes:

- The proposed Lake Heron RV Campground concept will be removed from the management plan. The concept will be replaced by a proposed primitive equestrian campground in the same general area of the park.
- The proposed cabin area concept will be relocated from the northern portion of the park to an area to the north of the proposed Thatcher Road day use area.

Alafia River State Park Advisory Group Summary Report

Staff recommendations continued:

- Rather than developing a new campground at the park, it will be proposed to redevelop the existing campground. The existing campground redesign will utilize the current location to reconfigure and add sites to the campground.
- The proposed Three Finger Lake trailhead and picnic area concept will be changed to an equestrian trailhead and trailer parking area. The proposed paddling launch, bike racks, and horse corral will be removed.
- Access to the proposed Three Finger Lake equestrian trailhead and primitive equestrian campground will be changed from a paved road to a stabilized road. Existing park management roads will be used, where possible.

Notes on Composition of the Advisory Group

Florida Statutes Chapter 259.032 Paragraph 10(b) establishes a requirement that all state land management plans for properties greater than 160 acres will be reviewed by an advisory group:

“Individual management plans required by s. 253.034(5), for parcels over 160 acres, shall be developed with input from an advisory group. Members of this advisory group shall include, at a minimum, representatives of the lead land managing agency, co-managing entities, local private property owners, the appropriate soil and water conservation district, a local conservation organization, and a local elected official.”

Advisory groups that are composed in compliance with these requirements complete the review of State park management plans. Additional members may be appointed to the groups, such as a representative of the park's Citizen Support Organization (if one exists), representatives of the recreational activities that exist in or are planned for the park, or representatives of any agency with an ownership interest in the property. Special issues or conditions that require a broader representation for adequate review of the management plan may require the appointment of additional members. The Division's intent in making these appointments is to create a group that represents a balanced cross-section of the park's stakeholders. Decisions on appointments are made on a case-by-case basis by Division of Recreation and Parks staff.

**Alafia River State Park
Advisory Group Written Comments**



FLORIDA DEPARTMENT of STATE

RON DESANTIS
Governor

LAUREL M. LEE
Secretary of State

March 27, 2019

Tyler Maldonado
Office of Park Planning
Florida Department of Environmental Protection
Division of Recreation and Parks
3900 Commonwealth Boulevard, MS 525
Tallahassee, FL 32399

Dear Mr. Maldonado,

Thank you for inviting the Division of Historical Resources (DHR) to participate in the advisory group review of the draft unit management plan for Alafia River State Park. We have completed our review and have the following comments and recommendations:

1. We note a discrepancy between your records and those of the Florida Master Site File (FMSF). Table 4 of the management plan (pp. 67–68) lists 25 archaeological sites and 1 resource group, and 3 historic cemeteries. However, 3 additional archaeological sites are located within the park but not accounted for in the plan. These are: HI00347, HI00575, and HI00576. I have attached the FMSF records for these sites. Please add them to your inventory.
2. The “Significance” reported for many of the resources does not accurately reflect the assessments of the State Historic Preservation Officer (SHPO). As you note on page 66, only 3 of the cultural resources within the park have been evaluated by the SHPO: HI04041, HI04042, and HI05343. All of these were determined to be ineligible for listing on the National Register of Historic Places. All other resources should be listed in Table 4 as “Not Evaluated.”
3. On page 66, you state that “nine sites may be considered destroyed: HI00354, HI00577, HI01043, HI05370, HI05372, HI05373, HI05374, HI05379, and HI09688.” That leaves 19 sites intact (including the 3 missing from your inventory), as well as 1 resource group and 2 historic cemeteries. However, in several places (pg. 66 and 79) you refer to only seven sites that are presumed intact. Please clarify this discrepancy.

Division of Historical Resources
R.A. Gray Building • 500 South Bronough Street • Tallahassee, Florida 32399
850.245.6300 • 850.245.6436 (Fax) • FLHeritage.com



**Alafia River State Park
Advisory Group Written Comments**

4. The total number of cultural resources given throughout the report will need to be updated based on the above comments (e.g., page 66).
5. With regard to your goals and objective for cultural resources, (pg. 79):
 - a. Annual monitoring of all archaeological and historical resources should be included as an action.
 - b. Objective B should be to locate and assess **all** recorded sites that are still in need of evaluation. Staff from DHR's Public Lands Archaeology program (PLA) are available to conduct a cultural resources reconnaissance survey, assess known sites, and provide management recommendations.

Please let us know if you have any questions or concerns regarding these comments. Thank you again for inviting us to participate and for your diligence in preserving, promoting, and interpreting Florida's cultural heritage.

Sincerely,



Jason O'Donoghue
Archaeologist III
Public Lands Archaeology
Bureau of Archaeological Research
Division of Historical Resources
Florida Department of State
B. Calvin Jones Center for Archaeology
1001 DeSoto Park Drive
Tallahassee, Florida 32301

Enclosures: ARSP-missing-sites.xlsx

**Alafia River State Park
Advisory Group Written Comments**

Hi: I won't be able to meet with the advisory group on Thursday. Enclosed are some of the comments posted by the River Riders members regarding improvements to Alafia River State Park.

On the equestrian Day Use parking:

1. No water for the horses to drink or cool off.
2. Entrance is getting difficult to egress and leave, because of the heavy traffic from the main street.

Some suggestions on the day use parking lot were, to move the whole parking lot near the barn, close to areas that do have water.

Thus, there would be access to water. This would also help with the entrance comment since the entrance would be through the main entrance.

On the overnight equestrian camping area:

1. Because of non horse campers taking over the equestrian area 6 to 11 months before the desired date, persons with horses are not able to put reservations through Reserve America since the area is booked already. The idea was to make this area for equestrians only and to be used by non horse campers only in a hardship situation.
2. Many of our members voiced a dissatisfaction with Reserve America both in procedures and prices.
3. There were complaints that the water by the barn is not clean enough for the horses to drink.

Thank you,
Jaqueline Vizzi

Alafia River State Park Advisory Group Written Comments

Advisory Group Comments for Alafia River State Park 2019 Draft UMP

By: Michael Edwards, Senior Forester
Florida Forest Service-Other Public Lands
4/5/19

I attended the Management Plan Advisory Group Meeting for the Alafia River State Park on March 28, 2019. Below I have summarized the comments I made during the meeting. I also have written some additional comments, post meeting, that I want to add. I mostly focused on the Resource Management Component of the UMP.

- **Natural Communities-** Each natural community. needs specific goals and objectives describing how the desired future conditions of the nat. comm. will be accomplished.
- **Timber Assessment and Timber Sale-** F4-Tech provided a recent Timber Assessment, (addendum 7). According to their data, there are stands in the Sandhill, mesic flatwoods and plantation communities that could use a timber thinning (basal area equal to or greater than 80 square feet per acre). These stands should be thinned to a BA of 30-40 sq.ft./ac. to manage for groundcover and wildlife habitat. There are also stands that could use reforestation/afforestation (BA less than 30 sq. ft./ac.). I suggest developing a site prep and reforestation/afforestation plan to include in the 2019 draft UMP.
- **Treated and Endangered Species-** This section in the 2004 UMP received a poor rating in the 2015 LMR Report. I recommend that the 2019 draft UMP mentions specific goals and objectives on how the specific T&E species found in ARSP will be managed. Also make sure the T&E plant and animal list is up to date for the 2019 draft UMP. The 2005 LMR Report identifies floodplain and scrub species specifically.
- **Monitoring-** This section in the 2004 UMP averaged a poor score from the 2015 LMR Report. The 2019 draft UMP should describe specific goals and objectives for monitoring and surveying of natural resources, in the following categories;
 - Sport fish or their habitat
 - Listed species
 - Other non-game species
 - Fire effects
 - Other habitats
 - Invasive species
- **Cultural Resources-** The draft 2019 UMP should mention requiring appropriate staff are up-to-date on the ARM training.
- **Prescribed Fire-** The 2019 Draft UMP could mention how FPS address smoke management. If applicable, FPS is encouraged to cooperate with the Florida Forest Service on wildland urban interface (WUI) mitigation burning/projects.
- **Non-native, Invasive and problem Species-** The 2019 draft UMP needs to address the control of pest/pathogens. FPS park managers should develop a public education/interpretation plan at the

Alafia River State Park Advisory Group Written Comments

park entrance, trail heads, and camp sites addressing the restricted movement of firewood. This is the primary movement of most forest pests. The website <https://www.dontmovefirewood.org/> has free resources available. The FPS can contact the FFS Forest Health Section Biologist; Jeffrey.Eickwort@FreshFromFlorida.com, for forest health advice.

- **Groundwater monitoring-** The 2019 draft UMP should mention ground water monitoring (quality and quantity). If this isn't something FPS monitors, that would be good to at least mention, or identify if another agency monitors the ground water on ARSP and if the data is utilized by FPS.
- **Adjacent Property Concerns-** The 2019 draft UMP needs to discuss the process/system that managers use to determine if ARSP has any surplus lands.
- **Resource Protection-** The 2015 LMR Report scored this section below average. I couldn't find this information in the draft 2019 UMP.

**DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF RECREATION AND PARKS
OFFICE OF PARK PLANNING**



**ALAFIA RIVER
STATE PARK**

PUBLIC COMMENTS

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: Alafia State Park improvements proposed
Date: Monday, April 1, 2019 3:11:52 PM

FYI

From: Robert Warthen <robert.rwarthen1@gmail.com>
Sent: Sunday, March 31, 2019 7:09 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: Alafia State Park improvements proposed

Mr. Maldonaado,

Dear Sir, I was impressed with the presentation your office made on March 27th of this year concerning the Alafia River State Park. It is pleasing to see that the state is interested in the continuing efforts to increase the potential use of the available properties for recreational activities. As I expressed in the meeting about the Three Fingers Equestrian parcel; in my opinion, this area must, or should, be left as is. There are several reasons for this:

This area is a quiet, peaceful, provides a pleasant ride, with some very beautiful scenery.

This area has with it a verity of trails that allow riders to choose their estimated ride time limit for riding. It also provides areas for walk, trot, and canter.

Equestrian riders ride the trails because they want to be in the natural Florida outdoors. Adding anything that would detract from this, would be an upset to the balance of this beautiful natural area.

This is not an active cattle range, which limits the quantity of nuisance flies, especially in the hot, humid summers. This adds appeal of the Equestrian rider.

Lastly I would suggest that we take very careful considerations in how we view our increase use of the properties that we have available to us, and to try to avoid potential threats to losing these areas to over use and overcrowding, which already provide prime opportunities for our outdoor activities as they are. While I realize that the job you, and others, have to ensure the fair and equitable use of these lands is challenging, we should never allow money to be the end goal, for this will defeat the purpose: "To enjoy the Florida outdoors, safe and free from over use and overcrowding, and destroying the habitat and the natural beauty that our state has."

Thank you,
Bob Warthen
Robert.rwarthen1@gmail.com
863-797-5873

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: Alafia State Park Management Plan
Date: Monday, April 1, 2019 3:11:58 PM

FYI

From: rjb1998@aol.com <rjb1998@aol.com>
Sent: Thursday, March 28, 2019 10:30 AM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: Alafia State Park Management Plan

Tyler,

Thank you for taking the time and having the meeting yesterday evening regarding the Alafia State Park Management Plan. What a challenge it has to be for you and your department to balance the wants, needs, and wishes of so many groups. There was some meaningful feedback given at the meeting. I would have been interested in hearing the biologist and park manager opinion on development impact on the natural aspects of the park, as well as the functional impact of these proposals. It's a nice park, and the staff is very good, and I'm glad the state of Florida continues to put an emphasis on our natural resources. There's a reason so many people enjoy these parks.

Also, I would like to also say that my family and I over the many years have enjoyed the many state parks of Florida.

A few concerns about the development of the north side:

- disruption of current trails and peaceful riding, equestrian or biking or hiking.
- The north access would have road which potentially would cut right up the middle of the current recreation area as well across a gopher tortoise habitat.
- disruption of the little bit of "natural" habitat currently there. There are gopher tortoise areas in those north areas, as well as few deer as well. Any development or the process of development would disrupt this.
- While I appreciate our out of state visitors, we need to be careful that the current stakeholders in this park and Florida residents do not give up the benefit of the north side of the park in favor of providing more facilities to be booked by those out of state. The benefit of many who use the park day in and day out, year round, should not be compromised in favor of providing facilities to be booked and used through the winter months by the out of state visitors disproportionately to Florida residents.
- I would like to see more shaded (not pavilions) picnic options in the park. Currently for day use, those options are few. There are a few individual tables scattered.
- It would be great to add camp sites, but with minimal impact to existing natural areas of the park.
- Cabins are a low priority for me, as the impact of sewer, water, maintenance, etc. in my opinion would outweigh the benefit or "return".
- It would be good to know about what options there are for the many acres of "restoration areas" to the east side of the river? Maybe the future cabin/campground plans could be there?
- I think river access and opportunity for enjoyment of the river would be good. Currently, access or even viewing is limited.

Additional opinion regarding the fee structure for camping:

If it's not already been done, there should be some overall analysis state-wide on the pricing model for camping for out of state guests versus Florida residents, as well as availability preferences for Florida residents. At \$22, it's pretty cheap, especially with a dump station, and water and electricity at each site. It would be nice for the state park system to be able to obtain additional funds that would improve and maintain its state parks.

Thanks again for taking the time for the meetings and input requests.

Sincerely,
Robert J. Boone

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: alafia
Date: Monday, April 1, 2019 3:12:22 PM

FYI

From: jgvizzi@verizon.net <jgvizzi@verizon.net>
Sent: Tuesday, March 26, 2019 2:01 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: alafia

Hi: I won't be able to meet with the advisory group on Thursday. Enclosed are some of the comments posted by the River Riders members regarding improvements to Alafia River State Park.

On the equestrian Day Use parking:

1. No water for the horses to drink or cool off.
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Some suggestions on the day use parking lot were, to move the whole parking lot near the barn, close to areas that do have water.

Thus, there would be access to water. This would also help with the entrance comment since the entrance would be through the main entrance.

On the overnight equestrian camping area:

1. Because of non horse campers taking over the equestrian area 6 to 11 months before the desired date, persons with horses are not able to put reservations through Reserve America since the area is booked already. The idea was to make this area for equestrians only and to be used by non horse campers only in a hardship situation.
2. Many of our members voiced a dissatisfaction with Reserve America both in procedures and prices.
3. There were complaints that the water by the barn is not clean enough for the horses to drink.

Thank you,
Jaqueline Vizzi

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: Alafia River state park 10yr plan
Date: Wednesday, April 3, 2019 9:51:52 AM

FYI

From: Ron Haertlein <rondoth@gmail.com>
Sent: Tuesday, April 02, 2019 11:51 AM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: Alafia River state park 10yr plan

G'day Tyler,

this was my first public meeting, entertaining. i liked the presentation. i also like the plan..

an observation, the equestrians were very vocal about keeping "THEIR" section of the park as is.. but here's my take, i've only been active in this park for 4 years, as a mt biker i see volunteers from the community build & maintain the trails. what i don't see is equestrian volunteers, i see the park & it's volunteers mowing & trimming. and my pet peeve is, equestrians seem like they're only 10% of the users, while taking the bulk of the park's resources to keep their trails rideable.. and mtb is 75% of usage and gets barely any resources allocated...

camping, yes to opening it up.. perhaps 15 equestrian sites up north, off Reserve America, rough or not...
30-60 sites where the existing camp sites are. even campers 75% or more come to ride the MTB trails..

and is there a way to get a minor fee added, a quarter per car, allocated to the CSO, it takes \$\$\$\$ to buy materials to keep trails at their optimum. our goal is to make all trails rideable all year round.. and having to deal with a high water table give use challenges that places with Mountains have no idea of... LOL

thanks for listening to my rambles,

ron

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: Alafia River State Park proposed management plan
Date: Wednesday, April 3, 2019 9:52:02 AM

FYI

From: Janet Schneider <jm_schneider@msn.com>
Sent: Tuesday, April 02, 2019 7:01 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Cc: Draper, Eric <Eric.Draper@dep.state.fl.us>
Subject: Alafia River State Park proposed management plan

Dear Mr. Maldonado,

I was very distressed to hear of the location of the proposed additions at the Alafia River State Park. Horse people are heavy users of its trails, and--as I understand you heard at the meeting--have strong concerns about your proposed build-up of features and density around the trails.

The goal of any person using Florida State Park trails is to get away into nature. Situating a large campground, adding cabins, and increasing the density of users in the center of the trails destroys the ability of hikers, bikers and horse people to actually enjoy the natural environment. Building a road to connect all your proposed "enhancements" will also destroy the ambiance and environment.

Horse people must, of necessity, always be aware of safety. A biker coming at speed around a corner can cause a horse to spook. Walking a trail beside pavement engenders anxiety, since we all know that cars do not obey speed limits and have, at times, actually veered toward horses just to watch them jump. Crossing pavement is hazardous to horses' hooves and increases the danger of slipping and falling. Running children do not always understand that horses are not big dogs. These are only a few of the challenges horse people face, often thanks to planners who do not understand and will not adjust plans to accommodate all users of the park.

I strongly protest all the so-called "enhancements" to Alafia State Park. While they will probably bring more overnight people to the park, they will also lose many of your staunch users and supporters by destroying the many features of the park that we now enjoy. Please remember that the mission of the Florida Park System is to show the natural Florida, not turn it into another vacation resort.

Sincerely,

Janet Schneider
2821 Knights Station Road
Lakeland, Florida 33810
863-858-6848

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: Alafia Horse Trails,
Date: Wednesday, April 3, 2019 9:52:11 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)

FYI

From: Julie A Magruder <Julie_Magruder@Progressive.com>
Sent: Wednesday, April 03, 2019 7:47 AM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>; eric.drapler@floridadep.gov
Subject: Alafia Horse Trails,

Dear Mr. Maldonado and Mr. Drapler,

I was recently made aware of the plans to develop part of the horse trails at Alafia River State Park, please...do not allow this to happen!

We have way too much building and development going on in Hillsborough County already and Alafia, much like all state parks, is a place we riders go to escape the insanity of the congestion in our county. The proposed additions to the park are simply more of the same....way too much congestion on too little of land. Apparently our county is on target to develop every single inch of available land, it's disgusting. Please do not allow Alafia River State Park to fall into this trap.

Please save and preserve the horse trails as they are today!

Thank you,

Julie Magruder
Registered Voter in Hillsborough County
Frequent Alafia River State Park Equestrian Trails user

Julie Magruder

PROGRESSIVE | Talent Advisor Group
Contingent Workforce Management, Sr.
4030 Crescent Park Drive
Riverview, FL 33578
813-804-6606

Rethink Progressive: www.progressive.com/careers



From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW:
Date: Wednesday, April 3, 2019 9:52:24 AM

FYI

-----Original Message-----

From: Barbara Carlin <bcarlin801@aol.com>
Sent: Wednesday, April 03, 2019 7:48 AM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject:

Hello, I am an avid trail horse woman in Florida . I've just heard that you're planning on decimating the Alafia trail system to replace with campgrounds. Alafia is the absolute best trail system in the state of Florida. It's so popular, it's hard to get a reservation to stay so you have to think about it in advance. The trails are well marked and footing is perfect. The overhead coverage on most of the trails are amazing and perfect for riding. I can't imagine the government taking this away from the horse back riders . Just in Lee and Collier there are over 5,000 horses. And yes, we do go to Alafia. Please reconsider this motion.

Barbara K Carlin
Fort Myers, Fla

Sent from my iPad

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: Equestrian trails
Date: Wednesday, April 3, 2019 9:52:32 AM

FYI

From: Michael Canfield <mcanfiel@mail.usf.edu>
Sent: Wednesday, April 03, 2019 8:25 AM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: Equestrian trails

Hello,

I am writing regarding the proposed reuse of the Alafia park moving away from offering as many equestrian services.

My first fear is that this will of course eliminate one of the few remaining trail areas within Hillsborough that offers any real quality of experience.

I recognize that there may be some element of preservation, but I feel that the extensive planning takes away too much from the horse experience.

I do not mind the evolution, however I would like to see it mirror the traditional land use of that region. Consider offering a premium equestrian experience alongside the proposed reuse. For example, more stalls (charge of course, revenue streams matter) and create the opportunity for a culture of all purpose use.

Right now the feeling is that the changes will entirely decimate the equestrian area - I think perception here matters and ensuring that you will keep at least some of them would help the changes.

I get that ownership is dying in hillsborough - it sucks because its a ton of fun to own them, just too expensive.

Our parks system does a great job really, I just wish we had more opportunity for horse camping within this area than we currently do.

But its probably expensive, not all horse owners are created equal, and many will not clean up after their horse.

--

Michael Canfield
Manager, USF IT

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: Save the Equestrian Trails and facilities at Alafia (and ALL Parks!)
Date: Thursday, April 4, 2019 10:12:17 AM

FYI

From: Sylvia Warren <horselady41@hotmail.com>
Sent: Wednesday, April 03, 2019 1:36 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>; eric.drapler@floridadep.gov.
Subject: Save the Equestrian Trails and facilities at Alafia (and ALL Parks!)

I love to ride the Florida Parks by horseback. I also like to be able to horse camp. I have a paid year Pass to the Florida Parks.

It is real nice to have facilities like stalls, wash racks, water and wonderful trails to go enjoy my horse and the outdoors.

With cities and towns expanding, the countryside is slowly getting smaller with less dirt roads and undeveloped land to ride horses on.

The Florida Parks are all we will have left when development expands throughout private lands.

PLEASE keep the Equestrians in mind, included, and happy as you do future planning in the Florida Parks !

Sincerely,

Sylvia Warren

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: Alacua River State Park
Date: Thursday, April 4, 2019 10:12:27 AM

FYI

-----Original Message-----

From: Bernadette Schoppman <mikeandsamsmom@yahoo.com>
Sent: Wednesday, April 03, 2019 6:03 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Cc: eric.drapler@floridadep.gov
Subject: Alacua River State Park

As an equestrian who rides at Alafia fairly frequently, I object to the new plans to infringe on our riding trails!! We go to ride in nature, not to doge bikes and hikers and campers. Most horses do not like bikes, and it seems most bikers do not realize that they can easily spook a horse and cause a serious accident when they come racing out of the woods without warning. We try to educate them when this happens so they will be more careful next time. My friends and I stick to the "horses only" trails but have encountered lost bikers on horse trails numerous times. Please don't take these trails away from us, there are very few places nearby as beautiful to ride at. We are respectful of the rules and would just like to continue to enjoy the beauty of this state park. Why should another group get to overtake our trails when they have existing facilities in place already??

Thanks you for your consideration.

Sincerely,
Bernadette Schoppman

Sent from my iPhone

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: Alafia River State Park UMP
Date: Thursday, April 4, 2019 10:12:34 AM

FYI

-----Original Message-----

From: kturbevi@tampabay.rr.com <kturbevi@tampabay.rr.com>
Sent: Thursday, April 04, 2019 8:53 AM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: Alafia River State Park UMP

It is my understanding that it was suggested that the proposed new RV campground in the horse trail section of Alafia, become a primitive equestrian campground. Great idea! All that would be needed would be water as horses require a lot. Depending on how close the proposed bathroom is from the campground, a portable potty might be needed. Whatever it takes to keep this campground off of Reserve America needs to happen.

Alafia's horse trails & camp sites have been much used by equestrians for many, many years. The barn & paddocks are evidence of this. The addition of the other proposed items should NOT be put in the horse trail area because of the possible conflict. Horses are prey animals which means they think 'something' is out to eat them all of the time...like squirrels. The traffic of bouncing trailers of kayaks & boats would be a scare to the horses. Bike racks should not be in this area as bikers should not be in this area as they have their own very large area. The cabins, recreational hall, & camp store should be located nearer the RV campground for more usage....not in the horse trail area.

Thank you for your work in helping the Florida State Parks grow!

Karen Turbeville

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: Alafia River State Park Changes
Date: Thursday, April 4, 2019 10:12:43 AM

FYI

From: Lindsay Roth <lindsayroth@coreconstruction.com>
Sent: Thursday, April 04, 2019 8:55 AM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>; eric.drapler@floridadep.gov
Subject: Alafia River State Park Changes

To Those It May Concern:

Good morning,

I write to you today as a life-long equestrian located in the Sarasota area. I have been hauling my horses to Alafia for decades, enjoying all the trails with my equestrian friends. It is our favorite place to go trail riding for hours in any direction from home. I have been trail riding at Alafia twice in the past 3 weeks and plan to go again for an equestrian related event this coming Sunday. I am deeply concerned about the changes being proposed to the park that would negatively impact the horse trails/amenities.

I HIGHLY OBJECT to the addition of cabins, another RV campground, the kayak & paddling launch, more bike racks, the horse corral, the recreational hall, and the camp store! These additions would be located in the area of and directly in the way of the horse trails! Also please consider changing the 30-site RV campground to a primitive equestrian campground. This small corner of the park should be reserved for only horses & hikers as it is now! ***High density traffic areas and horses do not mix!***

Thank you for reading.

Respectfully,

Lindsay Roth
Marketing

CORE Construction Services of Florida, LLC
8027 Cooper Creek Boulevard, Suite 110 | University Park, FL 34201-3002
P: 941-343-4300 | F: 941-552-0245 | C: 941-928-6473
E: LindsayRoth@COREconstruction.com
W: COREconstruction.com

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From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: Alafia Equestrian Trails Need Preserved
Date: Thursday, April 4, 2019 10:13:09 AM

FYI

From: Tara Harter <taraharter@mail.usf.edu>
Sent: Thursday, April 04, 2019 10:13 AM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: Alafia Equestrian Trails Need Preserved

Hello Mr.Maldonado and Mr.Draper,

My name is Tara Harter, a resident to Lithia and an Environmental Science graduate student. Additionally, I have been working with the South West Florida Water Management District, in the SWIM section, on many restoration projects.

I am saddened to find out about future plans for the Alafia State Park Equestrian Trails. While our population continues to increase many natural habitats for animals are lost. Not only do I enjoy riding my horse out in Alafia's beautiful park but I am concerned for the impact that the wildlife will also endure.

I hope that Alafia's natural habitat and wildlife are considered when making decisions for the park to become more of a tourist destination. We need to be advocates for the plants and animals that regard Alafia Stare Park as their home and that is not by disturbing their habitat.

Thank you for your time and consideration.

Sincerely,
Tara Harter

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: Alafia equestrians
Date: Friday, April 5, 2019 9:30:58 AM

FYI

From: Amy Sheridan <sheridan_amy@hotmail.com>
Sent: Thursday, April 04, 2019 10:33 AM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>; Draper, Eric <Eric.Draper@dep.state.fl.us>
Subject: Alafia equestrians

Please do not do anything to infringe in the access to the beautiful horse trails at Alafia state park. So much of the area is becoming housing developments and the wild areas are being taken away. This is such a lovely place and it would be such a shame to reduce access to horses and lose the wonder of the state park. Please do not take away or reduce the number of horse trails! Please, places like this are what makes the area so special. Florida equestrians adore this gorgeous park and our access to places like this continue to be taken away. Please don't let that happen to Alafia.

Thank you

Amy

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: Alafia State Park - Conceptual Land Use Plan
Date: Friday, April 5, 2019 9:31:10 AM
Attachments: [image001.png](#)

FYI

From: Lisa Wolfson <info@lisawolfson.net>
Sent: Thursday, April 04, 2019 5:19 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>; Draper, Eric <Eric.Draper@dep.state.fl.us>
Subject: Alafia State Park - Conceptual Land Use Plan

Hello Tyler & Eric,

I am a horseback rider who has enjoyed the trails at Alafia State Park for the past ten years. There are so few equestrian friendly parks in Hillsborough County. I just read the Conceptual Land Use Plan for the park and have serious concerns.

The plan to develop deep into the park, in my opinion, is reckless and counter productive to the conservation goals outlined in the report. If additional development is to be made, wouldn't it make more sense to locate any cabins, campsites and retail near the front of the park? To construct domiciles & retail deep into the heart of the park will create chaos, cause pollution, drive out wildlife, destroy habitat and ruin the park.

I respectfully request that more public input be sought prior to implementation of this plan. Many many people in the horse community, including myself, are just today learning about this proposed plan via word of mouth and social media. We would appreciate the opportunity to share our suggestions.

Thank you for your consideration.



Lisa Wolfson
Realtor, Top-Producer
WOLFSON TURNER TEAM
Signature Realty Associates
2234 Lithia Center Lane
Valrico, FL 33547

www.WolfsonTurner.com

Cell 813.431.4001

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: Alafia Horse Trails
Date: Friday, April 5, 2019 9:31:21 AM

FYI

From: Velvet Arnold <velvet.arnold@hotmail.com>
Sent: Thursday, April 04, 2019 7:55 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>; Draper, Eric <Eric.Draper@dep.state.fl.us>
Subject: Alafia Horse Trails

Hello Tyler and Eric,

It has just come to my attention that you're planning to decimate the horse trails at Alafia State Park.

I strongly oppose this plan! Alafia is one of the few safe options to ride a horse for some distance. Roads are too busy and narrow...its very unsafe. As you know, horses are herd animals and are jumpy by nature - think a 1200+ deer. No matter the amount of training, they can jump and dart/spook at anytime. Horses are NOT compatible with MULTI-USE trails! This is unsafe for us riders/others and completely unfair to take away this option from us. There are already endless options for other trail users...let us keep our trails!

Florida has the largest number of horses in the country...the equestrian community is already feeling the squeeze from the increasing population and urban sprawl.

DO NOT TAKE OUR TRAILS!!!!

Velvet Arnold
Bradenton, FL

[\(850\) 612-0181](tel:8506120181)

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: Equestrians at Alafia River State Park
Date: Friday, April 5, 2019 9:31:30 AM

FYI

-----Original Message-----

From: TomandJo@Mail.com <tomandjo@mail.com>
Sent: Friday, April 05, 2019 8:12 AM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: Equestrians at Alafia River State Park

You must rethink your plan to replace some of the best & most beautiful horse trails in FL with a 30-site campground, cabins , etc.

it would be such a travesty to deny this area to Equestrians who not only have enjoyed riding here for years but have worked hard to maintain the area with facilities-built a barn, etc, & ensure the trails remain a safe place to enjoy the beauty of nature. A campground, cabins & more will destroy all of this. Pls reconsider your plans and leave the trails as they are!!

Thank you.

Jo Iwanski

Ft Myers

Sent from Jo Iwanski's iPhone

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: Proposed Recreational Amenities at Alafia State Park
Date: Friday, April 5, 2019 9:49:03 AM

FYI

From: Mandy Parks <mparks@laneengineering.com>
Sent: Friday, April 05, 2019 9:47 AM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Cc: Draper, Eric <Eric.Draper@dep.state.fl.us>
Subject: Proposed Recreational Amenities at Alafia State Park

Mr. Maldonado,

As an avid user of Florida state parks and public land for both equestrian and non-equestrian activities for over 30 years, I strongly urge to consider the following in regards to the information presented at the March 27th public meeting that would result in shifting non-equestrian focused activities into the predominantly equestrian area of the park.

1. Please make the proposed 30-site RV area a primitive equestrian campground.
2. Please do not place recreation halls, camp store, kayak/canoe launches, and other public gathering focused areas in the area of the horse trails

The Alafia state park is truly a gem that is currently shared by many types of users, in mostly separate areas, in harmony. Moving high volume, non-equestrian activities into the equestrian area is both unfair to equestrian users of the park as well as extremely dangerous for all parties. A "yield" sign showing the (horse, biker, and hiker) will hardly be sufficient to provide guidance to the public for the potential interactions that will take place.

Ultimately, the proposed changes as they stand will drastically reduce equestrian use of the park. Sadly, equestrians will be forced to go elsewhere to safer and ever dwindling spaces reserved for their enjoyment.

Mandy L. Parks, PE
mparks@lane.engineering
813-758-4858

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: ALAFIA SAVE THE HORSE TRAILS, NO DEVELOPMENT
Date: Friday, April 5, 2019 10:58:52 AM

FYI

From: Lark Campisano <campisa7@aol.com>
Sent: Friday, April 05, 2019 10:47 AM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: ALAFIA SAVE THE HORSE TRAILS, NO DEVELOPMENT

Dear Sir, I am from Fort Myers, FL and I also belong to the South FL Trail Riders in Miami. We camp/ride horses in Alafia regularly therefore helping support the local economy. We do not want any development in this area. Please speak against that.

Lark Campisano 239-731-3265

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: 10-YEAR PLAN FOR ALAFIA STATE PARK
Date: Friday, April 5, 2019 12:09:27 PM
Attachments: [image003.png](#)

FYI

From: Heidi Habegger <hhabegger@neminc.com>
Sent: Friday, April 05, 2019 12:07 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Cc: Draper, Eric <Eric.Draper@dep.state.fl.us>
Subject: 10-YEAR PLAN FOR ALAFIA STATE PARK

I understand there is consideration to decimate the horse trails at Alafia State Park in favor of building an additional campground with cabins and additional roads, that will interfere with the current horse trail paths.

This is very disconcerting. Alafia is known as having the most beautiful equestrian trails in the state of florida. We utilize them quite often in the summer months when it is very hot, due the extensive shade on the majority of the trail paths.

These trails co-exist with a labyrinth of off-road mountain biking trails as well. Is it within the 10-year plan to decimate these as well?

I do not see how these two systems of trails would not affect the other. And if your intention is to keep the cycling trails, the equestrian trails should remain as well.

I can understand if some of the mileage is used for this new campsite project, but cannot imagine the complete equestrian trail system would have to be eliminated. This does not make much sense.

Alafia is a beautiful place, utilized by people that participate in numerous outdoor activities. I would hate to lose it to development and paved roads.

I urge you to reconsider this in your 10-year proposal, and come up with alternatives, in order to save the equestrian trails.

Speaking for myself and many other equestrian users of the park, we would understand if the state park system could even impose a yearly use fee that would allow us to bring our horses, these monies would then be able to allocated to maintenance of the trials and the general welfare of the park.

My best regards,

Heidi Habegger
Sarasota, Florida
941.780.4431



 www.neminc.com |  2820 62nd Ave. E. Bradenton, FL 34203

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: Alafia
Date: Friday, April 5, 2019 2:29:17 PM

FYI

From: Mary Abraham <maryaabraham@gmail.com>
Sent: Friday, April 05, 2019 1:36 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: Alafia

It has come to our attention that someone is trying to take away our wonderful horse park. We high tied our horses for years, and then the barn got built and it was even more wonderful to go there. I don't know who is behind this but it needs to be stopped. Mary Abraham, Calloosa Saddle Club, North Ft. Myers, Fl.

Sent from [Mail](#) for Windows 10

From: [Maldonado, Tyler](#)
To: [Baxley, Demi](#)
Subject: FW: Alafia
Date: Friday, April 5, 2019 2:29:27 PM

FYI

From: Mary Abraham <maryaabraham@gmail.com>
Sent: Friday, April 05, 2019 1:51 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: Alafia

Please don't take away from the equestrians the best park we have in Florida! We waited so long to have a barn instead of high tying and now you want to take it all away. Please reconsider, Mary Abraham, Caloosa Saddle Club, North Ft. Myers, Fl.

Sent from [Mail](#) for Windows 10

From: [Maldonado, Tyler](#)
To: [Degagne, Demi](#)
Subject: FW: Alifia
Date: Monday, April 15, 2019 10:19:28 AM

From: Jerry Knapp <jdknapp@gmail.com>
Sent: Friday, April 05, 2019 9:48 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: Alifia

Please keep Alifia as it is! We love riding our horses there.

DeAnne Knapp
12501 Astor Place
Fort Myers, FL 33913

From: [Maldonado, Tyler](#)
To: [Degagne, Demi](#)
Subject: FW: Alafia River State Park
Date: Monday, April 15, 2019 10:19:32 AM

From: Mitzie Newsome <huminbird1@gmail.com>
Sent: Saturday, April 06, 2019 1:30 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: Alafia River State Park

Hi, my name is Diane Newsome and a friend just told me bout a recent meeting about our favorite horseback riding area , Alafia River State Park. I have had a sinus infection for the last 3 weeks so havent been able to ride much but I would have come to the meeting if I had known about it. Could you please call me so I can find out more about this issue? My number is 613-966-8784 . Sincerely, Diane Newsome, owner of SugarHawk Stables in Lithia FL

From: [Maldonado, Tyler](#)
To: [Degagne, Demi](#)
Subject: FW: PLS KEEP THE TRAILS
Date: Monday, April 15, 2019 10:19:37 AM

-----Original Message-----

From: Steffany dragon <steffany.dragon@gmail.com>

Sent: Saturday, April 06, 2019 5:28 PM

To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>; Draper, Eric <Eric.Draper@dep.state.fl.us>

Subject: PLS KEEP THE TRAILS

> Dear Sirs:

> We are very concerned about the proposed changes or elimination of the Alafia State Park Equestrian Trails. We have a very strong equine industry here & the trails have been a very important part of life for the many equine & nature enthusiasts alike for years. This trail is not only important for the quality of life of humans & horses (the horses truly benefit from and need more, not fewer trails) but also for the wildlife appreciating the habitat the trails provide. Horseback riding is an ideal way to experience the beauty of Florida's native plant & animal life that does not disturb it. We truly hope you reconsider your plans now that we have brought the high importance of the trails to your attention, as well as the negative impact it would have to lose them, on plant, animal and human lives, alike!

>

> Please keep us informed,

> Steffany

> Sent from my iPhone

From: [Maldonado, Tyler](#)
To: [Degagne, Demi](#)
Subject: FW: Alf planning meeting
Date: Monday, April 15, 2019 10:19:44 AM

From: Vicki Lawry <vicshadyl@gmail.com>
Sent: Sunday, April 07, 2019 4:44 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: Alf planning meeting

April 7 2019

Tyler,

First thank you for having this meeting. However, many people asked how was the information simulated out to the public. I have no idea but it was very poorly announced.

After the meeting it was blasted on FB with incorrect information as if DEP is trying to rid Alafia River State Park of equestrians. In some ways I have to agree with the image of all these different user groups placed in one area in the north section of the park named Three Finger Lakes.

We are not against recreating on multi use trails but it is extremely important that we have separation on some parts of the trail system including a parking lot. The cost of a new road from the main entrance to the north along 39 to the now exiting parking area to the east of this so called new parking area (Three Fingers Lake) would eat a huge chunk of money. This will also be removing some of the equestrian trails. The same will happen where the proposed Three Finger Lake parking area that has so much crammed onto a small area will also be removing sections of our trails. Oh lets not forget the 30 site campground & cabins!

Why place so much in such a small amount of usable land? Why not wait & expand when made available the MOSAIC land?

Placing horses & large horse trailers in a congested area with other users will be creating a safety issue for all users, Why would anyone think that all of this in one area is ascetically pleasing. How many slots? Loss of revenue if we are turned away due to a lack of parking. Sometimes the north parking is so full we park on the other side of the gate in the field. Asphalt is is highly dangers to load & unload a horse due to slipping. Why the parking by the main area was left in grass.

A horse corral not needed for day time use. Restroom yes, pavilions are nice but most of use stay near our trailers & or load & leave. Remember we have a living animal that doesn't get placed on the bike rack of my vehicle or a kayak tied to the roof. These objects need no attention!

I do understand other users use pavilions and they are nice to have and I am not saying no. Its cost. NO BIKE RACKS! If bikers start to use the trails in the north section whats left.

I stated that myself & others volunteered for years to bring Alafia River State Park to what we envisioned the park would be like. We worked out a plan for separate trail users and multi-use trails. An equestrian campground that we have a hard time trying to get in with reservations. Why would we have to move when a barn that was built by sweat equity is in the existing campground!

This whole process needs to be reviewed over & over and back to the drawing table each time. Please don't wait for a meeting of commits to show possible changes. Somehow the user groups need to be brought into the beginning process. Information before a planned meeting. Yes lets

invite the community properly it is our park after all..

I voted 2x on preservation 2000 funding. I am a tax payer! I do write my concerns to my senators.

Looking forward to a response..Thank you,

Vicki Lawry

813-601-0228

From: [Maldonado, Tyler](#)
To: [Degagne, Demi](#)
Subject: FW: ALAFIA RIVER STATE PARK PLANS
Date: Monday, April 15, 2019 10:19:49 AM

From: Maureen Vos <movos@Tampabay.rr.com>
Sent: Monday, April 08, 2019 11:57 AM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: ALAFIA RIVER STATE PARK PLANS

Dear Mr. Maldonado,

As the owner of 6 horses and a frequent trail rider at the Alafia River State Park, I write to state my objections to the proposed plans for changes to the Alafia River State Park.

I ride my horses there (with friends) to enjoy nature and quiet. I generally stick to the north west side of the park so that I do not encounter bicycles and not too many hikers over there. I have been thrown from horses twice on the bike side of the park due to the quiet whirr of the bikes going by in the bushes, woods, near the trails, and suddenly surprising the horses. I have a few friends this has also happened to. Of course, I am not faulting the bicyclists. They were doing nothing wrong, just minding their own business, but my horses are not bombproof, so I stay away from the bicycle areas. There is (presently) lots of room to do that.

However, if the new plan takes place and an RV park and bicycle racks are put on the north west side of the park, then there is no sanctuary for horseback riders from the people who don't understand horses and bicycles. Currently, we do encounter hikers on the horse trails and they are always polite and respectful, but if those plans that I saw are enacted, then there will be so many more people, families. It's going to be a tourist destination with all that RV parking. Our enjoyment of the horse trails will effectively be gone and so, we horse people will have to be gone also. The very things we go there to enjoy, will be gone.

There are currently, IMO, plenty of picnic areas in the park and I'm not looking for a horse corral. There could never be enough corrals for all the horses anyways. I want to trail ride, maybe enjoy a light snack with friends and go home. At times, there are a LOT of horses in the park. A month ago, we came across 20 riders on a trail ride together and many other rider groups on the trails that day. Do we really want MORE? What's that going to do to the eco system. I realize that that is mostly a weekend situation. The park is mostly deserted during my week day rides. But, I believe the "tourists" are going to come on the weekends for the most part.

It is a shame that most of us day riders had no idea that there was a meeting, so of course we didn't come. I only found out because I saw a post on the Myakka River Riders Facebook page afterward.

Please consider either another meeting, or a change in the plans.

Thanks for taking the time to read this comment.

Sincerely,

Maureen Vos
8725 Erie Lane,
Parrish, FL 34219

From: [Maldonado, Tyler](#)
To: [Degagne, Demi](#)
Subject: FW: Proposed Recreational Amenities at Alafia State Park
Date: Monday, April 15, 2019 10:19:55 AM

From: liz2004@tampabay.rr.com <liz2004@tampabay.rr.com>
Sent: Monday, April 08, 2019 7:51 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Cc: Draper, Eric <Eric.Draper@dep.state.fl.us>
Subject: Proposed Recreational Amenities at Alafia State Park

Mr. Maldonado,

I frequently ride my horse at Alafia State Park. I've read about the proposed changes to the park, and the information presented at the March 27th public meeting (adding non-equestrian focused activities into the predominantly equestrian area of the park).

The proposed types of mixed use activities in close proximity to the equestrian areas could cause stress and fear in the horses, which would endanger the horses and their handlers. Please reconsider this plan and keep the equestrian area a safe place for our use. If the proposed changes are incorporated, I feel that it would discourage equestrians like myself from using the park.

Referencing the proposal specifically:

1. Please do not place recreation halls, camp store, kayak/canoe launches, and other public gathering focused areas in the area of the horse trails
2. Please make the proposed 30-site RV area a primitive equestrian campground.

Sincerely,

Liz Barksdale
813-920-3861

From: [Maldonado, Tyler](#)
To: [Degagne, Demi](#)
Subject: FW: Alafia River State Park HORSE Trails
Date: Monday, April 15, 2019 10:20:00 AM

From: Amy Chenard <a.chenard@aol.com>
Sent: Tuesday, April 09, 2019 10:10 AM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>; Draper, Eric
<Eric.Draper@dep.state.fl.us>
Subject: Alafia River State Park HORSE Trails

Hello,

I just saw a FB post that there was a planning meeting to decide the fate of the horse trails at Alafia River State Park. I load up my trailer with my horses and friends and use the park often. Please tell me this is "fake" news since losing the ability to ride in the beautiful park would break my heart. We are developing too much, too fast and losing everything amazing that Florida is. The last thing we need is more roads, more cabins, and more building. I beg you to reconsider this decision for the sake of the wildlife, and the tax paying citizens like myself who find peace in this beautiful setting.

Amy Chenard
Sarasota, FL

From: [Maldonado, Tyler](#)
To: [Degagne, Demi](#)
Subject: FW: Alafia State Park - Equestrian Trails
Date: Monday, April 15, 2019 10:20:04 AM

From: kbpfxhnt@gmail.com <kbpfxhnt@gmail.com>
Sent: Tuesday, April 09, 2019 1:21 PM
To: FLStateParkPlanning <FLStateParkPlanning@dep.state.fl.us>; Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>; Draper, Eric <Eric.Draper@dep.state.fl.us>
Subject: Alafia State Park - Equestrian Trails

Good Afternoon,

I am a 20 year resident of Hillsborough County, and Alafia State Park is a treasure because of its horse trails. Please listen to my fellow equestrians that our trails are constantly being threatened and almost never being expanded. Hikers and bikers have so many alternatives to their form of recreation. Horses do not. It is the writing on the wall for us equestrians, that if mixed use on horse trails are allowed, that someone will complain about the horses, and the horse trails or accessibility by horses will be eliminated. The horse community need assurance that their form of recreation is not threatened.

I was not at the recent March meeting presenting the plan, but I am conveying to you that the horse community on Facebook is highly agitated and mobilizing. I hope you can find a way to hear their concerns and assure them in writing that you are indeed protecting the horse trails for our use too.

Cordially,
Katie Parker
450 Knights Run Ave
Tampa, FL 33602

From: [Maldonado, Tyler](#)
To: [Degagne, Demi](#)
Subject: FW: Draft Changes to Alafia State Park
Date: Monday, April 15, 2019 10:20:14 AM

From: Maxwell, Bryon
Sent: Tuesday, April 09, 2019 5:01 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: Fwd: Draft Changes to Alafia State Park

FYI

Bryon Maxwell
Park Manager
Alafia River State Park
813-917-2816

----- Forwarded message -----

From: Jan and Tom McDonald <janetandtommcd@gmail.com>
Date: Apr 9, 2019 4:47 PM
Subject: Draft Changes to Alafia State Park
To: "Maxwell, Bryon" <Bryon.Maxwell@dep.state.fl.us>
Cc: Cynthia Huffman <rhuf926999@verizon.net>

Dear Ranger Maxwell: I have received a large number of comments to the proposed draft change to the park that would entail the closing of the north or equestrian entrance. To date, I have found that no accidents have occurred at the north entrance due to trailers entering the park. The consensus of the comments made to me were that the park users were very afraid that the closure of the north entrance and the re-routing of all trucks and trailers and cars with hikers and ham radio club members would result in a back log of vehicles.

These vehicles, some of which would be trucks with long trailers, could be forced to line up at the main park entrance and forced to stay along side the busy SR 39 roadway. This is an unsafe area to have trailers with horses park. It would be creating congestion and a dangerous situation.

Unfortunately, I have seen the tragedy of a trailer with horses that was rammed by a trailer truck that was unable to stop. I do not want to see this happen near Alafia State Park. Trucks frequent SR 39 and sometimes travel at speeds in excess of the limit. Please do not create an unsafe situation. If the north entrance must be closed then a long turning lane must be created for all the vehicles trying to enter the park at the main entrance. Alternatively, could the current service road that is used for the hunter paces be turned into an equestrian entrance.?

I know that you and everyone in the park value the safety of all the park visitors. Please consider these suggestions and the concerns of a large group of equestrians.

Thank you for your anticipated assistance. Jan

From: [Maldonado, Tyler](#)
To: [Degagne, Demi](#)
Subject: FW: Alafia Horse Trails
Date: Monday, April 15, 2019 10:20:20 AM

From: Elizabeth "Betty" Gentry <gentrysceltickennels@yahoo.com>
Sent: Wednesday, April 10, 2019 3:30 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>; Draper, Eric <Eric.Draper@dep.state.fl.us>
Subject: Alafia Horse Trails

Please leave them alone! We ride there regularly. It's beautiful wide open terrain and always beautiful wild life!! If you take out the horse trails, people would have no where local to ride their horses and enjoy the beauty of our area! Please leave them alone! We live within 15 miles of the park, and it's why we moved here!

Elizabeth Gentry

[Sent from Yahoo Mail for iPhone](#)

From: [Maldonado, Tyler](#)
To: [Degagne, Demi](#)
Subject: FW: Alafia state park
Date: Monday, April 15, 2019 10:20:25 AM

From: qmixer@aol.com <qmixer@aol.com>
Sent: Wednesday, April 10, 2019 3:55 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: Alafia state park

This is in rretards to the expansionof TV camp sites in Alafia , the horse trails are alreay limited as please don't take away more of the trails. The combinationof campers and horses aren'tgoing to be good ,there are so few places left to ride. Thank you
Sent from my Sprint Phone.

From: [Maldonado, Tyler](#)
To: [Degagne, Demi](#)
Subject: FW: Alafia River State Park
Date: Monday, April 15, 2019 10:20:29 AM

From: Ellen Alence <vetellen11@gmail.com>
Sent: Wednesday, April 10, 2019 8:39 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: Alafia River State Park

Good evening.

I have been a southeast Hillsborough County resident for 18 years.

I frequently utilize Alafia River State Park with my family and friends. Activities that I regularly participate in at his location are:

- 1) Riding the equestrian trails
- 2) Participating in the hunter pace equestrian events.
- 3) Running the trails with my dog.
- 4) Running in the trail races run by Tampa Races
- 5) Mountain biking

With all of the uncontrolled growth allowed by Hillsborough County, Alafia River State Park remains a gem. A gem where Florida residents can enjoy outdoor activities. Please don't take this away from us by adding cabins and other "amenities" that just aren't needed.

A lot of the RV sites are taken by out of state people. If you need more camping, maybe further restrict stays by out of state people.

As far as adding canoeing or kayaking, there is already canoeing and kayaking available right up the road at Alderman Ford.

If you want to add things, please do not do so at the expense of the existing activities, like the equestrian trails, which are also used by hikers and runners.

In this day and age with all the untethered growth and lack of face to face contact with people (vs electronics and social media), being able to go out to Alafia River State Park either alone or with family and friends is a blessing.

Being a frequent user of this facility, the camaraderie and sense of community is invigorating. Please do not add "things" that take away from what is already there and being utilized by residents.

If you are looking to add, why not enhance what is there? Better and expanded parking (both sides)? Mounting blocks along the equestrian trails? Maybe create crosscountry equestrian trails (add

jumps).

Please don't take away our equestrian trails or bike trails.

Thank you.

Dr. Ellen Alence

From: [Maldonado, Tyler](#)
To: [Degagne, Demi](#)
Subject: FW: 10 year plan for the Alafia River State Park.
Date: Monday, April 15, 2019 10:20:42 AM

From: Lynn Ryder <Lryder2@tampabay.rr.com>
Sent: Wednesday, April 10, 2019 9:37 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: 10 year plan for the Alafia River State Park.

Hello,

While I appreciate the time and effort used to hold the public meeting on the 10 year plan for the park, I can't help but be concerned about the information provided related to that plan. Several members of the equestrian community spoke at the meeting and they all voiced concerns over placing new camp grounds in the area currently being used as a riding site with numerous horse trails. This planned development would impact the riding trails and the general wilderness feel. New Camp grounds and mixed use areas will bring more paved roads. The roads would diminish the natural feel and look of the area. It will reduce the available riding area. There was a discussion regarding safety for the horses, riders and campers when all of the users are coming together in one area. Families camping with their children don't want to worry about keeping their children safe around these animals. And children want to run and play and be loud. They should be allowed to do all of that but not around the horses. If the new campgrounds are located away from the current equestrian trails, everyone would benefit.

I believe everyone wants to see the park expand and grow but not at the expense of services and natural areas already in use. Those areas should be left alone.

Thank you for taking the time to read my opinion.

Lynn Ryder
817 Old Welcome Rd.
Lithia, Florida 33547



Virus-free. www.avast.com

From: [Maldonado, Tyler](#)
To: [Degagne, Demi](#)
Subject: FW: Alafia State Park Horse Trails
Date: Monday, April 15, 2019 10:20:47 AM

From: Cheryl Decker <cdecker71@gmail.com>
Sent: Thursday, April 11, 2019 9:35 AM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: Alafia State Park Horse Trails

Good day sir

I am emailing you in regards to the Alafia state park horse trails that are tentatively scheduled to be removed due to adding other amenities such as an extra campsite.

I strongly ask that you don't touch the horse trails. That state park is huge and there should be plenty of room to accommodate the other amenities that you'd like to add without destroying or taking away what the equestrian riders love at that park. I can't believe that there wouldn't be other options to still add new amenities to that park without bothering what is already there for the equestrian riders. How about you look into adding more equestrian trails?

I hope you please listen to all of our concerns destroying the equestrian trails and I hope to hear response back from you.

Thank you have a great day.

Concerned Equestrian Rider
Cheryl Decker

--

[Have a great day.](#)
[Cheryl](#)

From: [Maldonado, Tyler](#)
To: [Degagne, Demi](#)
Subject: FW: Alafia State Park Equestrian Use
Date: Monday, April 15, 2019 10:20:53 AM

From: Ellen May <oakgrovearabians@gmail.com>
Sent: Thursday, April 11, 2019 11:27 AM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>; Draper, Eric <Eric.Draper@dep.state.fl.us>
Subject: Alafia State Park Equestrian Use

My family is from Florida although I now live in Arkansas. I return every year with my horse to enjoy Florida's natural beauty, weather, people and most especially, to horse camp and trail ride. I have long said Alafia State Park is one of my favorite places to ride anywhere in the US (I have ridden trails in all 48 states).

For years, I have known to book early if I have any hope of having a camping site there. I usually go mid-week and discover that I am the only or one of a very few horse campers there. Locals may come over to day ride, but those hoping to camp with their horse have virtually been pushed out by RV campers. I am glad to see the park being enjoyed by so many bikers, hikers, canoes, fishermen and such but please leave room for the horse people too!

I have suggested to staff and volunteers in the past, that it is a real shame the lovely barn and pens donated by Friends of Alafia remain so seldom used. Is there some reason the areas near the barn which are already open, level, partially shaded and close to the bath house can't be permitted as a primitive (water is already there for horses) equestrian camping area?

Thank you for your consideration. I look forward to your response.
Ellen May
Winslow, Arkansas
479 236 2550

From: [Maldonado, Tyler](#)
To: [Degagne, Demi](#)
Subject: FW: Alafia River State Park
Date: Monday, April 15, 2019 10:20:58 AM

From: Rosemary Arway <Rarway@hotmail.com>
Sent: Thursday, April 11, 2019 10:43 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>; eric.drapler@floridadep.gov
Subject: Alafia River State Park

Hello,

PLEASE, PLEASE do NOT change anything at Alafia State Park with regard to the existing horse facilities and camping. It is absolutely the BEST place in Florida and you all have done such a wonderful job in maintaining this beautiful equestrian park.

It would be unforgivable to change anything and the equestrians in our state would REALLY appreciate your commitment to keeping it the same.

Please recognize that there are limited places for us to enjoy nature with our horses. Please do not take this away or change it in any manner.

With appreciation,
Rosemary Arway

From: [Maldonado, Tyler](#)
To: [Degagne, Demi](#)
Subject: FW: Proposed Changes at Alafia River State Park
Date: Monday, April 15, 2019 10:21:17 AM

From: Maureen Vos <movos@Tampabay.rr.com>
Sent: Saturday, April 13, 2019 5:14 PM
To: Maldonado, Tyler <Tyler.Maldonado@dep.state.fl.us>
Subject: Proposed Changes at Alafia River State Park

1. The proposed new RV campground should be a primitive EQUESTRIAN CAMPGROUND, similar to Colt Creek's. Water/bathroom under future discussion.
The new campground for equestrians may take away some trails but it will be worth it.

NO WE DON'T NEED MORE CAMPGROUND AND/OR the things that go with it. DON'T WANT IT. WE DO NOT WANT TO LOSE TRAILS TO A CAMPGROUND or anything else.

2. The park will keep only one park entrance. An interior road will run along side HWY 39 to get to the north area parking/trail head. From this road, a road will run along the power line to get to the new EQUESTRIAN CAMPGROUND with an off road leading directly into the campground.

NO! We do not want a road inside the park taking away the trail that runs up Hwy 39, nor a road down the power line trail. What is wrong with the way it is now. We put our money into the box to use the park. We don't need congestion, nor another road inside the park.

What should horse people email about BY April 12th? Do away with the addition of cabins, another RV campground, kayak & paddling launching, bike racks, horse corral, recreational hall, and camp store that would be located in the area of the horse trails. Change the 30-site RV campground to a primitive equestrian campground. This small corner of the park should be reserved for only horses & hikers as it is now!

NO! We don't want more cabins, RVs, more launching areas, bike racks. We don't need a horse corral (what good is A horse corral). Definitely don't need a camp store in the horse trails. ARE YOU ALL INSANE?

We need the quiet horse trails. That's what we need. Most of us just use this small area to ride in. Please don't take it away from us.

Maureen Belknap-Vos
Frequent user of the horse trails at Alafia River State Park

Addendum 10 — Local Government Comprehensive Plan Compliance

Hillsborough County Comprehensive Plan Compliance

From: [Degagne, Demi](#)
To: [Shawn College](#)
Cc: [Ross Dickerson \(Dickersonr@hillsboroughcounty.org\)](#); [Maldonado, Tyler](#)
Subject: Hillsborough County - Request for Review of ALAFIA RIVER STATE PARK Unit Management Plan
Date: Monday, May 06, 2019 2:14:26 PM
Attachments: [ARSP_AGDraft_Compressed.pdf](#)
[image001.png](#)
[image002.png](#)

Good Morning Shawn,

Back in August 2018, we made contact with you regarding the need to have Division of Recreation and Parks, Office of Park Planning's park unit management plans reviewed to determine if the park unit management plan is in compliance with the local comprehensive plan. As a reminder, we specifically want to make sure we are accurately citing the future land use and zoning designations for the park and would like to confirm that our proposed developments in the conceptual land use section comply with those designations. In addition, the existing facilities section will also need to be reviewed.

Attached is a copy of the draft unit management plan for Alafia River State Park. Please accept this as an official request for review of our park management plan to ensure compliance with your local comprehensive plan. Tyler Maldonado, who is copied with this communication, is our point of contact regarding planning management of Alafia River State Park.

As I understand it, based on previous communications, the unit management plan will need to be reviewed by Hillsborough County's Planning Commission which meets once per month on the second Monday of the month. Please let us know when the plan will be presented to the Planning Commission and if attendance at the meeting by Park Planning is needed. We would like to be able to provide this information to our management, if asked.

Thank you, in advance, for your time and assistance with our request. If you have any questions or concerns regarding the management plan, please direct them to Mr. Maldonado at tyler.maldonado@floridadep.gov or 850.245.3051. As Mr. Maldonado's assistant, I am also available to you if you need any other information or have any questions.

Sincerely,



Demi P. Degagne

Florida Department of Environmental Protection
Division of Recreation and Parks/Office of Park Planning
Government Operations Consultant and
Park Planning Administrative Assistant
Demi.Degagne@floridadep.gov
Office: 850.245.3051
Direct: 850.245.3052

