

Land Management Plan Compliance Checklist

Required for State-owned conservation lands over 160 acres (Updated July 2022)

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://floridadep.gov/lands/environmental-services/content/land-stewardship>

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	Page 1 (Executive Summary); Page 9 (II.A.1)
2	The land acquisition program, if any, under which the property was acquired.	18-2.018 & 18-2.021	Page 1 (Executive Summary); Page 11 (II.A.4)
3	Degree of title interest held by the Board, including reservations and encumbrances such as leases.	18-2.021	Page 12 (II.B.2)
4	The legal description and acreage of the property.	18-2.018 & 18-2.021	Page 9 (II.A.2)
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	Exhibits B & E
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	Page 16 (II.D.3)
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	Page 16 (II.D.2); Exhibit C
8	Identification of adjacent land uses that conflict with the planned use of the property, if any.	18-2.021	Page 17 (II.D.4)
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	Page 3 (I.A); Page 12 (II.B.1)
10	Proximity of property to other significant State, local or federal land or water resources.	18-2.021	Page 10 (II.A.3); Exhibit F

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	Page 1 (Executive Summary); Page 3 (I.A); Page 12 (II.B.3)
12	A description of past and existing uses, including any unauthorized uses of the property.	18-2.018 & 18-2.021	Page 4 (I.B); Page 13 (II.B.4); Page 17 (II.D.6); Page 18 (II.E); Page 19 (III); Page 21 (IV); Page 32 (V); Page 36 (VI); Page 43 (VII)
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	Page 16 (II.D)

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	Page 1 (Executive Summary); Page 18 (II.E.1)
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	Page 21 (III.C-D); Exhibit H
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	Page 19 (II.E.6); Page 21 (III.C); Page 26 (IV.C.2-3); Page 43 (VI.F)
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	Page 3 (I.A)
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	Page 13 (II.B.5)
19	Letter of compliance from the local government stating that the LMP is in compliance with the Local Government Comprehensive Plan.	BOT requirement	Page 17 (II.D.5); Exhibit S
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	Page 8 (I.C Goal 7); Page 21 (IV); Exhibits L & M
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	Page 3 (I.A); Page 13 (II.B.4)
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	Page 40 (VI.C)
23	A statement regarding incompatible use in reference to Ch. 253.034(10).	253.034(10)	Page 16 (II.D.1)

*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
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24	A statement concerning the extent of public involvement and local government participation in the development of the plan, if any.	18-2.021	Page 1 (Executive Summary); Page 19 (II.E.4); Exhibits R, S & T
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	✓
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	Page 19 (II.E.4); Exhibit T
27	Summary of comments and concerns expressed by the advisory group for parcels over 160 acres	18-2.021	Exhibit T
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 & 259.032	✓
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	Page 19 (II.E.4); Exhibit R
30	Summary of comments and concerns expressed by the management review team, if required by Section 259.036, F.S.	18-2.021	Exhibit R
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	Exhibit R

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	Page 22 (IV.A); Exhibit I
33	Insert FNAI based natural community maps when available.	ARC consensus	Exhibits L,P & Q
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	Page 24 (IV.C); Exhibits I, L, M
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	Page 30 (IV.G)
36	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding beaches and dunes.	18-2.021	Page 30 (IV.E)
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	Page 30 (IV.F)

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	Page 27 (IV.C.4); Exhibits L, M
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	Page 24 (IV.C.1); Exhibits L, M
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	Page 26 (IV.C.2); Exhibits L, P, Q
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	Page 5 (I.C); Page 21 (III.C,D); Page 21 (IV); Page 36 (VI.A-B); Page 43 (VII)
42	Habitat Restoration and Improvement	259.032 & 253.034	Page 21 (IV)
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.	↓	Page 5 (I.C); Page 43 (VII)
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.		Page 5 (I.C)
42-C.	The associated measurable objectives to achieve the goals.		Page 5 (I.C)
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>		Page 5 (I.C); Page 36 (VI); Page 43 (VII)
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.		Page 15 (II.C.4), Exhibit U
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	Page 9 (II.A.2); Page 11 (II.A.4); Page 14 (II.C); Page 43 (VII); Exhibits B, J, M, Q, Y
44	Sustainable Forest Management, including implementation of prescribed fire management	18-2.021, 253.034 & 259.032 ↓	Page 36 (VI); Exhibit N
44-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).		Page 5 (I.C. Goal 1); Page 36 (VI); Page 43 (VII)
44-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).		Page 5 (I.C. Goal 1)
44-C.	Measurable objectives (see requirement for #42-C).		Page 5 (I.C. Goal 1)
44-D.	Related activities (see requirement for #42-D).		Page 36 (VI); Page 43 (VII)
44-E.	Budgets (see requirement for #42-E).		Page 15 (II.C.4), Exhibit U
45	Imperiled species, habitat maintenance, enhancement, restoration or population restoration	259.032 & 253.034	Page 24 (IV.C)
45-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).	↓	Page 7 (I.C Goal 4); Page 24 (IV.C.1); Page 43 (VII)
45-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).		Page 7 (I.C Goal 4); Page 24 (IV.C.1); Page 43 (VII)
45-C.	Measurable objectives (see requirement for #42-C).		Page 7 (I.C Goal 4)

45-D.	Related activities (see requirement for #42-D).		Page 26 (IV.C.1); Page 43 (VII)
45-E.	Budgets (see requirement for #42-E).		Page 15 (II.C.4), Exhibit U
45-F	Assess the feasibility of managing the lands > 40 contiguous acres as a recipient site for gopher tortoises consistent with rules of the Fish and Wildlife Conservation Commission, as prepared by the agency or cooperatively with a Fish and Wildlife Conservation Commission wildlife biologist.	259.105	Page 29 (IV.C.6)
45-G	Economic feasibility of establishing a gopher tortoise recipient site, including the initial cost, recurring management costs and the revenue projections.	259.105	Page 29 (IV.C.6)
46	***Quantitative data description of the land regarding an inventory of exotic and invasive plants and associated acreage. <i>See footnote.</i>	253.034	Page 41 (VI.D); Exhibit O
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	Exhibit V
48	Exotic and invasive species maintenance and control	259.032 & 253.034 ↓	Page 41 (VI.D)
48-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).		Page 8 (I.C Goal 5); Exhibit O
48-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).		Page 8 (I.C Goal 5)
48-C.	Measurable objectives (see requirement for #42-C).		Page 8 (I.C Goal 5)
48-D.	Related activities (see requirement for #42-D).		Page 41 (VI.D,E); Page 43 (VII)
48-E.	Budgets (see requirement for #42-E).		Page 15 (II.C.4), Exhibit U

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	Page 13 (II.B.7)
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	Page 22 (IV.B); Exhibits J, K
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	Page 23 (IV.B.4)
52	***Quantitative description of the land regarding an inventory of hydrological features and associated acreage. <i>See footnote.</i>	253.034	Page 22 (IV.B); Page 43 (VII)
53	Hydrological Preservation and Restoration	259.032 & 253.034 ↓	Page 22 (IV.B)
53-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).		Page 8 (I.C. Goal 7); Page 22 (IV.B)
53-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).		Page 8 (I.C. Goal 7)
53-C.	Measurable objectives (see requirement for #42-C).		Page 8 (I.C. Goal 7)
53-D.	Related activities (see requirement for #42-D).		Page 8 (I.C. Goal 7); Page 22 (IV.B)

53-E.	Budgets (see requirement for #42-E).		Page 15 (II.C.4); Exhibit U
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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	Page 20 (III.B); Exhibit G
55	***Quantitative data description of the land regarding an inventory of significant land, cultural or historical features and associated acreage.	253.034	Page 20 (III.B); Exhibit G
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	Page 21 (III.C,D); Exhibit H
57	Cultural and Historical Resources	259.032 & 253.034	Page 19 (III)
57-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).	↓	Page 8 (I.C. Goal 6)
57-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).		Page 8 (I.C. Goal 6)
57-C.	Measurable objectives (see requirement for #42-C).		Page 8 (I.C. Goal 6)
57-D.	Related activities (see requirement for #42-D).		Page 21 (III.C,D)
57-E.	Budgets (see requirement for #42-E).		Page 15 (II.C.4); Exhibit U

**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	Page 14 (II.C); Exhibit E
59	Capital Facilities and Infrastructure	259.032 & 253.034	Page 14 (II.C.)
59-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).	↓	Page 9 (I.C. Goal 8); Page 14 (II.C.)
59-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).		Page 9 (I.C. Goal 8); Page 14 (II.C.)
59-C.	Measurable objectives (see requirement for #42-C).		Page 9 (I.C. Goal 8); Page 14 (II.C.)
59-D.	Related activities (see requirement for #42-D).		Page 14 (II.C); Page 32 (V)
59-E.	Budgets (see requirement for #42-E).		Page 15 (II.C.4); Exhibit U
60	*** Quantitative data description of the land regarding an inventory of recreational facilities and associated acreage.	253.034	Page 32 (V); Exhibit E
61	Public Access and Recreational Opportunities	259.032 & 253.034	Page 32 (V)
61-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).	↓	Page 6 (I.C. Goal 2)
61-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).		Page 6 (I.C. Goal 2)
61-C.	Measurable objectives (see requirement for #42-C).		Page 6 (I.C. Goal 2)

61-D.	Related activities (see requirement for #42-D).		Page 13 (II.B.4); Page 19 (II.E.5,6); Exhibits A, B, C, E
61-E.	Budgets (see requirement for #42-E).		Page 15 (II.C.4); Exhibit U

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	✓
63	Place the Executive Summary at the front of the LMP. Include a physical description of the land.	ARC and 253.034	Page 1 (Executive Summary)
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	Page 4 (I.B); Exhibit A
65	Key management activities necessary to achieve the desired outcomes regarding other appropriate resource management.	259.032	Page 5 (I.C.); Page 43 (VII)
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, law enforcement activities.	253.034	Page 15 (II.C.4); Exhibit U
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	Page 15 (II.C.4); Exhibit U
68	A statement of gross income generated, net income and expenses.	18-2.018	Page 15 (II.C.4); Exhibit U

*** = 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.

TEN-YEAR LAND MANAGEMENT PLAN
FOR THE
LAKE GEORGE STATE FOREST
VOLUSIA COUNTY



Mesic Flatwoods at Lake George State Forest

Photo courtesy of Cindy Venuti

PREPARED BY THE
FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
FLORIDA FOREST SERVICE

APPROVED ON
TBD, 2026

TEN-YEAR LAND MANAGEMENT PLAN
FOR THE
LAKE GEORGE STATE FOREST



Approved by:

Richard Dolan, Director
Florida Forest Service

Date

James Roberts, Chief
Forest Management Bureau

Date

**TEN-YEAR LAND MANAGEMENT PLAN
LAKE GEORGE STATE FOREST
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**TEN-YEAR LAND MANAGEMENT PLAN
LAKE GEORGE STATE FOREST
EXHIBITS**

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Water Resources and BMAP Map.....	Exhibit K
FNAI Managed Area Tracking Record.....	Exhibit L
FWC Listed Species Occurrence Records	Exhibit M
LGSF Ten-Year Fire History	Exhibit N
Invasive Species Map	Exhibit O
Current FNAI Natural Communities and Cover Type Map	Exhibit P
Historic FNAI Natural Communities and Cover Type Map.....	Exhibit Q
Land Management Reviews (2019 & 2023).....	Exhibit R
Compliance with Local Comprehensive Plan (Volusia County).....	Exhibit S
State Forest Management Plan Advisory Group Summary	Exhibit T
State Forest Summary Budget	Exhibit U
Arthropod Control Plan.....	Exhibit V
FDEP Florida Forever Land Acquisition Projects.....	Exhibit W
Borrow Pit and Food Plot Map.....	Exhibit X
Management Prospectus.....	Exhibit Y

LAND MANAGEMENT PLAN EXECUTIVE SUMMARY

LEAD AGENCY: Florida Department of Agriculture and Consumer Services (FDACS), Florida Forest Service
 COMMON NAME: Lake George State Forest (LGSF)
 LOCATION: Volusia County
 ACREAGE TOTAL: 21,473.18 acres

Historic Natural Communities	Approximate Acreage
Basin marsh	199
Basin swamp	1,442
Baygall	1,327
Blackwater stream	4
Bottomland forest	13
Depression marsh	405
Dome swamp	357
Floodplain marsh	793

Historic Natural Communities	Approximate Acreage
Floodplain swamp	2,262
Hydric Hammock*	3,146
Mesic flatwoods	8,757
Sandhill	192
Scrubby flatwoods	265
Wet flatwoods	2,692
Wet Prairie	9

*According to FNAI 2024 Assessment, Mesic hammock historic acres are included in Hydric hammock historic acres

TIITF LEASE AGREEMENT NUMBER: 4009

USE: Single ☐ Multiple ☒

MANAGEMENT AGENCY

Florida DACS, Florida Forest Service
 Florida Fish and Wildlife Conservation Commission
 St. Johns River Water Management District
 Department of State, Division of Historical Resources

RESPONSIBILITY

General Forest Resource Management
 Wildlife Resources and Laws
 Water Resource Protection and Restoration
 Historical and Archaeological Resource Management

DESIGNATED LAND USE:

Multiple-Use State Forest

SUBLEASES:

None

ENCUMBRANCES:

Multiple power lines, water main.

TYPE OF ACQUISITION:

Conservation and Recreation (CARL) Lands, Preservation 2000, and Florida Forever.

UNIQUE FEATURES:

Lake George, St. Johns, River, Lake Dexter and associated creeks account for 6.55 miles of water frontage.

ARCHAEOLOGICAL / HISTORICAL:

Eleven (11) known sites

MANAGEMENT NEEDS:

Invasive species control; perimeter firelines; flora and fauna inventory; road repair and maintenance; fuel and fire management; thinning; recreation plan implementation, maintenance of recreational trails and facilities; forest inventory maintenance and boundary encroachment resolution.

ACQUISITION NEEDS:

967.8 Acres of Optimal Management Boundary

SURPLUS ACREAGE:

None

PUBLIC INVOLVEMENT:

Liaison Committee, Volusia County Council, Management Plan Advisory Group and Public Hearing, Acquisition and Restoration Council

I. Introduction

Lake George State Forest (LGSF) is comprised of 21,473.18 acres located in the northwestern portion of Volusia County, between Barberville and Astor, Florida; both north and south of State Road 40. See Exhibit B. This property was acquired under Preservation 2000, Conservation and Recreation Lands (CARL), and Florida Forever programs. The forest's diverse ecological communities include mesic flatwoods, floodplain wetlands, and interspersed cypress and bay depressions. LGSF is one of several publicly owned lands that encompass Lake George, Florida's second largest lake. The state forest has approximately 6.55 miles of water frontage on the westernmost boundary, comprised of 3.10 miles of St. Johns River frontage, and 3.45 miles of lake and creek frontage. The area along the river has a rich archeological history that contains many artifacts of past land use.

A. General Mission and Management Plan Direction

The primary mission of the Florida Forest Service (FFS) is to "protect Florida and its people from the dangers of wildland fire and manage the forest resources through a stewardship ethic to assure they are available for future generations."

Management strategies for LGSF center on the multiple-use concept, as defined in sections 589.04(3) and 253.034(2)(a) F.S. Implementation of this concept will utilize and conserve LGSF resources in a harmonious and coordinated combination that will best serve the people of the state of Florida, and that is consistent with the purpose for which the forest was acquired. Multiple-use management for LGSF will be accomplished with the following strategies:

- Practice sustainable forest management for the efficient generation of revenue and in support of state forest management objectives;
- Provide for resource-based outdoor recreation opportunities for multiple interests;
- Restore and manage healthy forests and native ecosystems ensuring the long-term viability of populations and species listed as endangered, threatened, or rare, and other components of biological diversity, including game and non-game wildlife, and plants;
- Protect known archaeological, historical, and cultural resources;
- Restore, maintain, and protect hydrological functions, related water resources, and the health of associated wetlands and aquatic communities; and
- Provide research and educational opportunities related to natural resource management.

This management plan is provided according to requirements of Sections 253.034, 259.032, and 373, Florida Statutes (F.S.), and was prepared utilizing guidelines outlined in Section 18-2.021 of the Florida Administrative Code (F.A.C.). It is not an annual work plan or detailed operational plan but provides general guidance for the management of LGSF for the next ten-year period and outlines the major concepts that will guide management activities on the forest. Though not part of this plan, each state forest also updates and maintains five-year action plans for silviculture, ecology, prescribed fire, roads and bridges, boundary maintenance, and recreation. These internal plans are updated annually with the current year serving as the annual operations plan for the forest.

B. Past Accomplishments

Data regarding past management activities and public use on LGSF have been compiled monthly and are available from the Forest Manager. A table has been prepared for this plan that summarizes the accomplishments made over the past ten years. See Exhibit A. The table does not attempt to account for all activities on the forest but summarizes major activities. Among the most notable are the following:

- Forest Management
 - Conducted an inventory update(s) across 25,371 acres
 - Established new inventory across 284 acres
 - Conducted prescribed burning site preparation on 97 acres
 - Conducted chopping site preparation on 9 acres
 - Conducted raking site preparation on 110 acres
 - Conducted herbicide site preparation on 107 acres
 - Planted 15,000 bareroot slash pines on 20 acres
 - Planted 71,000 bareroot longleaf pines on 97 acres
 - Marked 658 acres for timber sales
 - Cruised 2,812 acres for timber sales
 - Harvested 63,490 tons of timber from approximately 2,192 acres
 - Conducted timber stand improvement chopping on 217 acres
 - Conducted timber stand improvement mowing on 721 acres
- Fire Management
 - Conducted prescribed burns totaling 34,647 acres
 - Maintained 49 miles of perimeter firebreaks
- Road / Boundary Management
 - Conducted a boundary survey across three (3) miles of forest boundary
 - Improved or rebuilt 31 miles of forest roads
 - Graded 183 miles of roads
 - Maintained 45 miles of forest boundary
 - Mowed 636 miles of roads
 - Installed 46 culverts
 - Installed eight (8) low water crossings
- Recreation Management
 - Hosted 1,442,142 day-use and 18,901 camping visitors on the forest
 - Installed one (2) new informational kiosk
 - Administered 55 State Forest Use Permits
 - Administered 60 Commercial Vendor Permits
 - Added 0.84 miles of hiking trails
 - Improvements made to infrastructure of River Road campground
- Biological Management
 - Actively controlled 26 invasive plant species on 549.02 acres

- Education / Public Outreach
 - Hosted 18 forest-related program events (local school programs, clubs, and professional groups)
 - Produced one (2) radio, television, and / or print articles featuring forest activities
 - Hosted 20 research projects

C. Goals / Objectives for the Next Ten-Year Period

The following goals and objectives provide direction and focus of management resources for the next ten-year planning period. Funding, agency program priorities, and the potential for wildfire or other natural disasters during the planning period will determine the degree to which these objectives can be met. Management activities on LGSF during this management period must serve to conserve, protect, utilize, and enhance the natural and historical resources and manage resource-based public outdoor recreation, which is compatible with the conservation and protection of this forest. Most of the management operations will be conducted by the FFS, although appropriate activities will be contracted to private sector vendors or completed with the cooperation of other agencies. All activities will enhance the property's natural resource or public recreation value.

The management activities listed below will be addressed within the ten-year management period and are defined as short-term goals, long-term goals, or ongoing goals. Short-term goals are goals that are achievable within a two-year planning period, and long-term goals are achievable within a ten-year planning period. Objectives are listed in priority order for each goal.

➤ GOAL 1: Sustainable Forest Management

Objective 1: Continue to update and implement the Five-Year Silviculture Action Plan including reforestation, timber harvesting, prescribed burning, restoration, and timber stand improvement activities and goals. (Ongoing objective)

Performance Measures:

- Annual updates of the Five-Year Silviculture Action Plan completed
- Continued implementation of the Five-Year Silviculture Action Plan (acres treated)

Objective 2: Continue to implement the FFS process for developing stand descriptions and conducting forest inventory, including maintaining a GIS database containing forest stands, roads, and other attributes (including, but not limited to: rare, threatened, and endangered species, archaeological and historical resources, and invasive species locations). (Ongoing objective)

Performance Measures:

- Update GIS database and re-inventory all attributes as required by FFS procedures
- Number of acres inventoried

Objective 3: Continue to promote revenue generation through miscellaneous forest product sales (palmetto drupe, palmetto frond, cabbage palm, fuel wood, etc.), recreation fees, and/or leases (e.g. apiary) where appropriate. (Ongoing objective)

Performance Measure: Annual revenue generated by type

➤ **GOAL 2: Public Access and Recreation Opportunities**

Objective 1: Maintain and improve public access and recreation activities that are compatible with multiple-use management. (Ongoing objective)

Performance Measures:

- Number of visitor opportunities per day
- Number of improvements made

Objective 2: Continue to safely integrate visitor use into LGSF, following the Five-Year Outdoor Recreation Plan, and update annually. (Ongoing objective)

Performance Measures:

- Continued implementation of the Five-Year Outdoor Recreation Plan
- Annual updates of the Five-Year Outdoor Recreation Plan completed

Objective 3: Continue to involve and meet with the Liaison Committee. The purpose of Liaison Committee meetings is to facilitate communication between the FFS and committee members (and the groups they represent) about state forest management and to obtain feedback from these entities. The Liaison Committee consists of local residents, community leaders, special interest group representatives (vendors, hunters, and other recreation users, etc.), environmental group representatives, and other public / private entities. (Ongoing objective)

Performance Measures:

- Liaison Committee remains organized
- Annual meetings continue

Objective 4: Conduct two (2) interpretive / education programs annually. (Ongoing objective)

Performance Measure: Number of interpretive / education programs conducted annually

Objective 5: Maintain cooperation with Florida Fish and Wildlife Conservation Commission (FWC) to develop specific hunting season quotas and bag limits, and to address hunting issues which are to be agreed upon at an annual cooperator meeting between FFS and FWC. (Ongoing objective)

Performance Measures:

- Annual letter on agreed-upon hunting issues
- Updated rules posted and Wildlife Management Area (WMA) brochures available online at MyFWC.com

Objective 6: Recruit volunteers and volunteer organizations to assist with recreation and / or resource management. (Ongoing objective)

Performance Measures:

- Number of volunteers and organizations that assist with projects
- Number of hours provided by volunteers

➤ **GOAL 3: Habitat Restoration, Improvement, and Fire Management**

Objective 1: The LGSF currently contains approximately 12,792 acres of fire-dependent communities. LGSF staff will plan and conduct prescribed burns in a manner that benefits these fire-dependent natural communities within the forest. To achieve an adequate fire-return interval of two (2) to four (4) years for most fire-dependent communities, LGSF will plan and attempt to conduct prescribed burns on an average of approximately 3,200 to 6,400 acres per year. Currently, FFS staff estimates 11,895 acres at LGSF are within the desired fire-return interval. (Ongoing objective)

Performance Measures:

- Annual number of acres burned
- Number of acres burned within target fire-return interval

Objective 2 : Continue to annually update and implement the Five-Year Prescribed Burning Management Plan and the prescribed burning goals. (Ongoing objective)

Performance Measures:

- Annual updates of the Five-Year Prescribed Burning Management Plan completed
- Continued implementation of the Five-Year Prescribed Burning Management Plan (acres treated)

Objective 3: Reduce the threat of wildfire within the wildland urban interface on LGSF and the surrounding community through a comprehensive mitigation strategy that includes evaluating vegetative fuels near residential areas and identifying potential fuel reduction projects. (Ongoing objective)

Performance Measures:

- Evaluations complete
- Should the evaluations determine that fuel reduction is necessary, number of acres treated for fuel reduction

Objective 4: Utilize prescribed fire to enhance restoration of native groundcover. Evaluate areas where native groundcover has been eliminated or heavily impacted from historical land use on a case-by-case basis for alternative methods to address re-establishment of native groundcover. Restore native groundcover from historical land use, where practical, or heavily impacted from historical land use. (Ongoing objective)

Performance Measures:

- Number of acres evaluated
- Number of acres treated

➤ **GOAL 4: Listed and Rare Species Habitat Maintenance, Enhancement, Restoration, or Population Restoration**

Objective 1: In cooperation with FWC, maintain the Wildlife Management Strategy addressing wildlife species for LGSF, with emphasis on imperiled species and associated management prescriptions for their habitats. (Ongoing objective)

Performance Measures:

- Imperiled species management strategy completed
- Acres of habitat treated or restored
- Number of occurrences of a species, or locations of habitat found, recorded, and reported
- Baseline listed and rare species list completed for LGSF

Objective 2: In consultation with FWC, implement survey and monitoring protocols, where feasible, for listed and rare species. (Ongoing objective)

Performance Measure: Number of species for which monitoring is ongoing

Objective 3: In cooperation with the FNAI, FWC, and the FFS Forest Management Bureau State Lands Section, develop and implement strategies for locating, identifying, mapping, preserving, and monitoring listed and rare species and / or associated plant community(ies).

Performance Measures:

- Newly found listed and rare species, or newly identified populations of known species, added to running species list on a timely basis and reported to appropriate entity
- Surveys of listed and rare species in known populations completed on a regular schedule and reports provided to the appropriate entities

➤ **GOAL 5: Invasive Species Management and Control**

Objective 1: Continue to follow and annually update the Five-Year Ecological Plan for LGSF, to locate, identify, and control invasive species. (Ongoing objective)

Performance Measures:

- Total number of acres mapped and treated
- Annual updates of the Five-Year Ecological Plan completed
- Continue to maintain LGSF invasive species database

➤ **GOAL 6: Cultural and Historical Resource Management**

Objective 1: Ensure all known cultural and historical sites are recorded in the Florida Department of State, Division of Historical Resources (DHR) Florida Master Site File. (Ongoing objective)

Performance Measure: Documentation of known sites

Objective 2: Monitor recorded sites annually and send updates to the DHR Florida Master Site File as needed. (Ongoing objective)

Performance Measure: Number of sites monitored. Reports submitted to DHR

Objective 3: Maintain at least one (1) qualified staff member as an Archaeological Resource Management (ARM) Monitor. (Ongoing objective)

Performance Measure: Number of local staff trained as ARM monitors

➤ **GOAL 7: Hydrological Preservation and Restoration**

Objective 1: Protect water resources during management activities through the implementation of all applicable Silviculture Best Management Practices (BMPs). (Ongoing objective)

Performance Measure: Percent compliance with Silviculture BMPs

Objective 2: Conduct or obtain a site assessment/study to identify potential hydrological restoration needs. (Short-term objective)

Performance Measure: Assessment conducted

Objective 3: Close, rehabilitate, or restore roads, firelines, and trails that are causing hydrologic alterations or negatively impacting water quality. (Ongoing objective)

Performance Measure: Total number of roads, firelines, and trails closed, rehabilitated, and / or restored

➤ **GOAL 8: Capital Facilities and Infrastructure**

Objective 1: LGSF staff will continue maintenance of the picnic pavilion, one (1) primitive campground with seven (7) sites, three (3) parking areas, one (1) trailhead, 1.6 miles of trails, and 33 miles of public use forest roads. (Ongoing objective)

Performance Measure: The number of existing facilities, miles of roads, and miles of trails maintained

Objective 2: Continue to follow the Five-Year Roads and Bridges Management Plan and update annually. (Ongoing objective)

Performance Measures:

- Continued implementation of the Five-Year Roads and Bridges Management Plan
- Annual updates of the Five-Year Roads and Bridges Management Plan completed

Objective 3: Continue to implement the Five-Year Boundary Survey and Maintenance Management Plan and update annually. Approximately 20 percent of the forest boundary will be remarked annually as necessary, which includes harrowing, reposting signage, and repainting boundary trees. (Ongoing objective)

Performance Measures:

- Continued implementation of the Five-Year Boundary Survey and Maintenance Management Plan
- Percentage of forest boundary maintained each year
- Annual updates of the Five-Year Boundary Survey and Maintenance Management Plan completed

II. Administration Section

A. Descriptive Information

1. Common Name of Property

The common name of the property is Lake George State Forest (LGSF).

2. Legal Description and Acreage

The LGSF is comprised of four (4) tracts totaling 21,473.18 acres. These are referred to as the Astor Tract, Volusia Tract, Dexter Tract, and Mary Farms Tract. The Dexter and Mary Farms Tracts are comprised of all parcels south of State Road 40 (Dexter Pasture, Coraci / Mary Farms, and Berkovitz).

The forest is located in Volusia County, Florida between Barberville and Astor. The state forest is bisected by State Road 40; US Highway 17 and County Road 3 roughly parallel the eastern boundary south of State Road 40. The boundaries and major parcels are identified in Exhibits B and D. The property is located in all or part of Sections 1-5, 9-12, 45 and 46 of Township 16 South, Range 28 East; Sections 3-6 of Township 16 South, Range 29 East; Sections 19-21 and 28-34 of Township 15 South, Range 29 East; Sections 3-5, 7-10, 15-29, and 32-36 of Township 15 South, Range 28 East, and Section 36 of Township 14 South, Range 27 East, Volusia County, Florida. Acreage acquired by funding source is identified in Table 1.

Table 1. LGSF Acreage by Funding Source

Funding Source	Acres
CARL	14,433.61
P2000	4,023.21
DOF / P2000	1,153.00
DOF / FFS / FL Forever	1,863.36

A complete legal description of lands owned by the Board of Trustees of the Internal Improvement Trust Fund (TIITF) and SJRWMD is on record at the Orlando Forestry Center office, Florida Department of Environmental Protection (FDEP), and the FFS State Office in Tallahassee.

3. Proximity to Other Public Resources

Lands managed by state, federal, or local government, or by a private entity for conservation of natural or cultural resources that are located within approximately 15 miles of the forest are listed in Table 2 and illustrated in Exhibit F.

Table 2. Proximity to Significant Managed Lands

Managed Conservation Land	Managing Agency	Distance
Lake George Forest	Volusia County	Adjacent
Barberville Mitigation Bank	Volusia County	Adjacent
Barberville Conservation Area	Volusia County	Adjacent
Heart Island Conservation Area	SJRWMD	Adjacent
Lake Woodruff National Wildlife Refuge	USFWS	Adjacent
DeLeon Springs State Park	DRP	Adjacent
Ocala National Forest	USFS	Adjacent
Lake George Conservation Area	SJRWMD	7 miles north
Seminole State Forest	FFS	8 miles south southeast
Relay South Conservation Easement	Private	9 miles northeast
Tiger Bay State Forest	FFS	9 miles east
Crescent Lake Conservation Area	SJRWMD	10 miles north northeast

Managed Conservation Land	Managing Agency	Distance
Haw Creek Preserve State Park	DRP	11 miles north northeast
Relay North Conservation Easement	Private	12 miles northeast
Blue Spring State Park	DRP	12 miles southeast
Hontoon Island State Park	DRP	12 miles south southeast
Lower Wekiva River Preserve State Park	DRP	12 miles south
Longleaf Pine Preserve	Volusia County	14 miles southeast
Haw Creek Preserve	Flagler County	14 miles northeast

DRP – FDEP, Division of Recreation and Parks

FFS – FDACS, Florida Forest Service

FWC – Florida Fish and Wildlife Conservation Commission

SJRWMD – St. Johns River Water Management District

USFS – US Forest Service

USFWS – US Fish and Wildlife Service

4. Property Acquisition and Land Use Considerations

The majority of LGSF was acquired under the CARL program, starting with the purchase of the Astor Parcel from Union Camp on May 27, 1993, and followed by the purchase of the Dexter Pasture on July 19, 1995, and Coraci / Mary Farms on February 21, 1996.

The Berkovitz Parcel (now considered as part of the Dexter Tract) was purchased on June 16, 1998, with FFS / P2000 in-holding and additions funds. The Shaw Parcel was acquired on June 15, 2005, with FFS in-holding and addition funds. The Volusia County Parcel was purchased on December 19, 2007, with Florida Forever funds. The Tapscott Parcel was acquired on March 4, 2014, as well as an additional Volusia Parcel on October 24, 2018. Both acquisitions were with FFS / Florida Forever Funds. The major TIITF parcel acquisitions are identified in Table 3.

Table 3. TIITF Parcel Acquisitions

Parcel Name	Lease Date	Acres
Union Camp	6/20/1995	5,232.34
D.S.C. of Newark Enterprises / A.A. Coraci	12/22/1997	9,201.27
Strother Timberlands, Dexter Pasture	12/22/1997	4,023.21
Berkovitz	12/10/2001	1,153.00
Shaw	06/15/2005	38.36
Volusia County	12/19/2007	1,527.76
Tapscott	03/04/2014	10.05
Sams – McBride	10/24/2018	287.19

B. Management Authority, Purpose, and Constraints

1. Purpose for Acquisition / Management Prospectus

The purposes identified by the CARL program in the Management Prospectus for the acquisition of LGSF (Exhibit Y) are:

- To use and protect as a natural floodplain, marsh, or estuary, if the protection and conservation of such lands are necessary to enhance or protect water quality or quantity, and to protect fish or wildlife habitat that cannot adequately be accomplished through local, state, and federally regulated programs.
- To use as state parks, recreation areas, public beaches, state forests, wilderness areas, or wildlife management areas.
- To restore altered ecosystems and to correct environmental damage that has already occurred.
- To conserve lands that support habitat critical to or provide significant protection for an endangered or threatened species of plant or animal.
- To preserve archaeological and / or historical sites.

2. Degree of Title Interest Held by the Board

The Board of Trustees of the Internal Improvement Trust Fund (TIITF) holds fee simple title to the property. Lease Agreement Number 4009, dated June 20, 1995, assigned the property to the Florida Department of Agriculture and Consumer Services (FDACS), FFS as “lead agency” and to the St. Johns River Water Management District (SJRWMD), Volusia County, and FWC as “cooperating agencies.” Copies of this agreement and related deeds are on file at the FFS and Department of Environmental Protection (FDEP) offices in Tallahassee and at the LGSF headquarters.

3. Designated Single or Multiple-Use Management

The LGSF is managed under a multiple-use concept by the FFS, under the authority of Chapters 253 and 589, Florida Statutes. The FFS is the lead managing agency as stated in Management Lease Number 4009.

Multiple-use management is the harmonious and coordinated management of timber, recreation, conservation of fish and wildlife, forage, archaeological and historic sites, habitat and other biological resources, and water resources so they are utilized in the combination that will best serve the people of the state, making the most judicious use of the land for some or all these resources and considering the relative values of the various resources. Local demands, acquisition objectives, and other factors influence the array of uses that are compatible with and allowed on any specific area of the forest. This management approach is believed to provide for the greatest public benefit, by allowing compatible uses while protecting overall forest health, native ecosystems, and the functions and values associated with them.

4. Revenue Producing Activities

Numerous activities on LGSF provide for multiple-use as well as generate revenue to offset management costs. Revenue-producing activities will be considered when they have been determined to be financially feasible and will not adversely impact management of the forest. Current and potential revenue producing activities for the LGSF include, but are not limited to:

- *Timber Harvests* – Projected timber sale income varies. However, approximately one (1) sale a year is held on LGSF. For fiscal year 2024-2025, timber harvest sales totaled \$211,802.37.
- *Palmetto Frond Sales* – LGSF has contracted harvesting of palmetto fronds for several years. For fiscal year 2024-2025, palmetto frond sales totaled \$12,500.
- *Palmetto Drupe Sales* – LGSF has utilized special use permits to allow individuals to harvest palmetto drupes in the past and may consider issuing permits again in the future.
- *Other Miscellaneous Forest Product Sales* – Forest staff have evaluated and issued a limited number of permits for other forest products such as Christmas trees (sand pine), cut foliage, and sabal palm buds. A cabbage palm sale was held on LGSF in fiscal year 2025-2026. The FFS will consider additional miscellaneous forest product sales in the future as long as such sales do not adversely affect forest resources.
- *Apiaries* – Currently, there are no (0) apiary sites located on LGSF.
- *Cattle Grazing* – Cattle grazing was evaluated and determined to not be viable on LGSF under current conditions.
- *Recreation Day Use Areas and Primitive Camping Area* – Fees are collected for camping and day use through an online reservation platform. Presently, day use fees are only collected for the Bluffton Recreation Area. Additional fee areas may be implemented as additional facilities are added.

5. Conformation to State Lands Management Plan

Management of the forest under the multiple-use concept complies with the State Lands Management Plan and provides optimum balanced public utilization of the property. Specific authority for the FFS's management of public land is derived from Chapters 253, 259, and 589 F.S.

6. Legislative or Executive Constraints

There are no known legislative or executive constraints specifically directed toward LGSF.

7. Aquatic Preserve / Area of Critical State Concern

This area is not within an aquatic preserve or an area of critical state concern, nor is it in an area under study for such designation.

C. Capital Facilities and Infrastructure

1. Property Boundaries Establishment and Preservation

LGSF boundaries, 78 miles in total, are managed by state forest personnel in accordance with the guidelines of the State Forest Handbook. There are 40 gates throughout LGSF that require periodic maintenance. State forest boundaries are maintained by periodic clearing, repainting, and reposting, and placement of state forest boundary signs by FFS personnel.

2. Improvements

Major improvements located on the forest include: one (1) trailhead; two (2) day-use areas; seven (7) reservable, drive-up primitive campsites; one (1) pavilion, four (4) portable toilets, three (3) parking areas, three (3) mobile home / employee housing sites, and an FWC wildlife check station. Other improvements consist of an equipment storage area with a pole barn, storage room, and Conex boxes. This equipment storage area also includes a pole barn and storage shed for FWC. See Exhibit E for a map of the buildings and improvements at LGSF.

Buildings / Recreation infrastructure present on the Dexter / Mary Farms Tract of LGSF include:

- Storage Building / Metal / 160 sq. ft.
- Storage Building / Metal / 80 sq. ft.
- Pumphouse / Frame / 256 sq. ft.
- Pole Barn / Metal & Wood / 3,200 sq. ft.
- Portable Toilet / Jenkins Pond, 27 sq. ft.
- Portable Toilet / Bluffton Recreation Area, 27 sq. ft.
- Portable Toilet / River Road Campground, 27 sq. ft.
- Portable Toilet / River Road Campground, 27 sq. ft.
- Pavilion / Metal & Wood / Jenkins Pond 384 sq. ft.
- FWC Pole Barn / Metal & Wood / 2,500 sq. ft.
- FWC Storage Building / Metal / 320 sq. ft.
- FWC Storage Building / Metal & Wood / 120 sq. ft.
- FWC Check Station / Frame / 128 sq. ft.

Buildings / Recreation infrastructure present at Deleon Forestry Station of LGSF include:

- Office / Visitor Center / Frame / 2,375 sq. ft.
- Equipment Building / Metal / 3,000 sq. ft.
- Fire Tower / Metal & Wood / 64 sq. ft.
- Storage Office / Frame / 378 sq. Ft.
- Pole Barn / Metal & Wood / 1,800 sq. ft.
- Pumphouse / Storage / Frame / 120 sq. ft.
- Radio House / Storage / Frame / 64 sq. ft.
- Shop / Metal / 2,500 sq. ft.
- Storage building / Metal / 72 sq. ft.

- Storage building / Frame & Metal / 490 sq. ft.

3. On-Site Housing

There are currently three (3) mobile home / employee housing sites located off of Check Station Road, which share well access. Additionally, a well pump house is located between the mobile home sites and equipment compound. Housing is prioritized based on FFS policy.

FFS may establish additional on-site housing (mobile / manufactured home) on LGSF if deemed necessary to alleviate security and management issues. The need and feasibility for the state forest will be evaluated and established if considered appropriate by the Center Manager and approved by the FFS Director. Prior to the occurrence of any ground disturbing activity for establishing on-site housing, a notification will be sent to the DHR and Florida Natural Areas Inventory (FNAI) for review and recommendations. This type of housing will not exceed three homes per location with the possibility of more than one on-site housing location occurring if considered necessary by the Center Manager and approved by the FFS Director.

4. Operations Infrastructure

a. Operations Budget

For Fiscal Year 2024-2025 the total annual budget for LGSF was \$605,949.29. This amount includes expenses, contractual services, Other Personal Services Employment (OPS), etc. A summary budget for LGSF is contained in Exhibit U. Implementation of any of the activities within this management plan is contingent on availability of funding, other resources, and other statewide priorities.

b. Equipment

To carry out the mission of the FFS, equipment assigned to the LGSF includes:

- 2023 12-yard dump truck
- 2024 Excavator
- 2015 Backhoe
- 2021 4wd pickup truck with 75-gallon tank and electric pump
- 2000 farm tractor

c. Staffing

One (1) Forester is assigned to LGSF. In addition, a Forest Area Supervisor, three (3) Senior Forest Rangers, and three (3) Forest Rangers are stationed at the DeLeon Forestry Station and assist with management activities on LGSF. A full-time OPS Park Ranger and part-time OPS park ranger are assigned split duties between LGSF and Tiger Bay State Forest (TBSF). A Forestry Resource Administrator, Recreation Coordinator, and Forestry Supervisor II split duties with the other four (4) state forests within the Orlando Forestry Center. TBSF personnel and the Orlando Forestry Center Forest Rangers provide additional support as needed.

The Forester will work to achieve the goals outlined in this management plan. Recreation planning and management activities as well as resource management and planning activities, such as trail flagging / identification, recreation facility placement, timber cruising, and sale administration, and volunteer program, etc., are the responsibility of the Forester under the direction of the Resource Administrator and Center Manager. Forest operations, such as road maintenance, operations / recreation facility maintenance, prescribed burning, etc., are the responsibility of the Forest Area Supervisor under the direction of the Center Manager.

Additionally, a State Forest Liaison Committee comprised of private citizens and representatives of forest user groups meets bi-annually to provide input on forest management activities and share ideas with FFS staff to improve the state forest.

D. Additional Acquisitions and Land Use Considerations

1. Alternate Uses Considered

No alternate uses are being considered at this time. Alternate uses will be considered as requests are made and will be accommodated as appropriate if they are determined to be compatible with existing uses and with the management goals and objectives of the forest. Uses determined as incompatible include but are not limited to: water resource development projects, water supply projects, storm-water management projects, sewage treatment facilities, linear facilities, off highway vehicle use, dumping, mining, and oil well stimulation (e.g., hydraulic fracturing / fracking), or as determined by law, regulation, or other incompatible uses as described elsewhere in the management plan. Deadhead logging is not compatible with nor considered appropriate use within or adjacent to the forest boundaries.

2. Additional Land Needs

Purchasing additional land within the optimal management boundary would facilitate restoration, protection, maintenance, and management of the natural resources on LGSF. The LGSF is near the Longleaf Pine Ecosystem and Strategic Managed Area Lands List Florida Forever project areas. One of the main goals of these projects is to improve the efficacy and efficiency of state-managed conservation lands for the public, wildlife and natural communities. See Exhibits C and W.

There are 20 parcels of land comprised of 967.8 acres adjacent to the property which should receive priority for acquisition because they would benefit the management of the property. The FFS will work with these property owners, on a willing seller basis, to acquire these parcels.

3. Surplus Land Assessment

On conservation lands where FFS is the lead manager, FFS assesses and identifies areas for potential surplus land. This assessment consists of an examination of resource and operational management needs, public access and recreational use, and GIS modeling and analysis.

The evaluation of LGSF by FFS has determined that all portions of the area are being managed and operated for the original purposes of acquisition, as well as center on the

multiple-use concept, as defined in sections 589.04(3) and 253.034(2)(a) F.S. Implementation of this concept will utilize and conserve state forest resources in a harmonious and coordinated combination that will best serve the people of the state of Florida. Therefore, no portion of the LGSF is recommended for potential surplus.

4. Adjacent Conflicting Uses

During the development of this management plan, FFS staff identified and evaluated adjacent land uses, reviewed current local comprehensive plans, and future land use maps in making the determination that there are currently no known conflicting adjacent land uses. Additionally, FFS staff met with adjacent landowners and maintains liaison with those landowners to ensure that any conflicting future land uses may be readily identified and addressed.

FFS will cooperate with adjacent property owners, prospective owners, or prospective developers to discuss methods to minimize negative impacts on management, resources, facilities, roads, recreation, etc., and discuss ways to minimize encroachment onto the forest.

5. Compliance with Local Comprehensive Plan

This plan was submitted to the Volusia County Board of County Commissioners for review and compliance with their local comprehensive plan. See Exhibit S.

6. Utility Corridors and Easements

On the Astor Tract, a 110-foot-wide Clay Electric Cooperative transmission line currently runs along part of the southern boundary line and also through a short section of the interior. Short sections of the 20-foot Clay Electric Cooperative powerline easement and an eight-foot (8 ft) Florida Power easement are also present. On the Dexter / Mary Farms Tract, another 110-foot Clay Electric Cooperative transmission line runs west from U.S. Highway 17 about 2-5/8 miles and then north about 3/8 mile to State Road 40. This Clay Electric Cooperative line then borders the Dexter / Mary Farms Tract and runs along State Road 40 west to the St. Johns River. Also, in the Dexter / Mary Farms Tract is a power line that runs from State Road 40 down Check Station Road and serves the equipment compound and mobile home site. On the east side of the Dexter / Mary Farms Tract, a 100-foot-wide Duke Energy easement extends along the west side of County Road 3. All existing easements are on file with FDEP's Division of State Lands and also are available at the Orlando Forestry Center and at the LGSF Visitor Center.

FFS does not favor the fragmentation of natural communities with linear facilities. Consequently, easements for such uses will be discouraged to the greatest extent practical. When such encroachments are unavoidable, previously disturbed sites will be the preferred location. The objectives, when identifying possible locations for new linear facilities, will be to minimize damage to sensitive resources (e.g., listed species and archaeological sites), minimize habitat fragmentation, limit disruption of management activities, including prescribed burns, and limit disruption of resource-based multiple use activities such as recreation.

Collocation of new linear facilities with existing corridors will be considered but will be used only when expansion of existing corridors does not increase the level of habitat fragmentation and disruption of management and multiple-use activities. FFS will further encourage the use of underground cable where scenic considerations are desirable, as well as encourage the development and use of wildlife crossings for unavoidable roadway development projects. Easements for such utilities are subject to the review and approval of the TIITF. Requests for linear facility uses will be handled according to the Governor and the Cabinet's linear facilities policy.

E. Agency and Public Involvement

1. Responsibilities of Managing Agencies

FFS is the lead managing agency, responsible for overall forest management and public recreation activities, as stated in TIITF Management Lease number 4009. Pursuant to the management lease, the lead managing agency may enter into further agreements or to subleases on any part of the forest.

FFS will cooperate with the DHR regarding appropriate management practices on historical or archaeological sites on the property as stated in Section 267.061, F.S. FFS will consult DHR prior to the initiation of ground disturbing activities as required per DHR guidelines.

FDACS Office of Agricultural Law Enforcement (OALE) assumes law enforcement responsibilities, while FWC enforces hunting regulations, cooperatively sets hunting season dates with FFS, and conducts other wildlife management activities with input from FFS.

The St. Johns River Water Management District (SJRWMD) will be consulted and involved in matters relating to water resources as appropriate.

2. Law Enforcement

Primary law enforcement responsibilities will be handled by two (2) FDACS Office of Agricultural Law Enforcement (OALE). Rules governing the use of LGSF are stated in Chapter 5I-4, F.A.C. The FDACS Office of Agricultural Law Enforcement (OALE) will assist with open burning and wildfire investigations as needed.

Officers from FWC will enforce fish and wildlife regulations and aid in enforcing state forest rules. The Volusia County Sheriff's Office provides additional assistance as needed.

Special rules under Chapter 5I-4, F.A.C. were promulgated for FDACS-FFS to manage the use of state lands and better control traffic, and to oversee camping and other uses on LGSF.

3. Wildland Fire

The FFS has the primary responsibility for prevention, detection, and suppression of wildfires wherever they may occur. The FFS shall provide leadership and direction in the evaluation, coordination, allocation of resources, and monitoring of wildfire management

and protection (F.S. 590.01). The FFS also has the responsibility of authorizing prescribed burns (F.S. 590.02 [1][i]).

4. Public and Local Government Involvement

This plan has been prepared by FFS and will be carried out primarily by the FFS. FFS responds to public involvement through liaison committees, management plan advisory groups, public hearings, and through ongoing direct contact with user groups. Land Management Review Teams, as coordinated by the Division of State Lands, have conducted reviews of management plan implementation in 2019 and 2023. See Exhibit R. The review team's recommendations were addressed in this plan, as appropriate.

This plan was developed with input from the LGSF Management Plan Advisory Group and was reviewed at a public hearing on June 4, 2026. A summary of the advisory group's meetings and discussions, as well as written comments received on the plan, are included in Exhibit T. The Acquisition and Restoration Council (ARC) public hearing and meeting serve as an additional forum for public input and review of the plan.

5. Volunteers

Volunteers are important assets to LGSF. Volunteer activities may occur as one-time events or in association with recurring projects and routine maintenance. Additional volunteer recruitment will continue to assist furthering the FFS's mission.

6. Friends of Florida State Forests

Friends of Florida State Forests, Inc. (FFSF) is a Direct Support Organization (DSO) of the Florida Forest Service. FFSF supports management activities and projects on Florida's state forests. FFSF is established by Florida Statute, supports programs within Florida's state forests, and is governed by a board of directors representing all areas of the state. Through community support, FFSF assists the FFS to expand opportunities for recreation, environmental education, fire prevention, and forest management within Florida's state forests.

The FFSF program is referenced in Chapter 589.012, F.S. For more information visit: www.floridastateforests.org.

III. Archaeological / Cultural Resources and Protection

A. Past Uses

In the 1930s, the Ray Bond Lumber Company owned the Astor and Dexter parcels. Much of these parcels was forested in open stocking of longleaf and slash pine and was grazed. Later, Carl Brice, a local wood dealer, purchased the property and conducted naval stores operations. Union Camp began leasing these two (2) parcels in 1948, managing them for timber production and continuing cattle grazing operations. In the 1960s, conversion to intensive silviculture began. Union Camp purchased the property in the early 1970s. Under active timber management, predominantly slash pine was planted and a prescribed burning rotation of three (3) years was attempted until manpower shortages in the 1980s decreased the rotation to every five (5) or six (6) years. Harvest rotation age was approximately 25 years for pulpwood production. Hunting leases were also managed by Union Camp.

The Mary Farms Tract (Coraci Parcel) was previously owned by D.S.C. of Newark, Incorporated. Cattle grazing and hunting leases were the primary activities along with timber management. Under D.S.C.'s ownership, consulting foresters provided professional forest management for the first time in 1983. Thinning of some of the natural stands and reforestation of some of the cleared pasture areas were conducted.

Prior to D.S.C.'s ownership, cattle grazing and hunting were primary uses, while some of the property was in orange groves and other crops. Logging and land clearing were conducted to create additional grazing areas, and some naval stores operations probably took place. Timber management does not appear to have been actively pursued.

The Berkovitz Parcel was purchased from a private landowner, and the land is primarily swamp that lowers into Spring Garden Creek. There are four (4) old logging canals that run north from Spring Garden Creek toward upland parts of LGSF. However, these canals are not accessible due to hardwood growth near the river.

The Volusia County Parcel was previously managed by consulting forest managers for Florida Power Corporation for silviculture. Prior to state acquisition in 2007, the mature slash pine plantations were harvested and most of these areas were successfully reforested by bedding and machine planting.

B. Archaeological and Historical Resources

A review of information contained in the Florida Department of State, DHR, Florida Master Site File has determined there are 11 recorded archaeological sites within the designated area for LGSF. Currently, two (2) of the known sites on LGSF are eligible to be listed in the National Register of Historic Places. See Table 4 and Exhibit G.

Table 4. Archeological and Historical Sites on LGSF

Site ID	Site Name	Site Type
VO00010	Morrison's Creek Mound	AR
VO00019	Mount Taylor	AR
VO00022	Bluffton Midden	AR
VO00023	Bluffton Burial Mound	AR
VO07049	Dexter Point Midden	AR
VO07077	Bird Bench Mark	AR
VO07497	Jarred	AR
VO07498	Dexter Mary Farms Cattle Dip	AR
VO07677	Grahan	AR
VO08379	Lake George State Forest Well	AR
VO09460	Astor Tract Cattle Dipping Vat	AR

AR – Archaeological Site

C. Ground Disturbing Activities

Representatives of DHR and FNAI will be consulted prior to the initiation of proposed ground disturbing activity as required per DHR guidelines. FFS will make every effort to protect known archaeological and historical resources. FFS will follow the “Management Procedures for Archaeological and Historical Sites and Properties on State Owned or Controlled Lands” and will comply with all appropriate provisions of Section 267.061(2)(a, b), F.S. See Exhibit H. Any significant ground disturbing activity proposal will be submitted to DHR’s Compliance and Review office for review prior to undertakings and allow the Division a reasonable opportunity to comment. Ground disturbing activities not specifically covered by this plan will be conducted under the parameters of the “Interim Management Guidelines.”

D. Survey and Monitoring

Currently seven (7) Orlando Forestry Center staff are trained by DHR as Archaeological Resource Management (ARM) monitors. FFS will pursue opportunities for additional personnel to receive ARM Monitor training. FFS will consult with public lands archaeologists at DHR as necessary to determine an appropriate priority and frequency of monitoring at each of the listed sites, and any protection measures that might be required. Unless required on a more frequent basis, all archaeological and historical sites within the state forest will be monitored at least annually. FFS field staff will monitor the listed sites to note condition and any existing or potential threats.

Any known archaeological and historical sites will be identified on maps to aid state forest personnel and if necessary, law enforcement personnel in patrolling and protecting sites. Applicable surveys will be conducted by ARM monitors or contracted archaeologists during the process of planning and implementing multiple-use management activities. FFS personnel will remain alert for any environmentally significant resource discoveries, and protective actions will be taken as necessary. In addition, FFS will seek the advice and recommendations of DHR regarding any additional archaeological survey needs. Trained monitors will oversee limited types of ground disturbing activities in which DHR recommends monitoring. FFS will utilize the services of DHR Public Lands archaeologists, when available, to locate and evaluate unknown resources, and to make recommendations in the management of known resources.

IV. Natural Resources and Protection

The primary purpose for FFS management of LGSF is protection of upland and wetland and natural communities through a stewardship ethic to assure these resources will be available for future generations. Management activities will be executed in a manner to minimize soil erosion and maintain and protect / enhance the hydrological resources on LGSF. If problems arise, corrective action will be implemented by FFS staff under the direction of FFS’s Forest Hydrology Section.

LGSF falls within the jurisdiction of the SJRWMD. FFS will coordinate with SJRWMD and / or FDEP, as necessary, on activities pertaining to water resource protection and management. Any activities requiring water management district permits will be handled accordingly. FFS will work with SJRWMD to ensure that levels and quality of ground and surface water resources are appropriately monitored.

A. Soils and Geologic Resources

1. Resources

Soil information for LGSF was obtained from the United States Department of Agriculture Natural Resources Conservation Service (NRCS). The major soils listed by the NRCS include: Myakka-Myakka, wet, fine sands; Pomona fine sand; Samsula muck; Astatula fine sand; Immokalee sand; and Smyrna-Smyrna, wet, fine sands. Detailed information on all soils present on the forest may be found in Exhibit I.

2. Soil Protection

Management activities will be executed in a manner that minimizes negative impacts to the soil. As problems arise, corrective action will be implemented by FFS staff under the direction of the FFS Forest Hydrology section in conjunction with recommendations as contained in the most current version of the Florida Silviculture BMP manual.

Currently there are no major or significant soil erosion problems on LGSF.

B. Water Resources

The water resources on LGSF perform essential roles in the protection of water quality, groundwater recharge, flood control, and aquatic habitat preservation. In the interest of maintaining these valuable resource functions, state forest management personnel will work with the FFS Hydrology Section to incorporate wetlands restoration into the overall resource management program as opportunities arise, particularly where wetlands systems have been impaired or negatively impacted by previous management activities or natural disasters. See Exhibit K for a map of the water resources on LGSF.

1. Resources

LGSF has 0.90 miles of frontage on Lake George, 2.0 miles of frontage on Lake Dexter and about 3.1 miles of frontage along the St. Johns River. There is also about a quarter of a mile (0.25 mi) of frontage along Morrison Creek on the Astor Tract north of State Road 40. Morrison Creek flows into the St. Johns River. About half a mile (0.3 mi) of Deep Creek passes through the southeastern portion of LGSF. Several minor drains and canals are located throughout the portion of the state forest south of State Road 40. Jenkins Pond, developed from a borrow pit, is located within Dexter / Mary Farms. See Exhibit X. The northwest corner of Stone Pond is located within the state forest on the Astor Tract.

2. Water Classification

The Florida Department of Environmental Protection, Standards Development Section reports that the surface waters within and adjacent to LGSF are classified as Class III waters (Fish Consumption, Recreation, Propagation and Maintenance of a healthy, Well-Balanced Population of Fish and Wildlife), which is the statewide default classification under subsection 62-302.400, F.A.C.

According to subsection 62-302.700(9), F.A.C., there are no Outstanding Florida Waters (OFWs) within LGSF. The three (3) closest OFWs, which are directly adjacent to the state forest, are Lake Woodruff National Wildlife Refuge, De Leon Springs State Park and certain waters within the Ocala National Forest. OFWs within the Ocala National

Forest that are closest to LGSF include: Alexander Springs, Alexander Springs Creek, Juniper Springs, and Juniper Springs Creek. Additional adjacent managed areas include: Lake George WMA, and the Ocala National Forest WMA. See Exhibit J.

3. Water Protection

One objective for the acquisition and management of this public land was to optimize ecological restoration, protect and manage existing natural resources, and facilitate sustainable public use. Concerns over a continuous, usable source of fresh water requires emphasis on protecting this vital resource. Water resource protection measures, at a minimum, will be accomplished using BMPs as described in the most current version of Silviculture BMP Manual.

A Wetland Restoration Needs Assessment was conducted on the Astor, Dexter, and Mary Farm Tracts by the FFS Forest Hydrology Section in 2007. 140 sites were evaluated during the assessment. The assessment involved looking at and evaluating culverts and low-water crossings on approximately 70% of the roads and trails of the forest, and approximately 50% of the canals and ditches on the Dexter and Mary Farms Tracts.

From this assessment, multiple sites were identified on each Tract for enhancement or restoration efforts. Several projects have since been completed including road armoring, culvert replacements, culvert cleaning and low water crossing installations. Many of the sites have been and continue to be monitored by the state forest staff for changes.

An updated hydrological assessment is needed to determine any notable improvements and changes to the sites to help further guide management of LGSF during the next ten-year period.

4. Swamps, Marshes, and Other Wetlands

In addition to the waterways, LGSF currently contains approximately 9,551 acres in 11 hydric communities: basin marsh, basin swamp, baygall, blackwater stream, bottomland forest, depression marsh, dome swamp, floodplain marsh, floodplain swamp, hydric hammock, and wet prairie.

Maintenance of naturally occurring wetland communities is a high priority and will be accomplished through appropriate management activities, including prescribed fire, adherence to Silviculture BMPs, and treatment of invasive species.

5. Wetlands Restoration

Wetland restoration objectives on the LGSF include erosion control, restoration of hydrology and / or hydroperiod, and restoration of wetland plant and animal communities. To achieve these objectives, restoration activities may involve road and soil stabilization, water level control structure removal or installation, invasive species control, site preparation and re-vegetation with native wetlands species, and project monitoring. These activities may be conducted individually or concurrently; implemented by FFS personnel or by non-FFS personnel under mitigation or grant contractual agreements. Wetland restoration projects should be conducted in conjunction with other restoration activities indicated elsewhere in this plan.

Where applicable, LGSF, with assistance from the FFS Forest Management Bureau, may pursue funding to develop and implement wetlands restoration projects. Additionally, cooperative research among FFS, other state agencies, and the federal government will provide valuable information in determining future management objectives of wetland restoration.

Wetland restoration will be coordinated with the SJRWMD. Any activities requiring permits from the water management district will be handled accordingly and will follow the latest edition of the FFS Silviculture Best Management Practices Manual.

6. Florida Department of Environmental Protection Basin Management Action Plan (BMAP)

A Basin Management Action Plan (BMAP) is a "blueprint" for restoring impaired waters by reducing pollutant loadings to meet the allowable loadings established in a Total Maximum Daily Load (TMDL). It represents a comprehensive set of strategies, including, but not limited to: permit limits on wastewater facilities, urban and agricultural best management practices, conservation programs, financial assistance, and revenue generating activities, all designed to implement the pollutant reductions established by the TMDL. These broad-based plans are developed with local stakeholders, as they rely on local input and local commitment, and are adopted by Secretarial Order to be enforceable.

The BMAP provides for phased implementation under Subparagraph 403.067(7)(a)1, F.S. The phased BMAP approach allows for the implementation of projects designed to achieve incremental reductions, while simultaneously monitoring and conducting studies to better understand the water quality dynamics (sources and response variables) in the watershed.

A substantial portion of LGSF resides in the Middle St. Johns and Lower St. Johns BMAP. See Exhibit K.

C. Flora and Fauna Resources

1. Rare, Threatened, and Endangered Species

FFS employees continually monitor the forest for rare, endangered, or threatened species while conducting management activities. Specialized management techniques will be used, as necessary, to protect or increase endangered and threatened species, as applicable for both plants and animals.

The intent of FFS is to manage LGSF in a manner that will minimize the potential for wildlife species to become imperiled. FFS employees continually monitor the forest for threatened or endangered species while conducting management activities. Specialized management techniques may be used, as necessary, to protect or increase protection of rare, threatened, and endangered species, as applicable for both plants and animals. See Table 5 and Exhibit L.

Table 5. Rare, Threatened, and Endangered Species Documented on LGSF

Common Name	Scientific Name	FNAI Global Rank*	FNAI State Rank*	Federal Status*	State Status*
Plants					
Florida hartwrightia	<i>Hartwrightia floridana</i>	G2G3	S2S3	UR	T
Lake-side sunflower	<i>Helianthus carnosus</i>	G1G2	S1S2	N	E
Star anise	<i>Illicium parviflorum</i>	G2	S2	N	E
Narrowleaf naiad	<i>Najas filifolia</i>	G3	S2	UR	T
Celestial lily	<i>Nemastylis floridana</i>	G3	S3	N	E
Hooded pitcher plant	<i>Sarracenia minor</i>	G4T4	S4	N	ST
Mollusks					
St. Johns elephantear	<i>Elliptio monroensis</i>	G1G2	S1S2	N	N
Insects					
Sulphurous cave amphipod	<i>Crangonyx sulphurium</i>	G1	S1	N	N
Florida hypotrichia scarab beetle	<i>Hypotrichia spissipes</i>	G3G4	S3S4	N	N
Three spotted pleasing fungus beetle	<i>Ischyrys dunedinensis</i>	G2G3	S2S3	N	N
Volusia grasshopper	<i>Melanoplus adelogyrys</i>	G1G2	S1S2	N	N
Florida deepdigger scarab beetle	<i>Peltotrupes profundus</i>	G3	S3	N	N
Round-necked romulus long-horned beetle	<i>Romulus globosus</i>	G1G2	S1S2	N	N
Scrub palmetto flower scarab beetle	<i>Trigonopeltastes floridana</i>	G3	S3	N	N
Reptiles					
Spotted turtle	<i>Clemmys guttata</i>	G5	S2S3	UR	N
Gopher tortoise	<i>Gopherus polyphemus</i>	G3	S3	N	ST
Eastern indigo snake	<i>Drymarchon couperi</i>	G3	S2?	T	FT
Birds					
Florida sandhill crane	<i>Antigone canadensis pratensis</i>	G5T2	S2	N	ST
Limpkin	<i>Aramus guarauna</i>	G5	S3	N	N
Little blue heron	<i>Egretta caerulea</i>	G5	S4	N	ST
Snowy Egret	<i>Egretta thula</i>	G5	S3	N	N
Bald eagle	<i>Haliaeetus leucocephalus</i>	G5	S3	N	N
Osprey	<i>Pandion haliaetus</i>	G5	S3S4	N	N
Black rail	<i>Laterallus jamaicensis</i>	G3	S2	T	N
Wood stork	<i>Mycteria americana</i>	G4	S2	T, PDL	FT
Bachman's sparrow	<i>Peucaea aestivalis</i>	G3	S3	N	N
Mammals					
Southern fox squirrel	<i>Scurius niger niger</i>	G5T5	S3	N	N
Florida long-tailed weasel	<i>Mustela frenata peninsulae</i>	G5T3?	S3?	N	N
Florida manatee	<i>Trichechus manatus latirostris</i>	G2G3T2	S2S3	T	N

* STATUS / RANK KEY

FNAI Global Rank: G1= Critically Imperiled, G2 = Imperiled, G3= Very Rare, G4= Apparently Secure, G5= Demonstrably Secure, GNR = Element not yet ranked (temporary), G#? = Tentative rank, T# = Taxonomic Subgroup;

numbers have same definition as G#'s.

FNAI State Rank: S1= Critically Imperiled, S2= Imperiled, S3= Very Rare, S4= Apparently Secure, S5 = Demonstrably secure in Florida, S#?= Tentative Rank, Federal Status (USFWS): E= Listed Endangered, T= Listed Threatened, N= Not currently listed, C = Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened. T, PDL = Species currently listed threatened but has been proposed for delisting. SAT, T(S/A) = threatened due to similarity of appearance. A species that is threatened due to similarity of appearance with another listed species and is listed for its protection. Species listed as T(S/A) are not biologically endangered or threatened and are not subject to Section 7 consultation.

State Status (FWC): Animals: FE = Listed as Endangered Species at the Federal level by the USFWS, FT = Listed as Threatened Species at the Federal level by the USFWS, F(XN) = Federal listed as an experimental population in Florida, FT(S/A) = Federal Threatened due to similarity of appearance, SE = State population listed as Endangered by the FWC, ST = State population listed as Threatened by the FWC, by the FWC, C = Candidate species, N = Not currently listed, nor currently being considered for listing.

Plants: E = Endangered: species of plants native to Florida 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; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act; T = Threatened: 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 number as to cause them to be Endangered; CE = Commercially Exploited; N = Not currently listed, nor currently being considered for listing.

2. Florida Natural Areas Inventory

The Florida Natural Areas Inventory (FNAI) is the single most comprehensive source of information available on the locations of rare species and significant ecological resources throughout Florida. See Exhibit L. FNAI has reported the following:

a. Element Occurrences

FNAI element occurrences data layer includes occurrences of rare species and natural communities. For animals and plants, element occurrences usually indicate a viable population of the species. Based on the information available, this site appears to be located on or very near a significant region of scrub habitat, a natural community in decline that provides important habitat for several rare species within a small area.

b. Likely and Potential Habitat for Rare Species

In addition to documented occurrences, other rare or threatened species may occur near LGSF. Rare species and communities that have not been documented but that are likely or potential at the site are listed in Exhibit L.

c. Land Acquisition Projects

The site is located within the Longleaf Pine Ecosystem and the Strategic Managed Area Lands List Florida Forever projects. See Exhibit W.

FNAI recommends that professionals familiar with Florida's flora and fauna conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species before expansions or alterations are made to any facilities.

3. Florida Fish and Wildlife Conservation Commission

The FWC Fish and Wildlife Research Institute (FWRI) reports numerous records of listed species occurrences or critical habitats within the confines of the property. This includes state and federally listed endangered or threatened species.

Other findings by the FWC include:

- a. The property is located adjacent to a Strategic Habitat Conservation Area for American alligator (*Alligator mississippiensis*), bald eagle (*Haliaeetus leucocephalus*), eastern indigo snake (*Drymarchon couperi*), Everglades snail kite (*Rostrhamus sociabilis plumbeus*), Florida black bear (*Ursus americanus floridanus*), Florida pine snake (*Pituophis melanoleucus mugitus*), Florida sandhill crane (*Antigone canadensis pratensis*), Florida scrub-jay (*Aphelocoma coerulescens*), little blue heron (*Egretta caerulea*), gopher tortoise (*Gopherus polyphemus*), red-cockaded woodpecker (*Dryobates borealis*), southeastern American kestrel (*Falco sparverius paulus*), southern fox squirrel (*Sciurus niger niger*), and wood stork (*Mycteria americana*).
- b. LGSF is located within an area of low Species Richness, which indicates that the total number of selected focal species within potential habitat identified in a specific location is low relative to other similar area, but does not account for the number of individuals for each focal species within the population.
- c. LGSF contains and is adjacent to Priority Wetlands, which are wetlands significant to listed wetland-dependent vertebrates.

These data represent only those occurrences recorded by FWC staff and other affiliated researchers. The database does not necessarily contain records of all listed species that may occur in a given area. Also, data on certain species are not entered into the database on a site-specific basis. Therefore, one should not assume that an absence of occurrences in their database indicates that species of significance do not occur in the area. See Exhibit M.

The FWC recommends the review of management guidelines in the published FWC Gopher Tortoise Management Plan to guide management actions for the gopher tortoise (*Gopherus polyphemus*) on the area. The FWC Gopher Tortoise Management Plan provides beneficial resource guidelines for habitat management and monitoring of the gopher tortoise. For reference, the FWC Gopher Tortoise Management Plan can be accessed at MyFWC.com.

FWC recommends the review of management guidelines in FWC's published Species Action Plans for the management of imperiled, rare, and focal bird species. The FWC Species Action Plans provide beneficial resource guidelines for habitat management and monitoring of the respective species. For reference, the FWC Species Action Plans can be accessed at www.MyFWC.com.

4. Game Species and Other Wildlife

Wildlife management plays an important role in the management of resources on LGSF. The state forest currently makes up all of Lake George Dexter / Mary Farms Unit WMA and part of Lake George WMA. FWC provides cooperative technical assistance in managing the wildlife and fish populations, determining hunting seasons, establishing bag and season limits, and assists with overall law enforcement on the forest.

Notable game species inhabiting the forest include white-tailed deer, wild hog, wild turkey, and smaller species such as gray squirrel, rabbit, raccoon, opossum, armadillo, coyote, quail, and migratory birds in season. Wild hogs (*Sus scrofa*) are present on LGSF. At this time, hunter harvest is adequate to reduce the population, and no additional control actions are desired.

The FFS and FWC cooperatively maintain nine (9) permanent food plots totaling 160 acres, as well as nine (9) permanent wildlife openings totaling 73 acres on LGSF. Wildlife openings will be established and maintained in accordance with Chapter 5 of the FFS State Forest Handbook.

Non-game species will be managed and protected through the restoration and maintenance of native ecosystems found on the forest. The current State Forest Handbook gives additional details for such things as snag management and retention.

5. Survey and Monitoring

FFS may implement species-specific management plans developed by FWC and other agencies as applicable. FFS will cooperate with FWC and other agencies in the development of new wildlife management plans and monitoring protocols, as necessary. Such plans will be consistent with rule and statute promulgated for the management of such species.

These practices will aim to protect and, when possible, increase imperiled plants and animal species occurring on the forest. Continued efforts will be made to identify and implement biological surveys, as appropriate, including those species associated with the habitats adjacent to the St. Johns River.

a. Eagle Nesting Trees

Since the 2016 nesting season and the last management plan update, LGSF staff determined the bald eagle nests located on the forest as stable. LGSF currently has 11 bald eagle nests inside the forest boundary and multiple others on adjacent lands. Habitat and nesting tree guidelines for bald eagles have been created by FWC, and they are implemented on LGSF, following FWC's Species Action Plan for the Bald Eagle (2017).

b. Gopher Tortoises

Standardized surveys for gopher tortoise burrows have been conducted by FFS and FWC staff opportunistically, as needed, but generally in advance of land management activities that may impact tortoises (e.g., timber harvest). All surveys are done in cooperation with FWC.

The FFS follows and utilizes the Best Management Practices for gopher tortoises to assist in meeting management objectives for both the species and the communities in which it is found.

c. Florida Black Bear

FFS will continue to cooperate with FWC to implement FWC's Florida Black Bear Management Plan, with emphasis on maintaining sustainable black bear populations in suitable habitats throughout Florida for the benefit of the species and people.

d. Listed Plant Species

All known locations of listed or rare flora are GIS mapped, and location data are shared with the FFS Forest Management Bureau, Plant Conservation Program Biologist and/or FNAI, as appropriate.

e. Other Rare Biota Surveys

Surveys are done as time and staffing allow. High quality plant communities continue to incur ad hoc surveys for both plant and animal invasive species. The FFS will utilize FWC Species Action Plans for guidance both monitoring populations and for habitat management recommendations for rare and imperiled species, where appropriate.

Most of the isolated LGSF wetlands have received a cursory biological survey, with rare and significant plant and animal species observed and documented. Assistance will be offered to FWC for gopher tortoise burrow commensals monitoring, as well as monitoring for other rare species, as appropriate.

During routine management activities, incidental sightings of rare animals and plants are GIS mapped by FFS staff. All rare species data is collected and sent to the FFS Forest Management Bureau, Plant Conservation Program Biologist; appropriate FWC office or personnel; and/or FNAI on an incidental basis.

Surveys conducted by university researchers, students, and knowledgeable naturalists on LGSF augment information provided by formal surveys conducted by FWC and other cooperating agencies. The FFS will seek assistance from citizen scientists, colleges, universities, and other agencies to gather data on plant and animal species.

6. Gopher Tortoise Recipient Site Feasibility Assessment

The FFS has assessed the feasibility of establishing a gopher tortoise recipient site on TBSF. Soil drainage classes present across most of the forest range from somewhat poorly drained to very poorly drained; often either frequently flooded or with a degree of surficial saturation during the wetter months of the year (see Exhibit I). There are a few areas of moderately well drained to excessively drained soils but only represent relatively small portions of the forest. Therefore, despite the property totaling just under 21,500 acres in size, the FFS has determined there are no suitable soils for gopher tortoise recipient site establishment on MSF.

D. Sustainable Forest Resources

FFS practices sustainable multiple-use forestry to meet the forest resource needs and values of the present without compromising the similar capability of the future. Sustainable forestry involves practicing a land stewardship ethic that integrates the reforestation, managing, growing, nurturing, and harvesting of trees for useful products with the conservation of soil, air and water quality, wildlife and fish habitat, and aesthetics. This is accomplished by maintaining and updating accurate estimates of standing timber in order to assure that the timber resources retain their sustainability. Forest inventories will be updated on a continual basis according to guidelines established by the FFS Forest Management Bureau.

E. Beaches and Dune Resources

No beaches or dunes occur on the LGSF.

F. Mineral Resources

There are no known significant mineral deposits of commercial value on LGSF.

G. Unique Natural Features and Outstanding Native Landscapes

3.1 miles of frontage on the St. Johns River provides a large area of ecologically valuable floodplain swamp community as well as opportunities for shoreline protection. The undeveloped river frontage along Morrison Creek protects a 78-acre floodplain swamp.

LGSF's position in the surrounding landscape contributes to water resource protection of the Lake George watershed and aquifer recharge. LGSF's proximity to a number of publicly owned lands also contributes to wildlife corridors for several listed species, including Florida black bear.

The St. Johns River and its associated floodplain communities that exist on the western and southern boundaries of LGSF (including Bluffton Mound) provide significant ecological, recreational, and archaeological value.

H. Research Projects / Specimen Collection

Research projects may be conducted on the forest on a temporary or permanent basis for the purpose of obtaining information that furthers the knowledge of forestry and related fields. FFS cooperates with other governmental agencies, non-profit organizations, and educational institutions, whenever feasible, on this type of research. FFS will consider assisting with research projects when funds and manpower are available.

All proposed research on LGSF must be in accordance with the guidelines stated in the State Forest Handbook. Any requests for research should be submitted in writing to the appropriate field staff to be forwarded to the Forest Management Bureau for approval. Requests must include: a letter outlining the purpose, scope, methodology, and location of the proposed research. Requests are subject to review by FFS Foresters, Biologists, the Forest Health Section, and the Forest Hydrology Section, as appropriate. Authorization to conduct research will require that the investigator provide copies of any reports or studies generated from any research to the FFS and the LGSF staff. Other special conditions may be applicable, and the authorization may be terminated at any point if the study is not in compliance.

Research projects / specimen collections that have been initiated on the property include:

- University of Florida (Kaufman and Hertz). 2015. Compare tick densities, pathogen prevalence rates, and overall risk between different types of managed land (hunted vs. non-hunted land).
- Florida Fish and Wildlife Conservation Commission and the University of Florida (Doonan, Oxenrider, Teets, Austin, and Marx). 2015. Conduct research assessing the genetic structure of the statewide Florida mouse population.
- University of Florida (Molgo, Soltis, and Soltis). 2015. Conduct research on genetic traits within the genus *Callisia* on selected state forests to investigate its parentage and ploidal levels in conjunction with its morphology and natural history.
- University of Florida (Duncan). 2016. Conduct research on the ecology, natural history, distribution, and population dynamics of the southeastern pocket gopher (*Geomys pinetis*).
- University of Florida (Flory and Clark). 2017. Comprehensive field survey to generate robust relationships between abiotic and biotic environmental factors and cogongrass (*Imperata cylindrica*) distribution and abundance; assess which environmental factors shape the distribution and stand characteristics of cogongrass across a range of locations in Florida.
- California Botanical Garden, California State University and Bok Tower Gardens (Kiel, Fisher, and Peterson). 2019 and 2021. Evolution of taxonomy of the New World *Justicia* species.
- University of Florida (Daniels and Kimmel). 2021-2022. Investigate the distribution and floral hosts of two rare bee species in Florida: the scrub plasterer bee (*Caupolicana floridana*) and closely related *C. electa*.
- Boise State University (Rosentreter), DeBolt, Kaminsky, and Demmer. 2021-2023. Collect Florida lichens to produce an open-sourced key to species identification for ecologists, and to improve the overall knowledge of lichens in the state of Florida.
- Florida Natural Areas Inventory and University of Florida (Hill, Daniels, and McElveen). 2022-2024. Surveys for Frosted elfin, Arogos skipper, sawgrass skipper, and Duke's skipper.
- University of Florida (Reisinger, Kabalan, and Barrett). 2022. Conduct studies regarding the effects of land use and management practices on native slough crayfish (*Procambarus fallax*).
- University of New Hampshire (Varner and Reynolds). 2023. Conduct research investigating methane isotopes in ponds on selected state forest lands, and to measure stable methane isotopes across different latitudes to investigate if there are any differences depending on pond characteristics.
- Adventure Scientists (Eggers). 2023. Collect tuliptree samples for genetic research across all state forests in D-1 through D-12.
- Fish and Wildlife Research Institute, Florida Fish and Wildlife Conservation Commission (Hassler, Smith, and Braun de Torrez). 2023-2024. Conduct research investigating long-tailed weasel (*Mustela frenata*) and Eastern spotted skunk (*Spilogale putorius*) occurrence, habitat use, and diet composition on state forest lands within the Florida Wildlife Corridor study area in central Florida.
- University of Florida (Smith). 2024. Collect samples of Relampago fungus to learn more about the biology of a relatively new disease affecting a wide variety of host plants.

- Fire Neural Network (Kereszy and Kern). 2024. Install and maintain lightning detectors as part of Fire Neural Network.
- University of Florida (Lashley). 2025. Conduct study of wild turkey behavior, vital rates, and space use across the state of Florida.

I. Ground Disturbing Activities

Although the FFS's approach to handling ground disturbing activities is identified in other sections of this plan, the FFS's overall approach to this issue is summarized here. FFS recognizes the importance of managing and protecting sensitive resources and will take steps to ensure that such resources are not adversely impacted by ground disturbing activities. Sensitive resources include areas such as known sensitive species locations; archaeological, fossil, and historical sites; ecotones, wetlands, and water resources. The process for evaluating and obtaining approval for ground disturbing activities is outlined in Appendix 2.A.6. of the State Forest Handbook.

When new pre-suppression firelines, recreation trails, or other low-impact recreation site enhancements are necessary, their placement will be reviewed by state forest field staff to avoid sensitive areas. For ground disturbing activities such as construction of buildings, parking lots, and new roads, the FFS will consult with FNAI, DHR, WMD, and FDEP, as appropriate.

V. Public Access and Recreation

The primary recreation objective on LGSF is to provide the public with dispersed outdoor recreation activities that are dependent on the natural resources. FFS will continue to promote and encourage public access and recreation while protecting resources and practicing multiple-use management.

Periodic evaluations will be conducted by FFS staff to monitor recreational impacts on resources. Modifications to recreational uses will be implemented should significant negative impacts be identified. New recreation opportunities and facilities, which are compatible with the primary goals and responsibilities of the FFS, will be considered only after FFS determines their compatibility with other forest uses and forest resources. Assessment of visitor impacts, outdoor recreation opportunities and facilities, and proposed changes will all be addressed in the Five-Year Outdoor Recreation Plan updates.

A. Existing Recreation Opportunities

Recreation opportunities on LGSF include birdwatching, bicycling, fishing, hiking, horseback riding, hunting, paddling, picnicking, and primitive camping. Overnight camping is presently available at the River Road Campground. LGSF is part of the Great Florida Birding and Wildlife Trail and the FFS Trailwalker Program. The forest is open during daylight hours for visitors. See Exhibit E for a map of the Recreation, Facilities, and Improvements.

FFS is willing to work in partnership with appropriate ecotourism / local interest groups and local government agencies to further develop projects that lead to increased public recreational use and access.

1. Public Access & Parking

Astor and Volusia Tracts – Bisected by many public roads, these tracts generally have open access. A state forest sign and information kiosk are located at the intersection of Riley Pridgeon and Sandy Drain Road. A small shell parking area is located just east of the entrance to Sandy Drain Road and is suitable for equestrians, biking, hiking, or hunting access. Another entrance is located on Riley Pridgeon and Pridgeon Road. LGSF is bisected by State Road 40. Two (2) other paved roads provide public access to the state forest: Emporia Road and Shell Harbor Road. There are also several graded county roads maintained by Volusia County that bisect or lead into LGSF.

Dexter and Mary Farms Tracts – Recreational access on the western side of the unit is via St. Johns River Road. An entrance kiosk at the state forest gate gives recreation information to day users. This entrance is open 365 days a year during daylight hours. St. Johns River Road leads to the Bluffton Recreation Area where parking is provided to access the hiking trails, picnic shelters, fishing pier, portable restroom, and canoe / kayak launch.

Parking is maintained and available at the intersection of Bluffton Road and St. Johns River Road. Visitors may park and utilize a walk-through at the gate on Bluffton Road to walk or ride by horse or bicycle into the tract east of St. Johns River Road.

On the eastern side of the tract, visitor access is available at the Fawn Road entrance located about 1.25 miles south of State Road 40 on County Road 3. A lime rock parking area suitable for horse trailers and other vehicles, an information kiosk, and walk-thru for hikers, cyclists, or equestrians are located here.

Vehicle access to the eastern side of the tract is available from Check Station Road off SR 40 by day use permit. WMA access for hunting is only available by Check Station Road.

More information is contained on the Recreation, Facilities, and Improvements Map. See Exhibit E.

2. Hiking Trails and Trailheads

The River Road Trail is a 0.9-mile hiking trail that was constructed in fiscal year 2024-25. This trail begins at the River Road Campground on St. Johns River Road and ties into the Bluffton Interpretive Trail.

The Bluffton Interpretive Trail is a 0.75-mile interpretive hiking trail located at the Bluffton Recreation Area. Interpretive brochures for the trail are available at the trailhead and corresponding wayside markers that tell of the species, history, and the cultures of the Bluffton area.

The Bluffton Recreation Area has a short boardwalk / ramp to the pier, parking area, picnic shelters, grill, trailhead kiosk, and portable restroom. This area is a listed site on the Great Florida Birding and Wildlife Trail. The trailhead kiosk has a display with bird identification information, and cultural and historical information for this site.

Jenkins Pond day use area has a pavilion with two (2) picnic tables and a portable restroom available for visitor use.

3. Bicycling and Equestrian Use

Off-road bicycles and equestrian use are permitted on all roads and firelines. Parking is available on the Dexter/Mary Farms Tract at the Fawn Road entrance and at the Bluffton Road and St. Johns River Road intersection. Parking is available on the Astor Tract east of the Sandy Drain Road entrance.

4. Fishing

Areas most commonly used for fishing on LGSF include the Bluffton Recreation Area and Jenkins Pond.

Bluffton Recreation Area – There is a handicapped-accessible floating fishing pier to include with other available amenities at this site.

Jenkins Pond – A small, one (1) acre borrow pit has been restored in cooperation with FWC for fishing.

5. Camping

The River Road Campground is made up of seven (7) primitive sites. Located about one mile north of Bluffton Recreation Area, the campground is available for year-round primitive camping. The primitive campsites include fire rings, grills, lantern holders, bear-resistant food storage lockers, and picnic tables. The campground has bear-resistant trash receptacles, two (2) portable toilets, and a pitcher pump that provides non-potable water.

6. Environmental Education

Environmental information on LGSF is displayed on kiosks, and education is conducted through guided tours and hands-on events by request. Other opportunities for interpretive / educational programs will be considered. Targeted groups include the general public, school and youth groups, and various user groups.

B. Planned Recreation Activities

FFS will continue to assess plans for additional recreation opportunities based on demand, carrying capacity, demographics, and impact to the resources on the forest. All planned improvements may be completed as staff and funding permits. Both terrestrial and aquatic resources and related activities will be evaluated. Any plans will be incorporated into the Five-Year Outdoor Recreation Plan on file at LGSF.

FFS will continue to assess the site and encourage further research as to appropriate restoration and/or public use. No significant recreation changes are planned at this time. With the current quantity and quality of recreational opportunities available on LGSF, the focus will be the improvement and upgrades to current facilities.

1. Public Access and Parking

Within this ten-year planning cycle, current parking areas and forest access points will continually be evaluated for improvements. Existing parking areas are for all recreational users on the LGSF and FFS staff use. New designated parking areas may be established and installed as the need warrants. Listed plant and animal species and known archeological sites will be avoided. The size of parking areas will be determined by location and the activities supported for public use.

2. Hiking Trails and Trailheads

Within this ten-year planning cycle, suitable locations will be explored for additional recreation trails. The construction, maintenance, and improvements of multi-use, equestrian, cycling, nature, and hiking trails will be ongoing. FFS will install and replace trail directional and interpretive signs and re-paint blazes along all existing trails to help with trail signage and access as needed.

3. Environmental Education

LGSF will continue to offer programs to promote public education. These programs will consist of guided tours, interpretive trails, interpretive material in kiosks, hands-on events and/or distributing state forest brochures. The goal is to offer at least two (2) interpretive programs per year in addition to current fire prevention efforts. Partnerships with local groups will be encouraged to promote forest awareness.

4. Fishing

During this ten-year planning period, FFS will work with FWC's Freshwater Fisheries Management to conduct a survey and restock Jenkins Pond as deemed necessary.

5. Camping

Currently, no additional camping facilities are planned. During this ten-year planning period, FFS will install a single vault restroom at the River Road Campground.

C. Hunter Access

Regulated hunting and fishing on Florida's state forests is managed cooperatively with the FWC. LGSF is managed as two different Wildlife Management Areas (WMAs) under this cooperative agreement. The Astor and Volusia tracts make up the Lake George WMA which are combined with the St. Johns River Water Management District lands (SJRWMD) and Volusia County Lake George tracts. The Dexter and Mary Farms Tracts make up the Lake George: Dexter/Mary Farms Unit WMA.

Astor and Volusia Tracts – Currently allows archery, muzzle loading, general gun, small game and spring turkey seasons.

Dexter and / Mary Farms Tracts – Currently allows archery, muzzle loading, general gun, small game and special opportunity turkey hunts.

Hunting season dates, limits, and methods are established annually by FWC, in cooperation with FFS. WMA regulations are updated annually and are identified in the current WMA brochure provided by FWC at www.MyFWC.com. Non-hunting recreation users are encouraged to check the WMA regulations and season dates before visiting LGSF.

D. Education

FFS may create partnerships with local K-12 schools and / or universities for the development and implementation of educational opportunities on LGSF. Once partnerships are developed, the Five-Year Outdoor Recreation Plan will provide more insight to management activities as they pertain to future educational opportunities LGSF may provide to the public. Educational displays are planned for the visitor center to provide historical and environmental information.

VI. Forest Management Practices

A. Prescribed Fire

Forest management practices on LGSF are important in the restoration and maintenance of forest ecosystems and provide a variety of benefits to Floridians. The prescribed burning program developed for LGSF produces multiple benefits. The objectives of prescribed burning on LGSF include facilitating forest management operations, enhancing wildlife and listed species habitat, decreasing fuel loading, enhancing public safety, and restoring, maintaining, and protecting all native ecosystems, ecotones, and their ecological processes. Prescribed fire is an effective tool in controlling the encroachment of shrubs and hardwoods, stimulating the recovery of native herbaceous groundcover, and promoting the regeneration of native pines.

FFS utilizes a fire management program on state forests that includes wildfire prevention, detection and suppression, and prescribed burning. This program is the responsibility of FFS's Orlando Forestry Center through its Operations Section and is detailed in the Five-Year Prescribed Burning Management Plan. Emphasis will be placed on prescribed burning, wildfire prevention, and education to help reduce wildfire occurrence on the forest. FFS personnel are responsible for planning and implementing the annual prescribed burn program for LGSF, which will consist of dormant and growing season burns. An update to the Five-Year Prescribed Burning Management Plan is developed each year by FFS staff. All burns conducted on LGSF are executed by Florida Certified Prescribed Burn Managers in accordance with Chapters 590.125, F.S. and 5I-2 F.A.C.

A Fire History chart detailing the recent history of prescribed burns and wildfires at LGSF is available in Exhibit N.

FFS has three (3) fire towers, two (2) brush trucks, one (1) heavy dozer, and nine (9) tractor-plow units located in Volusia County. Additional support is available from neighboring counties. Personnel and equipment are stationed at Deleon Forestry Station, Tiger Bay State Forest, Ashby Tower, and New Smyrna Fire Station (Volusia County Fire Services). These resources will be used for pre-suppression practices, establishment of firebreaks, rehabilitation of existing firelines, construction of new firelines, maintenance of perimeter firebreaks, and prescribed burning.

According to FNAI, historic, fire-dependent natural communities on LGSF are estimated to have occupied 16,138 acres and to have burned at approximately two to four-year intervals. Current fire-dependent communities encompass 12,792 acres. Some historically fire-dependent communities have been altered through past land use practices, which inhibits the ability to meet objectives with prescribed fire alone. Based on current conditions and management objectives, LGSF will plan for 3,200 to 6,400 acres to be prescribed burned annually. Priority ranking of burn units is used to keep fire-return intervals maintained while slowly adding additional acreage. Meeting prescribed fire goals will be largely dependent on weather conditions, available personnel, and statewide emergency situations such as wildfires, hurricanes, and other natural disaster response and relief.

Currently it is estimated that approximately 11,895 acres of LGSF are within the desired fire-return interval.

1. Fire Management

The fire management plan serves as a working tool and an informational document for LGSF. The plan provides guidelines regarding wildfire suppression and prescribed fire management. It will specify burn units, burn unit prescriptions, appropriate fire return intervals, and fire pre-suppression planning. The plan may be reviewed and amended as necessary.

The use of prescribed fire in the management of timber, wildlife, and ecological resources on LGSF is necessary if the FFS is to fulfill the goals and objectives stated in this plan including: enhancing and restoring native plant communities, managing protected species, managing timber, recreation, historical, and other resource values. The fire management plan and its objectives shall reflect and incorporate these multiple-resource objectives.

- a. Prescribed Fire:** Prescribed fire is the most important land management tool, both ecologically and economically, for managing vegetation and natural communities and perpetuating existing wildlife populations in Florida. Forest operation records and staff experience should be combined with the FNAI inventory and assessment (2024) to identify areas that may require mechanical or chemical treatments in conjunction with prescribed fire to restore a more natural vegetative structure.
- b. Burn Unit Plans:** Each prescribed fire will be conducted in accordance with FFS regulations and state law (Chapter 5I-2 F.A.C., Chapter 590, F.S.) and have a burn unit plan (or prescription). Each prescription will contain, at a minimum, the information, as required by Section 590.125(3), F.S., needed to complete the FFS Prescribed Burn Plan Form FDACS 11461.

Aerial ignition may be considered for large burn units where this tactic can be cost effective for larger acreages. Consideration should be given to rotating burn units between dormant and growing season burns over time with the understanding that historically, most natural fires occurred during the growing season or the transition to the growing season. Fire return intervals for a burn unit are recommended to fall within the natural, historic range for the dominant natural community or communities within a given burn unit.

Based upon available species survey data, burn units within a prescription that have listed wildlife species shall explicitly state their presence and any restrictions or requirements relative to prescribed burning in proximity to these species or habitats. These may include time of year, pre-burn preparation, fire return intervals, and other burn parameters.

B. Wildfire Prevention and Mitigation Strategies

FFS utilizes a comprehensive wildfire management approach on state forests that includes an ongoing program of wildfire prevention, detection, and suppression, and prescribed burning. Implementation of this program is the responsibility of FFS's Orlando Forestry Center. Emphasis will be placed on consistent accomplishment of prescribed burning goals and community outreach to increase public understanding of wildfire prevention and the benefits of prescribed fire.

FFS has three (3) paramount considerations regarding wildfires and are established in priority order:

- 1) Protection of human lives
- 2) Protection of improvements
- 3) Protection of natural resources

All procedures regarding wildfire will follow the State Forest Handbook and the LGSF Fire Management Plan.

1. Suppression Strategies

If a wildfire occurs on LGSF there are two (2) alternative suppression strategies as defined below:

- a. Contain and Control** is defined as a suppression strategy where a fire is restricted to a certain area by using existing natural or constructed barriers that stop the fire's spread under the prevailing and forecasted weather until it is out. This strategy allows the use of environmentally sensitive tactics based on fuels, fire behavior, and weather conditions that keep a wildfire from burning a large area or for a long duration.
- b. Direct Suppression** is defined as a suppression strategy where aggressive suppression tactics are used to establish firelines around a fire to halt its spread and to extinguish all hotspots. This alternative is used whenever there is a threat to human life, property, private lands, and / or critical natural or cultural resources. This strategy should also be used when the total district fire load dictates that crews not be involved with individual fires for any longer than necessary.

Appropriate suppression action will be that which provides for the most reasonable probability of minimizing fire suppression cost and critical resource damage, consistent with probable fire behavior, total fire load, potential resource and environmental impacts, safety, and smoke management considerations. The Incident Command System (ICS) will be used for all suppression actions.

2. Smoke Management

Caution will be exercised to prevent a public safety or health hazard from the smoke of any prescribed burn or wildfire. Prescribed burns must pass the smoke screening procedure and be conducted by a certified burner. If smoke threatens to cause a safety hazard, then direct, immediate suppression action will be taken.

3. Firebreaks and Firelines

A system of permanent fire breaks will be developed and maintained around and within the boundaries of LGSF to guard against fires escaping from and entering the forest. Such fire breaks will consist of natural barriers, roads, trails, permanent grass strips, and where appropriate, well maintained harrowed lines. All pre-suppression fire breaks will meet the established Silvicultural BMP criteria.

During wildfire suppression, the use of water and foam, permanent fire breaks, natural barriers, and existing roads and trails for firelines can be used when human life, safety, property, and resource considerations allow. Plowed and / or bladed lines will be used for initial installation of firelines in heavy fuels and in cases where it's considered necessary to protect life, property, or resources and / or to minimize threats to firefighters. Plowed and bladed lines will be rehabilitated and brought into BMP compliance as soon as practical after the fire is suppressed.

4. Sensitive Areas

LGSF retains on file in the state forest headquarters an Environmentally Sensitive Area Map that identifies protected sites such as critical wetlands and archaeological and historical sites known to occur on the state forest. FFS personnel are aware of these areas in the event of a wildfire. Special precautions will be followed when prescribed burning in sensitive areas on LGSF. When possible, fire staff will avoid line construction in wetland ecotones and other sensitive areas throughout the forest.

5. Firewise Communities

FFS has implemented a Firewise community approach for prevention statewide. Specifically, in the area adjacent to or nearby LGSF, efforts in this regard will continue to identify communities at risk and to contact their representatives.

6. Adjacent Neighbor Contacts

The staff at LGSF maintains a list of neighbors that have requested they be notified in advance of prescribed burns. These families are contacted by telephone or email with potential sites and dates of anticipated prescribed burns.

7. Post-Burn Evaluations

A post-burn evaluation is required for each prescribed burn on the forest to assess impacts on timber and habitat. Based on the evaluations, after prescribed fires in particular, decisions will be made on the effectiveness of the prescribed burn and improvements that can be made in the future. A historical fire record for all significant fires and prescribed burns will be maintained. This will be accomplished using completed burn plans and the

maintenance of GIS data. These records are intended to provide data for future management decisions.

C. Sustainable Forestry and Silviculture

Timber is a valuable economic and ecological resource. Timber harvesting for the purposes of generating revenue, improving stand viability, forest health, wildlife, and ecological restoration and maintenance is important to meeting the silvicultural objectives on LGSF.

1. Strategies

The following silvicultural strategies will apply to silvicultural practices on LGSF:

- a. To restore and maintain forest health and vigor through timber harvesting, prescribed burning, and reforestation, both naturally and artificially, with species native to the site.
- b. To create, through natural or artificial regeneration, uneven-aged, and even-aged management, a forest with both young and old growth components that yields sustainable economic, ecological, and social benefits.

2. Silvicultural Operations

Silvicultural operations on LGSF will be directed toward improving forest health, wildlife habitat, ecological and economical sustainability, as well as recovery from past private management. Stands of off-site species with merchantable volume will be scheduled for harvest, followed by reforestation with the appropriate tree species. Site preparation methods may include prescribed fire, mechanical vegetation control, and / or herbicide applications. Herbicide applications may be necessary to control woody competition and to re-establish desired native species of both overstory and groundcover. Herbicides used will be registered for forestry use by the U.S. Environmental Protection Agency (EPA) and will not adversely affect water resources.

Prescribed fire is the most desirable method of vegetation control in fire-dependent ecosystems. However, due to the existence of areas where fuel loads have reached dangerous levels or urban interface dictates prescribed fire is not suitable, mechanical, or chemical vegetation control may be used. Mechanical and / or chemical vegetation control will be utilized where appropriate as determined by FFS staff for wildlife enhancement, fuel mitigation, and reforestation.

Maintenance and restoration of timber stands and natural communities through timber harvesting will include thinning for maintenance, regeneration harvests applicable to the species present, and clear-cutting to remove off-site species, and improve wildlife and plant habitat.

All silvicultural activities, including timber harvesting and reforestation, will meet or exceed the standards in FFS's Silviculture BMPs and the State Forest Handbook, and will follow the Five-Year Silviculture Action Plan.

3. Forest Inventory

The purpose of a forest inventory is to provide FFS resource managers with information and tools for short and long-range resource management and planning. Ten percent (10%) of LGSF forest will be re-inventoried annually to provide an accurate estimation of the standing timber and to ensure that stands will be managed sustainably.

Timber / forestry resources available on the property include slash, pond, loblolly, sand, and a small area of longleaf pine. In addition, there are mixed hardwoods and cypress found throughout the forest.

4. Timber Sales

Timber sales are generally advertised for competitive bids and sold on a per unit or lump sum basis. All timber sales are conducted according to guidelines specified in the State Forest Handbook.

D. Invasive Species Control

FFS employees continually monitor the forest for invasive species while conducting management activities. LGSF staff will locate, identify, and apply control measures with the intent to eradicate or control invasive species. Table 6 lists the general treatment strategy, acres impacted, and population stability trend for invasive plant species occurring on LGSF. Also see Exhibit O.

Ongoing maintenance and monitoring strategies are outlined in the Five-Year Ecological Management Plan which is developed to locate, identify, and control invasive plant species. Occurrences of invasive species are recorded in the LGSF GIS database and are monitored and treated annually as funding permits. The GIS database is updated as new infestations are discovered.

Adjacent landowners who are known to have these species on their property may be approached to cooperate on control measures through the use of hold harmless agreements. FFS works to control the spread of invasive species by decontaminating agency equipment and equipment used by private contractors according to the State Forest Handbook.

Feral hogs (*Sus scrofa*) are present on LGSF. Currently, the harvest of feral hogs during hunting season has been able to control the feral hog population on LGSF. FWC has issued a feral hog control permit to FFS for all state forests and FFS will allow for feral hog removal on LGSF through trapping and hunting as necessary.

Training in the identification and control of invasive species will be scheduled for personnel as time and resources permit. Training concerning invasive plants will be coordinated with the Forest Management Bureau's Forest Health Section. Control of invasive species will be target specific and use a variety of methods including appropriately labeled and efficacious herbicides.

Table 6. Invasive Plant Species Occurring on LGSF

Common Name	Scientific Name	Treatment Strategy	Acres Impacted	Increasing / Decreasing
Air-potato	<i>Dioscorea bulbifera</i>	Spot herbicide treatment	5.8	Stable
Brazilian pepper	<i>Schinus terebinthifolia</i>	Spot herbicide treatment	0.1	Stable
Caesar's weed	<i>Urena lobata</i>	Spot herbicide treatment	8.7	Stable
Camphor tree	<i>Cinnamomum camphora</i>	Spot herbicide treatment	13.9	Stable
Chinese tallow	<i>Triadica sebifera</i>	Spot herbicide treatment	0.1	Stable
Cogongrass	<i>Imperata cylindrica</i>	Spot herbicide treatment	30.7	Stable
Coral ardisia	<i>Ardisia crenata</i>	Spot herbicide treatment	10.3	Stable
Earpod tree	<i>Enterolobium contortisiliquum</i>	Spot herbicide treatment	0.1	Stable
Elephant ear	<i>Xanthosoma sagittifolium</i>	Spot herbicide treatment	0.4	Stable
Golden rain tree	<i>Koelreuteria elegans</i>	Spot herbicide treatment	0.1	Stable
Guinea grass	<i>Urochloa maxima</i>	Spot herbicide treatment	0.1	Stable
Japanese climbing fern	<i>Lygodium japonicum</i>	Spot herbicide treatment	0.2	Stable
Mimosa tree	<i>Albizia julibrissin</i>	Spot herbicide treatment	0.1	Stable
Peruvian primrose-willow	<i>Ludwigia peruviana</i>	Spot herbicide treatment	17.7	Stable
Podocarpus	<i>Podocarpus macrophyllus</i>	Spot herbicide treatment	1.1	Stable
Showy rattlebox	<i>Crotalaria spectabilis</i>	Spot herbicide treatment	2.3	Stable
Small-leaf spiderwort	<i>Tradescantia fluminensis</i>	Spot herbicide treatment	0.1	Stable
Tuberous sword fern	<i>Nephrolepis cordifolia</i>	Spot herbicide treatment	14.8	Stable
Torpedo grass	<i>Panicum repens</i>	Spot herbicide treatment	0.1	Stable
Tropical soda apple	<i>Solanum viarum</i>	Spot herbicide treatment	0.1	Stable
Wedelia	<i>Sphagneticola trilobata</i>	Spot herbicide treatment	0.8	Stable

E. Insects, Disease, and Forest Health

Currently, there are no significant insect or disease problems on LGSF. In the event of a forest pest outbreak, LGSF resource managers will consult with the Forest Management Bureau's Forest Health Section to formulate an appropriate response.

In compliance with Section 388.4111, F.S. and in Section 5E-13.042, F.A.C., all lands have been evaluated and subsequently designated as environmentally sensitive and biologically highly productive. Such designation is appropriate and consistent with the previously documented natural resources and ecosystem values and affords the appropriate protection for these resources from arthropod control practices that would impose a potential hazard to fish, wildlife, and other natural resources existing on this property. The local arthropod control agencies in Volusia County will be notified of the approval of this plan documenting this designation.

As a result, prior to conducting any arthropod control activities on LGSF, the local agency must prepare a public lands control plan that addresses all concerns that FFS may have for protecting the natural resources and ecosystem values on the state forest. In this regard, FFS will provide the local agency details on the management objectives for LGSF. This public lands control plan must comply with FDACS guidelines and use the appropriate FDACS form. The plan must then be approved and mutually adopted by the county, FFS, and FDACS, prior to initiation of any mosquito control work. Should the local mosquito control district not propose any mosquito control operations on the property, no arthropod control plan is required. See Exhibit V.

F. Use of Private Land Contractors

The forest manager makes ongoing evaluations of the use of private contractors and consultants to facilitate the total resource management activities of this state forest. The opportunities for outsourcing land management work include:

1. Herbicide applications
2. Restoration activities
3. Site preparation
4. Reforestation
5. Timber harvesting
6. Timber stand improvement
7. Surveying/boundary marking
8. Biological assessments and mapping
9. Contractors for fixed capital and infrastructure improvements

VII. Proposed Management Activities for Natural Communities

In 2024, FNAI completed an inventory and natural community mapping project on LGSF. Current and historic natural community cover types can be found in Exhibits P and Q, and Table 7. The inventory included managed and altered landcover types which are habitats that have been impacted by humans and do not fit into FNAI's Natural Community Classification. See Tables 8 and 9.

Table 7. Natural Community Types

Community Type	Historic Acres*	Current Acres*
Basin marsh	199	199
Basin swamp	1,442	1,435
Baygall	1,327	1,313
Blackwater stream	4	7
Bottomland forest	13	12
Depression marsh	405	386
Dome swamp	357	354
Floodplain marsh	493	435
Floodplain swamp	2,262	2,312
Hydric Hammock***	3,146	3,089
Mesic flatwoods**	8,757	6,768
Sandhill	192	23
Scrubby flatwoods**	265	160
Wet flatwoods**	2,692	1,710
Wet prairie**	9	9
Managed and other altered community types**	0	3,353
TOTAL	21,563	21,565

* Rounding errors exist.

** Includes restoration community acreage as determined by FNAI.

*** Mesic hammock historic and current acres are included within Hydric hammock

Table 8. Managed Landcover Types

Landcover Type*	Current Acres
Pine plantation	2,058
TOTAL	2,058

* Protocol as described in Appendix 2 of FNAI's "Guide to the Natural Communities of Florida", 2010 Edition.

Table 9. Other Altered Landcover Types

Landcover Type*	Current Acres**
Abandoned field / abandoned pasture	195
Artificial pond	4
Clearing / regeneration	238
Developed	22
Impoundment	5
Road	159
Spoil area	3
Successional hardwood forest	566
Successional hydric shrubland / forest	12
Utility corridor	91
TOTAL	1,295

* Protocol as described in Appendix 2 of FNAI's "Guide to the Natural Communities of Florida", 2010 Edition.

** Rounding errors exist.

For the purposes of this management plan, restoration is defined as the process of returning ecosystems to the appropriate structure and species composition, based on soil type, representative species present, and hydrology. Management during this ten-year period will begin with a forest-wide assessment of the fuel loading, timber densities, reforestation needs, and groundcover in order to develop a five-year comprehensive action plan for prescribed burning and other management activities across the forest. Strategies may include thinning pine plantations, mowing or chopping in areas of heavy fuel buildup, application of both dormant and growing season fires, and / or the use of herbicides to control hardwoods and / or hardwood regeneration. Site preparation and reforestation may be required to increase pine stocking in stands with very poor stocking or in restoration efforts. Fire-return intervals are included as a guide and may vary depending upon specific conditions and are intended to attain desired forest and resource management goals. See Table 10.

Table 10. Prescribed Fire Interval Guide on LGSF

Habitat Type	Historic Fire Return Intervals**	LGSF Fire Frequency Goal (Local)	Comments
Basin marsh	Variable	Variable	Allow entry of fire when burning adjacent uplands
Basin swamp	Variable	1 to 3 years	Allow entry of fire when burning adjacent uplands
Baygall	Variable	3 to 5 years	Burn when adjacent uplands are burned
Bottomland forest	Variable	N/A	Burn when adjacent uplands are burned
Depression marsh	1 to 5 years	(see comments)	Allow entry of fire when burning adjacent uplands
Dome swamp	1 to 5 years	3 to 5 years	Allow entry of fire when burning adjacent uplands
Floodplain marsh	2 to 4 years	2 to 4 years	Continue to incorporate into Lake Woodruff National Wildlife Refuge fire management plan.
Floodplain swamp	Variable	N/A	N/A
Hydric hammock	N/A	N/A	Match or exceed frequency for original natural community
Mesic flatwoods*	2 to 4 years	2 to 4 years	Fire frequency goal to help eliminate weedy overgrowth of shrubs and vines.
Sandhill	1 to 3 years	N/A	There is no access to extant sandhill with heavy equipment.
Scrubby flatwoods*	5 to 15 years	2 to 6 years	This community is embedded within larger burn units (i.e. mesic flatwoods) and will receive fire more frequently.
Wet flatwoods*	2 to 3 years	2 to 3 years	Burn when adjacent uplands are burned
Wet prairie*	2 to 3 years	2 to 4 years	Burn when adjacent uplands are burned

* Includes restoration community acreage

** As determined by FNAI

The following community descriptions, existing condition descriptions, and management recommendations are taken from a 2024 FNAI mapping project report and the Guide to the Natural Communities of Florida (FNAI 2010), as well as from the knowledge and experience gained by FFS during forest inventory efforts and routine field work on LGSF. To achieve the objectives outlined in this plan, the following management activities will be performed in the natural and managed communities at LGSF during the next ten-year planning period. Goals, desired conditions, standards, and guidelines provide management area direction. These goals and desired conditions may take many planning cycles to attain.

A. Basin Marsh

Description:

Basin marshes are herb or shrub-dominated isolated wetlands. They are often situated in relatively large and irregularly shaped basins, or in various sized depressions surrounded by non-pyrogenic communities such as swamps or hammocks. The shallower marsh edges tend to be grassy and herbaceous and more diverse with some hydrophytic woody species, while deeper areas are often inundated and occupied by floating plants. Basin marshes tend to be larger than depression marshes, which are typically shallow and within a fire-maintained community. Basin marshes may develop in large solution depressions that were formerly shallow lakes. The lake bottom has slowly filled with sediments from the surrounding uplands and with peat derived from plants. They are regularly inundated with stagnant water.

Current Conditions:

Basin marshes are scattered throughout LGSF and occupy various sized depressions. These marshes are dominated by herbaceous species and shrubs but also may have occasional trees – swamp tupelo (*Nyssa biflora*), slash pine (*Pinus elliotii*), dahoon (*Ilex cassine*), sweetgum (*Liquidambar styraciflua*), cabbage palm (*Sabal palmetto*), and/or pond cypress (*Taxodium ascendens*) – in and around the basin. These trees are often stunted. Shrubs include common buttonbush (*Cephalanthus occidentalis*) and coastalplain willow (*Salix caroliniana*). Herbaceous species typically occur in zones determined by water depth. The deepest centers will have alligatorflag (*Thalia geniculata*), waterlily (*Nymphaea* sp.), and pickerelweed (*Pontederia cordata*). Toward the outer margin, maidencane (*Hymenachne hemitoma*), Walter's sedge (*Carex striata* var. *striata*), yellow-eyed grasses (*Xyris* sp.), bladderworts (*Utricularia* sp.), and sphagnum moss (*Sphagnum* sp.) are dominant with Virginia chain fern (*Anchistea virginica*), Carolina redroot (*Lachnanthes caroliniana*), and southern umbrella sedge (*Fuirena scirpoidea*) also frequent.

Many of the basin marshes in LGSF are inclusions in swamps or hammocks, but some basins in former sandhill or pine flatwoods are also included in this category due to their larger size and depth. They are frequently associated with baygalls, often occurring as a mosaic with patches of forested wetlands. Past timber operations on the site have led to the occasional invasion of these communities by slash pine. At least one basin marsh in the Astor Tract has an included marsh lake which is deeper and contains waterlilies and alligatorflag.

Fire Regimes:

Basin marshes may have occasionally burned near the end of the dry season, and pyrogenic species like sawgrass (*Cladium jamaicense*) and maidencane (*Hymenachne hemitoma*) can burn even when there is standing water. Hydrology and the surrounding communities dictate

the fire return interval of this community which can differ greatly depending on both. Long hydroperiods in conjunction with occasional fire maintain this community as a primarily herbaceous community.

Management Needs:

Marsh edges should be allowed to burn along with the surrounding community. Basin marshes should not be bedded or planted with pine trees and, where possible, existing trees should be removed. Feral hog rooting can create severe soil disturbances along marsh edges and increase the possibility of invasion by non-native plants.

B. Basin Swamp

Description:

Basin swamps are forested wetlands typically occupying isolated depressions, although they may provide drainage into floodplains. Due to their size or landscape position, basin swamps are not exposed to frequent fires. These swamps have a closed canopy dominated by hydrophytic trees that can withstand extended hydroperiods and thrive in nutrient poor, usually acidic peat soils, overlying an impervious soil layer. The understory is formed by smaller trees and shrubs, often occupying hummocks. Herbs may be sparse or form a well-developed layer in the shaded groundcover.

Current Conditions:

Basin swamps in LGSF are mostly in large, irregularly shaped depressions. These swamps generally accumulate water through local rainfall and groundwater inflows, and some have outflows to the St. Johns River or Lake George.

The canopy is dominated by hydrophytic trees such as pond cypress (*Taxodium ascendens*), swamp tupelo (*Nyssa biflora*), loblolly bay (*Gordonia lasianthus*) and slash pine (*Pinus elliotii*). Other trees that are occasional or common in these basin swamps are red maple (*Acer rubrum*), sweetgum (*Liquidambar styraciflua*), green ash (*Fraxinus pennsylvanica*), American elm (*Ulmus americana*), and swamp laurel oak (*Quercus laurifolia*). In some swamps there is a subcanopy or tall shrub layer consisting of loblolly bay (*Gordonia lasianthus*), swamp dogwood (*Swida foemina*), dahoon (*Ilex cassine*), swamp bay (*Tamala palustris*), coastal plain willow (*Salix caroliniana*), or cabbage palm (*Sabal palmetto*). Other shorter shrubs commonly found are common buttonbush (*Cephalanthus occidentalis*), swamp doghobble (*Eubotrys racemosus*), fetterbush (*Lyonia lucida*), large gallberry (*Ilex coriacea*), and southern bayberry (*Morella cerifera*). In swamps with a well-developed herb layer, common emergent species are lizard's tail (*Saururus cernuus*), toothed midsorus fern (*Telmatoblechnum serrulatum*), millet beaksedge (*Rhynchospora miliacea*), royal fern (*Osmunda spectabilis*), pickerelweed (*Pontederia cordata*), Virginia chain fern (*Anchistea virginica*), sphagnum moss (*Sphagnum* sp.), beaksedges (*Rhynchospora* sp.), bandana-of-the-Everglades (*Canna flaccida*), green arrow arum (*Peltandra virginica*), broadleaf cattail (*Typha latifolia*) maidencane (*Hymenachne hemitoma*), and arrowheads (*Sagittaria* sp.). Occasionally, duckweeds (*Lemna* sp.), American waterfern (*Azolla caroliniana*), or viviparous spikerush (*Eleocharis vivipara*) may be found floating or submerged. Poison ivy (*Toxicodendron radicans* var. *radicans*) is a common vine.

Basin swamps at LGSF commonly grade into hydric hammocks and baygalls, and distinctions between these are sometimes difficult to discern, particularly where the communities intergrade in a complex mosaic. Small marshes dominated by herbs or shrubs may be embedded within the swamp.

Fire Regimes:

Fire intervals are quite variable in basin swamps and depend on the dominant vegetation, fire exposure, and drought. The interior may go decades or centuries without fire, while the exposed outer edges can be susceptible to frequent fire from adjacent pyrogenic communities.

Management Needs:

Little active management is required for this community type. Burning adjacent fire-adapted communities and allowing fire to enter basin swamps naturally with the adjacent uplands is desirable. Exclusion of fires can lead to hardwood encroachment and peat accumulation. Hydrologic disturbances such as ditches, fire breaks, and roads should be minimized, if not avoided altogether in this community.

C. Baygall**Description:**

Baygall is an evergreen forested wetland of bay species situated at the base of a slope or in a depression. The canopy and understory of baygall should be generally similar strata and are typically quite dense with bay species, as well as a variety of other woody species that differ by region and hydrology. Vines are generally abundant and contribute to the often-impenetrable understory, while herbaceous species are often sparse. Baygall typically develops on wet soils at the bases of slopes, edges of floodplains, in depressions, and in stagnant drainages. The soils are composed of acidic peat.

Current Conditions:

Baygalls are scattered throughout LGSF but are more common in the northern Astor Tract. These communities are seepage wetlands with a typically dense canopy of mainly loblolly bay (*Gordonia lasianthus*) and slash pine (*Pinus elliottii*). Loblolly pine (*Pinus taeda*) is occasional and swamp tupelo (*Nyssa biflora*) may also be common in baygalls that grade into basin swamps. Some baygalls may have included marshes. Common shrubs and small trees include fetterbush (*Lyonia lucida*), southern bayberry (*Morella cerifera*), dahoon (*Ilex cassine*), swamp doghobble (*Eubotrys racemosus*), large gallberry (*Ilex coriacea*), saw palmetto (*Serenoa repens*), swamp bay (*Tamala palustris*), maleberry (*Lyonia ligustrina* var. *foliosiflora*), and dwarf huckleberry (*Gaylussacia dumosa*). In baygalls with a developed herb layer, Virginia chain fern (*Anchistea virginica*), beaksedges (*Rhynchospora* sp.), Elliott's sedge (*Carex elliottii*), grassy arrowhead (*Sagittaria graminea*), sphagnum moss (*Sphagnum* sp.), Carolina redroot (*Lachnanthes caroliniana*), and cinnamon fern (*Osmundastrum cinnamomeum*) are typical. Vines may become quite frequent in some of the more overgrown baygalls, with coral greenbrier (*Smilax walteri*), laurel greenbrier (*Smilax laurifolia*), and muscadine (*Vitis rotundifolia*) frequent.

Many of the baygalls in LGSF, especially those in the Astor Tract, are heavily overgrown with vines and shrubs. However, baygalls in the Dexter/Mary Farms Tracts have received more fire in the past several decades and are often very open and difficult to distinguish from burned swamps or historic wet flatwoods.

Fire Regimes:

The deep peat soils, constant seepage from upland communities, and usually closed canopy keeps the ground saturated, limiting decomposition and accumulating leaf litter, generally inhibiting fire. Baygalls can withstand a moderate fire frequency since the bay trees re-sprout following fire. However, fire during a drought can kill the trees by burning into the organic soils and killing their roots.

Management Needs:

Management activities should focus on maintaining the historically occurring baygalls. Burning adjacent fire-adapted communities and allowing fire to enter baygalls naturally with the adjacent uplands is desirable.

D. Blackwater Stream

Description:

Blackwater streams are perennial or intermittent seasonal watercourses originating deep in sandy lowlands where extensive wetlands with organic soils function as reservoirs, collecting rainfall and discharging it slowly to the stream. The acidic, tea-colored waters of blackwater streams are laden with tannins, particulates, dissolved organic matter and iron derived from drainage through swamps and marshes.

Current Conditions:

The St. Johns River is a large blackwater stream originating in an extensive marsh system to the south and flowing generally northward through several large lakes including Lake George. Emergent and floating aquatic vegetation growth is often reduced because of continuous water flow, and the dark-colored water reduces light penetration, inhibiting submerged aquatic plant growth. In the vicinity of LGSF, the adjacent communities are typically floodplain marsh, floodplain swamp, or hydric hammock.

Fire Regimes:

Blackwater stream is not a pyrogenic community.

Management Needs:

Maintaining the water quality and quantity in blackwater streams is essential to managing this community. Hydrological changes in the surrounding communities should be avoided. Continued monitoring of water quality and adherence to best management practices for forestry and agricultural operations on nearby lands is critical to maintaining this community.

E. Bottomland Forest

Description:

Bottomland forest is a deciduous or mixed deciduous/evergreen, closed-canopy forest on terraces and levees along rivers and tributaries, on higher terraces and levees in flood plains, and in somewhat isolated depressions that do not flood frequently. The soils are typically a mixture of sand, clay, and organic materials. Often bottomland forests are only inundated during high floods. It is generally an intermediate between swamps and uplands. The canopy and subcanopy may be quite diverse, containing species tolerant of both upland and swamp communities.

Current Conditions:

At LGSF, two (2) areas of bottomland forest are mapped on the northern portion of the managed area in a landscape of pine flatwoods grading to large basin swamps. The canopy is dominated by large sweetgums (*Liquidambar styraciflua*), slash pine (*Pinus elliottii*), and loblolly pine (*Pinus taeda*). The subcanopy is dominated by red maple (*Acer rubrum*), sweetgum (*Liquidambar styraciflua*), sweetbay (*Magnolia virginiana* var. *australis*), and swamp tupelo (*Nyssa biflora*). The shrub layer has smaller red maples, southern bayberry (*Morella cerifera*), cabbage palm (*Sabal palmetto*), and saw palmetto (*Serenoa repens*). The sparse herbaceous understory is made up of Virginia chain fern (*Anchistea virginica*) and false rein orchid (*Habenaria* sp.).

These forests are similar to the more common hydric hammock communities in the vicinity. However, the canopy contains mostly sweetgum. Cabbage palm, an abundant canopy and subcanopy species in hydric hammocks, is restricted to the shrub layers. More bottomland forest is likely present on LGSF, but difficult to discern from other forested wetlands.

Fire Regimes:

Fire is not a significant factor in bottomland forests, as it is often too wet and shaded to carry fire well.

Management Needs:

While bottomland forests are not often inundated, the vegetation is impacted by the high-water table and irregular flooding events. Bottomland forests are important for nutrient deposition further downstream, with occasional floods redistributing the dense nutrients that form there. Management should take care to manage the hydrological conditions and water quality to maintain this community, remove feral hogs, and monitor and treat any non-native invasive plant infestations.

F. Depression Marsh

Description:

Depression marsh is a shallow, usually rounded depression in sand substrate with herbaceous vegetation or subshrubs, often in concentric bands. Depression marshes typically occur in landscapes occupied by fire-maintained matrix communities such as mesic flatwoods, dry prairie, or sandhill. The concentric zones or bands of vegetation are related to length of the hydroperiod and depth of flooding. Hydroperiods can range widely from as few as 50 days or less to more than 200 days of inundation per year. Depression marshes often dry out during periods of low rainfall, and as a result, burn periodically. The substrate is usually acidic sand,

possibly with deepening peat toward the center. Water depth in depression marshes usually increases toward the center, so vegetation can form concentric zones of hydrophytic vegetation based on hydroperiod. Marshes should be dominated by a dense layer of pyrogenic graminoids and herbs along the edges with plants becoming more aquatic near the deeper portions of the marsh.

Current Conditions:

There are numerous depression marshes scattered throughout the forest. These are generally small depressions in areas of historic pine flatwoods. In composition, these are similar to basin marsh, differing mostly in size and landscape position and usually shallower than basin marsh. Occasionally a few trees common to swamps may be present around the edge of the depression or stunted trees may be growing in the center – swamp tupelo (*Nyssa biflora*), slash pine (*Pinus elliottii*), pond pine (*Pinus serotina*), and/or pond cypress (*Taxodium ascendens*). Common buttonbush (*Cephalanthus occidentalis*) is an occasional shrub found mostly around the edge of the marsh. Maidencane (*Hymenachne hemitoma*), waterlily (*Nymphaea* sp.), Walter's sedge (*Carex striata* var. *striata*), yellow-eyed grasses (*Xyris* sp.), bladderworts (*Utricularia* sp.), Virginia chain fern (*Anchistea virginica*), sphagnum moss (*Sphagnum* sp.), Carolina redroot (*Lachnanthes caroliniana*), and sawgrass (*Cladium jamaicense*) are all frequent herbaceous species. A dense stand of pure maidencane or sawgrass usually occupies the majority of the depression. Vines are infrequent, but coral greenbrier (*Smilax walteri*) and laurel greenbrier (*Smilax laurifolia*) may be found in many depressions.

Many of the historic depressions evident on the 1940s aerial photography are partially or entirely planted with off-site pines or have been colonized by pines from adjacent stands, possibly as a result of less frequent fire or hydrology alteration.

Fire Regimes:

Fire is important for restricting invasion of shrubs and trees and typically occur at an interval of 1 to 5 years with the surrounding pyrogenic communities. Depression marshes with increasing amounts of young pines or other woody plants typically suggest some degree of fire exclusion.

Management Needs:

Prescribed fire in surrounding flatwoods should be allowed to burn through depression marshes. The marshes will burn more completely during dry periods, and those marshes with more shrub cover should be burned more often during spring and early summer as weather and fuel loading allows. Depression marshes should not be bedded or planted with pines and existing pines should be removed.

G. Dome Swamp

Description:

Dome swamp is an isolated, forested, depressional wetland occurring within a fire-maintained community. They are generally small and rounded, although they can be large and shallow. The characteristic dome shape is created by smaller trees that grow in the shallower waters of the outer edge, while the interior of the swamp has larger trees. Typically, this community is dominated by pond cypress (*Taxodium ascendens*). The understory, when present, should be dominated by pyrogenic graminoids and herbaceous species.

Dome swamps typically form in sandy depressions that have formed in pyrogenic upland communities. The soils are quite variable and often composed of a layer of peat that is thin or absent along the edges, but thicker towards the center of the dome. This peat layer is underlain by acidic sands or marl and then limestone or clay.

Current Conditions:

There are several small dome swamps throughout LGSF. These are similar in species composition to basin swamps but often smaller in size, usually rounded, and embedded in areas of former pine flatwoods or sandhill. Dome swamps are inundated during the rainy season. The closed canopy is dominated by pond cypress (*Taxodium ascendens*) and swamp tupelo (*Nyssa biflora*), with slash pine (*Pinus elliottii*), swamp laurel oak (*Quercus laurifolia*), dahoon (*Ilex cassine*), swamp bay (*Tamala palustris*), sweet bay (*Magnolia virginiana* var. *australis*), coastalplain willow (*Salix caroliniana*), and cabbage palm (*Sabal palmetto*) occasional in the canopy and subcanopy/tall shrub layers. Southern bayberry (*Morella cerifera*), Virginia chain fern (*Anchistea virginica*), maidencane (*Hymenachne hemitoma*), duckweeds (*Lemna* sp.), royal fern (*Osmunda spectabilis*), green arrow arum (*Peltandra virginica*), broadleaf cattail (*Typha latifolia*), and poison ivy (*Toxicodendron radicans* var. *radicans*) are also common plants.

The dome swamps in the forest range from being very shrubby in the understory to being open and grassy. These open dome swamps are more frequent in the Dexter and Mary Farms Tract where they have had more exposure to fire in the recent past. Fires may also open up the canopy somewhat, leading to more light penetration and a more herbaceous understory.

Fire Regimes:

Fire is essential for maintaining the structure of the community, the normal fire cycle may be as short as 3 to 5 years along the edges, but the deep center of the swamps may rarely carry fire. The community should burn with the surrounding pyrogenic communities to maintain its structure and create open ecotone to the surrounding pinelands.

Management Needs:

Although many of the dome swamps in the Dexter and Mary Farms tracts have burned recently, the swamps on the Astor tract are often more shrubby and may require burning. Most importantly, fires should be allowed to burn up to the edge of the swamps to maintain the typical grassy edge around each swamp. Feral hog populations, which are highly destructive to soils, particularly in ecotonal areas, should be reduced as much as possible.

H. Floodplain Marsh

Description:

Floodplain marsh is an herbaceous or shrubby wetland community occupying river floodplains and influenced mostly by stream hydrology for water input. Typically, this community is dominated by sand cordgrass (*Spartina bakeri*), sawgrass (*Cladium jamaicense*), and/or maidencane (*Panicum hemitomon*). In wetter sites, shrub thickets may occur, typically dominated by coastalplain willow (*Salix caroliniana*) or common buttonbush (*Cephalanthus occidentalis*).

Floodplain marshes have sand, with or without an organic layer, that is saturated most of the year. Floodplain marshes occur on flat slow draining plains with long hydroperiods along rivers and streams.

Current Conditions:

Floodplain marsh borders much of the St. Johns River, and although LGSF does not always include the land up to the river, the large marsh extends past the forest border in several places. This is a wet, open, shrubby community with shrubs such as coastalplain willow (*Salix caroliniana*) and common buttonbush (*Cephalanthus occidentalis*) being the predominant woody species. Emergent herbs are also frequent with sawgrass (*Cladium jamaicense*), pickerelweed (*Pontederia cordata*), marshpennyworts (*Hydrocotyle* sp.), and primrosewillows (*Ludwigia* sp.). The non-native invasive species wild taro (*Colocasia esculenta*), Peruvian primrosewillow (*Ludwigia peruviana*), and alligator weed (*Alternanthera philoxeroides*) are also present, but it is not known to what extent they are growing in the marsh. This community mostly grades into floodplain swamp or hydric hammock.

Comparing the historic and current aerial photographs, the marsh appears to be much shrubbier than in the 1940s, and some areas may essentially have become swamp. There are some ditches evident in the northwestern part of the floodplain around Lake George.

Fire Regimes:

Floodplain marshes are adapted to frequent fires with dominant species re-sprouting vigorously preventing woody encroachment.

Management Needs:

Currently the floodplain marsh on the southern boundary of LGSF is burned approximately every two years and is incorporated into the Lake Woodruff National Wildlife Refuge fire management plan. The fires used to maintain the floodplain marsh burn up to the floodplain wetlands of LGSF before self-extinguishing. Because floodplain marshes are maintained by a regime of water and fire, these areas will continue to be burned at least every five years to avoid shrub invasion and eventual succession to bog. Natural fires will be allowed to burn in these areas if safe to do so. However, severe fires during drought periods will often burn the peat and will be avoided.

I. Floodplain Swamp

Description:

Floodplain swamp is a closed-canopy forest of hydrophytic trees that grow in frequently or permanently flooded hydric soils along stream and river channels, and in depressions and oxbows within floodplains. The trees in this community are often buttressed, and should form a fairly dense canopy, with a very sparse understory or groundcover. Floodplain swamps often occur within a mosaic of communities including alluvial forest, bottomland forest, and baygall. Floodplain swamps typically border permanently moving bodies of water, but the swamps themselves may be quite stagnant except during higher flooding events as they become isolated by natural features.

The soils of floodplain swamps are quite variable, containing mixtures of alluvial and organic materials, and occasionally sands occurring in the subsoil. Floodplain swamps are generally inundated for large portions of the year restricting understory and herbaceous growth.

Current Conditions:

Floodplain swamp occurs along much of the St. Johns River in LGSF. This community occupies flooded soils and with a closed canopy of mainly bald cypress (*Taxodium distichum*) and swamp tupelo (*Nyssa biflora*), along with a diversity of other trees in the canopy and subcanopy such as red maple (*Acer rubrum*), green ash (*Fraxinus pennsylvanica*), and American elm (*Ulmus americana*).

Most areas of floodplain swamp in Lake George State Forest have been heavily logged in the early 20th century and are still recovering from this disturbance. The furrowed paths of old drag lines remain evident on current aerial photography. Floodplain swamps grade into hydric hammock and floodplain marsh, often forming a complex mosaic with areas of vegetation characteristic of multiple types.

Fire Regimes:

Floodplain swamps are usually too wet to support fire, although during very dry conditions large cypress trees may tolerate occasional burns.

Management Needs:

Maintenance of natural hydroperiods is critical to floodplain swamps. Disruption of these fluctuations in water level can be detrimental to the reproduction of many plant species. Alteration of the hydroperiod will be avoided. Floodplain swamps are usually too wet to support fires and may be used as a natural fire break. Prescribed fire in adjacent upland stands will be allowed to “creep” into the edges of these stands, reducing hardwood encroachment into flatwoods and encouraging the growth of herbaceous vegetation. Fire lines made by plows will not be created along the perimeter of floodplain wetlands for routine prescribed burns.

J. Hydric Hammock

Description:

Hydric hammock is an evergreen hardwood and/or palm forest with variable understory, typically dominated by palms and ferns occurring on moist soils, often with limestone or shelly sand very near the surface. The community should have a closed canopy of oaks and palms with an open understory and sparse groundcover. The species composition of this community is mainly influenced by flooding patterns with more hydrophytic trees occurring in forests with higher flood frequency.

Current Conditions:

LGSF has extensive hydric hammocks along the St. Johns River as well as smaller patches in the Astor Tract to the north. These communities may be inundated for part of the year and are characterized by having a closed, diverse hardwood and palm canopy dominated by swamp laurel oak (*Quercus laurifolia*), water oak (*Quercus nigra*), cabbage palm (*Sabal palmetto*), sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), live oak (*Quercus virginiana*), and slash pine (*Pinus elliotii*), with eastern red cedar (*Juniperus virginiana*) and cabbage palm common in the subcanopy and shrub layers. Other common canopy and subcanopy trees are pond cypress (*Taxodium ascendens*), green ash (*Fraxinus pennsylvanica*), sweet bay (*Magnolia virginiana* var. *australis*), sugarberry (*Celtis laevigata*), American elm (*Ulmus americana*), swamp dogwood (*Swida foemina*), water hickory (*Carya aquatica*), American hornbeam (*Carpinus caroliniana*), eastern box elder (*Acer negundo* var. *negundo*), loblolly bay (*Gordonia lasianthus*), and swamp bay (*Tamala palustris*). Tall and short shrubs are also diverse with bluestem palmetto (*Sabal minor*), saw palmetto (*Serenoa repens*), fetterbush (*Lyonia lucida*), southern bayberry (*Morella cerifera*), St. Andrew's-cross (*Hypericum hypericoides*), Walter's viburnum (*Viburnum obovatum*), groundsel tree (*Baccharis halimifolia*), common persimmon (*Diospyros virginiana*), common buttonbush (*Cephalanthus occidentalis*), American beautyberry (*Callicarpa americana*), Florida hobblebush (*Agarista populifolia*), and maleberry (*Lyonia ligustrina* var. *foliosiflora*) as common or occasional shrubs. The herbaceous layer may be well-developed in open areas with cinnamon fern (*Osmundastrum cinnamomeum*), whip nutrush (*Scleria triglomerata*), netted chain fern (*Lorinseria areolata*), witchgrasses (*Dichanthelium* sp.), fireweed (*Erechtites hieracifolius*), beaksedges (*Rhynchospora* sp.), Florida indigo-bush (*Amorpha fruticosa*), maiden fern (*Thelypteris* sp.), common blue violet (*Viola sororia* var. *sororia*), woodsgrass (*Oplismenus hirtellus*), Browne's savory (*Clinopodium brownei*), Carolina wild petunia (*Ruellia caroliniensis*), lizard's tail (*Saururus cernuus*), millet beaksedge (*Rhynchospora miliacea*), royal fern (*Osmunda spectabilis*), and Virginia chain fern (*Anchistea virginica*). Epiphytes are common with golden polypody (*Phlebodium aureum*) and shoestring fern (*Vittaria lineata*) found on the many cabbage palms. Bartram's airplant (*Tillandsia bartramii*), Spanish moss (*Tillandsia usneoides*), and tropical resurrection fern (*Pleopeltis polypodioides*) are often abundant on oaks. Vines are occasional to common and include sarsaparilla vine (*Smilax pumila*), trumpet creeper (*Campsis radicans*), Virginia creeper (*Parthenocissus quinquefolia*), poison ivy (*Toxicodendron radicans* var. *radicans*), leafless swallowwort (*Orthosia scoparia*), summer grape (*Vitis aestivalis* var. *aestivalis*), rattan vine (*Berchemia scandens*), laurel greenbrier (*Smilax laurifolia*), and saw greenbrier (*Smilax bona-nox*).

Diversity is highest in the large hydric hammock near the St. Johns River. Smaller areas may contain only a few of the listed species but are still dominated by swamp laurel oak and cabbage palm. Hydric hammock grades to wet flatwoods and swamps, often occurring as patches within those communities. It also contains higher, drier ridges that support a mesic hammock community. The historic extent of hydric hammock versus pine flatwoods is difficult to estimate, partly due to the prevalence of cabbage palm flatwoods in the Dexter/Mary Farms unit. Early land survey records recorded large areas of mixed pine/palm, and these can appear quite similar to hammock in the 1940s aerial photographs.

Fire Regimes:

Because of their generally saturated soils and the sparsity of herbaceous ground cover, hydric hammocks rarely burn. However, most of the dominant species are fire tolerant. Prescribed fires should be allowed to burn up to the edge of these communities to discourage weedy overgrowth.

Management Needs:

As with floodplain swamp, hydric hammock requires natural hydroperiods to maintain its species composition. All silviculture, vehicle traffic, firebreaks, hydrologic disturbance, clearing and other disruptive activities should be minimized in this community. Feral hog populations, which are highly destructive to soils, should be reduced as much as possible. Non-native plants, particularly vining species, are a threat to hydric hammocks.

K. Mesic Flatwoods (Including Restoration Areas)**Description:**

Mesic flatwoods are relatively open pine forests with a diverse understory of short shrubs and herbs occurring on low, flat terrain. Mesic flatwoods are a dominant upland community type and can occur intermingled with wet flatwoods or mesic hammock. Mesic flatwoods are distinguished from wet flatwoods by their abundance of certain shrubs, particularly saw palmetto (*Serenoa repens*) and runner oaks (*Quercus minima* and/or *Q. elliotii*), and herb species composition. The gradation between scrubby, mesic, and wet flatwoods may often be subtle, and boundaries can be difficult to determine.

This community generally has acidic soils made up of nutrient-poor fine sands with upper layers darkened by organic matter. Species occurring in mesic flatwoods must be tolerant of long-term soil saturation during the wet season, and dry conditions during the rest of the year.

Current Conditions:

Past timber management has impacted virtually all of the historic mesic flatwoods in LGSF. Tree stands are mostly slash pine (*Pinus elliotii*), with more recent plantings of longleaf pine (*Pinus palustris*). Canopy ages range from newly planted to mature plantations with some older pine stands being fairly dense. However, many stands have been thinned, mechanically treated, and are within the desired fire rotation. These are mostly considered restoration areas, since there is still considerable disturbance to the groundcover and/or the canopy pines require additional thinning. Some restored stands are at natural basal area with a more or less intact groundcover and are mapped as mesic flatwoods.

In areas with a standing canopy, the dominant species are slash pine or longleaf pine. Loblolly bay (*Gordonia lasianthus*) or occasionally sand laurel oak (*Quercus hemisphaerica*) may be canopy or subcanopy trees in some areas, expanding from adjacent baygalls or hammocks. Shrub species dominate the understory and consist mainly of saw palmetto (*Serenoa repens*), gallberry (*Ilex glabra*), coastalplain staggerbush (*Lyonia fruticosa*), shiny blueberry (*Vaccinium myrsinites*), dwarf live oak (*Quercus minima*), and blue huckleberry (*Gaylussacia frondosa*). Other frequent shrubs include southern bayberry (*Morella cerifera*), dwarf pawpaw (*Asimina pygmaea*), Atlantic St. John's-wort (*Hypericum reductum*), sand blackberry (*Rubus cuneifolius*), Piedmont staggerbush (*Lyonia mariana*), tarflower (*Bejaria racemosa*), and fetterbush (*Lyonia lucida*). Also, rusty staggerbush (*Lyonia ferruginea*), winged sumac (*Rhus copallinum* var. *copallinum*), common persimmon (*Diospyros virginiana*), large gallberry (*Ilex coriacea*), runner oak (*Quercus elliotii*), sawtooth blackberry (*Rubus argutus*), and American beautyberry (*Callicarpa americana*) are occasional. Mesic flatwoods under restoration in the Dexter and Mary Farms tracts often have a well-developed herb layer consisting mostly of broomsedge bluestem (*Andropogon virginicus*), witchgrasses (*Dichanthelium* sp.), southern wiregrass (*Aristida beyrichiana*), Virginia chain fern (*Anchistea virginica*), nutgrasses (*Scleria* sp.), yellow milkwort (*Polygala rugelii*), shortleaf yellow-eyed grass (*Xyris brevifolia*), pinebarren whitetop aster (*Oclemena reticulata*), and yellow hatpins (*Syngonanthus flavidulus*). These herbs are also common: whip nutrush (*Scleria triglomerata*), Piedmont pinweed (*Lechea torreyi*), Mohr's thoroughwort (*Eupatorium mohrii*), Leggett's pinweed (*Lechea pulchella*), beaksedges (*Rhynchospora* sp.), bushy bluestem (*Andropogon glomeratus*), whitetop aster (*Sericocarpus tortifolius*), coastalplain milkwort (*Polygala setacea*), blackroot (*Pterocaulon pycnostachyum*), American bluehearts (*Buchnera americana*), greenvein ladies'-tresses (*Spiranthes praecox*), savannah milkweed (*Asclepias pedicellata*), southern umbrellasedge (*Fuirena scirpoidea*), narrowleaf silkgrass (*Pityopsis graminifolia*), Walter's aster (*Symphyotrichum walteri*), small butterwort (*Pinguicula pumila*) and bottlebrush threeawn (*Aristida spiciformis* var. *spiciformis*).

Weedy overgrowth of shrubs and vines in many older stands has eliminated most of the herb layer, but recently burned areas have a similar species composition to the above. Vines consist mainly of muscadine (*Vitis rotundifolia*) and earleaf greenbrier (*Smilax auriculata*), with Elliott's milkpea (*Galactia elliotii*) commonly found as ground runners. In heavily overgrown areas, muscadine is the dominant vine and can shade out the shrub and herb layer completely.

Fire Regimes:

Fire is an important factor in maintaining high plant diversity and historically occurred every 2 to 4 years during the late spring/early summer lightning season. Southern wiregrass (*Aristida beyrichiana*) is a key component of this community, carrying fire across the landscape. This species requires fire to flower though, so fire exclusion can have long and lasting impacts on the community. Flatwoods in the Astor and Volusia tracts are in more critical need of burning than in the Dexter and Mary Farms tracts.

Management Needs:

Efforts to restore pine plantations to naturally regenerating stands with the appropriate composition of longleaf and slash pine will require continuing efforts with some tree planting, natural regeneration (natural seed fall), and / or gradual thinning through a series of harvests. Slash pine plantations will likely be thinned at 15 to 20 years of age and continue to be thinned in later years to achieve the desired stocking of basal area. Natural stands may have a wider range of stocking density. Artificial and natural regeneration stocking density should be sufficient to produce naturally regenerating stands resembling historical conditions.

The condition of the mesic flatwoods will be process-driven with the primary process being prescribed fire. Fire return interval will be every 2 to 4 years. Where conditions allow, prescribed fires will occur during the growing season but may occur any month of the year. Understory fuel reduction via heavy mowing may be used prior to prescribed fire to further assist with shrub height.

L. Mesic Hammock**Description:**

Mesic hammock is a well-developed evergreen hardwood and/or palm forest on soils that are rarely inundated. Typically, the canopy is closed and dominated by live oak (*Quercus virginiana*) and cabbage palm (*Sabal palmetto*), though other hardwoods can often be found in the canopy and subcanopy as well. The shrubby understory can vary in density but typically consists of a mix of less water tolerant shrubs than those found in hydric hammock. The herbaceous layer is often sparse and patchy with a few ferns and graminoids.

Current Conditions:

Mesic hammock occurs as small pockets in or ecotonal transitions to the larger mosaic of hydric hammock. These areas are higher than hydric hammock and usually become dominated by live oak (*Quercus virginiana*) and southern magnolia (*Magnolia grandiflora*) rather than swamp laurel oak (*Quercus laurifolia*). Overall, the canopy will lose the more hydrophytic trees such as bald cypress (*Taxodium distichum*) and swamp tupelo (*Nyssa biflora*) and gain more mesic species such as pignut hickory (*Carya glabra*). In addition, shrubs typical of more mesic situations such as saw palmetto (*Serenoa repens*), shiny blueberry (*Vaccinium myrsinites*), deerberry (*Vaccinium stamineum*), rusty staggerbush (*Lyonia ferruginea*), and tarflower (*Bejaria racemosa*) occur here.

Fire Regimes:

Mesic hammock is not a fire-adapted community and can arise in a pyrogenic community when shielded from fire. The extent of the edge of hammocks may extend or contract with the frequency and intensity of fire in the surrounding communities.

Management Needs:

Maintenance of the surrounding hydric hammock should also preserve the included mesic hammock. A shortened hydroperiod in the hydric hammock may result in an expansion of the mesic hammock inclusions. All silviculture, vehicle traffic, firebreaks, hydrologic disturbance, clearing and other disruptive activities should be minimized in this community.

Feral hog populations, which are highly destructive to soils, should be reduced as much as possible. Invasive plants, particularly vining species, are a threat to mesic hammocks.

M. Sandhill

Description:

Sandhills are relatively open forests of pine trees with a sparse understory of deciduous oaks and a fairly dense ground cover of grasses and herbs on rolling hills of sand. Sandhill occurs on the rolling topography and deep sands of the Southeastern U.S. Coastal Plain. Typical associations or indicator species are longleaf pine (*Pinus palustris*), turkey oak (*Quercus laevis*), and southern wiregrass (*Aristida beyrichiana*).

Sandhill occurs on crests and slopes of rolling hills and ridges with steep or gentle topography. Soils are deep, marine-deposited, often yellowish sands that are well-drained and relatively infertile.

Current Conditions:

There are several historic sandhills on LGSF, mostly in the Astor Tract near developed land. These are usually small and found on hilltops with sandy soil. Of these, only one area located just south of Emporia Road off of Richardson Fernery Road can be considered an extant sandhill. This area was assessed in 2005 to have a canopy of scattered sand pine (*Pinus clausa*) along with young planted longleaf pine. The understory contains some typical sandhill indicators, including bluejack oak (*Quercus incana*), turkey oak, and southern wiregrass. Otherwise, the shrub layer is fairly scrubby with myrtle oak (*Quercus myrtifolia*), Chapman's oak (*Quercus chapmanii*), deerberry (*Vaccinium stamineum*), Carolina holly (*Ilex ambigua*), eastern wild black cherry (*Prunus serotina* var. *serotina*), winged sumac (*Rhus copallinum* var. *copallinum*), saw palmetto (*Serenoa repens*), wild olive (*Carthagenia americana*), rusty staggerbush (*Lyonia ferruginea*), and Florida pricklypear (*Opuntia austrina*).

The remainder of historic sandhills on Lake George State Forest are now dominated by weedy oak species, mainly sand laurel oak (*Quercus hemisphaerica*), and are mapped as current successional hardwood forest. Historic sandhills often grade into pine flatwoods and can be difficult to distinguish from historic scrubby flatwoods due to the level of disturbance and overlapping characteristic species.

Fire Regimes:

Sandhills are dependent on frequent, low intensity ground fires every 1 to 3 years to reduce hardwood competition and to perpetuate pines and grasses. Variability in fire season, frequency, and intensity are also important to maintain species diversity in this community.

Management Needs:

Land development has greatly impacted the historic sandhills at LGSF. These communities require a return to a frequent burn schedule if they are to keep from staying oak-dominated xeric hammocks. Areas bordering nurseries or other development may require the treatment of escaped cultivated plants to restore the native landscape. As most of the historic sandhills in LGSF are small and close to developed areas, prescribed fires may be impractical and will

be evaluated for potential mechanical treatments in lieu of fire. The only existing sandhill on LGSF occurs within an area that has limited access.

N. Scrubby Flatwoods (Including Restoration Areas)

Description:

Scrubby flatwoods have elements characteristic of both mesic flatwoods and scrub communities. This community should have an open canopy of widely spaced pine trees with a low, shrubby understory dominated by scrub oaks and saw palmetto (*Serenoa repens*) often interspersed with areas of barren white sand. In addition to the dominant shrubs, grasses and dwarf shrubs make up a substantial portion of the ground cover in this community.

Scrubby flatwoods occur on slight rises within mesic flatwoods and in transitional areas between scrub and mesic flatwoods, on moderately well-drained sands.

Current Conditions:

There are several isolated patches of scrubby flatwoods in LGSF. These are remnants that have all been covered by pine plantation in the past. Scrubby flatwoods are relatively flat and have a xeric assemblage of understory oaks and saw palmetto along with a mesic canopy. Planted pines are all slash pine (*Pinus elliottii*). Occasionally, longleaf pines (*Pinus palustris*) can be found regenerating or as isolated mature trees, and sand pine (*Pinus clausa*) is a frequent invader. Typically, a subcanopy or tall shrub layer is present, often overgrown, with some combination of sand laurel oak (*Quercus hemisphaerica*), sand live oak (*Quercus geminata*), myrtle oak (*Quercus myrtifolia*), rusty staggerbush (*Lyonia ferruginea*), Chapman's oak (*Quercus chapmanii*), turkey oak (*Quercus laevis*), Carolina holly (*Ilex ambigua*), eastern wild black cherry (*Prunus serotina* var. *serotina*), and wild olive (*Carthagenia americanum*). Common short shrubs include saw palmetto (*Serenoa repens*), deerberry (*Vaccinium stamineum*), southern bayberry (*Morella cerifera*), dwarf live oak (*Quercus minima*), coastalplain staggerbush (*Lyonia fruticosa*), Florida pricklypear (*Opuntia austrina*), and dwarf pawpaw (*Asimina pygmaea*). Typical herbaceous species are southern wiregrass (*Aristida beyrichiana*), witchgrasses (*Dichanthelium* sp.), sandyfield beaksedge (*Rhynchospora megalocarpa*), pinebarren frostweed (*Crocyanthemum corymbosum*), tread softly (*Cnidioscolus stimulosus*), broomsedge bluestem (*Andropogon virginicus*), and goldenrod (*Solidago* sp.). Occasionally, Florida scrub roseling (*Cuthbertia ornata*), rough hedgehyssop (*Sophronanthe hispida*), Florida scrub frostweed (*Helianthemum nashii*), fragrant eryngo (*Eryngium aromaticum*), and/or shortleaf gayfeather (*Liatris tenuifolia*) may also be found. Vines are occasional and include muscadine (*Vitis rotundifolia*) and earleaf greenbrier (*Smilax auriculata*).

In former pine plantations currently in restoration, herbaceous species, particularly wiregrass, may be lacking. In the larger of the two areas mapped as current scrubby flatwoods, sand pine is common, and the understory is dominated by tall shrubs. However, the smaller area to the south is in relatively good condition. Many former scrubby flatwoods are currently overgrown with a canopy of weedy oaks and are mapped as successional hardwood forest. Scrubby flatwoods often occur as rises within mesic flatwoods. They also may be ecotonal between sandhill and mesic flatwoods and may be difficult to distinguish from sandhill on 1940s aerial photographs.

Fire Regimes:

The more continuous ground cover of scrubby flatwoods burns more readily than scrub, but less than mesic flatwoods. Ground fires in surrounding mesic flatwoods often enter scrubby flatwoods and become extinguished, forming a patchwork of burned portions. A natural fire return interval between 5 and 10 years (and occasionally up to 15 years) allows scrub oaks to maintain dominance in the community. These oaks produce acorns 3 years post-fire, with peak production at 5 years. Due to the patchy isolated locations on LGSF, this community is embedded within larger burn units (i.e. mesic flatwoods) and will receive fire more frequently.

Management Needs:

Areas with a dense slash pine canopy need to be thinned to allow more light to penetrate to the ground cover. This will encourage the regeneration of longleaf pine and reduce the amount of pine litter fuel. Burning every 2 to 6 years with cool season fires will further reduce fuel loads and expose soil, encouraging ground cover regrowth. Southern wiregrass may need to be replanted in areas where it has been completely lost. Once some restoration has been achieved, a burn interval of 5 to 6 years should be maintained. In the larger of the two (2) areas mapped as current scrubby flatwoods, off-site sand pine should be removed as it becomes merchantable, and the site should be reforested with longleaf pine.

O. Wet Flatwoods (Including Restoration Areas)**Description:**

Wet flatwoods are relatively open, pine canopy forests with an understory of hydrophytic herbs and shrubs. Southern wiregrass (*Aristida beyrichiana*) is often a dominant component of this community, carrying and promoting fire in the ecosystem. The herbaceous layer may be quite diverse containing various graminoids and pyrogenic herbaceous species. Shrubs vary greatly in density in this community dependent on soils, hydrology, and fire return intervals. Calcareous soils with limestone near the surface or with some shell content may develop a unique mixed pine/palm community somewhat intermediate between flatwoods and hydric hammock.

Wet flatwoods often occur in the ecotones between mesic flatwoods and low-lying wetlands, creating an occasionally difficult-to-distinguish mosaic of communities. Wet flatwoods are often intermingled with mesic flatwoods, basin marsh, and depression marsh. They are distinguished from mesic flatwoods by the general lack of saw palmetto (*Serenoa repens*) and more hydrophytic species in the understory. Wet flatwoods have more canopy cover than wet prairies, where the canopy is absent or quite sparse. Generally, the soils of shrubbier wet flatwoods are poorly drained sands, while more herbaceous wet flatwoods have more loamy sands when the fire regime is taken into account.

Current Conditions:

Historic wet flatwoods in LGSF are less extensive than mesic flatwoods and gradations between these two communities are often very fine. Past timber management, clearcutting, and roller-chopping make this community even more difficult to recognize. Areas determined to be wet flatwoods in the forest are characterized by having a lower density of saw palmetto (*Serenoa repens*) and normally an increase in gallberry (*Ilex glabra*) and large gallberry (*Ilex coriacea*) as well as a better-developed herbaceous layer with more hydrophytic plants. Most of the wet flatwoods in Lake George State Forest have a significant shrub cover of around 50

percent, however, a few areas that are more frequently inundated have almost no shrub cover. Dominant canopy trees are all planted slash pine (*Pinus elliottii*) or longleaf pine (*Pinus palustris*) at various stages of development.

Common shrub species are gallberry, large gallberry, maleberry (*Lyonia ligustrina* var. *foliosiflora*), southern bayberry (*Morella cerifera*), red chokeberry (*Aronia arbutifolia*), roundpod St. John's-wort (*Hypericum cistifolium*), saw palmetto, fetterbush (*Lyonia lucida*), coastalplain staggerbush (*Lyonia fruticosa*), shiny blueberry (*Vaccinium myrsinites*), swamp bay, Piedmont staggerbush (*Lyonia mariana*), dwarf huckleberry (*Gaylussacia dumosa*), myrtleleaf St. John's-wort (*Hypericum myrtifolium*), sawtooth blackberry (*Rubus argutus*), and American beautyberry (*Callicarpa americana*). The dominant herbaceous species are southern wiregrass (*Aristida beyrichiana*), yellow-eyed grasses (*Xyris* sp.), witchgrasses (*Dichanthelium* sp.), yellow hatpins (*Syngonanthus flavidulus*), Virginia chain fern (*Anchistea virginica*), bushy bluestem (*Andropogon glomeratus*), wiry beaksedges (*Rhynchospora* sp.), pinebarren whitetop aster (*Oclemena reticulata*), and yellow milkwort (*Polygala rugelii*). Other herbs commonly found are cinnamon fern (*Osmundastrum cinnamomeum*), sphagnum moss (*Sphagnum* sp.), spadeleaf (*Centella erecta*), blue maidencane (*Amphicarpum muehlenbergianum*), shortleaf yellow-eyed grass (*Xyris brevifolia*), longleaf camphorweed (*Pluchea longifolia*), orange milkwort (*Polygala lutea*), savannah milkweed (*Asclepias pedicellata*), Piedmont pinweed (*Lechea torreyi*), American bluehearts (*Buchnera americana*), southern umbrellasedge (*Fuirena scirpoidea*), blackroot (*Pterocaulon pycnostachyum*), greenvein ladies'-tresses (*Spiranthes praecox*), fewflower milkweed (*Asclepias lanceolata*), yellow colic-root (*Aletris lutea*), small butterwort (*Pinguicula pumila*), rushes (*Juncus* sp.), netted chain fern (*Lorinseria areolata*), Carolina redroot (*Lachnanthes caroliniana*), and meadowbeauties (*Rhexia* sp.). Common vine species are laurel greenbrier (*Smilax laurifolia*), cat greenbrier (*Smilax glauca*), muscadine (*Vitis rotundifolia*), Elliott's milkpea (*Galactia elliottii*), and poison ivy (*Toxicodendron radicans* var. *radicans*).

Historic wet flatwoods were almost all planted with slash pines, and many areas have a dense pine canopy, markedly increased fuel loads, and decreased diversity. These are mapped as current pine plantation, but many acres have been thinned and burned and are considered to be in restoration.

Wet flatwoods intergrades with baygall, and adjacent flatwoods are often invaded with a subcanopy of loblolly bay (*Gordonia lasianthus*) and scattered dahoon (*Ilex cassine*) and swamp bay (*Tamala palustris*).

Wet flatwoods are more common to the Dexter and Mary Farms tract, often occurring interspersed in a network of hydric hammock. The historic extent of hydric hammock versus pine flatwoods is difficult to estimate, partly due to the prevalence of cabbage palm flatwoods in the Dexter and Mary Farms tracts. Early land survey records recorded large areas of mixed pine / palm, and these can appear quite similar to hammock in the 1940s aerial photographs. Historic wet flatwoods in this area may be invaded with cabbage palm (*Sabal palmetto*), water oak (*Quercus nigra*), or sweetgum (*Liquidambar styraciflua*).

Fire Regimes:

Fire is an important factor in maintaining species richness and composition and typically occurs every 2 to 5 years during the late spring / early summer lightning season. Wet flatwoods with a more frequent fire return interval have a sparser understory and a dense complement of herbs and smaller shrubs. Conversely, thick, shrubby understory layers tend to suppress groundcover plants.

Management Needs:

Fire management in wet flatwoods is similar to that of mesic flatwoods and is vital for decreasing fuel loads, reducing woody encroachment, and sustaining herbaceous species. Current conditions require restoration with more frequent fire application (every 2 to 3 years) than the historical (3 to 10 years) interval. Areas with remnant or restored herbaceous vegetation should be high priority for burning and burned with late spring / early summer fires to benefit southern wiregrass flowering and seed viability. Roller-chopping can be destructive to the ground cover and should be avoided when possible. To maximize southern wiregrass restoration, wet flatwoods should be thinned and burned rather than roller-chopped. Growing season burns will be more effective in encouraging flowering of southern wiregrass when fuel and weather conditions allow.

P. Wet Prairie (Including Restoration Areas)**Description:**

Wet prairie is an herbaceous community found on continuously wet, but not inundated soils, typically on flat land. This community is usually dominated by southern wiregrass (*Aristida beyrichiana*) along with a variety of graminoid and herbs. High quality wet prairies are very sparsely populated by woody species and have little to no canopy.

Generally, the soils are acidic, nutrient deficient, and saturated. Wet prairies are distinguished from dry prairie by their abundance of hydrophytic herbs, and scarcity or absence of shrubs, particularly saw palmetto (*Serenoa repens*). Wet prairies differ from wet flatwoods based on canopy cover, and from shallow depression marsh based on presence of southern wiregrass.

Current Conditions:

Wet prairies in LGSF do not appear to have been common or extensive, but rather occupied small inclusions and ecotones to marshes or swamps. These have essentially been lost to past timber operations. They are now either covered with tall canopies of planted slash pine (*Pinus elliotii*) or have been recently clearcut and planted again with more slash pines.

A single, larger area of what was likely historic wet prairie is mapped on the Astor Tract as restoration. This area has a short open canopy of planted slash pines with scattered loblolly bay (*Gordonia lasianthus*), gallberry (*Ilex glabra*), and blueberry (*Vaccinium* sp.). The herb layer is dense but dominated by weedy species such as blue maidencane (*Amphicarpum muehlenbergianum*), Carolina redroot (*Lachnanthes caroliniana*), Virginia chain fern (*Anchistea virginica*), and purple bluestem (*Andropogon cretaceus*). However, other species that might indicate a wet prairie are also present, including yellow hatpins (*Syngonanthus flavidulus*), and shortleaf, yellow-eyed grass (*Xyris brevifolia*). This area grades into restoration mesic flatwoods and depression marsh.

Fire Regimes:

Natural fires likely entered wet prairies from the surrounding pineland community and burned when they were dry enough to carry fire. A natural fire return interval for this community is generally 2 to 3 years, similar to the surrounding pinelands. Wet prairies burned on a longer interval will begin to be invaded by woody species, decreasing the species diversity and fire dependent species indicative of this community.

Management Needs:

In areas where dense pine plantations occur, re-planting of trees should not occur after harvesting. Frequent prescribed fires should be applied, and if shrubs are extremely dense, a single roller chop prior to the first burn may be appropriate. Areas where pines are sparse or non-existent should be burned every 1 to 4 years in the warm season months (March through August) to promote native, non-weedy graminoid groundcover.

Q. Managed Landcover Type

Pine plantations represent a vegetative landcover that the FFS manages as an integral component of the agency's multi-use management approach. This managed landcover type provides both ecological benefits, such as wildlife habitat and ground and surface water filtration, as well as opportunities for generating revenue that can be used to help offset management costs. Management of plantations within the state forest is conducted to further ensure compatibility with other management goals and objectives.

1. Pine Plantation**Description:**

Pine plantations at LGSF are located on historic pine flatwoods, sandhill, and, less commonly, baygall, marsh, and hammock communities and have desired future conditions matching those communities.

Current Conditions:

Pine plantations at LGSF consist of a replanting of native pines, typically slash pine (*Pinus elliotii*), usually over former pine flatwoods. Site preparation and shading from the planted pines, along with reduced fire frequency, has temporarily but noticeably impacted the native understory. Herbaceous species are less robust, and there is often a dense growth of muscadine vines, gallberry, and saw palmetto.

Many pine plantations have been thinned and burned over the past decades, and these planted stands are typically in some state of restoration to the historic natural community. In the past, pines were planted over some areas of former clearing or agriculture. Where these are recognizable on the current aerial photography, they have been mapped as abandoned field/abandoned pasture to reflect the much more disturbed groundcover resulting from more intensive past land use.

Fire Regimes:

Refer to the historic community. If the goal is restoration of the historic community, thinning and more frequent fire may be required than is typical for the historic community.

Management Needs:

Pine plantations should be monitored for non-native species as these are often introduced by machinery and can spread to nearby natural communities. If restoration is the goal, thinning to a more natural tree density may be needed. Management should follow fire recommendations for the historic community.

R. Other Altered Landcover Types**Description:**

Altered landcover types are mapped where the natural community has been overwhelmingly altered as a result of human activity. The altered landcover types described in this section are often not appropriate areas for restoration. If restoration is desired, the target future condition of the altered habitat is dependent on the historic community. Refer to the appropriate community type for a more specific explanation of the desired future condition (DFC).

Current Conditions:

Altered landcover types on LGSF comprise abandoned field / abandoned pasture, artificial pond, clearing / regeneration, developed, impoundment, road, successional hardwood forest, successional hydric shrubland / forest, and utility corridor.

Abandoned field / Abandoned Pasture (195 acres) – Old fields, fallow pastures, early successional areas formerly grazed or in agriculture without recent activity to maintain the area as pasture or planted field. These areas are often dominated by weedy native (e.g., *Rubus* spp., *Myrica cerifera*) and non-native species (e.g., *Indigofera hirsuta*). In old pastures, generally designated when weedy cover from woody species (*Rubus* spp., *Myrica cerifera*, etc.) is greater than 20 percent. At Lake George State Forest, several large areas in the Dexter and Mary Farms tracts appear to have had a more intensive past land use than the surrounding planted pine stands. These areas have a mostly weedy groundcover, but most have been planted in slash pine.

Artificial Pond (4 acres) – Water retention ponds, cattle ponds, etc.

Clearing / Regeneration (238 acres) – Dove fields, wildlife food plots, recent or historic clearings that have significantly altered the groundcover and/or overstory of the original natural community.

Developed (22 acres) – Check station, parking lots, buildings, campground, recreational, equipment storage, and residential areas.

Impoundment (5 acres) – Drainage from a swamp in the Dexter and Mary Farms tracts appears to be impounded by the elevated road, creating an artificial wetland/pond dominated by herbaceous marsh species.

Road (37 acres) – Paved or unpaved.

Spoil Area (3 acres) – Area where dredge or spoil material is deposited, may be re-colonized by plants.

Successional Hardwood Forest (566 acres) – Successional hardwood forests mapped on LGSF are historic pine flatwoods and sandhill and have DFCs matching those communities.

Successional hardwood forests are fire-excluded pine communities or previously disturbed clearings that are now dominated by fast growing hardwoods. These forests may contain some remnant species characteristic of the historic community but are functioning as closed canopy hammocks. Much of the former extent of sandhill and scrubby flatwoods on LGSF area is now occupied by successional hardwood forests.

Some forests may have remnant longleaf (*Pinus palustris*) or other pines in the overstory, but the main canopy is now either sand laurel oak (*Quercus hemisphaerica*) or resembling a hammock with either live oak (*Quercus virginiana*) or sand live oak (*Quercus geminata*) forming a closed canopy over a low diversity ground cover. Several of these forests are located adjacent to plant nurseries and have been invaded by the cultivated leatherleaf fern (*Rumohra adiantiformis*).

Successional Hydric Shrubland / Forest (12 acres) – One successional hydric shrubland is mapped in LGSF in a historic marsh and has DFCs matching that community.

Successional hydric shrublands are fire excluded or disturbed areas that are dominated by fast growing hydrophilic hardwoods such as southern bayberry (*Morella cerifera*) and groundsel tree (*Baccharis halimifolia*). Weedy vines such as Smilax (*Smilax* spp.) and muscadine (*Vitis rotundifolia*) are often common in the shrub layers. These shrubland/forests may invade herbaceous habitats (i.e., wet prairie, wet flatwoods, depression marsh, basin marsh, and floodplain marsh) due to lengthy fire-suppression and/or hydrological alterations. Although some shifts in community type may be better described with a natural community designation, the use of “successional hydric shrubland” is suitable to label areas that are known to be highly disturbed and altered, and where restoration efforts of hydrology restoration and/or re-introduction of fire would be particularly beneficial.

At LGSF, one successional hydric forest/shrubland was mapped in a former marsh located within a more recently acquired area of overgrown, fire-excluded flatwoods. Its location near the St. Johns River floodplain has promoted the overgrowth of cabbage palms and other woody vegetation.

Utility corridor (91 acres) – Electric, gas, telephone right-of-way.

Fire Regimes:

Refer to the historic community.

Management Needs:

It may not be practical or desirable to restore some of the ruderal habitats (e.g., artificial ponds, clearings) to the historic natural community.

VIII. References

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- Florida Department of Environmental Protection. 2020. Water Quality Assessments, TMDLs, and BMAPs. URL: <https://fdep.maps.arcgis.com>.

IX. Glossary of Abbreviations

ARC	Acquisition and Restoration Council
ARM.....	Archaeological Resource Monitor
BMP	Best Management Practice
CARL.....	Conservation and Recreation Lands Acquisition Program
DHR.....	Division of Historical Resources
DRP.....	Division of Recreation and Parks
DSO.....	Direct Support Organization
F.A.C.....	Florida Administrative Code
FDACS.....	Florida Department of Agriculture and Consumer Services
FDEP.....	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FFS.....	Florida Forest Service
FFSF.....	Friends of Florida State Forests, Inc.
FNAI	Florida Natural Areas Inventory
F.S.	Florida Statutes
FWC.....	Florida Fish and Wildlife Conservation Commission
GIS.....	Geographic Information System
LGSF.....	Lake George State Forest
LTDS.....	Line Transect Distance Sampling
NRCS	Natural Resources Conservation Service
OALE.....	DACS Office of Agricultural Law Enforcement
OFW.....	Outstanding Florida Waters
OOF.....	Operation Outdoor Freedom
OPS	Other Personal Services Employment
SJRWMD	St. Johns River Water Management District
SOR	Save Our Rivers
TBSF.....	Tiger Bay State Forest
TIITF.....	Board of Trustees of the Internal Improvement Trust Fund
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
WMA	Wildlife Management Area

LAKE GEORGE STATE FOREST
2026 LAND MANAGEMENT PLAN

EXHIBITS

Exhibit A

Ten-Year Management Accomplishment Summary

Lake George State Forest
10-Year Accomplishments

Site Preparation	Number	Acres
Burning	N/A	97
Chop Single Pass	N/A	9
Raking	N/A	110
Herbicide	N/A	107

Planting	Number	Acres
Slash Bareroot	15,000	20
Longleaf Bareroot	71,000	97

Timber Stand Improvement	Number	Acres
Chopping	N/A	217
Mowing	N/A	721

Timber Sales	Tons	Acres
Marking	N/A	658
Cruising	N/A	2,812
Harvest	63,490	2,192

Timber Inventory	Number	Acres
Inventory Update	N/A	25,371
New Inventory	N/A	284
Plots	N/A	3,150

Recreation	Number	Acres
Day Use Estimated Forest Visitors	1,442,142	N/A
Overnight Primitive Camping	18,901	N/A
State Forest Use Permits	55	N/A
Commercial Vendor Permits	60	N/A
Informational Kiosks Installed	2	N/A

Fire	Number	Acres
Prescribed Burning	N/A	34,647

Invasive Control	Number	Acres
Air Potato	N/A	29.65
Asparagus Fern	N/A	4.00
Brazilian Pepper	N/A	0.50
Caesar Weed	N/A	34.86
Camphor Tree	N/A	185.23
Castor Bean	N/A	0.20
China Berry	N/A	0.37
Chinese Tallow	N/A	6.1
Cogon Grass	N/A	151.08
Coral Ardisia	N/A	41.91
Earpod Tree	N/A	1.80
Elephant Ear	N/A	7.71
Flamegold	N/A	1.80
Guinea Grass	N/A	0.10
Japanese Climbing Fern	N/A	2.70
Lantana	N/A	1.30
Mimosa	N/A	4.32
Peruvian Water Primrose	N/A	6.50
Podocarpus	N/A	4.81
Showy Rattle Box	N/A	10.78
Small Leaf Spiderwort	N/A	0.37
Sword Fern	N/A	44.17
Torpedo Grass	N/A	3.10
Tropical Soda Apple	N/A	4.75
Wedelia	N/A	0.50
Wild Tarrow	N/A	0.41

Roadwork	Number	Miles
Perimeter Firebreaks	N/A	49
Boundary Survey	N/A	3
Roads Graded	N/A	183
Road Mowed	N/A	636
Roads Rebuilt	N/A	31
Culverts Installed	46	N/A
Low Water Crossing	8	N/A

Exhibit B

Boundary and Roads Maps



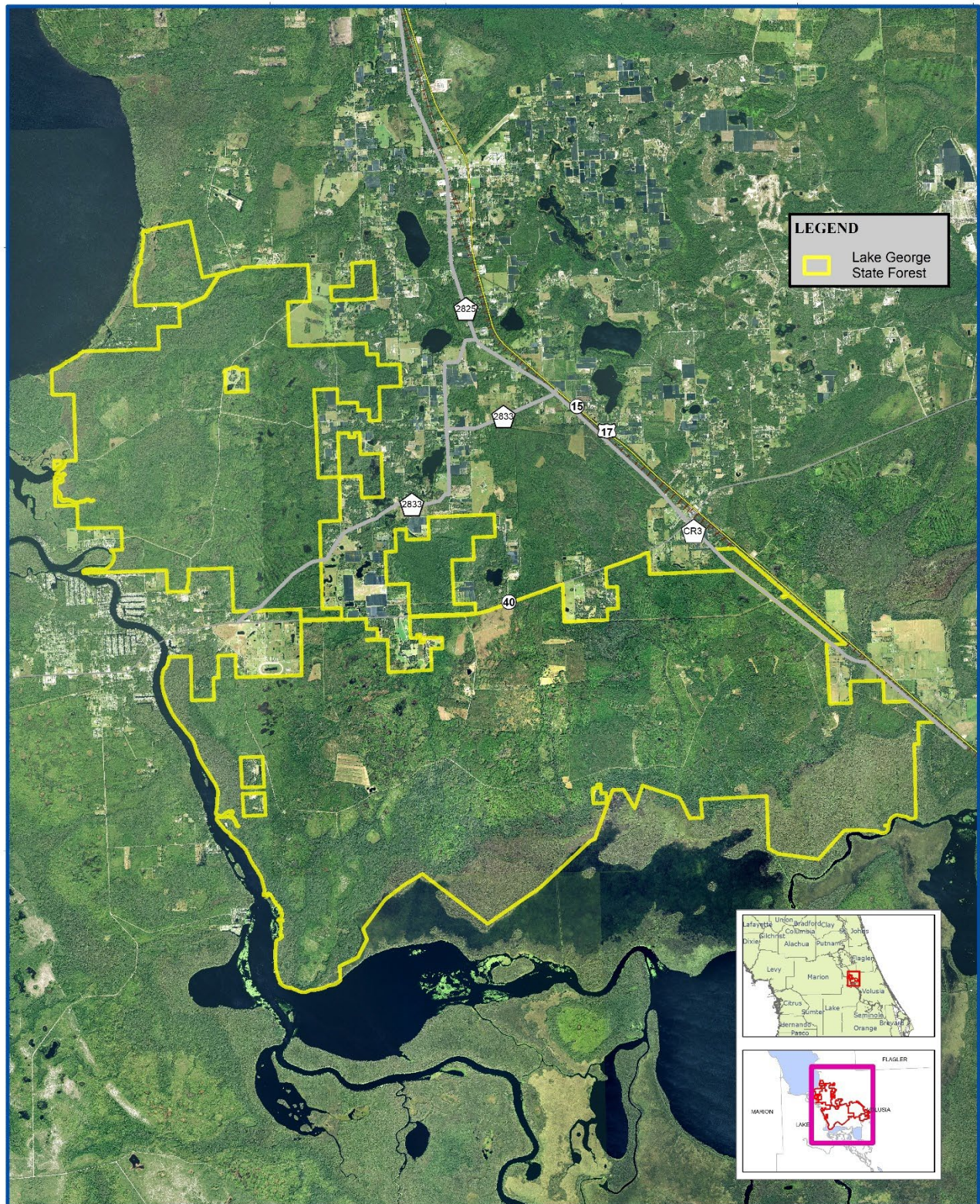
Florida Forest Service

Lake George State Forest Boundary Map

Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

DISCLAIMER:
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Transportation, the Florida Department of
Agriculture, and the Florida Department of
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Managed Area boundaries courtesy of
the Florida Natural Areas Inventory
Primarily Used Surface Data (PDS)
from the US Army Corps of Engineers



LEGEND

□ Lake George
State Forest



0.5 0.25 0 0.5 1
Miles



Map Month/Year: August 2025

1,000 500 0 1,000 2,000 3,000 4,000
Yards



Florida Forest Service

Lake George State Forest

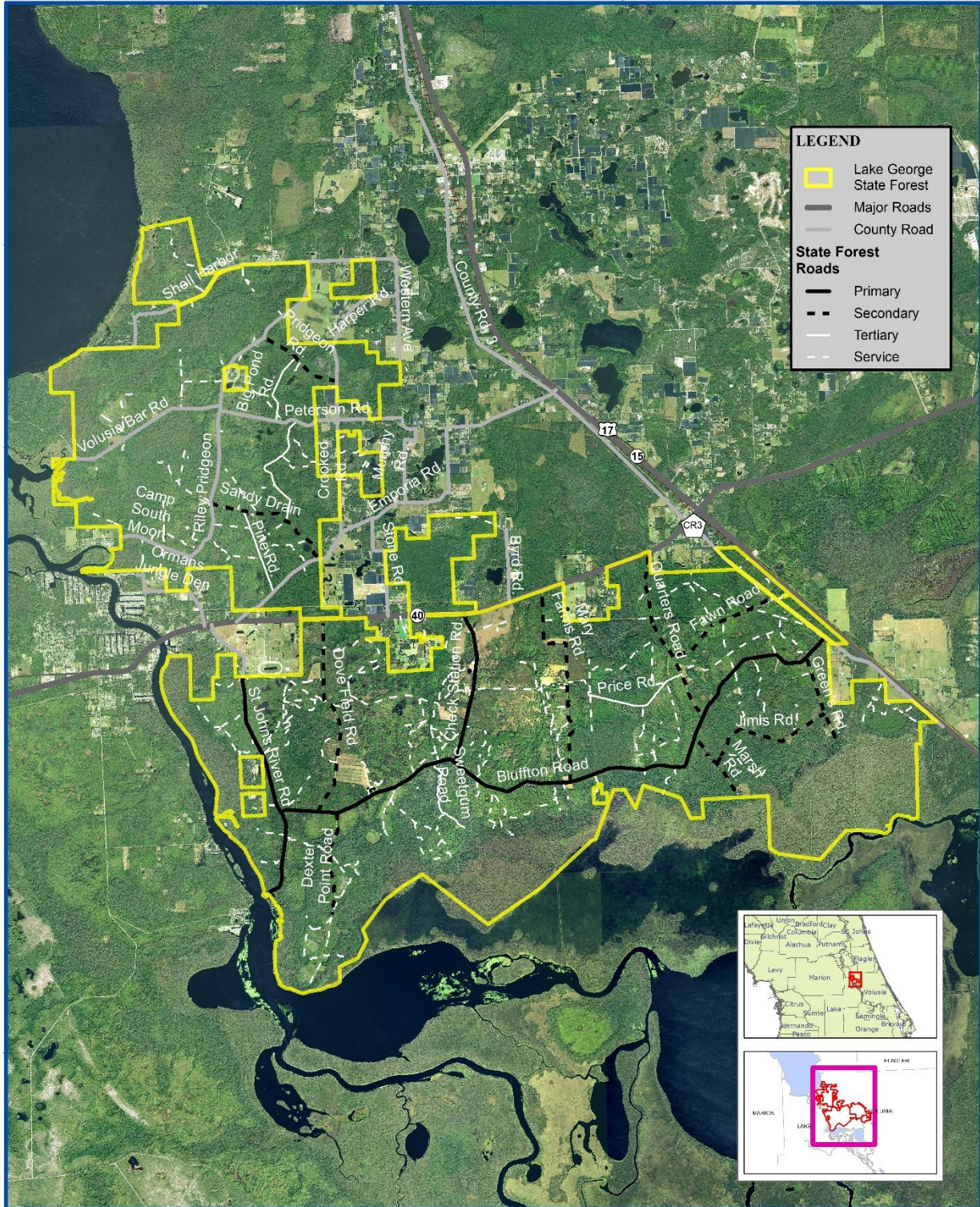
Road Map

Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

81° 20' 00" W

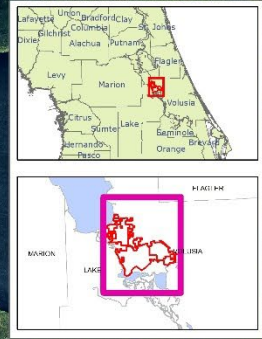
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Managed Area boundaries courtesy of the Florida Department of Agriculture and Forestry (FDOA). Boundaries are based on the Florida Department of Agriculture and Forestry (FDOA) data as of the date of publication of this document.



LEGEND

- Lake George State Forest
- Major Roads
- County Road
- State Forest Roads**
 - Primary
 - Secondary
 - Tertiary
 - Service



Map Month/Year: August 2025



Exhibit C

Optimal Management Boundary Map



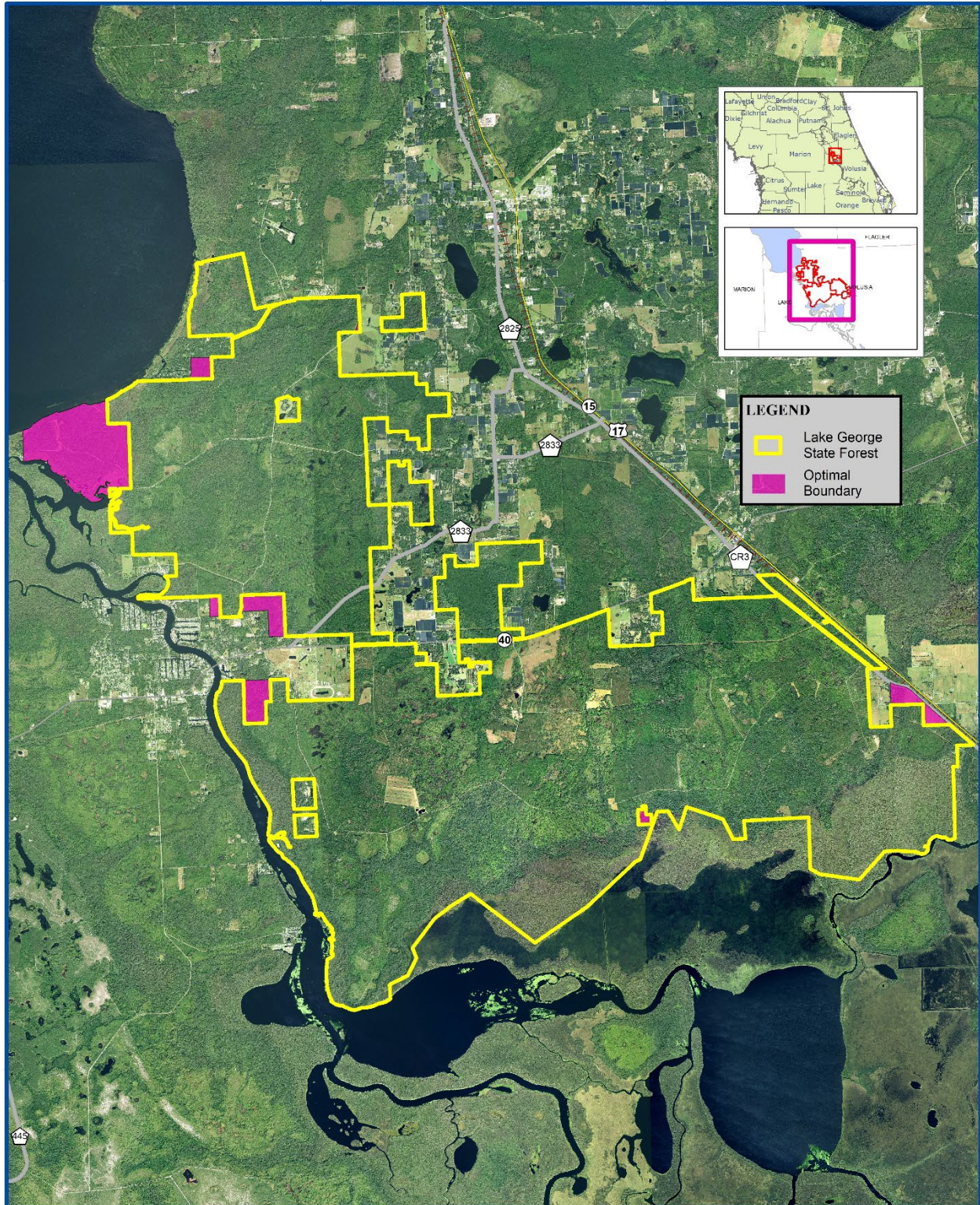
Florida Forest Service

Lake George State Forest Optimal Boundary Map

Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

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of any land or interest in land shown on this map.
The Florida Forest Service makes no claim to ownership
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Map data is courtesy of the Florida Natural Areas Inventory
Formerly USGS Data Users (FISDS)
from the U.S. Army Corps of Engineers



0.5 0.25 0 0.5 1
Miles



81° 00' 00"

Map Month/Year: June 2026

1,000 500 0 1,000 2,000 3,000 4,000
Yards

Exhibit D

Tract and Acreage Map



Florida Forest Service

Lake George State Forest Tract & Acreage Map

Coordinate System: Florida, Alabama
High Accuracy Reference Network (HARN) Datum

81° 30' 00" W

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Formerly Aerial Survey Data (ASD)
from the US Army Corps of Engineers

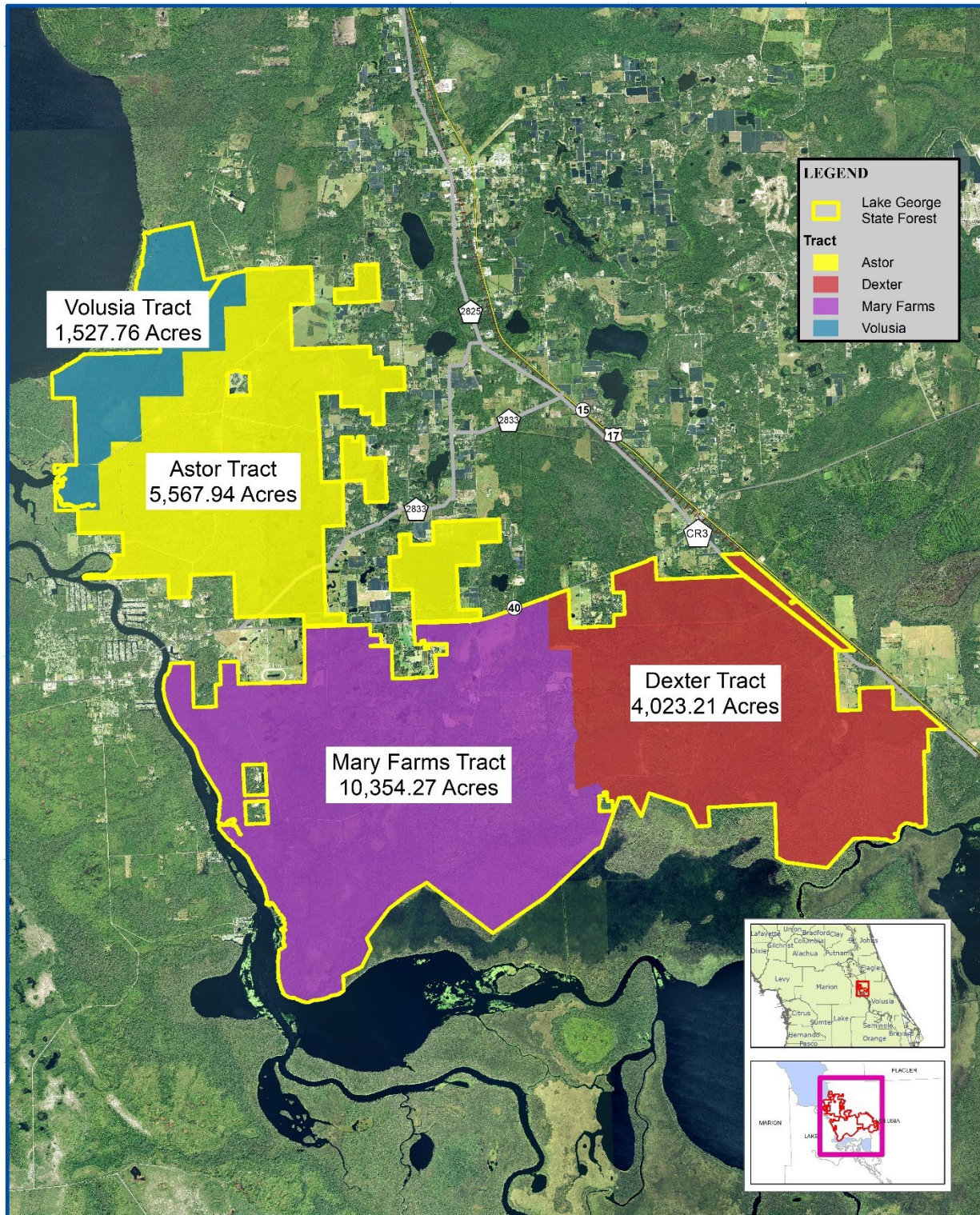


Exhibit E

Facilities, Recreation, and Improvements Map



Florida Forest Service

Lake George State Forest

Facilities, Recreation, and Improvements Map

Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

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Managed Area boundaries courtesy of
the Florida Natural Areas Inventory
Parallels used: Datum 8 (NAD83)
from the US Army Corps of Engineers
in 1984.

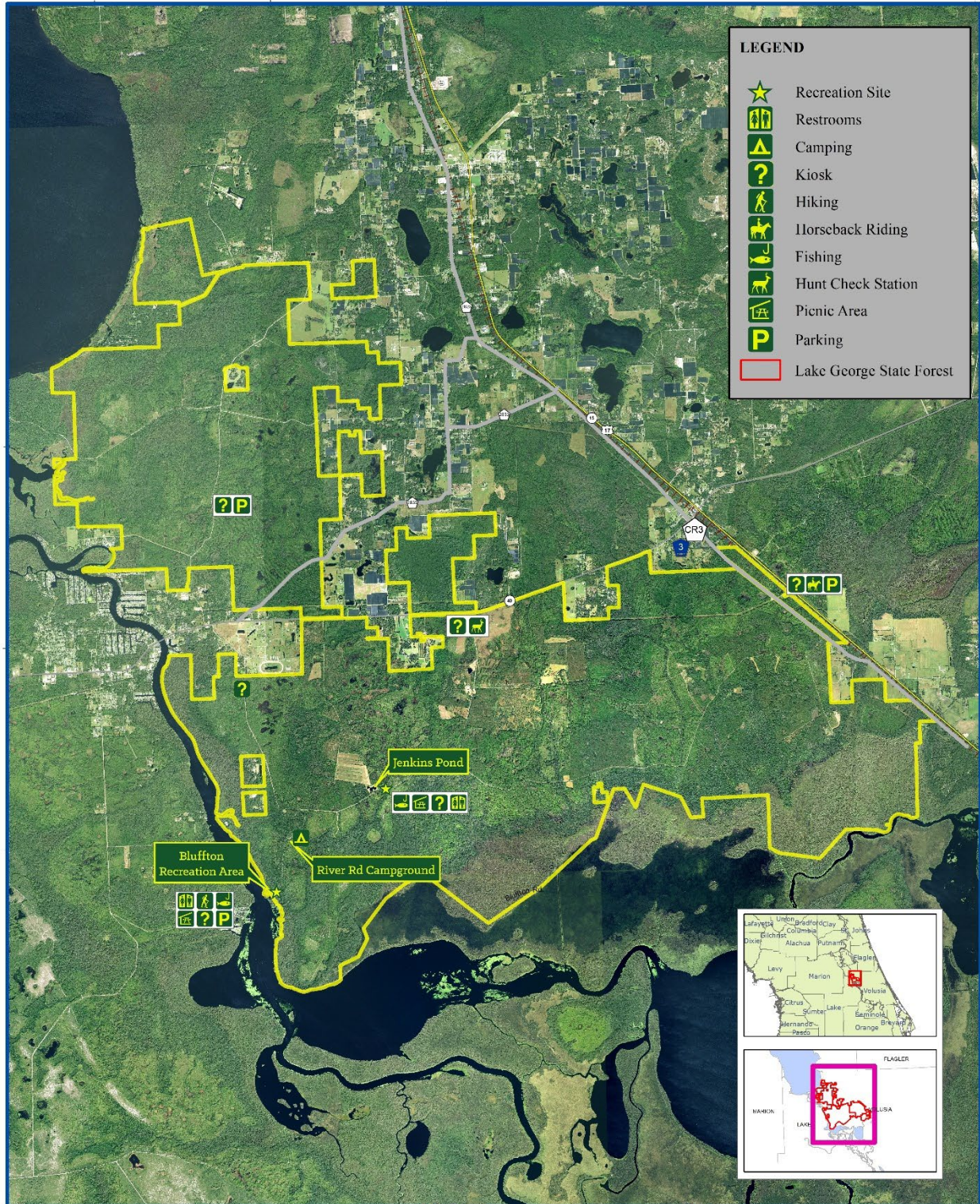


Exhibit F

Proximity
to
Significant Managed Lands Map



Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

DESCRIPTION:
This tool was created by the Florida Forest Service (FFS), Forestry Information Systems (FIS) staff using data from multiple sources. Maps created by FFS are designed for desktop use and are for use by trained staff personnel. This product is not intended for use by the general public.

The Florida Forest Service reserves the right to correct, modify, or delete any information, without notice, at any time. The Florida Forest Service does not warrant, either verbally or in writing, as to the accuracy or completeness of the information contained on this map.

Manages Area Boundary Inventory of the Florida Natural Area Inventory, Formerly Used Defense Sites (FUDS) from the US Army Corps of Engineers

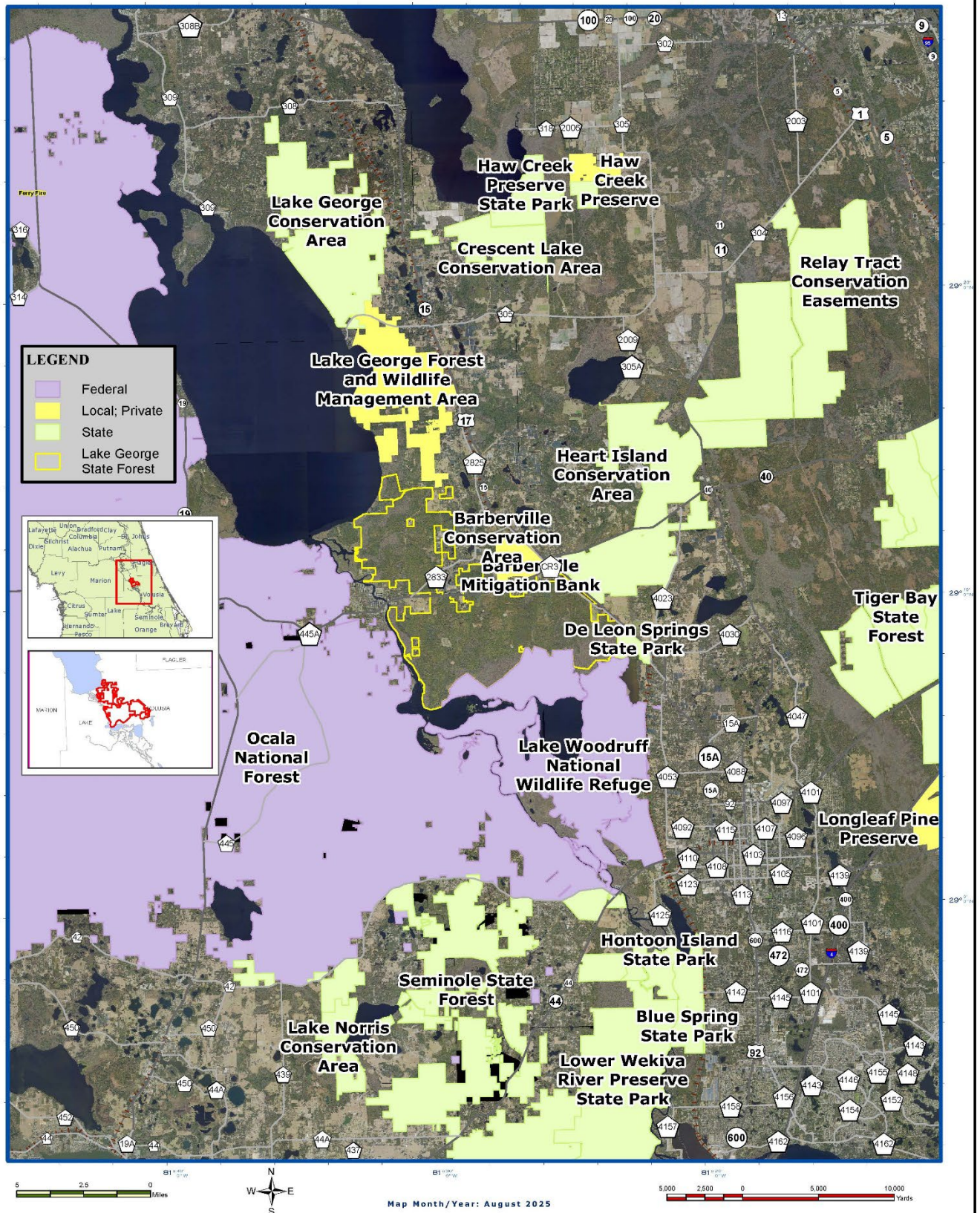


Exhibit G

Division of Historical Resources

Report

on

Archaeological Sites and Cultural Sites



This record search is for informational purposes only and does NOT constitute a project review. This search only identifies resources recorded at the Florida Master Site File and does NOT provide project approval from the Division of Historical Resources. Contact the Compliance and Review Section of the Division of Historical Resources at CompliancePermits@dos.myFlorida.com for project review information.

December 16, 2024

Emily Marsh
State Lands Management Planner
Florida Forest Service
Florida Department of Agriculture and Consumer Services



In response to your inquiry of December 16, 2024, the Florida Master Site File inventory shows 11 previously recorded archeological sites found on Lake George State Forest, Volusia County, Fla.

When interpreting the results of this search, please consider the following information:

- This search area may contain unrecorded archaeological sites, historical structures or other resources even if previously surveyed for cultural resources.
- Federal, state and local laws require formal environmental review for most projects. This search DOES NOT constitute such a review. If your project falls under these laws, you should contact the Compliance and Review Section of the Division of Historical Resources at CompliancePermits@dos.myFlorida.com

Please do not hesitate to contact us if you have any questions regarding the results of this search.

Sincerely,

Eman M. Vovsi, Ph.D.
Data Base Analyst/Records Specialist
Florida Master Site File
Eman.Vovsi@DOS.MyFlorida.com



AR=11
SS=0
CM=0
RG=0
BR=0
Total=11

Cultural Resource Roster

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
VO00010	AR	MORRISON'S CREEK MOUND		Human Remains May Be Present		
VO00019	AR	MOUNT TAYLOR	Volusia		Eligible	NR Listed - Oct 08, 1997
VO00022	AR	BLUFFTON MIDDEN		Human Remains May Be Present	Eligible	
VO00023	AR	BLUFFTON BURIAL MOUND		Human Remains May Be Present		
VO07049	AR	DEXTER POINT MIDDEN	Volusia			
VO07077	AR	BIRD BENCH MARK	UNSP			
VO07497	AR	Jarred				
VO07498	AR	Dexter/Mary Farms Cattle Dip				
VO07677	AR	Grahan	None			
VO08379	AR	Lake George State Forest Well	Astor			
VO09460	AR	Astor Tract Cattle Dipping Vat	Pierson			

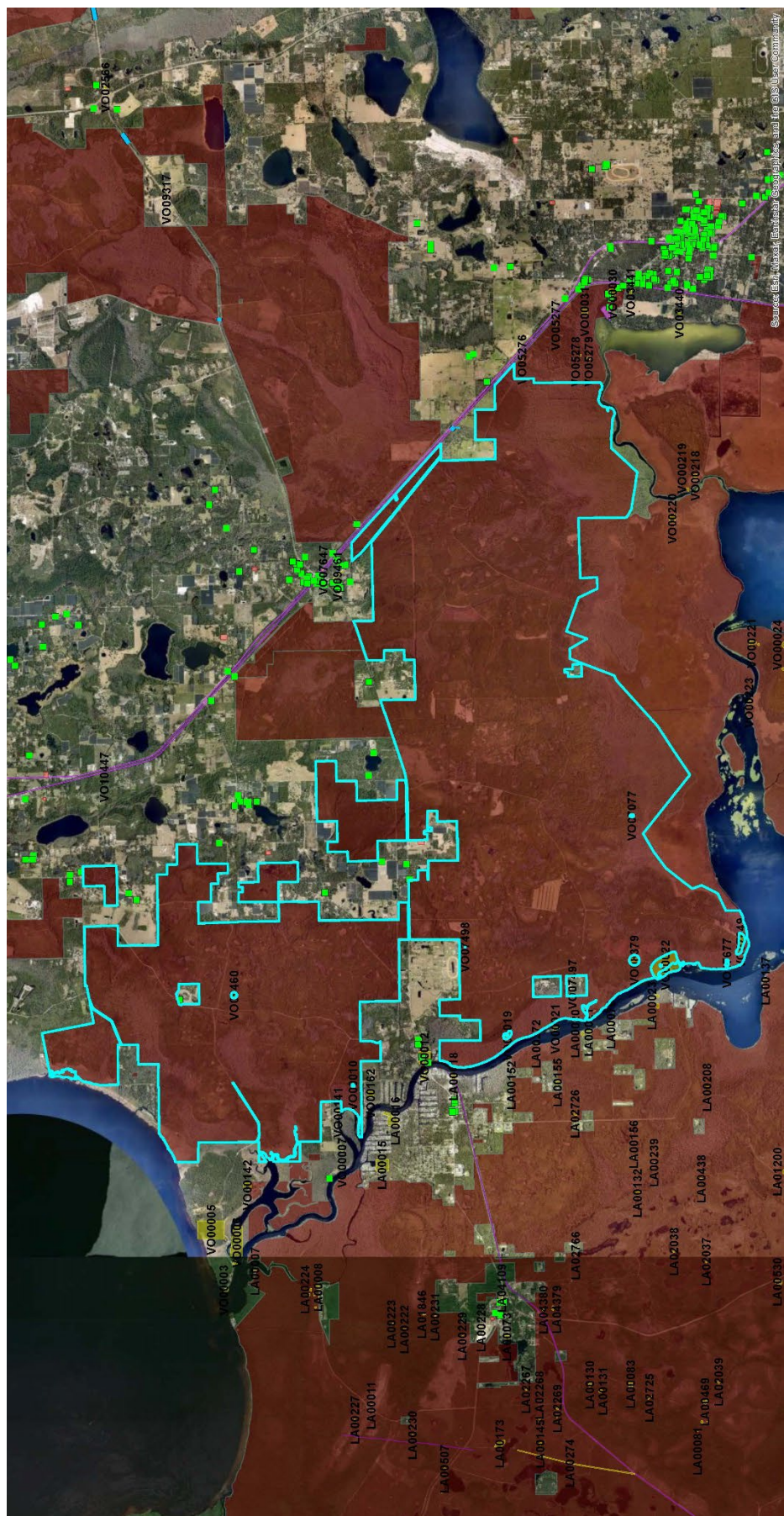


Exhibit H

Management Procedures for Archaeological and Historical Sites and Properties on State Owned or Controlled Lands

Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Properties
(revised June 2021)

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

A. Historic Property Definition

Historic properties include archaeological sites and historic structures as well as other types of resources. Chapter 267, Florida Statutes states: “ ‘*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 Chapter 267, F.S. and state policy related to historic properties, state agencies of the executive branch must provide the Division of Historical Resources (Division) the opportunity to comment on any undertakings with the potential to affect historic properties that are listed, or eligible for listing, in the National Register of Historic Places, 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 undertaking. (267.061(2)(a))

State agencies must consult with the Division when, as a result of state action or assistance, a historic property will be demolished or substantially altered in a way that will adversely affect the property. State agencies must take timely steps to consider feasible and prudent alternatives to the adverse effect. If no feasible or prudent alternatives exist, the state agency must take timely steps to avoid or mitigate the adverse effect. (267.061(2)(b))

State agencies must consult with Division to establish a program to locate, inventory and evaluate all historic properties under ownership or controlled by the agency. (267.061(2)(c))

State agencies are responsible for preserving historic properties under their control. State agencies are directed to use historic properties available to the agency when that use is consistent with the historic property and the agency’s mission. State agencies are also directed to pursue preservation of historic properties to support their continued use. (267.061(2)(d))

C. Statutory Authority

The full text of Chapter 267, F.S. and additional information related to the treatment of historic properties is available at:

<https://dos.myflorida.com/historical/preservation/compliance-and-review/regulations-guidelines/>

D. Management Implementation

Although the Division sits on the Acquisition and Restoration Council and approves land management plans, these plans are conceptual and do not include detailed project information. Specific information for individual projects must be submitted to the Division for review and comment.

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. The Division's recommendations may include, but are not limited to: approval of the project as submitted, recommendation for a cultural resource assessment survey by a qualified professional archaeologist, and modifications to the proposed project to avoid or mitigate potential adverse effects.

Projects such as additions or alterations to historic structures as well as new construction must also be submitted to the Division for review. Projects involving structures fifty years of age or older must be submitted to the Division for a significance determination. In rare cases, structures under fifty years of age may be deemed historically significant.

Adverse effects to historic properties must be avoided when possible, and if avoidance is not possible, additional consultation with the Division is necessary to develop a mitigation plan. Furthermore, managers of state property should make preparations for locating and evaluating historic properties, both archaeological sites and historic structures.

E. Archaeological Resource Management (ARM) Training

The ARM Training Course introduces state land managers to the nature of archaeological resources, Florida archaeology, and the role of the Division in managing state-owned archaeological resources. Participants gain a better understanding of the requirements of state and federal laws with regard to protecting and managing archaeological sites on state managed lands. Participants also receive a certificate recognizing their ability to conduct limited monitoring activities in accordance with the Division's Review Procedure, thereby reducing the time and money spent to comply with state regulations. Additional information regarding the ARM Training Course is available at:

<https://dos.myflorida.com/historical/archaeology/education/arm-training-courses/>

F. Matrix for Ground Disturbance on State Lands

The matrix is a tool designed to help streamline the Division's Review Procedure. The matrix allows state land managers to make decisions about balancing ground disturbance and stewardship of historic resources. The matrix establishes types of undertakings that are either minor or major disturbances and then guides the land manager to consult the Division, conduct ARM-trained project monitoring, or proceed with the project. Additional information regarding the matrix is available at:

<https://dos.myflorida.com/historical/archaeology/education/dhr-matrix-for-ground-disturbance-on-state-lands/>

G. Human Remains Treatment

Chapter 872, *Florida Statutes* makes it illegal to willfully and knowingly disturb human remains. In the event human remains are discovered, cease all activity in the area that may disturb the remains. Leave the bones and nearby items in place. Immediately notify law enforcement or the local district medical examiner of the discovery and follow the provisions of Chapter 872, FS. Additional information regarding the treatment of human remains and cemeteries is available at:

<https://dos.myflorida.com/historical/archaeology/human-remains/>
<https://dos.myflorida.com/historical/archaeology/human-remains/abandoned-cemeteries/what-are-the-applicable-laws-and-regulations/>

H. Division of Historical Resources Review Procedure

Projects on state owned or controlled properties may submit projects to the Division for review using the streamlined State Lands Consultation Form. The form provides instructions to submit projects for review and outlines the necessary information for the Division to complete the review process. The State Lands Consultation Form and additional information about the Division's review process is available at:

<https://dos.myflorida.com/historical/preservation/compliance-and-review/state-lands-review/>

* * *

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

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

StateLandsCompliance@dos.myflorida.com

Phone: (850) 245-6333
Toll Free: (800) 847-7278
Fax: (850) 245-6435

Exhibit I

Soil Survey Maps and Descriptions



Florida Forest Service

Lake George State Forest

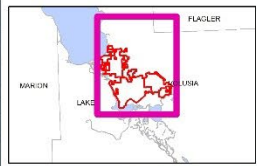
Soils Map

Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

81° 0' W

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Map Area boundaries courtesy of the Florida Forest Service. The Florida Forest Service is not responsible for any claims or liabilities resulting from the use of this map.



LEGEND

Lake George State Forest

Soil Type

- Apopka fine sand, 0-5% slopes
- Arents
- Astatula fine sand, 0-8% slopes
- Astor fine sand
- Basinger fine sand, depressional
- Bluff sandy clay loam
- Cassia fine sand
- Daytona sand, 0-5% slopes
- Deland fine sand, 0-5% slopes
- EauGallie fine sand
- Electra fine sand, 0-5% slopes
- Farmton fine sand
- Gator muck
- Holopaw sand
- Hontoon mucky peat
- Immokalee sand
- Immokalee sand, depressional
- Malabar fine sand
- Myakka fine sand
- Myakka fine sand, depressional

- Myakka-St. Johns complex
- Orsino fine sand, 0-5% slopes
- Pineda fine sand
- Placid fine sand, depressional
- Pomona fine sand
- Pomona fine sand, depressional
- Pomona-St. Johns complex
- Pompano fine sand
- Pompano-Placid complex
- Quartzipsamments, gently sloping
- Samsula muck
- Smyrna fine sand
- St. Johns fine sand
- Tavares fine sand, 0-5% slopes
- Tequesta muck
- Terra Ceia muck
- Tuscahula fine sand
- Valkaria fine sand
- Water
- Wauchula fine sand
- County Road

0.5 0.25 0 0.5 1 Miles



Map Month/Year: August 2025

1,000 500 0 1,000 2,000 3,000 4,000 Yards

Component Legend

This report presents general information about the map units and map unit components in the selected area. It shows map unit symbols and names and the components in each map unit. It also shows the percent of the components in the map units, the kind of component, and the slope range of each component.

Report—Component Legend

Component Legend—Volusia County, Florida							
Map unit symbol and name	Map unit acres	Pct. of map unit	Component name	Component kind	Pct. slope		
					Low	RV	High
1—Apopka fine sand, 0 to 5 percent slopes	10,970						
		85	Apopka	Series	0.0	3.0	5.0
3—Arents	1,205						
		51	Arents	Taxon above family	0.0	1.0	2.0
		49	Arents	Taxon above family	0.0	1.0	2.0
4—Astatula fine sand, 0 to 8 percent slopes	38,620						
		85	Astatula	Series	0.0	4.0	8.0
7—Astor fine sand	3,960						
		85	Astor, frequently flooded	Series	0.0	0.5	1.0
8—Basinger fine sand, frequently ponded, 0 to 1 percent slopes	9,005						
		90	Basinger	Series	0.0	0.5	1.0
10—Bluff sandy clay loam	7,515						
		80	Bluff	Series	1.0	1.0	2.0
13—Cassia fine sand, 0 to 2 percent slopes	7,720						
		80	Cassia	Series	0.0	1.0	2.0
17—Daytona sand, 0 to 5 percent slopes	17,550						
		85	Daytona	Series	0.0	3.0	5.0
20—EauGallie fine sand	12,320						
		70	Eaugallie, non-hydric	Series	0.0	1.0	2.0
		10	Eaugallie, hydric	Series	0.0	1.0	2.0
22—Electra fine sand, 0 to 5 percent slopes	2,760						
		85	Electra	Series	0.0	2.0	5.0

Component Legend--Volusia County, Florida							
Map unit symbol and name	Map unit acres	Pct. of map unit	Component name	Component kind	Pct. slope		
					Low	RV	High
23—Farmton fine sand	8,190						
		70	Farmton, non-hydric	Series	0.0	1.0	2.0
		10	Farmton, hydric	Series	0.0	1.0	2.0
25—Gator muck, 0 to 1 percent slopes, frequently flooded	7,840						
		82	Gator, frequently flooded	Series	0.0	0.5	1.0
26—Holopaw sand	3,870						
		80	Holopaw, non-hydric	Series	0.0	1.0	2.0
27—Hontoon muck, frequently ponded, 0 to 1 percent slopes	20,960						
		80	Hontoon	Series	0.0	0.5	1.0
29—Immokalee sand	34,220						
		65	Immokalee, non-hydric	Series	0.0	1.0	2.0
		10	Immokalee, hydric	Series	0.0	1.0	2.0
30—Immokalee sand, depressional	1,460						
		80	Immokalee, depressional	Series	0.0	0.9	2.0
31—Malabar fine sand	13,090						
		80	Malabar, hydric	Series	0.0	1.0	2.0
32—Myakka-Myakka, wet, fine sands, 0 to 2 percent slopes	52,860						
		70	Myakka	Series	0.0	1.0	2.0
		15	Myakka, wet	Series	0.0	1.0	2.0
33—Myakka fine sand, frequently ponded, 0 to 1 percent slopes	7,370						
		85	Myakka	Series	0.0	0.5	1.0
34—Myakka-St. Johns complex	10,040						
		60	Myakka, depressional	Series	0.0	0.9	2.0
		25	St. Johns, depressional	Series	0.0	0.9	2.0
37—Orsino fine sand, 0 to 5 percent slopes	10,470						
		82	Orsino	Series	0.0	2.0	5.0
45—Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes	12,950						
		45	Pineda	Series	0.0	1.0	2.0
		40	Pineda, wet	Series	0.0	0.5	1.0
48—Placid fine sand, frequently ponded, 0 to 1 percent slopes	2,250						
		80	Placid	Series	0.0	0.5	1.0

Component Legend--Volusia County, Florida							
Map unit symbol and name	Map unit acres	Pct. of map unit	Component name	Component kind	Pct. slope		
					Low	RV	High
49—Pomona fine sand	51,410						
		70	Pomona, non-hydric	Series	0.0	1.0	2.0
		10	Pomona, hydric	Series	0.0	1.0	2.0
50—Pomona fine sand, depressional, 0 to 2 percent slopes	6,810						
		80	Pomona	Series	0.0	1.0	2.0
51—Pomona-St. Johns complex	11,700						
		60	Pomona, depressional	Series	0.0	1.0	2.0
		30	St. Johns, depressional	Series	0.0	1.0	2.0
52—Pompano fine sand	4,005						
		65	Pompano, non-hydric	Series	0.0	1.0	2.0
		16	Pompano, hydric	Series	0.0	1.0	2.0
53—Pompano-Placid complex	7,495						
		55	Pompano, depressional	Series	0.0	0.9	2.0
		25	Placid	Series	0.0	0.9	2.0
54—Quartzipsamments, gently sloping	2,365						
		100	Quartzipsamments	Taxon above family	0.0	3.0	5.0
56—Samsula muck, frequently ponded, 0 to 1 percent slopes	42,735						
		85	Samsula	Series	0.0	0.5	1.0
60—Smyrna-Smyrna, wet, fine sand, 0 to 2 percent slopes	30,820						
		76	Smyrna, non-hydric	Series	0.0	1.0	2.0
		20	Smyrna, hydric	Series	0.0	1.0	2.0
61—St. Johns fine sand	7,140						
		60	St. Johns, hydric	Series	0.0	0.5	2.0
		20	St. Johns, non-hydric	Series	0.0	0.9	2.0
63—Tavares fine sand, 0 to 5 percent slopes	21,390						
		83	Tavares	Series	0.0	3.0	5.0
64—Tequesta muck, frequently ponded, 0 to 1 percent slopes	16,105						
		87	Tequesta	Series	0.0	0.5	1.0
65—Terra Ceia muck, frequently ponded, 0 to 1 percent slopes	28,070						
		80	Terra ceia	Series	0.0	0.5	1.0

Component Legend--Volusia County, Florida							
Map unit symbol and name	Map unit acres	Pct. of map unit	Component name	Component kind	Pct. slope		
					Low	RV	High
69—Tuscahill fine sand, 0 to 2 percent slopes	14,570						
		84	Tuscahill	Series	0.0	1.0	2.0
72—Valkaria fine sand, 0 to 2 percent slopes	2,245						
		85	Valkaria	Series	0.0	1.0	2.0
75—Wauchula fine sand	14,345						
		75	Wauchula, non-hydric	Series	0.0	1.0	2.0
		10	Wauchula, hydric	Series	0.0	1.0	2.0
99—Water	85,685						
		100	Water	Miscellaneous area			

Data Source Information

Soil Survey Area: Volusia County, Florida
 Survey Area Data: Version 23, Aug 26, 2024

Map Unit Description (Brief, Generated)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, provide information on the composition of map units and properties of their components.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The Map Unit Description (Brief, Generated) report displays a generated description of the major soils that occur in a map unit. Descriptions of non-soil (miscellaneous areas) and minor map unit components are not included. This description is generated from the underlying soil attribute data.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description (Brief, Generated)

Volusia County, Florida

Map Unit: 1—Apopka fine sand, 0 to 5 percent slopes

Component: Apopka (85%)

The Apopka component makes up 85 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridges on marine terraces on coastal plains, hills on marine terraces on coastal plains. The parent material consists of eolian deposits and/or sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Electra (4%)

Generated brief soil descriptions are created for major soil components. The Electra soil is a minor component.

Component: Orsino (4%)

Generated brief soil descriptions are created for major soil components. The Orsino soil is a minor component.

Component: Astatula (4%)

Generated brief soil descriptions are created for major soil components. The Astatula soil is a minor component.

Component: Tavares (3%)

Generated brief soil descriptions are created for major soil components. The Tavares soil is a minor component.

Map Unit: 3—Arents**Component:** Arents (51%)

The Arents component makes up 51 percent of the map unit. Slopes are 0 to 2 percent. This component is on fills, rises on marine terraces on coastal plains. The parent material consists of altered marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 0 percent. Nonirrigated land capability classification is 4s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Arents (49%)

The Arents component makes up 49 percent of the map unit. Slopes are 0 to 2 percent. This component is on sanitary landfills on marine terraces on coastal plains, rises on marine terraces on coastal plains. The parent material consists of altered marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 36 inches during June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 0 percent. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map Unit: 4—Astatula fine sand, 0 to 8 percent slopes

Component: Astatula (85%)

The Astatula component makes up 85 percent of the map unit. Slopes are 0 to 8 percent. This component is on ridges, coastal plains. The parent material consists of eolian or sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive layer is very high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R155XY230FL Sandy Scrub on Ridges, Knolls, and Dunes of Xeric Uplands ecological site. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Orsino (6%)

Generated brief soil descriptions are created for major soil components. The Orsino soil is a minor component.

Component: Apopka (6%)

Generated brief soil descriptions are created for major soil components. The Apopka soil is a minor component.

Component: Paola (3%)

Generated brief soil descriptions are created for major soil components. The Paola soil is a minor component.

Map Unit: 7—Astor fine sand

Component: Astor, frequently flooded (85%)

The Astor, frequently flooded component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on flood plains on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 6 percent. This component is in the R155XY030FL Sandy Freshwater Floodplain Marshes and Swamps ecological site. Nonirrigated land capability classification is 6w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: EauGallie, hydric (3%)

Generated brief soil descriptions are created for major soil components. The EauGallie, hydric soil is a minor component.

Component: Basinger, depressional (3%)

Generated brief soil descriptions are created for major soil components. The Basinger, depressional soil is a minor component.

Component: Gator (3%)

Generated brief soil descriptions are created for major soil components. The Gator soil is a minor component.

Component: Pompano, hydric (2%)

Generated brief soil descriptions are created for major soil components. The Pompano, hydric soil is a minor component.

Component: Myakka, hydric (2%)

Generated brief soil descriptions are created for major soil components. The Myakka, hydric soil is a minor component.

Component: Riviera, hydric (2%)

Generated brief soil descriptions are created for major soil components. The Riviera, hydric soil is a minor component.

Map Unit: 8—Basinger fine sand, frequently ponded, 0 to 1 percent slopes

Component: Basinger (90%)

The Basinger component makes up 90 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during July, August, September, October. Organic matter content in the surface horizon is about 5 percent. This component is in the R155XY070FL Sandy Freshwater Isolated Marshes and Swamps ecological site. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Smyrna (5%)

Generated brief soil descriptions are created for major soil components. The Smyrna soil is a minor component.

Component: Samsula (3%)

Generated brief soil descriptions are created for major soil components. The Samsula soil is a minor component.

Component: Floridana (2%)

Generated brief soil descriptions are created for major soil components. The Floridana soil is a minor component.

Map Unit: 10—Bluff sandy clay loam

Component: Bluff (80%)

The Bluff component makes up 80 percent of the map unit. Slopes are 1 to 2 percent. This component is on stream terraces on flood plains on marine terraces on coastal plains. The parent material consists of loamy and clayey marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is high. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 8 percent. This component is in the R155XY050FL Loamy and Clayey Freshwater Floodplain Marshes and Swamps ecological site. Nonirrigated land capability classification is 5w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Gator (7%)

Generated brief soil descriptions are created for major soil components. The Gator soil is a minor component.

Component: Chobee, frequently flooded (7%)

Generated brief soil descriptions are created for major soil components. The Chobee, frequently flooded soil is a minor component.

Component: Holopaw, hydric (6%)

Generated brief soil descriptions are created for major soil components. The Holopaw, hydric soil is a minor component.

Map Unit: 13—Cassia fine sand, 0 to 2 percent slopes

Component: Cassia (80%)

The Cassia component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during June, July, August, September, October, November. Organic matter content in the surface horizon is about 1 percent. This component is in the F155XY150FL Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands ecological site. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Myakka (7%)

Generated brief soil descriptions are created for major soil components. The Myakka soil is a minor component.

Component: Pomello (6%)

Generated brief soil descriptions are created for major soil components. The Pomello soil is a minor component.

Component: Satellite (4%)

Generated brief soil descriptions are created for major soil components. The Satellite soil is a minor component.

Component: Jonathan (3%)

Generated brief soil descriptions are created for major soil components. The Jonathan soil is a minor component.

Map Unit: 17—Daytona sand, 0 to 5 percent slopes**Component:** Daytona (85%)

The Daytona component makes up 85 percent of the map unit. Slopes are 0 to 5 percent. This component is on rises on marine terraces on coastal plains. The parent material consists of sandy marine deposits and/or eolian deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 50 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 1 percent. This component is in the R155XY180FL Sandy Scrub on Rises, Ridges, and Knolls of Mesic Uplands ecological site. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Cassia (4%)

Generated brief soil descriptions are created for major soil components. The Cassia soil is a minor component.

Component: Immokalee (4%)

Generated brief soil descriptions are created for major soil components. The Immokalee soil is a minor component.

Component: Orsino (2%)

Generated brief soil descriptions are created for major soil components. The Orsino soil is a minor component.

Component: St. Lucie (2%)

Generated brief soil descriptions are created for major soil components. The St. Lucie soil is a minor component.

Component: Satellite (2%)

Generated brief soil descriptions are created for major soil components. The Satellite soil is a minor component.

Component: Pompano (1%)

Generated brief soil descriptions are created for major soil components. The Pompano soil is a minor component.

Map Unit: 20—EauGallie fine sand

Component: EauGallie, non-hydric (70%)

The EauGallie, non-hydric component makes up 70 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during January, February, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 2 percent. This component is in the F155XY120FL Sandy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: EauGallie, hydric (10%)

The EauGallie, hydric component makes up 10 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during June, July, August, September. Organic matter content in the surface horizon is about 2 percent. This component is in the F155XY120FL Sandy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Pinellas, non-hydric (7%)

Generated brief soil descriptions are created for major soil components. The Pinellas, non-hydric soil is a minor component.

Component: Farmton, non-hydric (7%)

Generated brief soil descriptions are created for major soil components. The Farmton, non-hydric soil is a minor component.

Component: Wabasso, non-hydric (6%)

Generated brief soil descriptions are created for major soil components. The Wabasso, non-hydric soil is a minor component.

Map Unit: 22—Electra fine sand, 0 to 5 percent slopes

Component: Electra (85%)

The Electra component makes up 85 percent of the map unit. Slopes are 0 to 5 percent. This component is on knolls, coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during June, July, August, September, October, November. Organic matter content in the surface horizon is about 2 percent. This component is in the F155XY150FL Sandy Flatwoods and Hammocks on Rises and Knolls of Mesic Uplands ecological site. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Pomello (8%)

Generated brief soil descriptions are created for major soil components. The Pomello soil is a minor component.

Component: Adamsville (3%)

Generated brief soil descriptions are created for major soil components. The Adamsville soil is a minor component.

Component: Ankona (2%)

Generated brief soil descriptions are created for major soil components. The Ankona soil is a minor component.

Component: Sparr (2%)

Generated brief soil descriptions are created for major soil components. The Sparr soil is a minor component.

Map Unit: 23—Farmton fine sand**Component:** Farmton, non-hydric (70%)

The Farmton, non-hydric component makes up 70 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 2 percent. This component is in the F155XY120FL Sandy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Farmton, hydric (10%)

The Farmton, hydric component makes up 10 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during June, July, August, September. Organic matter content in the surface horizon is about 2 percent. This component is in the F155XY120FL Sandy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: EauGallie, non-hydric (4%)

Generated brief soil descriptions are created for major soil components. The EauGallie, non-hydric soil is a minor component.

Component: Basinger, depressional (4%)

Generated brief soil descriptions are created for major soil components. The Basinger, depressional soil is a minor component.

Component: Myakka, non-hydric (3%)

Generated brief soil descriptions are created for major soil components. The Myakka, non-hydric soil is a minor component.

Component: Immokalee, non-hydric (3%)

Generated brief soil descriptions are created for major soil components. The Immokalee, non-hydric soil is a minor component.

Component: Wauchula, non-hydric (3%)

Generated brief soil descriptions are created for major soil components. The Wauchula, non-hydric soil is a minor component.

Component: Pomona, non-hydric (3%)

Generated brief soil descriptions are created for major soil components. The Pomona, non-hydric soil is a minor component.

Map Unit: 25—Gator muck, 0 to 1 percent slopes, frequently flooded

Component: Gator, frequently flooded (82%)

The Gator, frequently flooded component makes up 82 percent of the map unit. Slopes are 0 to 1 percent. This component is on flood plains on marine terraces on coastal plains. The parent material consists of herbaceous organic material over sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. This component is in the R155XY060FL Organic Freshwater Floodplain Marshes and Swamps ecological site. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Terra Ceia, frequently flooded (6%)

Generated brief soil descriptions are created for major soil components. The Terra Ceia, frequently flooded soil is a minor component.

Component: Floridana, frequently flooded (5%)

Generated brief soil descriptions are created for major soil components. The Floridana, frequently flooded soil is a minor component.

Component: Pompano (3%)

Generated brief soil descriptions are created for major soil components. The Pompano soil is a minor component.

Component: St. Johns (2%)

Generated brief soil descriptions are created for major soil components. The St. Johns soil is a minor component.

Component: Tequesta (2%)

Generated brief soil descriptions are created for major soil components. The Tequesta soil is a minor component.

Map Unit: 26—Holopaw sand

Component: Holopaw, non-hydric (80%)

The Holopaw, non-hydric component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 10 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 3 percent. This component is in the F155XY120FL Sandy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Holopaw, hydric (5%)

Generated brief soil descriptions are created for major soil components. The Holopaw, hydric soil is a minor component.

Component: Pineda, non-hydric (3%)

Generated brief soil descriptions are created for major soil components. The Pineda, non-hydric soil is a minor component.

Component: Pomona, non-hydric (3%)

Generated brief soil descriptions are created for major soil components. The Pomona, non-hydric soil is a minor component.

Component: Farmton, non-hydric (3%)

Generated brief soil descriptions are created for major soil components. The Farmton, non-hydric soil is a minor component.

Component: Riviera, non-hydric (3%)

Generated brief soil descriptions are created for major soil components. The Riviera, non-hydric soil is a minor component.

Component: Malabar, hydric (3%)

Generated brief soil descriptions are created for major soil components. The Malabar, hydric soil is a minor component.

Map Unit: 27—Hontoon muck, frequently ponded, 0 to 1 percent slopes

Component: Hontoon (80%)

The Hontoon component makes up 80 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of herbaceous organic material. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 50 percent. This component is in the R155XY100FL Organic Freshwater Isolated Marshes and Swamps ecological site. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Samsula (7%)

Generated brief soil descriptions are created for major soil components. The Samsula soil is a minor component.

Component: Placid (5%)

Generated brief soil descriptions are created for major soil components. The Placid soil is a minor component.

Component: Basinger (4%)

Generated brief soil descriptions are created for major soil components. The Basinger soil is a minor component.

Component: Myakka (2%)

Generated brief soil descriptions are created for major soil components. The Myakka soil is a minor component.

Component: Pompano (2%)

Generated brief soil descriptions are created for major soil components. The Pompano soil is a minor component.

Map Unit: 29—Immokalee sand

Component: Immokalee, non-hydric (65%)

The Immokalee, non-hydric component makes up 65 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during January, February, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 2 percent. This component is in the F155XY120FL Sandy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Immokalee, hydric (10%)

The Immokalee, hydric component makes up 10 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during July, August, September. Organic matter content in the surface horizon is about 2 percent. This component is in the F155XY120FL Sandy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Basinger, depressional (4%)

Generated brief soil descriptions are created for major soil components. The Basinger, depressional soil is a minor component.

Component: Myakka, non-hydric (4%)

Generated brief soil descriptions are created for major soil components. The Myakka, non-hydric soil is a minor component.

Component: Placid (4%)

Generated brief soil descriptions are created for major soil components. The Placid soil is a minor component.

Component: Daytona (4%)

Generated brief soil descriptions are created for major soil components. The Daytona soil is a minor component.

Component: St. Johns, hydric (3%)

Generated brief soil descriptions are created for major soil components. The St. Johns, hydric soil is a minor component.

Component: Satellite (3%)

Generated brief soil descriptions are created for major soil components. The Satellite soil is a minor component.

Component: Smyrna, non-hydric (3%)

Generated brief soil descriptions are created for major soil components. The Smyrna, non-hydric soil is a minor component.

Map Unit: 30—Immokalee sand, depressional

Component: Immokalee, depressional (80%)

The Immokalee, depressional component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions on marine terraces on coastal plains, drainageways on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during June, July, August, September. Organic matter content in the surface horizon is about 2 percent. This component is in the R155XY070FL Sandy Freshwater Isolated Marshes and Swamps ecological site. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Myakka, depressional (4%)

Generated brief soil descriptions are created for major soil components. The Myakka, depressional soil is a minor component.

Component: Basinger, depressional (4%)

Generated brief soil descriptions are created for major soil components. The Basinger, depressional soil is a minor component.

Component: Placid (4%)

Generated brief soil descriptions are created for major soil components. The Placid soil is a minor component.

Component: Pompano, depressional (4%)

Generated brief soil descriptions are created for major soil components. The Pompano, depressional soil is a minor component.

Component: St. Johns, hydric (4%)

Generated brief soil descriptions are created for major soil components. The St. Johns, hydric soil is a minor component.

Map Unit: 31—Malabar fine sand**Component:** Malabar, hydric (80%)

The Malabar, hydric component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 2 inches during June, July, August, September. Organic matter content in the surface horizon is about 3 percent. This component is in the R155XY070FL Sandy Freshwater Isolated Marshes and Swamps ecological site. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Malabar, non-hydric (5%)

Generated brief soil descriptions are created for major soil components. The Malabar, non-hydric soil is a minor component.

Component: Pineda, hydric (3%)

Generated brief soil descriptions are created for major soil components. The Pineda, hydric soil is a minor component.

Component: Basinger, depressional (3%)

Generated brief soil descriptions are created for major soil components. The Basinger, depressional soil is a minor component.

Component: Holopaw, hydric (3%)

Generated brief soil descriptions are created for major soil components. The Holopaw, hydric soil is a minor component.

Component: Riviera, hydric (2%)

Generated brief soil descriptions are created for major soil components. The Riviera, hydric soil is a minor component.

Component: Valkaria (2%)

Generated brief soil descriptions are created for major soil components. The Valkaria soil is a minor component.

Component: Pompano, hydric (2%)

Generated brief soil descriptions are created for major soil components. The Pompano, hydric soil is a minor component.

Map Unit: 32—Myakka-Myakka, wet, fine sands, 0 to 2 percent slopes

Component: Myakka (70%)

The Myakka component makes up 70 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods, coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during June, July, August, September, October, November. Organic matter content in the surface horizon is about 2 percent. This component is in the F155XY120FL Sandy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Myakka, wet (15%)

The Myakka, wet component makes up 15 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods, coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during July, August, September, October. Organic matter content in the surface horizon is about 2 percent. This component is in the F155XY120FL Sandy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Basinger (5%)

Generated brief soil descriptions are created for major soil components. The Basinger soil is a minor component.

Component: Placid (5%)

Generated brief soil descriptions are created for major soil components. The Placid soil is a minor component.

Component: EauGallie (5%)

Generated brief soil descriptions are created for major soil components. The EauGallie soil is a minor component.

Map Unit: 33—Myakka fine sand, frequently ponded, 0 to 1 percent slopes**Component:** Myakka (85%)

The Myakka component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during July, August, September, October. Organic matter content in the surface horizon is about 4 percent. This component is in the R155XY070FL Sandy Freshwater Isolated Marshes and Swamps ecological site. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Pompano (4%)

Generated brief soil descriptions are created for major soil components. The Pompano soil is a minor component.

Component: Placid (3%)

Generated brief soil descriptions are created for major soil components. The Placid soil is a minor component.

Component: St. Johns (3%)

Generated brief soil descriptions are created for major soil components. The St. Johns soil is a minor component.

Component: Immokalee (3%)

Generated brief soil descriptions are created for major soil components. The Immokalee soil is a minor component.

Component: Samsula (1%)

Generated brief soil descriptions are created for major soil components. The Samsula soil is a minor component.

Component: Floridana (1%)

Generated brief soil descriptions are created for major soil components. The Floridana soil is a minor component.

Map Unit: 34—Myakka-St. Johns complex

Component: Myakka, depressional (60%)

The Myakka, depressional component makes up 60 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 2 percent. This component is in the R155XY070FL Sandy Freshwater Isolated Marshes and Swamps ecological site. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: St. Johns, depressional (25%)

The St. Johns, depressional component makes up 25 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions on marine terraces on coastal plains, drainageways on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 3 percent. This component is in the R155XY070FL Sandy Freshwater Isolated Marshes and Swamps ecological site. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Placid (3%)

Generated brief soil descriptions are created for major soil components. The Placid soil is a minor component.

Component: Basinger, depressional (3%)

Generated brief soil descriptions are created for major soil components. The Basinger, depressional soil is a minor component.

Component: Pompano, depressional (3%)

Generated brief soil descriptions are created for major soil components. The Pompano, depressional soil is a minor component.

Component: Valkaria (2%)

Generated brief soil descriptions are created for major soil components. The Valkaria soil is a minor component.

Component: Samsula (2%)

Generated brief soil descriptions are created for major soil components. The Samsula soil is a minor component.

Component: Pomona, depressional (2%)

Generated brief soil descriptions are created for major soil components. The Pomona, depressional soil is a minor component.

Map Unit: 37—Orsino fine sand, 0 to 5 percent slopes

Component: Orsino (82%)

The Orsino component makes up 82 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridges on marine terraces on coastal plains. The parent material consists of sandy marine deposits and/or eolian deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is very high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 50 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 2 percent. This component is in the R155XY180FL Sandy Scrub on Rises, Ridges, and Knolls of Mesic Uplands ecological site. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Paola (6%)

Generated brief soil descriptions are created for major soil components. The Paola soil is a minor component.

Component: Cassia (4%)

Generated brief soil descriptions are created for major soil components. The Cassia soil is a minor component.

Component: Daytona (3%)

Generated brief soil descriptions are created for major soil components. The Daytona soil is a minor component.

Component: Tavares (3%)

Generated brief soil descriptions are created for major soil components. The Tavares soil is a minor component.

Component: Immokalee (1%)

Generated brief soil descriptions are created for major soil components. The Immokalee soil is a minor component.

Component: Basinger (1%)

Generated brief soil descriptions are created for major soil components. The Basinger soil is a minor component.

Map Unit: 45—Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes**Component:** Pineda (45%)

The Pineda component makes up 45 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during June, July, August, September, October, November. Organic matter content in the surface horizon is about 3 percent. This component is in the F155XY130FL Sandy over Loamy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Pineda, wet (40%)

The Pineda, wet component makes up 40 percent of the map unit. Slopes are 0 to 1 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during July, August, September, October. Organic matter content in the surface horizon is about 3 percent. This component is in the R155XY080FL Sandy over Loamy Freshwater Isolated Marshes and Swamps ecological site. Nonirrigated land capability classification is 3w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Felda (6%)

Generated brief soil descriptions are created for major soil components. The Felda soil is a minor component.

Component: Wabasso (3%)

Generated brief soil descriptions are created for major soil components. The Wabasso soil is a minor component.

Component: Valkaria (2%)

Generated brief soil descriptions are created for major soil components. The Valkaria soil is a minor component.

Component: Cypress Lake (2%)

Generated brief soil descriptions are created for major soil components. The Cypress Lake soil is a minor component.

Component: Brynwood (2%)

Generated brief soil descriptions are created for major soil components. The Brynwood soil is a minor component.

Map Unit: 48—Placid fine sand, frequently ponded, 0 to 1 percent slopes**Component:** Placid (80%)

The Placid component makes up 80 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during July, August, September, October. Organic matter content in the surface horizon is about 6 percent. This component is in the R155XY070FL Sandy Freshwater Isolated Marshes and Swamps ecological site. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Basinger (7%)

Generated brief soil descriptions are created for major soil components. The Basinger soil is a minor component.

Component: Myakka (5%)

Generated brief soil descriptions are created for major soil components. The Myakka soil is a minor component.

Component: Samsula (3%)

Generated brief soil descriptions are created for major soil components. The Samsula soil is a minor component.

Component: Gentry (3%)

Generated brief soil descriptions are created for major soil components. The Gentry soil is a minor component.

Component: Felda (2%)

Generated brief soil descriptions are created for major soil components. The Felda soil is a minor component.

Map Unit: 49—Pomona fine sand

Component: Pomona, non-hydric (70%)

The Pomona, non-hydric component makes up 70 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 10 inches during June, July, August, September. Organic matter content in the surface horizon is about 2 percent. This component is in the F155XY120FL Sandy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Pomona, hydric (10%)

The Pomona, hydric component makes up 10 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 4 inches during June, July, August, September. Organic matter content in the surface horizon is about 2 percent. This component is in the F155XY120FL Sandy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: EauGallie, non-hydric (4%)

Generated brief soil descriptions are created for major soil components. The EauGallie, non-hydric soil is a minor component.

Component: Basinger, depressional (4%)

Generated brief soil descriptions are created for major soil components. The Basinger, depressional soil is a minor component.

Component: Wauchula, non-hydric (3%)

Generated brief soil descriptions are created for major soil components. The Wauchula, non-hydric soil is a minor component.

Component: Myakka, non-hydric (3%)

Generated brief soil descriptions are created for major soil components. The Myakka, non-hydric soil is a minor component.

Component: Farmton, non-hydric (3%)

Generated brief soil descriptions are created for major soil components. The Farmton, non-hydric soil is a minor component.

Component: Immokalee, non-hydric (3%)

Generated brief soil descriptions are created for major soil components. The Immokalee, non-hydric soil is a minor component.

Map Unit: 50—Pomona fine sand, depressional, 0 to 2 percent slopes

Component: Pomona (80%)

The Pomona component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during June, July, August, September. Organic matter content in the surface horizon is about 2 percent. This component is in the R155XY070FL Sandy Freshwater Isolated Marshes and Swamps ecological site. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Basinger (5%)

Generated brief soil descriptions are created for major soil components. The Basinger soil is a minor component.

Component: Malabar (5%)

Generated brief soil descriptions are created for major soil components. The Malabar soil is a minor component.

Component: Immokalee (5%)

Generated brief soil descriptions are created for major soil components. The Immokalee soil is a minor component.

Component: St. Johns (5%)

Generated brief soil descriptions are created for major soil components. The St. Johns soil is a minor component.

Map Unit: 51—Pomona-St. Johns complex

Component: Pomona, depressional (60%)

The Pomona, depressional component makes up 60 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions on marine terraces on coastal plains, drainageways on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during June, July, August, September. Organic matter content in the surface horizon is about 2 percent. This component is in the R155XY070FL Sandy Freshwater Isolated Marshes and Swamps ecological site. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: St. Johns, depressional (30%)

The St. Johns, depressional component makes up 30 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions on marine terraces on coastal plains, drainageways on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 3 percent. This component is in the R155XY070FL Sandy Freshwater Isolated Marshes and Swamps ecological site. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Basinger, depressional (2%)

Generated brief soil descriptions are created for major soil components. The Basinger, depressional soil is a minor component.

Component: EauGallie, depressional (2%)

Generated brief soil descriptions are created for major soil components. The EauGallie, depressional soil is a minor component.

Component: Malabar, hydric (1%)

Generated brief soil descriptions are created for major soil components. The Malabar, hydric soil is a minor component.

Component: Pompano, depressional (1%)

Generated brief soil descriptions are created for major soil components. The Pompano, depressional soil is a minor component.

Component: Samsula (1%)

Generated brief soil descriptions are created for major soil components. The Samsula soil is a minor component.

Component: Immokalee, non-hydric (1%)

Generated brief soil descriptions are created for major soil components. The Immokalee, non-hydric soil is a minor component.

Component: Placid (1%)

Generated brief soil descriptions are created for major soil components. The Placid soil is a minor component.

Component: Scoggin (1%)

Generated brief soil descriptions are created for major soil components. The Scoggin soil is a minor component.

Map Unit: 52—Pompano fine sand**Component:** Pompano, non-hydric (65%)

The Pompano, non-hydric component makes up 65 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is very high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 10 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 3 percent. This component is in the F155XY120FL Sandy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Pompano, hydric (16%)

The Pompano, hydric component makes up 16 percent of the map unit. Slopes are 0 to 2 percent. This component is on drainageways on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is very high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 2 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 3 percent. This component is in the R155XY070FL Sandy Freshwater Isolated Marshes and Swamps ecological site. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Basinger, depressional (7%)

Generated brief soil descriptions are created for major soil components. The Basinger, depressional soil is a minor component.

Component: Placid (6%)

Generated brief soil descriptions are created for major soil components. The Placid soil is a minor component.

Component: Immokalee, non-hydric (6%)

Generated brief soil descriptions are created for major soil components. The Immokalee, non-hydric soil is a minor component.

Map Unit: 53—Pompano-Placid complex

Component: Pompano, depressional (55%)

The Pompano, depressional component makes up 55 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is very high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 3 percent. This component is in the R155XY070FL Sandy Freshwater Isolated Marshes and Swamps ecological site. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Placid (25%)

The Placid component makes up 25 percent of the map unit. Slopes are 0 to 2 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 6 percent. This component is in the R155XY070FL Sandy Freshwater Isolated Marshes and Swamps ecological site. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Malabar, hydric (4%)

Generated brief soil descriptions are created for major soil components. The Malabar, hydric soil is a minor component.

Component: Riviera, hydric (4%)

Generated brief soil descriptions are created for major soil components. The Riviera, hydric soil is a minor component.

Component: Tequesta (4%)

Generated brief soil descriptions are created for major soil components. The Tequesta soil is a minor component.

Component: Holopaw, hydric (4%)

Generated brief soil descriptions are created for major soil components. The Holopaw, hydric soil is a minor component.

Component: Samsula (4%)

Generated brief soil descriptions are created for major soil components. The Samsula soil is a minor component.

Map Unit: 54—Quartzipsamments, gently sloping

Component: Quartzipsamments (100%)

The Quartzipsamments component makes up 100 percent of the map unit. Slopes are 0 to 5 percent. This component is on fills on rises on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 0 percent. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Map Unit: 56—Samsula muck, frequently ponded, 0 to 1 percent slopes

Component: Samsula (85%)

The Samsula component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of herbaceous organic material over sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. This component is in the R155XY100FL Organic Freshwater Isolated Marshes and Swamps ecological site. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Myakka (3%)

Generated brief soil descriptions are created for major soil components. The Myakka soil is a minor component.

Component: Kaliga (3%)

Generated brief soil descriptions are created for major soil components. The Kaliga soil is a minor component.

Component: Basinger (3%)

Generated brief soil descriptions are created for major soil components. The Basinger soil is a minor component.

Component: Floridana (2%)

Generated brief soil descriptions are created for major soil components. The Floridana soil is a minor component.

Component: Sanibel (2%)

Generated brief soil descriptions are created for major soil components. The Sanibel soil is a minor component.

Component: Anclote (2%)

Generated brief soil descriptions are created for major soil components. The Anclote soil is a minor component.

Map Unit: 60—Smyrna-Smyrna, wet, fine sand, 0 to 2 percent slopes**Component:** Smyrna, non-hydric (76%)

The Smyrna, non-hydric component makes up 76 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during June, July, August, September. Organic matter content in the surface horizon is about 7 percent. This component is in the F155XY120FL Sandy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 4w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 0 within 30 inches of the soil surface.

Component: Smyrna, hydric (20%)

The Smyrna, hydric component makes up 20 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during June, July, August, September. Organic matter content in the surface horizon is about 7 percent. This component is in the F155XY120FL Sandy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 0 within 30 inches of the soil surface.

Component: Basinger, depressional (2%)

Generated brief soil descriptions are created for major soil components. The Basinger, depressional soil is a minor component.

Component: Pomona, non-hydric (1%)

Generated brief soil descriptions are created for major soil components. The Pomona, non-hydric soil is a minor component.

Component: EauGallie, hydric (1%)

Generated brief soil descriptions are created for major soil components. The EauGallie, hydric soil is a minor component.

Map Unit: 61—St. Johns fine sand

Component: St. Johns, hydric (60%)

The St. Johns, hydric component makes up 60 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 3 percent. This component is in the F155XY120FL Sandy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 3w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: St. Johns, non-hydric (20%)

The St. Johns, non-hydric component makes up 20 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 10 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 3 percent. This component is in the F155XY120FL Sandy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Myakka, hydric (5%)

Generated brief soil descriptions are created for major soil components. The Myakka, hydric soil is a minor component.

Component: Basinger, depressional (5%)

Generated brief soil descriptions are created for major soil components. The Basinger, depressional soil is a minor component.

Component: Smyrna, hydric (5%)

Generated brief soil descriptions are created for major soil components. The Smyrna, hydric soil is a minor component.

Component: Placid (5%)

Generated brief soil descriptions are created for major soil components. The Placid soil is a minor component.

Map Unit: 63—Tavares fine sand, 0 to 5 percent slopes**Component:** Tavares (83%)

The Tavares component makes up 83 percent of the map unit. Slopes are 0 to 5 percent. This component is on hills on marine terraces on coastal plains. The parent material consists of eolian or sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 2 percent. This component is in the R155XY180FL Sandy Scrub on Rises, Ridges, and Knolls of Mesic Uplands ecological site. Nonirrigated land capability classification is 3s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Cassia (5%)

Generated brief soil descriptions are created for major soil components. The Cassia soil is a minor component.

Component: Pomello (4%)

Generated brief soil descriptions are created for major soil components. The Pomello soil is a minor component.

Component: Apopka (3%)

Generated brief soil descriptions are created for major soil components. The Apopka soil is a minor component.

Component: Astatula (3%)

Generated brief soil descriptions are created for major soil components. The Astatula soil is a minor component.

Component: Adamsville (2%)

Generated brief soil descriptions are created for major soil components. The Adamsville soil is a minor component.

Map Unit: 64—Tequesta muck, frequently ponded, 0 to 1 percent slopes

Component: Tequesta (87%)

The Tequesta component makes up 87 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of herbaceous organic material over sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during July, August, September, October. Organic matter content in the surface horizon is about 75 percent. This component is in the R155XY100FL Organic Freshwater Isolated Marshes and Swamps ecological site. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Basinger (4%)

Generated brief soil descriptions are created for major soil components. The Basinger soil is a minor component.

Component: Holopaw (3%)

Generated brief soil descriptions are created for major soil components. The Holopaw soil is a minor component.

Component: Sanibel (3%)

Generated brief soil descriptions are created for major soil components. The Sanibel soil is a minor component.

Component: Kaliga (3%)

Generated brief soil descriptions are created for major soil components. The Kaliga soil is a minor component.

Map Unit: 65—Terra Ceia muck, frequently ponded, 0 to 1 percent slopes

Component: Terra Ceia (80%)

The Terra Ceia component makes up 80 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of herbaceous organic material. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. This component is in the R155XY100FL Organic Freshwater Isolated Marshes and Swamps ecological site. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Okeelanta (6%)

Generated brief soil descriptions are created for major soil components. The Okeelanta soil is a minor component.

Component: Gator (5%)

Generated brief soil descriptions are created for major soil components. The Gator soil is a minor component.

Component: Tomoka (3%)

Generated brief soil descriptions are created for major soil components. The Tomoka soil is a minor component.

Component: Okeechobee (2%)

Generated brief soil descriptions are created for major soil components. The Okeechobee soil is a minor component.

Component: Chobee (1%)

Generated brief soil descriptions are created for major soil components. The Chobee soil is a minor component.

Component: Pompano (1%)

Generated brief soil descriptions are created for major soil components. The Pompano soil is a minor component.

Component: Anclothe (1%)

Generated brief soil descriptions are created for major soil components. The Anclothe soil is a minor component.

Component: Placid (1%)

Generated brief soil descriptions are created for major soil components. The Placid soil is a minor component.

Map Unit: 69—Tuscawilla fine sand, 0 to 2 percent slopes

Component: Tuscawilla (84%)

The Tuscawilla component makes up 84 percent of the map unit. Slopes are 0 to 2 percent. This component is on rises, coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is occasionally ponded. A seasonal zone of water saturation is at 3 inches during January, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 3 percent. This component is in the F155XY140FL Loamy and Clayey Flats and Hammocks ecological site. Nonirrigated land capability classification is 3w. This soil meets hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 15 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Wabasso (4%)

Generated brief soil descriptions are created for major soil components. The Wabasso soil is a minor component.

Component: Chobee, flooded (4%)

Generated brief soil descriptions are created for major soil components. The Chobee, flooded soil is a minor component.

Component: Tequesta (4%)

Generated brief soil descriptions are created for major soil components. The Tequesta soil is a minor component.

Component: Jupiter (2%)

Generated brief soil descriptions are created for major soil components. The Jupiter soil is a minor component.

Component: Cypress Lake (2%)

Generated brief soil descriptions are created for major soil components. The Cypress Lake soil is a minor component.

Map Unit: 72—Valkaria fine sand, 0 to 2 percent slopes

Component: Valkaria (85%)

The Valkaria component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during July, August, September, October. Organic matter content in the surface horizon is about 3 percent. This component is in the F155XY120FL Sandy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Myakka (5%)

Generated brief soil descriptions are created for major soil components. The Myakka soil is a minor component.

Component: Pineda (4%)

Generated brief soil descriptions are created for major soil components. The Pineda soil is a minor component.

Component: Malabar (4%)

Generated brief soil descriptions are created for major soil components. The Malabar soil is a minor component.

Component: Satellite (2%)

Generated brief soil descriptions are created for major soil components. The Satellite soil is a minor component.

Map Unit: 75—Wauchula fine sand**Component:** Wauchula, non-hydric (75%)

The Wauchula, non-hydric component makes up 75 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during June, July, August, September. Organic matter content in the surface horizon is about 5 percent. This component is in the F155XY130FL Sandy over Loamy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Wauchula, hydric (10%)

The Wauchula, hydric component makes up 10 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats on marine terraces on coastal plains. The parent material consists of sandy and loamy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 5 inches during June, July, August, September. Organic matter content in the surface horizon is about 5 percent. This component is in the F155XY130FL Sandy over Loamy Flatwoods and Hammocks ecological site. Nonirrigated land capability classification is 3w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

Component: Pomona, non-hydric (4%)

Generated brief soil descriptions are created for major soil components. The Pomona, non-hydric soil is a minor component.

Component: Scoggin (4%)

Generated brief soil descriptions are created for major soil components. The Scoggin soil is a minor component.

Component: Pineda, hydric (4%)

Generated brief soil descriptions are created for major soil components. The Pineda, hydric soil is a minor component.

Component: Wabasso, non-hydric (3%)

Generated brief soil descriptions are created for major soil components. The Wabasso, non-hydric soil is a minor component.

Map Unit: 99—Water

Component: Water (100%)

Generated brief soil descriptions are created for major soil components. The Water is a miscellaneous area.

Data Source Information

Soil Survey Area: Volusia County, Florida
Survey Area Data: Version 23, Aug 26, 2024

Exhibit J

Department
of
Environmental Protection

Outstanding Florida Waters



FLORIDA DEPARTMENT OF Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Alexis A. Lambert
Secretary

December 18th, 2024

Ms. Emily Marsh
Land Management Planner, Florida Forest Service
Florida Department of Agriculture and Consumer Services
3125 Conner Boulevard, Suite I-258, Mail Stop C-25
Tallahassee, FL 32399-1650

RE: Lake George State Forest

Dear Ms. Marsh:

Thank you for your inquiry regarding the surface water quality classifications and Outstanding Florida Waters (OFW) for Lake George State Forest in Volusia County. All of the surface waters within, adjacent to, or within 5 miles of Lake George State Forest are classified as Class III waters pursuant to Rule 62-302.400, Florida Administrative Code (FAC).

According to subsection 62-302.700(9), F.A.C., Lake George State Forest is not designated as an OFW. There are three OFWs directly adjacent to the state forest. This includes the Lake Woodruff National Wildlife Refuge OFW, per subparagraph 62-302.700(9)(b)15., F.A.C., and De Leon Springs State Recreation Area OFW (now called De Leon Springs State Park), per subparagraph 62-302.700(9)(c)16., F.A.C. Lake George State Forest is also adjacent to Ocala National Forest, where certain waters within the National Forest are OFW. Waters that are OFWs within the Ocala National Forest that are closest to the Lake George State Forest are Alexander Springs, Alexander Springs Creek, Juniper Springs, and Juniper Springs Creek, per subparagraph 62-302.700(9)(n)2., F.A.C.

Other important managed areas that are within or adjacent to Lake George State Forest include the Lake George Wildlife Management Area and the Ocala National Forest Wildlife Management Area.

If you have any questions or need additional information about this response, please feel free to contact me via e-mail at Talia.E.Smith-Sickler@FloridaDEP.gov or by phone at 850-245-8068.

Sincerely,

Talia Elisa Smith-Sickler
Standards Development Section
Water Quality Standards Program
Florida Department of Environmental Protection

Lake George State Forest Map (DRAFT):

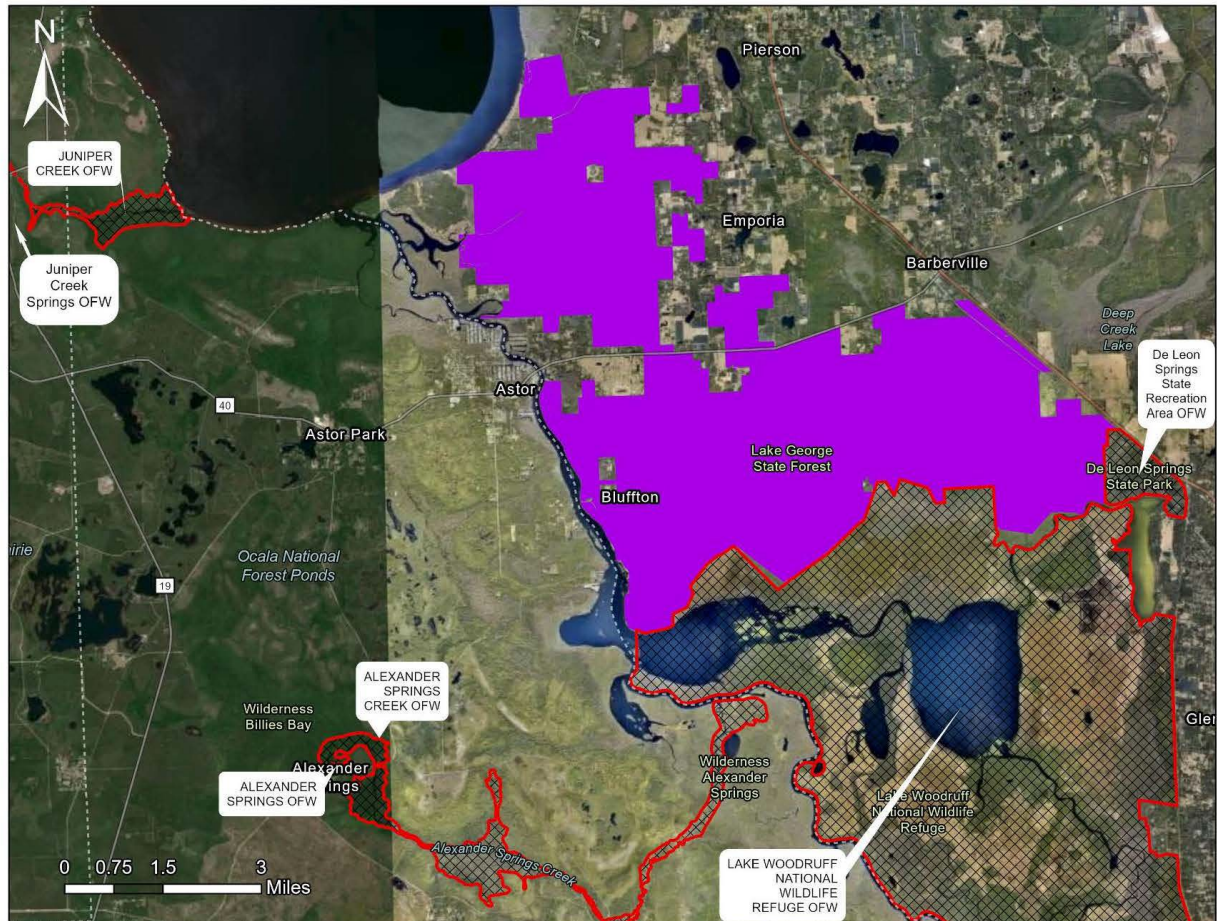


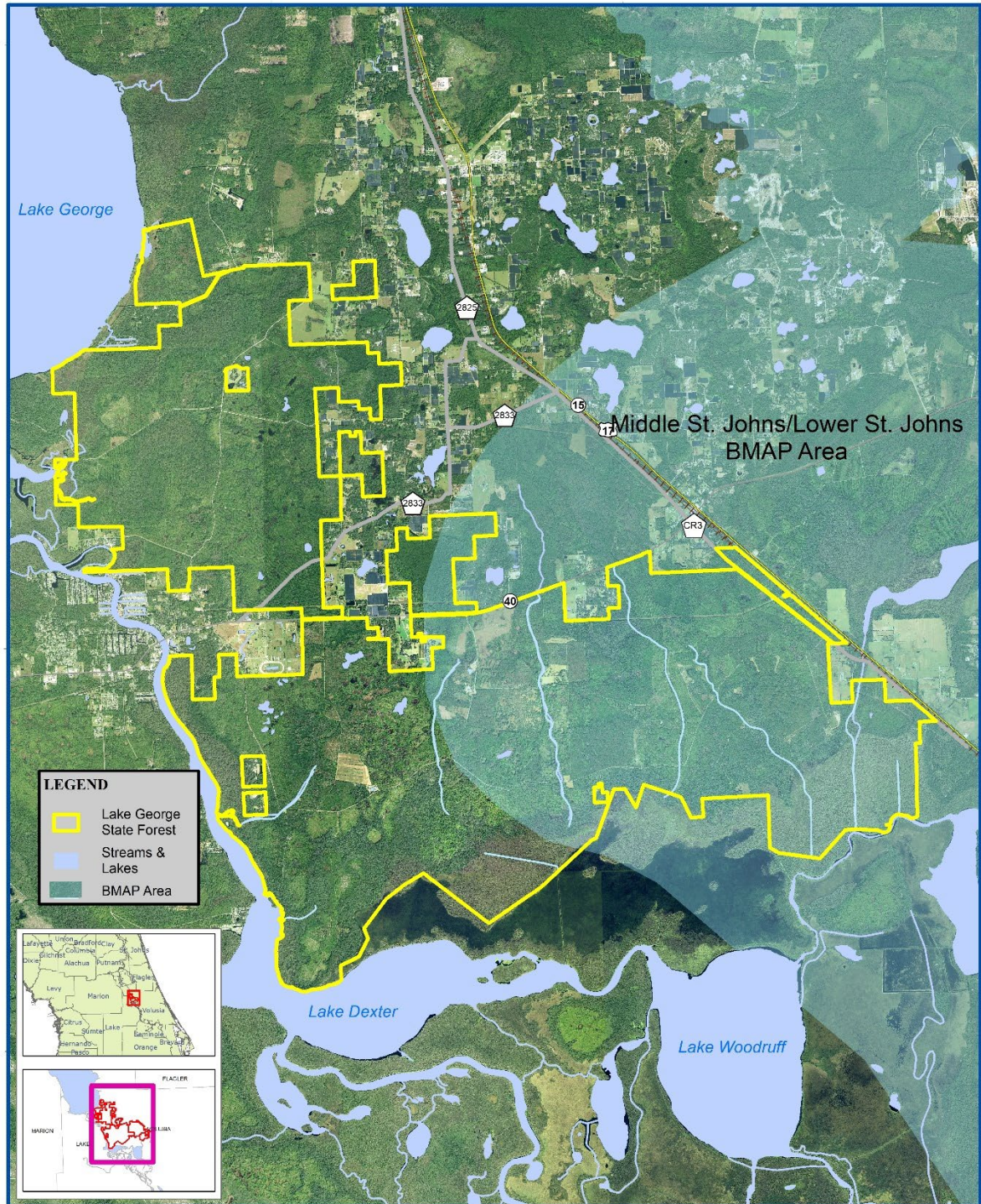
Exhibit K

Water Resources and BMAP Map



USFAC/AFAC:
This is a new unit within The Florida National Guard.
The Air Force Component Division (AFCD) will supply data for their available resources. Those created by FFA are designed for aircraft use and for use by ground-based agencies. This is a data base that will be used by the AFCD to coordinate the use of aircraft, weapons, munitions, and other assets in the future. The AFCD will be responsible for the use of aircraft, weapons, munitions, and other assets in the future. The AFCD will be responsible for the use of aircraft, weapons, munitions, and other assets in the future. The AFCD will be responsible for the use of aircraft, weapons, munitions, and other assets in the future.

Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

 $81^{+32}_{-10} \%$ 

Map Month/Year: August 2025



Exhibit L

Florida Natural Areas Inventory

Managed Area Tracking Record



1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
fax 850-681-9364
www.fnai.org

December 18, 2024

Emily Marsh
Florida Forest Service
Florida Department of Agriculture and Consumer Services
3125 Conner Boulevard
Tallahassee, FL 32399-1650

Dear Ms. Marsh,

Thank you for requesting information from the Florida Natural Areas Inventory (FNAI). At your request we have produced the following report for your project area.

The purpose of this Standard Data Report is to provide objective scientific information on natural resources located in the vicinity of a site of interest, in order to inform those involved in project planning and evaluation. This Report makes no determination of the suitability of a proposed project for this location, or the potential impacts of the project on natural resources in the area.

Project: Lake George State Forest 10-Year LMP
Date Received: 12/16/2024
Location: Volusia County

Element Occurrences

A search of our maps and database indicates that we currently have many element occurrences mapped in the vicinity of the study area (see enclosed map and element occurrence table). Please be advised that a lack of element occurrences in the FNAI database is not a sufficient indication of the absence of rare or endangered species on a site.

The element occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates that some element occurrences occur in the general vicinity of the label point. This may be due to lack of precision of the source data, or an element that occurs over an extended area (such as a wide ranging species or large natural community). For animals and plants, element occurrences generally refer to more than a casual sighting; they usually indicate a viable population of the species. Note that some element occurrences represent historically documented observations which may no longer be extant. Extirpated element occurrences will be marked with an 'X' following the occurrence label on the enclosed map.

*Several of the species and natural communities tracked by the Inventory are considered **data sensitive**. Occurrence records for these elements contain information that we consider sensitive due to collection pressures, extreme rarity, or at the request of the source of the information. The Element Occurrence Record has been labeled "Data Sensitive." We request that you not publish or release specific locational data about these species or communities without consent from the Inventory. If you have any questions concerning this please do not hesitate to call.*



Florida Resources
and Environmental
Analysis Center

Institute of Science
and Public Affairs

The Florida State University

Likely and Potential Rare Species

In addition to documented occurrences, other rare species and natural communities may be identified on or near the site based on habitat models and species range models (see enclosed Biodiversity

Tracking Florida's Biodiversity

Matrix Report). These species should be taken into consideration in field surveys, land management, and impact avoidance and mitigation.

FNAI habitat models indicate areas, which based on land cover type, offer suitable habitat for one or more rare species that is known to occur in the vicinity. Habitat models have been developed for approximately 300 of the rarest species tracked by the Inventory, including all federally listed species.

FNAI species range models indicate areas that are within the known or predicted range of a species, based on climate variables, soils, vegetation, and/or slope. Species range models have been developed for approximately 340 species, including all federally listed species.

The FNAI Biodiversity Matrix Geodatabase compiles Documented, Likely, and Potential species and natural communities for each square mile Matrix Unit statewide.

CLIP

The enclosed map shows natural resource conservation priorities based on the Critical Lands and Waters Identification Project. CLIP is based on many of the same natural resource data developed for the Florida Forever Conservation Needs Assessment, but provides an overall picture of conservation priorities across different resource categories, including biodiversity, landscapes, surface waters, and aggregated CLIP priorities (that combine the individual resource categories). CLIP is also based primarily on remote sensed data and is not intended to be the definitive authority on natural resources on a site.

For more information on CLIP, visit <https://www.fnai.org/services/clip>.

Managed Areas

Portions of the site appear to be located within the Lake George State Forest, managed by the FL Dept. of Agriculture and Consumer Services, Florida Forest Service.

The Managed Areas data layer shows public and privately managed conservation lands throughout the state. Federal, state, local, and privately managed conservation lands are included.

The Inventory always recommends that professionals familiar with Florida's flora and fauna conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species.

Please visit www.fnai.org/species-communities/tracking-main for county or statewide element occurrence distributions and links to more element information.

The database maintained by the Florida Natural Areas Inventory is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources. However, the data are not always based on comprehensive or site-specific field surveys. Therefore this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. Inventory data are designed for the purposes of conservation planning and scientific research, and are not intended for use as the primary criteria for regulatory decisions.

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and the Inventory must be credited as an information source in these publications. **The maps contain sensitive environmental information, please do not distribute or publish without prior consent from FNAI.** FNAI data may not be resold for profit.

Thank you for your use of FNAI services. If I can be of further assistance, please contact me at (850) 224-8207 or at kbrinegar@fnai.fsu.edu.

Tracking Florida's Biodiversity

Emily Marsh

Page 3

December 18, 2024

Sincerely,

Kerri Brinegar

Kerri Brinegar
GIS / Data Services

Encl

Tracking Florida's Biodiversity



Florida
Natural Areas
Inventory

CLIP v4.0 Resource Priorities

Biodiversity Resource Category

- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

Landscape Resource Category

- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

Surface Water Resource Category

- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

Aggregated CLIP Priorities

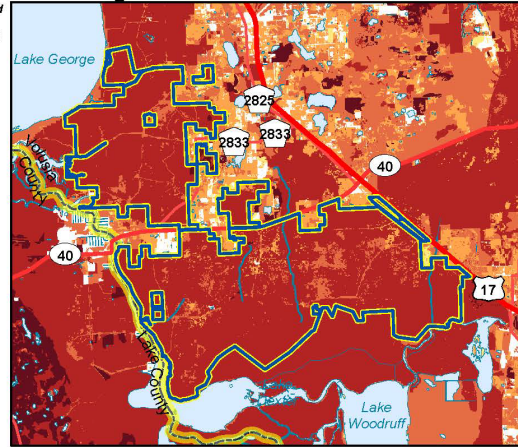
- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

Site Boundary

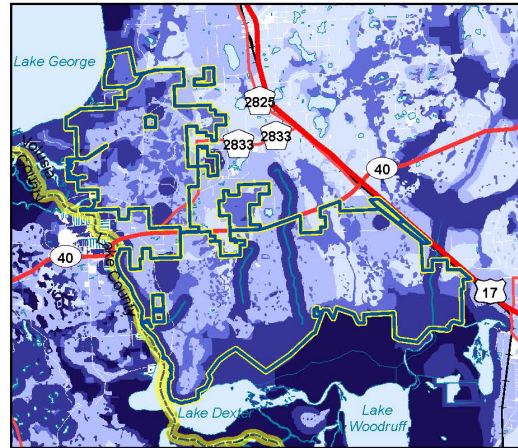
Map should not be interpreted without
accompanying documents.

Critical Lands and Waters Identification Project
(CLIP) is a cooperative effort between the FSU
Florida Natural Areas Inventory, UF Center for
Landscape Conservation Planning, and FL Fish &
Wildlife Conservation Commission, with additional
funding from FL Dept of Environmental Protection
and US Fish & Wildlife Service.

Lake George State Forest 10-Year LMP



CLIP Biodiversity Resource Priorities

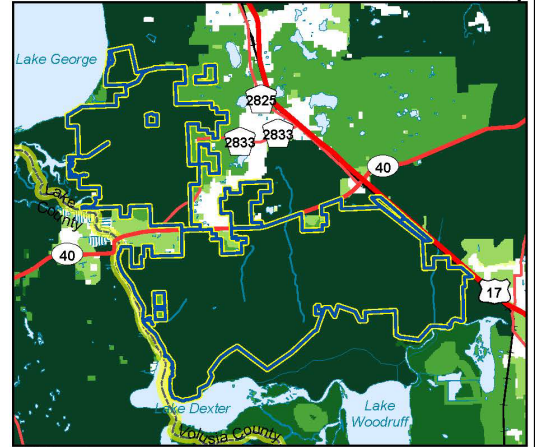


CLIP Surface Water Resource Priorities

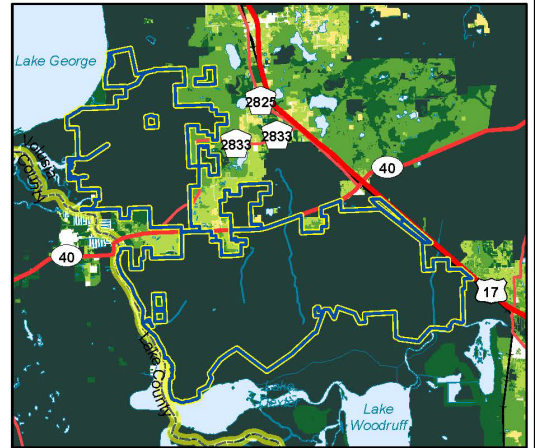


Site boundaries are approximate.

Volusia County



CLIP Landscape Resource Priorities



CLIP Aggregated Resource Priorities

Map produced by KAB
12/18/2024



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FNAI ELEMENT OCCURRENCE REPORT on or near Lake George State Forest 10-Year LMP

Global State Federal State Observation									
Map Label	Scientific Name	Common Name	Rank	Rank	Status	Listing	Date	Description	EO Comments
ANTIIPRAT*38	<i>Antigone canadensis pratensis</i>	Florida Sandhill Crane	G5T2	S2	N	N	ST	1984	IMPROVED PASTURE.
ARAMIGUAR*35	<i>Aramus guarauna</i>	Limpkin	G5	S3	N	N	N	2005-07 pre	2005-07: spring-run, with floating mats of aquatic and emergent vegetation (F05DAV01FLUS, PNDDAV04FLUS, PNDDHER03FLUS).
BASISWAM*32	Basin swamp		G4	S3	N	N	N	2004	The basin swamp continued NE ca. 2 miles and was ca. 0.25 mile wide N-S in some places. It connected to the Deep Creek drainage to the SE by a corridor narrowing to ca. 500' wide at one point. Surrounding uplands converted to pine plantations.
DS*38973	<i>Data Sensitive Element</i>	Data Sensitive	G5	S2S3	UR	N	N	2014-07-29	Data Sensitive
DS*41690	<i>Data Sensitive Element</i>	Data Sensitive	G1	S1	N	N	N	2005-04-11	Data Sensitive
EGRECAER*287	<i>Egretta caerulea</i>	Little Blue Heron	G5	S4	N	N	ST	1988-06-22	Island in lake.
1988/06/22: J.A. Hovis, GFC, observation. 1 ANHI nest observed from air. Colony probably larger than recorded from air; several layers of dense vegetation make accurate count difficult. Location plotted from air on map is very different from LORAN lat and long. "Total" = C (4 spp. & SMWHITE). 1989/05/23: J.A. Hovis, GFC, observation. Surveyed from helicopter. Site not visited by plane in 1989. "Total" = E (includes GREG, CAEG, LBHE, ANHI, DCCO).									



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Global State Federal State Observation									
Map Label	Scientific Name	Common Name	Rank	Status	Listing	Date	Description	EO	Comments
EGRECAER*403	<i>Egretta caerulea</i>	Little Blue Heron	G5	S4	N	ST	2005-07	2005-07: spring-run stream (F05DAV01FLUS, PNDDAV04FLUS, PNDDHER03FLUS).	2005-07: an adult was observed foraging (PNDDAV04FLUS).
EGRETHUL*263	<i>Egretta thula</i>	Snowy Egret	G5	S3	N	N	2005-07 pre	2005-07 pre: spring-run stream, with floating and emergent vegetation in abundance along the banks (F05DAV01FLUS, PNDDAV04FLUS).	2005-07 pre: One Snowy Egret was observed foraging along the bank (F05DAV01FLUS, PNDDAV04FLUS).
ELLIMONR*4	<i>Elliptio monroensis</i>	St. Johns Elephantear	G1G2	S1S2	N	N	2015 pre	St. Johns River system, at least south (upstream) of Lake George. Inhabits river, lakes along the main stem, and lower reaches of some large tributaries (B14WIL01FLUS:205).	Williams et al. (2014) depict at least 17 sites from which this occurrence has been documented.
GOPHPOLY*1415	<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST	2011-07	From 2004 and 2010 aerials the area appears to be a former old field that has a few large oaks and successional vegetation, only a small area still completely open.	2011-07: G. Williams reported 3 tortoise burrows (one active, two inactive) for park (U11WILL04FLUS).
GOPHPOLY*324	<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST	1981-08?	No general description given	1981-08?: Species occurrence noted here in Diemer's unpublished map set (U86DIE01FLUS).
HALLILEUC* (X)28	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	1987	No general description given	Nest status 1999-2003: Unknown/not assessed - 2003, 2002, 2001, 2000, 1999; Status 1995-98: Inactive - 1996, 1997, 1996, 1995; (U03FWC01FLUS). Previous data (note different format) NEST: 1980-1987 ACTIVE, 1979, 1988 INACTIVE. FLEDGED YOUNG 1980-1984, 1987, 1985 UNKNOWN.
HALLILEUC*119	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003	No general description given	Nest status 1995-2003: Continuously active. (U03FWC01FLUS). Previous data (note different format) NEST: 1981-1988 ACTIVE. FLEDGED YOUNG 1981, 1984-1986, 1988.
HALLILEUC*1200	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2002	2005-07-12: Source does not provide a description.	2003, 2001, 1999: not active (U03FWC01FLUS). 2002, 2000: active (U03FWC01FLUS).



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Map Label	Scientific Name	Common Name	Global State Federal State Observation				Description	EO Comments
			Rank	Rank	Status	Listing	Date	
HALILEUC*126	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	1996	No general description given
HALILEUC*1644	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	1999	Nest status: Active, 1999; Not active, 2001, 2000; Unknown status or not assessed, 2003, 2002;(U03FWC01FLUS)
HALILEUC*1647	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003	Status 1995-98: Active - 1996, 1995; Inactive - 1998, 1997; (U03FWC01FLUS); Previous data (note different format)
HALILEUC*1648	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2002	NEST: 1975-1983, 1985-1986, 1988 ACTIVE; INACTIVE 1984, FLEDGED YOUNG 1975, 1977-1981, 1985, UNKNOWN 1982-1983, 1988, NO DATA 1987.
HALILEUC*1652	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003	Nest status: Active, 2003, 2002, 2001, 2000, 1999;(U03FWC01FLUS)
HALILEUC*1663	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003	Nest status: Active, 2003, 2002, 2001; Unknown status or not assessed, 2000, 1999;(U03FWC01FLUS)
HALILEUC*1664	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003	Nest status: Active, 2003, 2002, 2001; Unknown status or not assessed, 2000, 1999;(U03FWC01FLUS)
HALILEUC*1670	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2002	Nest status: Active, 2002; Not active, 2003; Unknown status or not assessed, 2001, 2000, 1998;(U03FWC01FLUS)
HALILEUC*1675	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003	Nest status: Active, 2003, 2002; Unknown status or not assessed, 2001, 2000, 1999;(U03FWC01FLUS)
HALILEUC*1682	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003	Nest status: Active, 2003; Unknown status or not assessed, 2002, 2001, 2000, 1999;(U03FWC01FLUS)



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Map Label	Scientific Name	Common Name	Global Rank	State Status	Observation Date	Description	EO Comments
HALILEUC*27	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003 No general description given Nest status 1995-2003: Continuously active. (U03FWC01FLUS). Previous data (note different format) NEST: 1995: PRODUCED 2 YOUNG; 1994-92: NO DATA; 1991: ACTIVE, PRODUCED 0 YOUNG; 1990: PRODUCED 1 YOUNG; 1989: PRODUCTIVITY UNKNOWN; 1978-1981, 1983-1988 ACTIVE; 1977 USED BY OWL; 1982 INACTIVE. FLEDGED YOUNG 1978, 1980-1981, 1983-1986, 1988; UNKNOWN 1979; NO DATA 1987.
HALILEUC*29	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003 No general description given Nest status 1995-2003: Continuously active. (U03FWC01FLUS). Previous data (note different format) NEST: 1995: ACTIVE, PRODUCED 0 YOUNG; 1994-91: NO DATA; 1990: GONE; 1989: ACTIVE, PRODUCED 0 YOUNG; 1974-1977, 1979-1986 ACTIVE; FLEDGED YOUNG 1977, 1980-1982, 1984, 1986; UNKNOWN 1983 AND 1985; NO DATA 1978 AND 1987-1988.
HALILEUC*30	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003 No general description given Nest status 1999-2003: Continuously active; Status 1995-98: Active - 1998, 1997, 1996; Inactive - 1995; (U03FWC01FLUS). Previous data (note different format) NEST: 1995: GONE; 1994-92: NO DATA; 1991: UNKNOWN; 1990: PRODUCED 2 YOUNG; 1989: PRODUCED 2 YOUNG; 1979-1988 ACTIVE. FLEDGED YOUNG 1979-1988.
HALILEUC*32	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003 No general description given Nest status 1995-2003: Continuously active. (U03FWC01FLUS). Previous data (note different format) NEST: 1995: PRODUCED 1 YOUNG; 1994-92: NO DATA; 1991: PRODUCTIVITY UNKNOWN; 1990: PRODUCED 2 YOUNG; 1989: PRODUCTIVITY UNKNOWN; 1975-1976, 1978-1988 ACTIVE; FLEDGED YOUNG 1975-1976, 1978-1988; NO DATA 1977.
HALILEUC*883	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003 No general description given Nest status 1995-2003: Continuously active. (U03FWC01FLUS). Previous data (note different format) Nest: 1995: Produced 2 young.



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Map Label	Scientific Name	Common Name	Global State Federal State Observation			Date	Description	EO Comments
			Rank	Rank	Status			
HALILEUC*897	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003	No general description given
HALILEUC*898	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	1997	No general description given
HALILEUC*899	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003	No general description given
HARTFLOR*90	<i>Hartwrightia floridana</i>	Florida hartwrightia	G2G3	S2S3	UR	T	1929-09-12	None given
HELICARN*23	<i>Helianthus camosus</i>	lake-side sunflower	G1G2	S1S2	N	E	2002	2004-08-18: Former (?) mesic flatwoods disturbed by fire suppression, pine plantation and road. Slash pine plantation with many herbs such as <i>Nemastylis floridana</i> , <i>Elytraria caroliniana</i> , and <i>Myrica cerifera</i> (F05HER01FLUS).
HYPOSPIS*3	<i>Hypotrictia spissipes</i>	Florida Hypotrictia Scarab Beetle	G3G4	S3S4	N	N	1994 pre	1994-Pre: This species was collected at this site (B94DEY01FLUS).
ILLIPARV*22	<i>Illicium parviflorum</i>	star anise	G2	S2	N	E	2005-07 pre	2005-07pre: two populations were documented within a few 100 meters of each other; the first population had roughly 600 plants ranging from two to 12 feet tall and the second population had roughly 3,000 plants from 15-20 feet tall. All were in the early floral stage (F05DAV01FLUS, PNDHER03FLUS).
ISCHDUNE*2	<i>Ischyryus dunedinensis</i>	Three Spotted Pleasing Fungus Beetle	G2G3	S2S3	N	N	1994 pre	1994-Pre: This specimen was collected at this site (B94DEY01FLUS).



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Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	Observation Date	Description	EO Comments
MELAADEL*1	<i>Melanoplus adelogyrus</i>	Volusia Grasshopper	G1G2	S1S2	N	N	1931-05-23 1931-05-23: No description given (U08ALM01FLUS).	1931-05-23: Two specimens were collected by T. H. Hubbell (U08ALM01FLUS). 1931-05-05: One specimen was collected by T. H. Hubbell (U08ALM01FLUS).
NAJAFIL*49	<i>Najas filifolia</i>	Narrowleaf Naiad	G3	S2	UR	T	2011 Lacustrine	Species present (U18DEP01FLUS)
NEMAFLOR*22	<i>Nemastylis floridana</i>	celestial lily	G3	S3	N	E	1998-11-01 No general description given	1998-11-01: PLANT(S) WAS/WERE FLOWERING (U98GRA01FLUS).
NEMAFLOR*33	<i>Nemastylis floridana</i>	celestial lily	G3	S3	N	E	1982-10-09 2005-08-03: Road shoulders mown but not shallow roadside ditches. Mown powerline R/W to E appears to be good possible habitat especially at edge of dome swamp immediately NE of road. Small creek just to S flows under road and thru fire suppressed mesic	2005-08-03: Not found in cursory morning survey along roadside (PNDSC03FLUS). 1982-10-09: Few, fruiting (S82BALUFFLUS).
NEMAFLOR*34	<i>Nemastylis floridana</i>	celestial lily	G3	S3	N	E	2002-09-01 2002-09-01: Adjacent to wet flatwoods with planted slash pine and many cabbage palms. Fire suppressed (PNDCA05FLUS).	2002-09-01: 20-30 plants in flower in 50 square feet (PNDCA05FLUS).
NEMAFLOR*7	<i>Nemastylis floridana</i>	celestial lily	G3	S3	N	E	1986 2005-08-03: Clearcut wet flatwoods to N, overgrown wet flatwoods to W, hydric hammock to S (PNDSC03FLUS). 1986: ROADSIDE POPULATION OF VERY FEW PLANTS (M87MOB01FLUS).	2005-08-03: Not found during cursory early afternoon survey. Clearcut mesic to wet flatwoods to N appears to be suitable habitat (PNDSC03FLUS). 1986: ROADSIDE POPULATION OF VERY FEW PLANTS (M87MOB01FLUS).
PANDHAL*124	<i>Pandion haliaetus</i>	Osprey	G5	S3S4	N	N	2005-07 pre 2005-07 pre: the edge of a hydric hammock (F05DAV01FLUS, PNDDAV04FLUS).	2005-07 pre: one adult Osprey was observed foraging (F05DAV01FLUS, PNDDAV04FLUS).
PELTIPROF*16	<i>Peltotrupes profundus</i>	Florida Deepdigger Scarab Beetle	G3	S3	N	N	1960-05-05 1960-05-05: No description given (B73WOO01FLUS).	1960-05-05: Five specimens were collected by C. R. Roberts using a malt trap (B73WOO01FLUS). 1960-04-22: Four specimens were collected by R. E. Woodruff using a malt trap (B73WOO01FLUS).
ROMUGLOB*4	<i>Romulus globosus</i>	Round-Necked Romulus Long-Horned Beetle	G1G2	S1S2	N	N	1994 pre 1994-Pre: No description given (B94DEY01FLUS).	1994-Pre: This species was collected at this site, the earliest collection date being 10 May and the latest was 27 July (B94DEY01FLUS).



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			Rank	Status	Listing	Date	
SCIUNIGE*236	<i>Sciurus niger niger</i>	Southeastern Fox Squirrel	G5T5	S3	N	N	2000-05-12: Old field with <i>Paspalum notatum</i> and <i>Myrica cerifera</i> . Remnant flatwoods to the North (U04MCP01FLUS).
TRIGFLOR*2	<i>Trigonopeltastes floridana</i>	Scrub Palmetto Flower Scarab Beetle	G3	S3	N	N	1994-Pre: No description given (B94DEY01FLUS).
URSUFLOP*95	<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T4	S4	N	N	2000-05-12: Old field with mesic area of pine plantation, dome and wet flatwoods, and private commercial timberland, nurseries, and small neighborhoods; public lands are dominated by pine plantation but also have flatwoods interspersed with dome swam
VICIOCAL*5	<i>Vicia ocalensis</i>	Ocala vetch	G2	S2	N	E	2018-05-14 -- Lake Edge 2018-05-22
WET FLAT*44	Wet flatwoods		G4	S4	N	N	2004 No general description given

2000-05-12: One adult observed (U04MCP01FLUS). 1999-10-30: One adult observed (U04MCP01FLUS).

1994-Pre: This species was collected at this site (B94DEY01FLUS).

2002: 1,025-1,539 bears estimated in the primary ranges in the Ocala-St. John's region. Part of a larger population that includes Okefenokee Swamp National Wildlife Refuge in Georgia (U05SIM01FLUS). 2014: 1,198 bears estimated in the Ocala-St. John's region and 495 estimated in the Osceola region (A16HUM01FLUS). 2016: polygons created to show where bears are considered 'Abundant' and 'Common' (U16FWC01FLUS)

 Primary is the FWC-designated core area that represents breeding range and contains documented evidence of reproduction or female bears within available habitat, and Secondary is the FWC-designated area where bears occur within available habitat but outside primary bear range (evidence of bears without documented evidence of reproduction) (U12FWC02FLUS, U05SIM01FLUS). These boundaries are based on decades of bear observations, roadkill distribution, nuisance bear locations, and bear research projects. For detailed location data contact the FWC, present in 3 locations.

2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-10-13) (U05FNA02FLUS). *Pinus eliottii* with diverse herbs, including *Eriocaulon decangulare*, *Woodwardia virginica*, *Sphagnum* sp., *Eragrostis* sp., *Proserpinaca pectinata*, *Panicum hemitonon*, *Bacopa caroliniana*, *Sabatia* sp., *Ludwigia suffruticosa*, *Lilium catesbaei*, etc.

Florida Natural Areas Inventory

Aggregated Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Documented					
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N
<i>Sciurus niger niger</i>	Southeastern Fox Squirrel	G5T5	S3	N	N
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T4	S4	N	N
Likely					
<i>Antigone canadensis pratensis</i>	Florida Sandhill Crane	G5T2	S2	N	ST
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
<i>Elliptio monroensis</i>	St. Johns Elephantear	G1G2	S1S2	N	N
<i>Hartwrightia floridana</i>	Florida hartwrightia	G2G3	S2S3	UR	T
<i>Helianthus carnosus</i>	lake-side sunflower	G1G2	S1S2	N	E
<i>Illicium parviflorum</i>	star anise	G2	S2	N	E
<i>Laterallus jamaicensis</i>	Black Rail	G3	S2	T	N
<i>Melanoplus adelogyrus</i>	Volusia Grasshopper	G1G2	S1S2	N	N
Mesic flatwoods		G4	S4	N	N
<i>Mustela frenata peninsulae</i>	Florida Long-tailed Weasel	G5T3?	S3?	N	N
<i>Mycteria americana</i>	Wood Stork	G4	S2	T, PDL	FT
<i>Najas filifolia</i>	Narrowleaf Naiad	G3	S2	UR	T
<i>Nemastylis floridana</i>	celestial lily		S3	N	E
Sandhill			S2	N	N
Sandhill upland lake			S2	N	N
Scrub		G2	S2	N	N
<i>Trichechus manatus latirostris</i>	Florida Manatee	G2G3T2	S2S3	T	N
<i>Vicia ocalensis</i>	Ocala vetch	G2	S2	N	E
Potential					
<i>Acipenser oxyrinchus oxyrinchus</i>	Atlantic Sturgeon	G3T3	S1	E	FE
<i>Aphelocoma coerulescens</i>	Florida Scrub-Jay	G1G2	S1S2	T	FT
<i>Asplenium curtissii</i>	Curtiss' spleenwort	G1	S1	N	N
<i>Asplenium heteroresiliens</i>	Morzentis' spleenwort	G2	S1	N	N
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	ST
<i>Bonamia grandiflora</i>	Florida bonamia	G3	S3	T	E
<i>Calopogon multiflorus</i>	many-flowered grass-pink	G2G3	S2S3	N	T
<i>Carex chapmanii</i>	Chapman's sedge	G3	S3	N	T
<i>Centrosema arenicola</i>	sand butterfly pea	G2Q	S2	N	E
<i>Clinopodium ashei</i>	Ashe's savory	G3	S3	N	T
<i>Conradina grandiflora</i>	large-flowered rosemary		S3	N	T
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S1	N	N
<i>Cucurbita okeechobeensis</i>	Okeechobee gourd	G1	S1	E	E
<i>Deeringothamnus rugelii</i>	Rugel's pawpaw		S1	E	E
<i>Didymoglossum punctatum ssp. floridanur</i>	Florida filmy fern	G4G5T1	S1	E	E
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Gymnopogon chapmanianus</i>	Chapman's skeletongrass		S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Hypotrachia spissipes</i>	Florida Hypotrachia Scarab Beetle	G3G4	S3S4	N	N
<i>Ischyrys dunedinensis</i>	Three Spotted Pleasing Fungus Beetl	G2G3	S2S3	N	N
<i>Lampropeltis extenuata</i>	Short-tailed Snake	G3	S3	PT	ST
<i>Lechea cernua</i>	nodding pinweed		S3	N	T
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	UR	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E

Definitions: Documented - Rare species and natural communities documented on or near this site.
 Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.
 Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
 Potential - This site lies within the known or predicted range of the species listed.

Florida Natural Areas Inventory

Aggregated Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Matelea floridana</i>	Florida spiny-pod	G2	S2	N	E
<i>Mnesithea tuberculosa</i>	Piedmont jointgrass	G3	S3	N	T
<i>Monotropsis reynoldsiae</i>	pygmy pipes	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat		S2	N	N
<i>Nolina atopocarpa</i>	Florida beargrass	G3	S3	N	T
<i>Notophthalmus perstriatus</i>	Striped Newt	G2G3	S2	N	ST
<i>Parnassia grandifolia</i>	large-leaved grass-of-parnassus	G3	S2	N	E
<i>Peltotrupes profundus</i>	Florida Deepdigger Scarab Beetle		S3	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow		S3	N	N
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S2	N	E
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	N
<i>Polygala lewtonii</i>	Lewton's polygala	G2	S2	E	E
<i>Pteronotropis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Pycnanthemum floridanum</i>	Florida mountain-mint	G3	S3	N	T
<i>Romulus globosus</i>	Round-Necked Romulus Long-Hornec	G1G2	S1S2	N	N
<i>Rudbeckia nitida</i>	St. John's blackeyed susan	G3	S2	N	E
<i>Salix floridana</i>	Florida willow	G2G3	S2S3	UR	E
<i>Sceloporus woodi</i>	Florida Scrub Lizard		S2S3	UR	N
<i>Spigelia loganioides</i>	pinkroot	G2	S2	N	E
<i>Trigonopeltastes floridana</i>	Scrub Palmetto Flower Scarab Beetle	G3	S3	N	N

Definitions: Documented - Rare species and natural communities documented on or near this site.
 Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.
 Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
 Potential - This site lies within the known or predicted range of the species listed.

Elements and Element Occurrences

An **element** is 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 an area of land and/or water in which a species or natural community is, or was, present. An EO should have practical conservation value for the Element as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location.

Element Ranking and Legal Status

Using a ranking system developed by NatureServe and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks for 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 (EOs), estimated abundance (number of individuals for species; area for natural communities), geographic range, estimated number of adequately protected EOs, relative threat of destruction, and ecological fragility.

FNAI GLOBAL ELEMENT RANK

G1 = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
G2 = Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
G3 = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
G4 = Apparently secure globally (may be rare in parts of range).
G5 = Demonstrably secure globally.
GH = Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker).
GX = Believed to be extinct throughout range.
GXC = Extirpated from the wild but still known from captivity or cultivation.
G#? = Tentative rank (e.g., G2?).
G#G# = Range of rank; insufficient data to assign specific global rank (e.g., G2G3).
G#T# = Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1).
G#Q = Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q).
G#T#Q = Same as above, but validity as subspecies or variety is questioned.
GU = Unrankable; due to a lack of information no rank or range can be assigned (e.g., GUT2).
GNA = Ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
GNR = Element not yet ranked (temporary).
GVRTNR = Neither the element nor the taxonomic subgroup has yet been ranked.

FNAI STATE ELEMENT RANK

S1 = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
S2 = Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
S3 = Either very rare and local in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
S4 = Apparently secure in Florida (may be rare in parts of range).
S5 = Demonstrably secure in Florida.
SH = Of historical occurrence in Florida, possibly extirpated, but may be rediscovered (e.g., ivory-billed woodpecker).
SX = Believed to be extirpated throughout Florida.
SU = Unrankable; due to a lack of information no rank or range can be assigned.
SNA = State ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
SNR = Element not yet ranked (temporary).

FEDERAL LEGAL STATUS

Legal status information provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant federal agency.

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

C = Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.

E = Endangered: species in danger of extinction throughout all or a significant portion of its range.

E, T = Species currently listed endangered in a portion of its range but only listed as threatened in other areas

E, PDL = Species currently listed endangered but has been proposed for delisting.

E, PT = Species currently listed endangered but has been proposed for listing as threatened.

E, XN = Species currently listed endangered but tracked population is a non-essential experimental population.

T = Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.

PE = Species proposed for listing as endangered.

PS = - An infraspecific taxon or population has federal status but the entire species does not - status is in only a portion of the species range.

PT = Species proposed for listing as threatened.

SAT = Treated as threatened due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.

SC = Not currently listed, but considered a "species of concern" to USFWS.

DL = Delisted.

UR = Under review.

STATE LEGAL STATUS

Provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant state agency.

Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

C = Candidate for listing at the Federal level by the U. S. Fish and Wildlife Service

FE = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service

FT = Listed as Threatened Species at the Federal level by the U. S. Fish and Wildlife Service

FXN = Federal listed as an experimental population in Florida

FT(S/A) = Federal Threatened due to similarity of appearance

ST = State population listed as Threatened by the FFWCC. 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 as a consequence is destined or very likely to become an endangered species within the foreseeable future.

SSC = Listed as Species of Special Concern by the FFWCC. 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 which, in the foreseeable future, may result in its becoming a threatened species. (SSC* for *Pandion haliaetus* (Osprey) indicates that this status applies in Monroe county only.)

N = Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011, 581.185 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or see: <https://www.flrules.org/gateway/ChapterHome.asp?Chapter=5B-40>.

E = Endangered: species of plants native to Florida 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; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act.

T = Threatened: 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 number as to cause them to be Endangered.

CE = Commercially exploited: species native to the state which are subject to being removed in significant numbers from native habitats in the state and sold or transported for sale.

N = Not currently listed, nor currently being considered for listing.

Element Occurrence Ranking

FNAI ranks of quality of the element occurrence in terms of its viability (EORANK). Viability is estimated using a combination of factors that contribute to continued survival of the element at the location. Among these are the size of the EO, general condition of the EO at the site, and the conditions of the landscape surrounding the EO (e.g. an immediate threat to an EO by local development pressure could lower an EO rank).

A = Excellent estimated viability
A? = Possibly excellent estimated viability
AB = Excellent or good estimated viability
AC = Excellent, good, or fair estimated viability
B = Good estimated viability
B? = Possibly good estimated viability
BC = Good or fair estimated viability
BD = Good, fair, or poor estimated viability
C = Fair estimated viability
C? = Possibly fair estimated viability
CD = Fair or poor estimated viability
D = Poor estimated viability
D? = Possibly poor estimated viability
E = Verified extant (viability not assessed)
F = Failed to find
H = Historical
NR = Not ranked, a placeholder when an EO is not (yet) ranked.
U = Unrankable
X = Extirpated

*For additional detail on the above ranks see: <http://www.natureserve.org/explorer/eorankguide.htm>

FNAI also uses the following EO ranks:

H? = Possibly historical
F? = Possibly failed to find
X? = Possibly extirpated

The following offers further explanation of the H and X ranks as they are used by FNAI:

The rank of H is used when there is a lack of recent field information verifying the continued existence of an EO, such as (a) when an EO is based only on historical collections data; or (b) when an EO was ranked A, B, C, D, or E at one time and is later, without field survey work, considered to be possibly extirpated due to general habitat loss or degradation of the environment in the area. This definition of the H rank is dependent on an interpretation of what constitutes "recent" field information. Generally, if there is no known survey of an EO within the last 20 to 40 years, it should be assigned an H rank. While these time frames represent suggested maximum limits, the actual time period for historical EOs may vary according to the biology of the element and the specific landscape context of each occurrence (including anthropogenic alteration of the environment). Thus, an H rank may be assigned to an EO before the maximum time frames have lapsed. Occurrences that have not been surveyed for periods exceeding these time frames should not be ranked A, B, C, or D. The higher maximum limit for plants and communities (i.e., ranging from 20 to 40 years) is based upon the assumption that occurrences of these elements generally have the potential to persist at a given location for longer periods of time. This greater potential is a reflection of plant biology and community dynamics. However, landscape factors must also be considered. Thus, areas with more anthropogenic impacts on the environment (e.g., development) will be at the lower end of the range, and less-impacted areas will be at the higher end.

The rank of X is assigned to EOs for which there is documented destruction of habitat or environment, or persuasive evidence of eradication based on adequate survey (i.e., thorough or repeated survey efforts by one or more experienced observers at times and under conditions appropriate for the Element at that location).



Florida Natural Areas Inventory
Managed Area Element Summary
Lake George State Forest



SCIENTIFIC NAME	COMMON NAME	Global rank	State rank	Federal status	State status
PLANTS					
<i>Nemastylis floridana</i>	celestial lily	G3	S3	N	E
BIRDS					
<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N
MAMMALS					
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T4	S4	N	N

Note: Summary includes all documented and likely species occurrence records currently in the FNAI database.



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Florida Natural Areas Inventory

Managed Area Element Summary

Lake George State Forest



SCIENTIFIC NAME	COMMON NAME	Global rank	State rank	Federal status	State status
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Using a ranking system developed by NatureServe and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks for 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 (EOs), estimated abundance (number of individuals for species; area for natural communities), geographic range, estimated number of adequately protected EOs, relative threat of destruction, and ecological fragility.

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- G2 = Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3 = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- G4 = Apparently secure globally (may be rare in parts of range).
- G5 = Demonstrably secure globally.
- GH = Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker).
- GX = Believed to be extinct throughout range.
- GXC = Extirpated from the wild but still known from captivity or cultivation.
- G#? = Tentative rank (e.g., G2?).
- G#G# = Range of rank; insufficient data to assign specific global rank (e.g., G2G3).
- G#T# = Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1).
- G#Q = Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q).
- G#T#Q = Same as above, but validity as subspecies or variety is questioned.
- GU = Unrankable; due to a lack of information no rank or range can be assigned (e.g., GUT2).
- GNA = Ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- GNR = Element not yet ranked (temporary).
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FNAI STATE ELEMENT RANK

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- S3 = Either very rare and local in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- S4 = Apparently secure in Florida (may be rare in parts of range).
- S5 = Demonstrably secure in Florida.
- SH = Of historical occurrence in Florida, possibly extirpated, but may be rediscovered (e.g., ivory-billed woodpecker).
- SX = Believed to be extirpated throughout Florida.
- SU = Unrankable; due to a lack of information no rank or range can be assigned.
- SNA = State ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- SNR = Element not yet ranked (temporary).

FEDERAL LEGAL STATUS

Note: Summary includes all documented and likely species occurrence records currently in the FNAI database.

Legal status information provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant federal agency.

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

C = Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.
LE = Endangered: species in danger of extinction throughout all or a significant portion of its range.
LE, LT = Species currently listed endangered in a portion of its range but only listed as threatened in other areas
LE, PDL = Species currently listed endangered but has been proposed for delisting.
LE, PT = Species currently listed endangered but has been proposed for listing as threatened.
LE, XN = Species currently listed endangered but tracked population is a non-essential experimental population.
LT = Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.
SAT = Treated as threatened due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.
SC = Not currently listed, but considered a "species of concern" to USFWS.

STATE LEGAL STATUS

Provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant state agency.

Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

FE = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service
FT = Listed as Threatened Species at the Federal level by the U. S. Fish and Wildlife Service
F(XN) = Federal listed as an experimental population in Florida
FT(S/A) = Federal Threatened due to similarity of appearance
ST = State population listed as Threatened by the FFWCC. 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 as a consequence is destined or very likely to become an endangered species within the foreseeable future. (ST* for *Ursus americanus floridanus* (Florida black bear) indicates that this status does not apply in Baker and Columbia counties and in the Apalachicola National Forest. ST* for *Neovison vison* pop.1 (Southern mink, South Florida population) indicates that this status applies to the Everglades population only.)
SSC = Listed as Species of Special Concern by the FFWCC. 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 which, in the foreseeable future, may result in its becoming a threatened species. (SSC* indicates that a species has SSC status only in selected portions of its range in Florida. SSC* for *Pandion haliaetus* (Osprey) indicates that this status applies in Monroe county only.)
N = Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or see: <http://www.doacs.state.fl.us/pi/>.

LE = Endangered: species of plants native to Florida 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; includes all species determined to be endangered or threatened pursuant



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Florida Natural Areas Inventory

Managed Area Element Summary Lake George State Forest



to the U.S. Endangered Species Act.

LT = Threatened: 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 number as to cause them to be Endangered.

N = Not currently listed, nor currently being considered for listing.

Exhibit M

Florida Fish and Wildlife
Conservation Commission

Listed Species Occurrence Records



**Florida Fish
and Wildlife
Conservation
Commission**

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Rodney Barreto
Chairman
Coral Gables

Steven Hudson
Vice Chairman
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800 955-8770 (V)

MyFWC.com

January 24, 2025

Emily Marsh
Florida Forest Service
3125 Conner Boulevard
Tallahassee, Florida 32399-1650
emily.marsh@fdacs.gov

Dear Ms. Marsh:

This letter is in response to your request for listed species occurrence records and critical habitats for the Lake George State Forest, located in Volusia County.

FWC staff conducted a geographic information system (GIS) analysis of the project area utilizing a variety of internal datasets. The analysis found that the project area contains documented occurrences and potential habitat for the following listed and managed species:

- American alligator (*Alligator mississippiensis*, Federally Threatened due to similarity of appearance)
- Bald eagle (*Haliaeetus leucocephalus*)
- Eastern indigo snake (*Drymarchon couperi*, Federally Threatened [FT])
- Everglade snail kite (*Rostrhamus sociabilis plumbeus*, Federally Endangered [FE])
- Florida black bear (*Ursus americanus floridanus*)
- Florida pine snake (*Pituophis melanoleucus mugitus*, State Threatened [ST])
- Florida sandhill crane (*Antigone canadensis pratensis*, ST)
- Florida scrub-jay (*Aphelocoma coerulescens*, FT)
- Little blue heron (*Egretta caerulea*, ST)
- Gopher tortoise (*Gopherus polyphemus*, ST)
- Red-cockaded woodpecker (*Picoides borealis*, FE)
- Southeastern American kestrel (*Falco sparverius paulus*, ST)
- Southern fox squirrel (*Sciurus niger*)
- Wood stork (*Mycteria americana*, FT)

The wildlife occurrence data represents only species recorded by FWC staff and other affiliated researchers and the available databases do not necessarily contain records of all listed species that may occur in a given area. Therefore, the absence of a species in this list does not mean that species does not occur in the area. On-site surveys using appropriate methodologies are always the most reliable method to determine the potential presence of listed species and their habitat.

The enclosed maps are based on aggregated species models and include listed species Strategic Habitat Conservation Areas (SHCAs), species richness, and priority wetlands for listed species. These data highlight areas with enhanced value for multiple listed and managed species of wildlife.

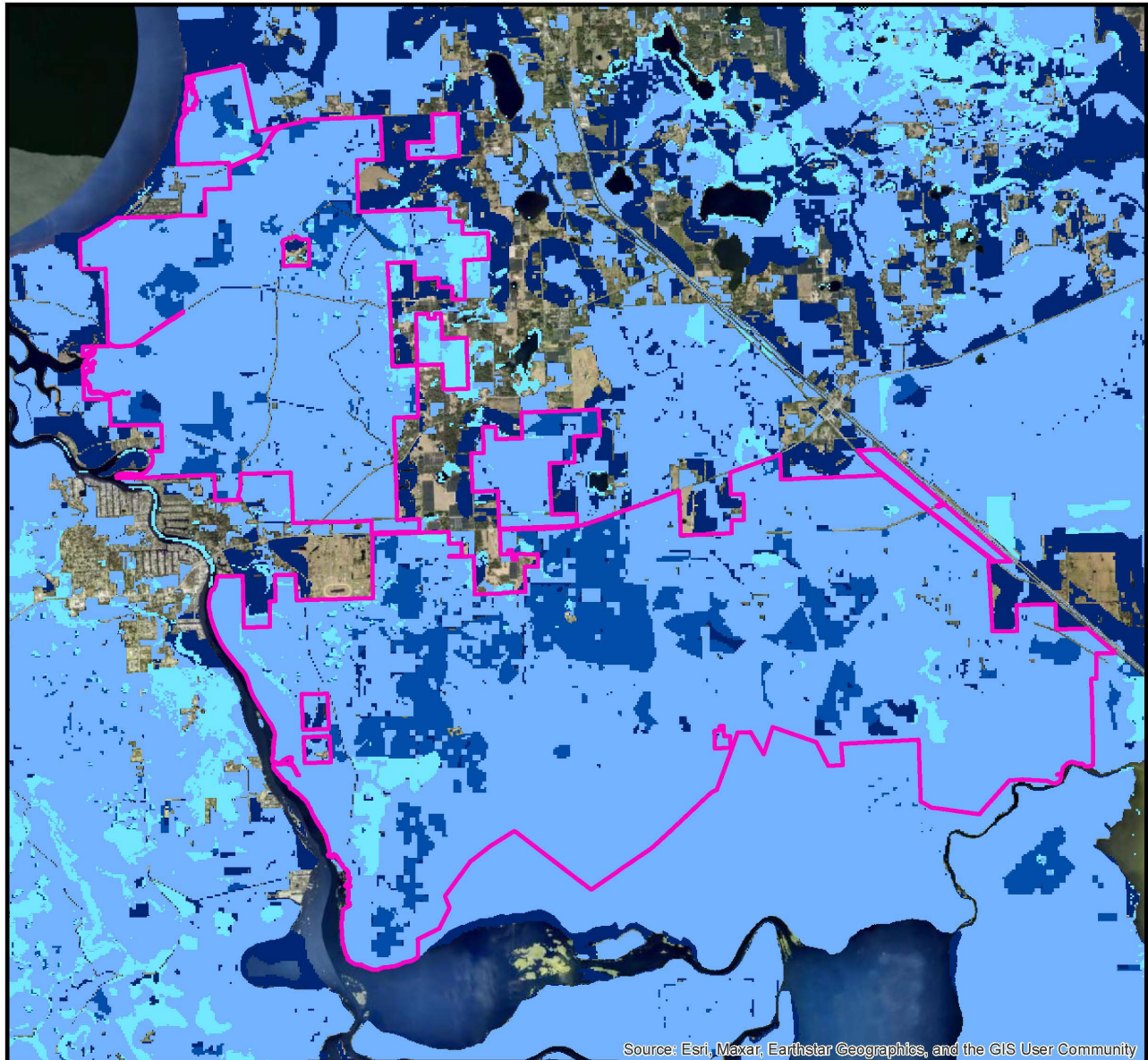
Emily Marsh
Page 2
January 24, 2025

For specific technical questions regarding the content of this letter, please contact Alex Flores Bonilla at 850-488-8783 or by email at Alex.Flores@MyFWC.com. All other inquiries may be sent to ConservationPlanningServices@MyFWC.com.

Sincerely,

A handwritten signature in blue ink that reads "Laura DiGruttolo". The signature is written in a cursive style with a large, stylized "L" and "D".

Laura DiGruttolo
Land Use Planning Supervisor
Office of Conservation Planning Services



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

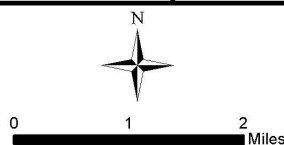


Prioritized SHCA's

- Priority 1
- Priority 2
- Priority 3
- Priority 4
- Priority 5
- Lake George State Forest

The prioritized SHCA map identifies 5 classes of SHCA based upon Heritage ranking criteria developed by The Nature Conservancy, the Natural Heritage Program Network, and the Florida Natural Areas Inventory. There are 2 possible ranks used to prioritize a species' SHCA: 1) the global rank based on a species worldwide status, and 2) the state rank-based upon the species status in Florida. The state and global ranks are based upon many factors such as known occurrence locations, estimated abundance, range, amount of habitat currently protected, perceived levels of threats towards the species, and ecological approximate site boundary and 10-mile buffer fragility.

Lake George State Forest 10 Year Land Management Plan



The boundaries depicted on this map document are approximate. This map document is intended for use only at the published scale. These data are intended for informational use only and should not be considered authoritative for navigation, engineering, legal, or other site-specific purpose. FWC does not assume any legal liability or responsibility arising from the use of this product in a manner not intended by the author.





Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

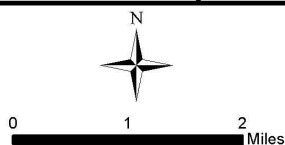


Prioritized Wetlands

- Lake George State Forest
- 1-3 species, wetland habitat
- 4-6 species, wetland habitat
- 7-9 species, wetland habitat
- 10-11 species, wetland habitat

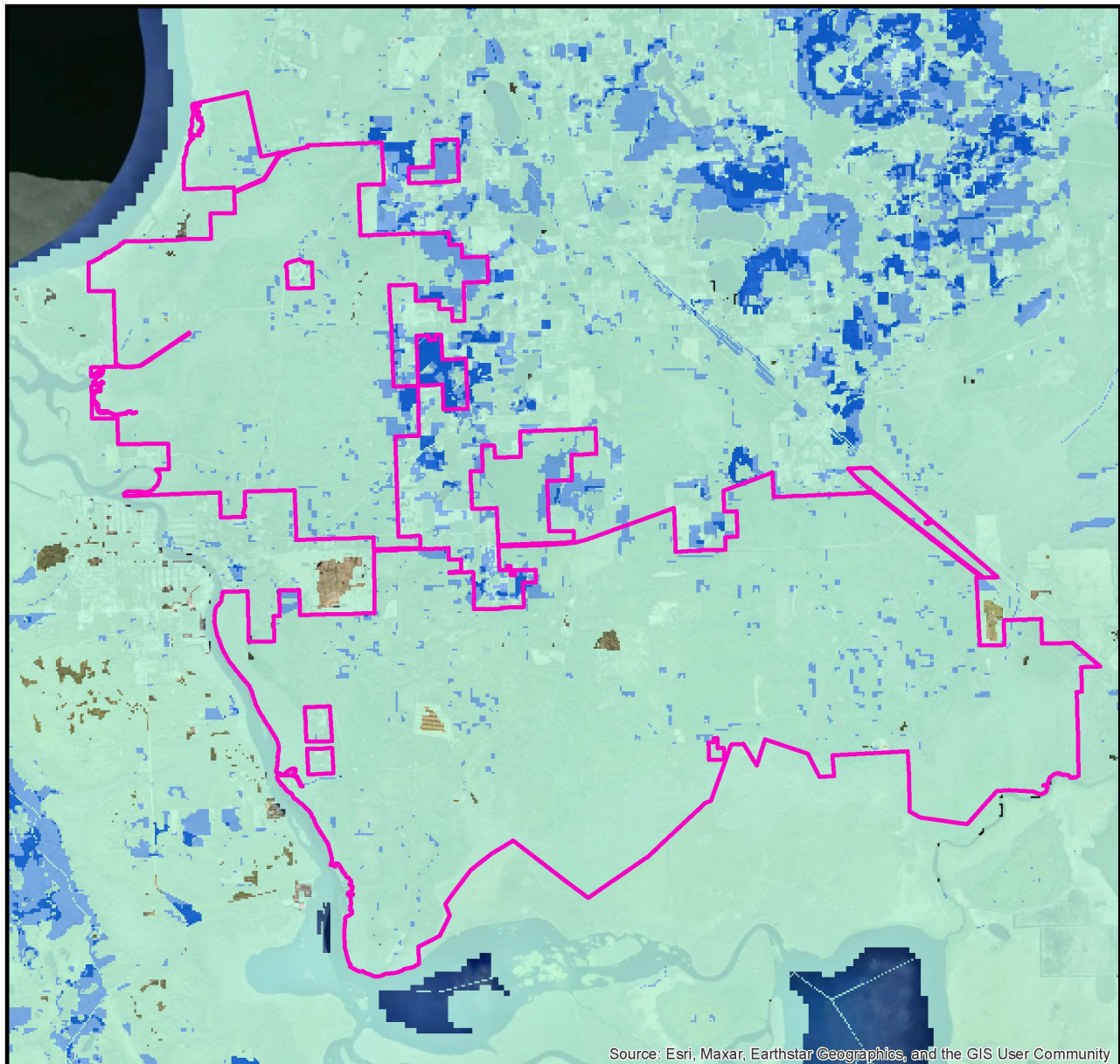
This raster dataset identifies Florida wetlands important to wetland-dependent vertebrates listed by the State of Florida as endangered, threatened, or species of special concern. The dataset also ranks the relative importance of wetland areas based on species richness of the selected vertebrate species.

Lake George State Forest 10 Year Land Management Plan



The boundaries depicted on this map document are approximate. This map document is intended for use only at the published scale. These data are intended for informational use only and should not be considered authoritative for navigation, engineering, legal, or other site-specific purpose. FWC does not assume any legal liability or responsibility arising from the use of this product in a manner not intended by the author.





Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

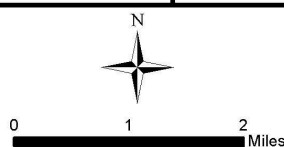


Species Richness



This dataset represents the richness of potential habitat for selected focal species in Florida. Potential habitat includes areas that have been occupied by the species and areas where occupancy is unknown based on available occurrence records. We combined the potential habitats generated for Florida into a single grid layer indicating diversity. Pixel cell value indicates the total number of species potential habitat identified at the specific location.

Lake George State Forest 10 Year Land Management Plan



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Exhibit N

Ten-Year Fire History

Lake George State Forest Burn Acres by Fiscal Year



Exhibit O

Invasive Species Map



Florida Forest Service

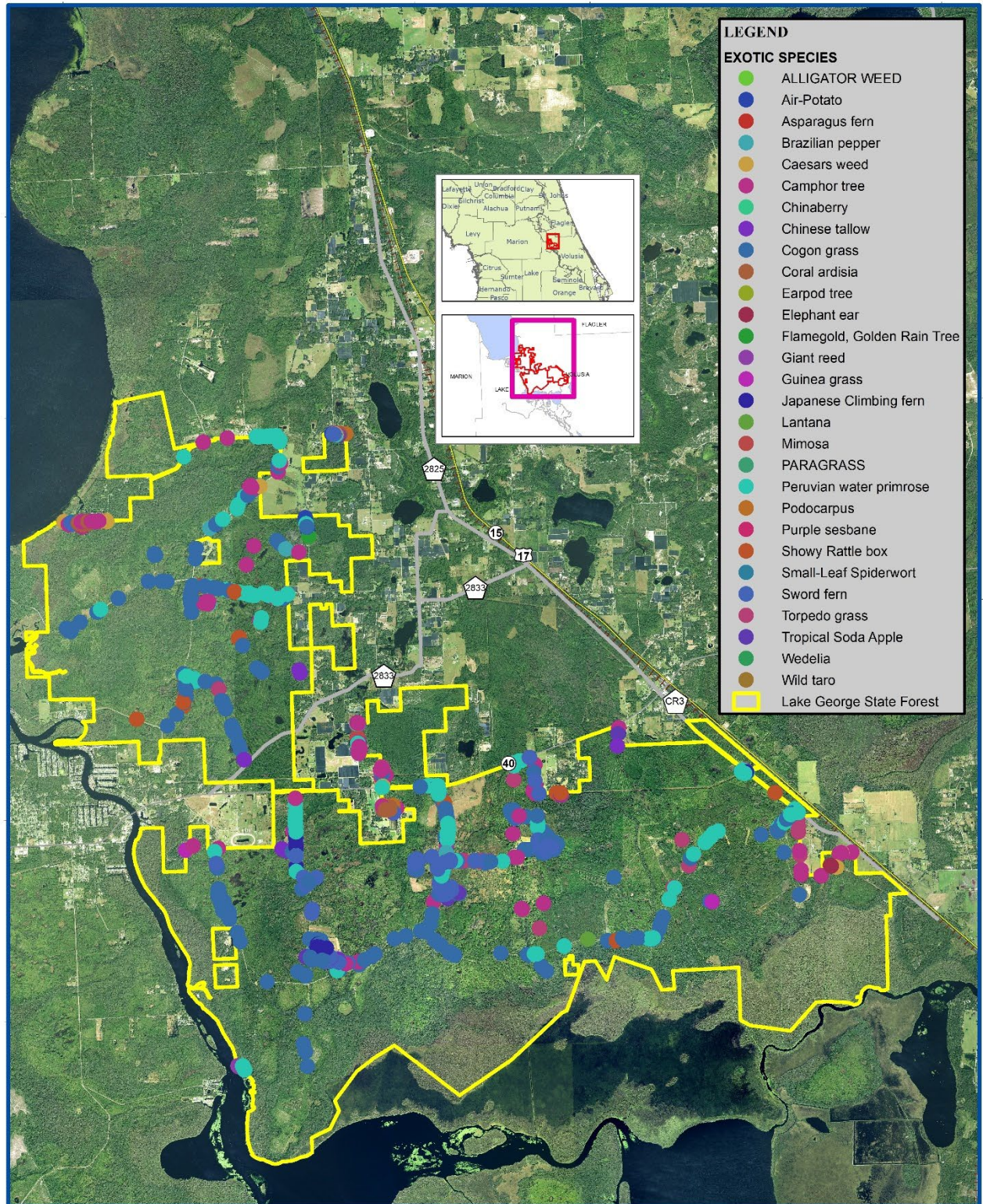
Lake George State Forest Non-Native Invasive Species Map

Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

01° 30' 00"

DISCLAIMER:
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that may appear in this map. Users should not rely on this map for
any purpose other than general information. The Florida Forest Service
does not warrant the accuracy or completeness of the information
on this map.

MapScale Area boundaries courtesy of
the Florida Natural Areas Inventory
Copyright 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014, 2016, 2018, 2020, 2022
From the US Army Corps of Engineers



0 0.25 0.5 1 Miles



Map Month/Year: August 2025

0 500 1,000 2,000 3,000 4,000 Yards

Exhibit P

Current FNAI Natural Communities and Cover Types Map



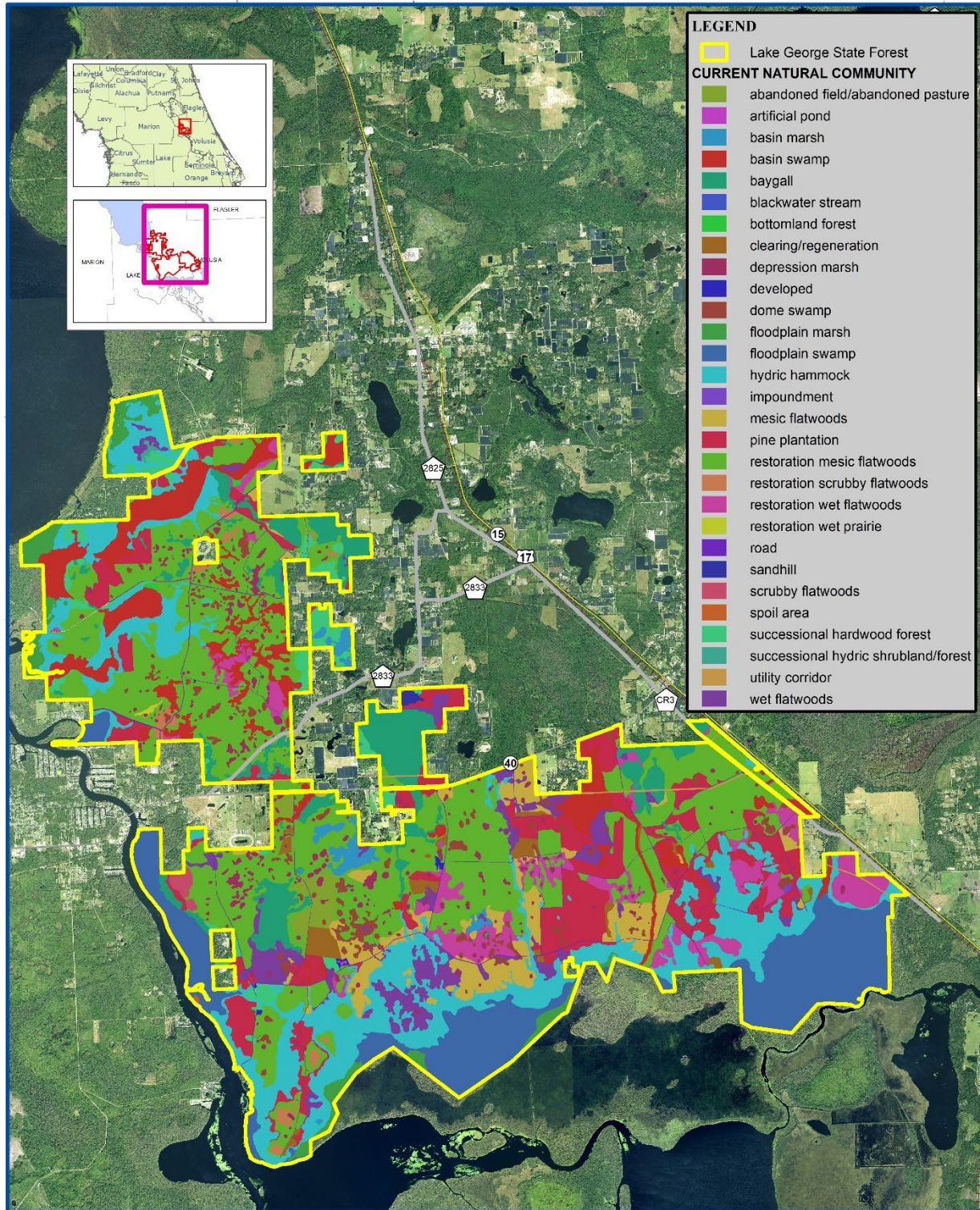
Florida Forest Service

Lake George State Forest

Current FNAI Natural Communities and Cover Type Map

Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

DISCLAIMER:
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Map Month/Year: August 2025

Exhibit Q

Historic FNAI Natural Communities and Cover Types Map



Florida Forest Service

Lake George State Forest

Historic FNAI Natural Communities Map

Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

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responsible for any errors or omissions on this map.

Managed Area boundaries courtesy of
the Florida Natural Areas Inventory
Form by United States Forest Service (USFS)
from the US Army Corps of Engineers

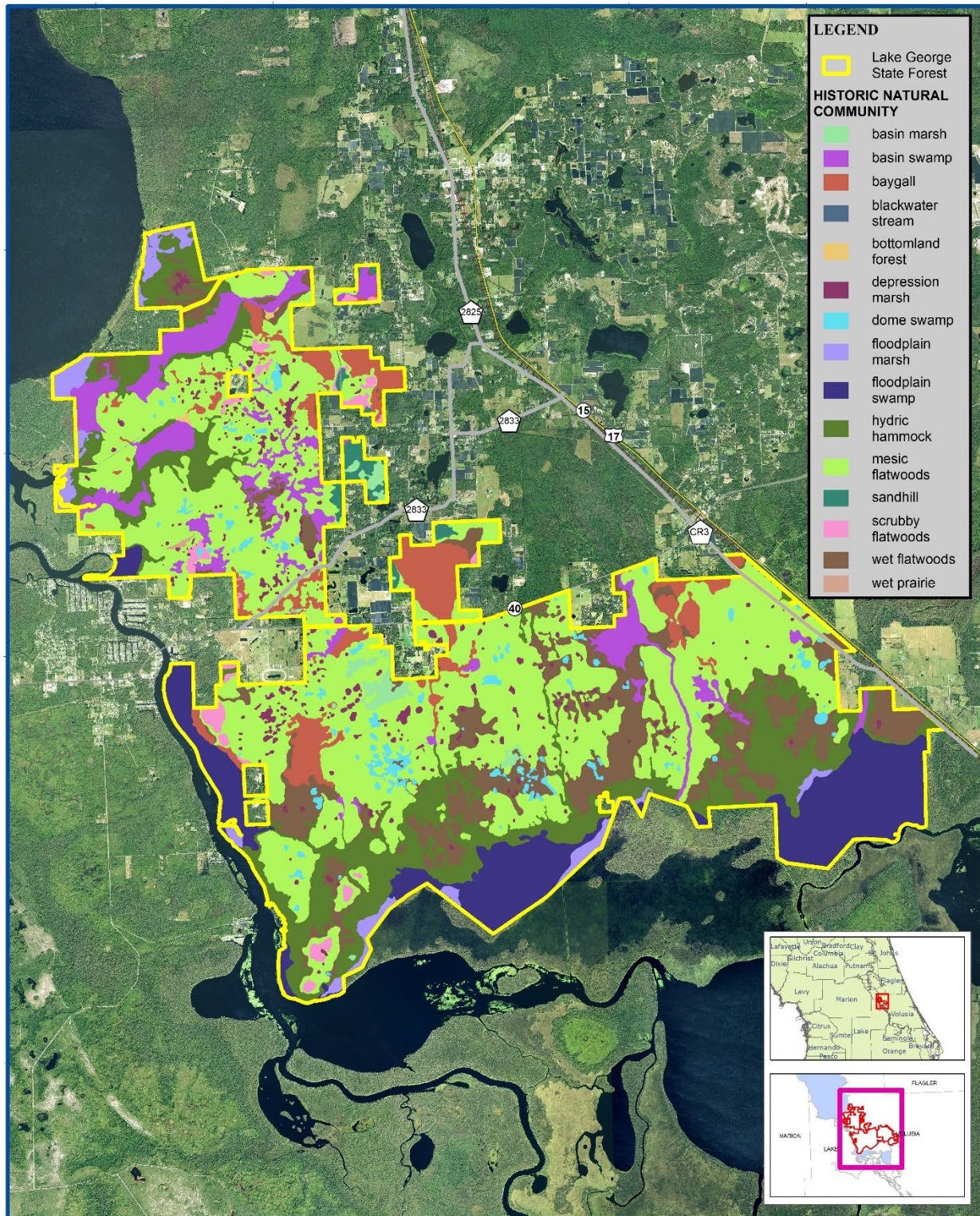


Exhibit R

Land Management Reviews

(2019 & 2023)

2019 Land Management Review Team Report for Lake George State Forest

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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 cases 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 or jurisdictional water management 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: Lake George State Forest

Managed by: Department of Agriculture and Consumer Services, Florida Forest Service

Acres: 4,195

County: Volusia

Purpose(s) for Acquisition: to protect and restore the natural and cultural values of the property and provide the greatest benefit to the citizens of the state.

Acquisition Program(s): CARL/P2000

Original Acquisition Date: 5/27/1993

Area Reviewed: Entire Property

Last Management Plan Approval Date: 12/16/16

Review Date: 4/26/19

Agency Manager and Key Staff Present:

- Justina Jones, Manager
- Donald King
- Anthony Petellat
- Conrad Wysocki
- Trevor Stamey
- Will Raulerson
- Brian Gregory

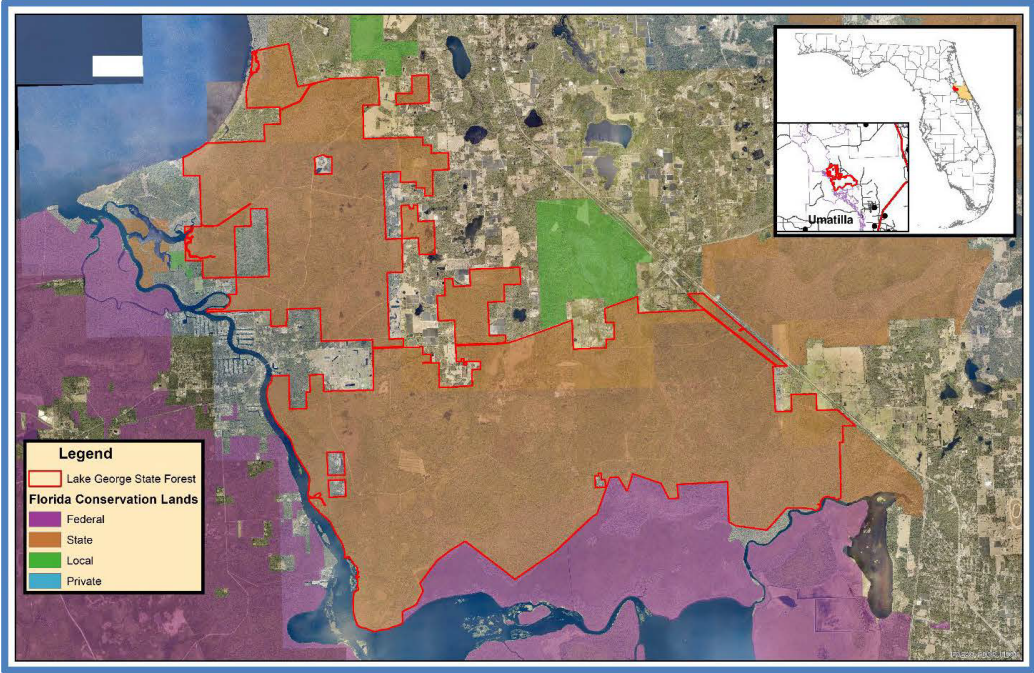
Review Team Members Present (voting)

- DRP District, None
- Tim Baylie, Local Gov't.
- Travis Blunden, FWC
- Brennan Hagan, DEP District
- Heather Schmiede, FFS
- Dean Gemeinhardt, SJRWMD
- Ray Jarrett, Cons. Organization
- Don Dunn, Private Land Manager

Other Non-Team Members Present (attending)

- Keith Singleton, DEP/DSL
- Aaryn Tarver, FWC

1.2 Property Map



1.3. Overview of Land Management Review Results

Is the property managed for purposes that are compatible with conservation, preservation, or recreation?

Yes = 7, No = 0

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

Yes = 7, 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	3.93	4.17
Prescribed Fire / Habitat Restoration	4.13	4.33
Hydrology	4.36	4.21
Imperiled Species	3.27	3.43
Exotic / Invasive Species	3.97	3.80
Cultural Resources	4.64	4.64
Public Access / Education / Law Enforcement	4.39	4.06
Infrastructure / Equipment / Staffing	3.93	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 the Florida Forest Service (FFS) for developing and implementing an effective invasive species management program. (7+, 0-)
2. The team commends the FFS for the expansion and improvement of the prescribed fire program over the last 10 years. (7+, 0-)
3. The team commends the FFS for the high quality interpretive panels in the kiosks at the trailheads and state forest entrances. (7+, 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 the FFS increase annual acreages and continue to add growing season fire to the prescribed fire rotation. (7+, 0-)

Managing Agency Response: The FFS will continue to work toward increasing the annual acres burned and add growing season fire to the prescribed fire rotation.

2. The team recommends that the FFS conduct rare plant and animal inventories for the area. (7+, 0-)

Managing Agency Response: The FFS will seek opportunities to conduct rare plant and animal inventories for the area by coordinating efforts with FWC and their biologists.

3. The team recommends that the FFS add a map of blueway opportunities at Bluffton Recreational Area. (7+, 0-)

Managing Agency Response: The FFS will evaluate opportunities for establishing a blueway trail from the Bluffton Recreation Area.

4. The team recommends that the FFS explore the feasibility of developing additional hiking trails. (7+, 0-)

Managing Agency Response: The FFS will evaluate opportunities for developing additional hiking trails.

5. The team recommends that the FFS increase the use of mechanical treatment in areas of wildland urban interface to reduce the understory and to facilitate burning. (7+, 0-)

Managing Agency Response: The FFS will seek opportunities to reduce the fuel loads in the wildland urban interface areas.

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 floodplain marsh, dome swamp, floodplain swamp, hydric hammock, wet prairie, and xeric hammock.
2. Natural resource survey/monitoring resources, specifically fire effects monitoring, other habitat management effects monitoring, and invasive species survey and monitoring.
3. Cultural Resources, specifically cultural resource survey, and protection and preservation.
4. Resource management (prescribed fire), specifically quality.
5. Forest management, specifically timber inventory, timber harvesting, and site preparation.
6. Non-native, invasive, and problem species, specifically prevention and control of plants, and control of pests/pathogens.
7. Hydro-alteration, specifically roads/culverts, and ditches.
8. Resource protection, specifically boundary survey, gates and fencing, signage, and law enforcement presence.
9. Public access, specifically roads and parking.
10. Environmental education and outreach, specifically wildlife, invasive species, habitat management activities, interpretive facilities and signs, recreational opportunities, and management of visitor impacts.
11. Management resources, specifically waste disposal, sanitary facilities, buildings, and staff.

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. *The maintenance condition of the Natural Communities, specifically sandhill, received a below average score. The review team is asked to evaluate, based on their perspective, what percent of the natural community is in maintenance condition. The scores range from 1 to 5, with 1 being 0-20% in maintenance condition, 2 being 21-40%, 3 being 41-60%, 4 being 61-80% and 5 being 81-100%.*

Managing Agency Response: The age of a majority of the timber in these areas is a contributing factor to the current condition of this community. As the forest stands mature, restoration efforts such as thinning, burning, and removing off-site pine will occur.

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 Flatwoods	I.A.1	3	3	3	4	3	4	3		3.29
Depression Pond/Marsh	I.A.2	3	3	3	3	3	3	4		3.14
Scrubby Flatwoods	I.A.3	3	4	2	2	3	4	4		3.14
Floodplain Marsh	I.A.4	4	4	5	3	4	4	4		4.00
Sandhill	I.A.5	2	2	2	2	2	3	3		2.29
Basin Marsh	I.A.6	4	4	3	4	3	4	4		3.71
Basin Swamp	I.A.7	4	2	4	3	3	3	3		3.14
Baygall	I.A.8	3	3	4	3	3	4	3		3.29
Dome Swamp	I.A.9	5	4	4	5	5	5	4		4.57
Floodplain Swamp	I.A.10	5	5	5	5	4	5	5		4.86
Hydric Hammock	I.A.11	5	5	5	5	5	5	4		4.86
Wet Flatwoods	I.A.12	3	3	2	4	3	4	3		3.14
Wet Prairie	I.A.13	5	5	3	5	5	5	5		4.71
Xeric Hammock	I.A.14	5	4	4	3	5		3		4.00
Natural Communities Average Score										3.72
Listed species: Protection & Preservation (I.B)										
Animals	I.B.1	4	x	2	4	4	4	2		3.33
Plants	I.B.2	4	x	2	4	4		2		3.20
Listed Species Average Score										3.27
Natural Resources Survey/Management Resources (I.C)										
Listed species or their habitat monitoring	I.C.2	4	2		3	3	4	2		3.00
Fire effects monitoring	I.C.4	4	5	4	5	5	5	4		4.57
Other habitat management effects monitoring	I.C.5	4	4	4	4	4	4	4		4.00
Invasive species survey / monitoring	I.C.6	5	4	4	4	5	5	4		4.43
Cultural Resources (Archeological & Historic sites) (II.A, II.B)										
Cultural Res. Survey	II.A	5	5	4	5	4	5	5		4.71
Protection and preservation	II.B	5	5	4	5	4	5	4		4.57
Cultural Resources Average Score										4.64
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	4	3	3	5	3	5	3		3.71
Frequency	III.A.2	4	3	3	5	4	5	3		3.86
Quality	III.A.3	5	5		5	5	5	4		4.83
Resource Management, Prescribed Fire Average Score										4.13
Forest Management (III.C)										
Timber Inventory	III.C.1	5	5	5	4	4	5	4		4.57
Timber Harvesting	III.C.2	5	4	3	4	5	4	4		4.14
Reforestation/Afforestation	III.C.3	5	3	3	3	5	4	4		3.86
Site Preparation	III.C.4	5	4	4	3	4	4	4		4.00
Forest Management Average Score										4.14
Non-Native, Invasive & Problem Species (III.D)										
Prevention										

prevention - plants	III.D.1.a	5	4	4	3	5	5	4		4.29
prevention - animals	III.D.1.b	5	3	3	3	4	4	4		3.71
prevention - pests/pathogens	III.D.1.c	4	3	3		4	4	4		3.67
Control										
control - plants	III.D.2.a	5	3	3	5	5	5	4		4.29
control - animals	III.D.2.b	5	3	3	4	4	4	4		3.86
control - pest/pathogens	III.D.2.c	5	4	3	4	3	5	4		4.00
Non-Native, Invasive & Problem Species Average Score										3.97
Hydrologic/Geologic function Hydro-Alteration (III.E.1)										
Roads/culverts	III.E.1.a	5	4	4	5	5	4	4		4.43
Ditches	III.E.1.b	5	4	4	4	4	5	4		4.29
Hydrologic/Geologic function, Hydro-Alteration Average Score										4.36
Resource Protection (III.F)										
Boundary survey	III.F.1	5	4	5	5	4	5	5		4.71
Gates & fencing	III.F.2	5	3	4	4	4	5	4		4.14
Signage	III.F.3	5	4	4	5	5	5	4		4.57
Law enforcement presence	III.F.4	5	5	4	5	4	4	3		4.29
Resource Protection Average Score										4.43
Adjacent Property Concerns (III.G)										
Land Use										
Ferries	III.G.1.b	4	3	4	3	4	4	2		3.43
Inholdings/additions	III.G.2	5	3	5	3	4	4	3		3.86
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	5	4	5	5	5	4	4		4.57
Parking	IV.1.b	5	5	4	5	4	4	4		4.43
Environmental Education & Outreach										
Wildlife	IV.2.a	4	5	3	5	5	4	4		4.29
Invasive Species	IV.2.b	4	4	3	4	5	4	4		4.00
Habitat Management Activities	IV.2.c	4	5	3	4	4	4	4		4.00
Interpretive facilities and signs	IV.3	4	4	5	5	4	4	5		4.43
Recreational Opportunities	IV.4	5	4	5	5	5	4	5		4.71
Management of Visitor Impacts	IV.5	5	5	4	4	4		4		4.33
Public Access & Education Average Score										4.35
Management Resources (V.1, V.2, V.3, V.4)										
Maintenance										
Waste disposal	V.1.a	5	4	5	4	5	4	4		4.43
Sanitary facilities	V.1.b	5	4	4	4	5	4	2		4.00
Infrastructure										
Buildings	V.2.a	4	3	4	4	5	4	4		4.00
Equipment	V.2.b	4	3	4	3	4	4	4		3.71
Staff	V.3	4	3	4	4	5	4	4		4.00
Funding	V.4	4	3	4	2	4	4	3		3.43
Management Resources Average Score										3.93

Color Code:

Excellent

Above
Average

Below
Average

Poor

Missing
VoteInsufficient
InformationSee
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 Resources Survey and Monitoring Resources, specifically listed species or their habitat monitoring, received a below average score. This is an indication that the management plan does not sufficiently address survey or monitoring.*

Managing Agency Response: The FFS will include a discussion about surveying and monitoring listed species and their habitat in the next management plan revision.

2. *Adjacent Property Concerns, specifically discussion of potential surplus land determination, received a below average score. This is an indication that the management plan does not sufficiently address adjacent property.*

Managing Agency Response: The FFS will include a discussion about potential surplus land determination in the next management plan revision.

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 Flatwoods	I.A.1	5	4		4	5	5	4		4.50
Depression Pond/Marsh	I.A.2	4	3		4	4	4	4		3.83
Scrubby Flatwoods	I.A.3	5	4	4	4	4	4	4		4.14
Floodplain Marsh	I.A.4	4	4		3	4	4	4		3.83
Sandhill	I.A.5	4	2		4	4	5	3		3.67
Basin Marsh	I.A.6	4	3		4	4	5	4		4.00
Basin Swamp	I.A.7	4	3		4	4	5	4		4.00
Baygall	I.A.8	4	3		4	4	5	4		4.00
Dome Swamp	I.A.9	4	4		5	5	5	4		4.50
Floodplain Swamp	I.A.10	4	5		5	4	5	4		4.50
Hydric Hammock	I.A.11	4	5		5	4	5	4		4.50
Wet Flatwoods	I.A.12	4	3		5	4	5	4		4.17

Wet Prairie	I.A.13	4	5		4	5	5	4		4.50
Xeric Hammock	I.A.14	4	4		4	5		3		4.00
Natural Communities Average Score										4.15
Listed species: Protection & Preservation (I.B)										
Animals	I.B.1	3		2	4	5	5	3		3.67
Plants	I.B.2	3		2	5	4		2		3.20
Listed Species Average Score										3.43
Natural Resources Survey/Management Resources (I.C)										
Listed species or their habitat monitoring	I.C.2	3	3	2	3	3	4	2		2.86
Fire effects monitoring	I.C.4	4	5	2	5	5	5	4		4.29
Other habitat management effects monitoring	I.C.5	3	3	2	4	4	4	4		3.43
Invasive species survey / monitoring	I.C.6	5	4	3	4	5	5	4		4.29
Cultural Resources (Archeological & Historic sites) (II.A, II.B)										
Cultural Res. Survey	II.A	4	5	4	5	5	5	5		4.71
Protection and preservation	II.B	4	5	4	5	5	5	4		4.57
Cultural Resources Average Score										4.64
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	4	4	4	4	5	5	4		4.29
Frequency	III.A.2	4	4	4	5	5	5	4		4.43
Quality	III.A.3	4	5	3	4	5	5	4		4.29
Resource Management, Prescribed Fire Average Score										4.33
Forest Management (III.C)										
Timber Inventory	III.C.1	5	5	3	4	5	5	5		4.57
Timber Harvesting	III.C.2	4	4	3	5	4	5	5		4.29
Reforestation/Afforestation	III.C.3	4	3	2	3	5	5	5		3.86
Site Preparation	III.C.4	4	4	2	4	4	5	5		4.00
Forest Management Average Score										4.18
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.E.1.a	4	4	2	4	5	4	4		3.86
prevention - animals	III.E.1.b	4	3	2	4	4	5	4		3.71
prevention - pests/pathogens	III.E.1.c	4	4	2		4	4	4		3.67
Control										
control - plants	III.E.2.a	4	4	3	5	5	5	4		4.29
control - animals	III.E.2.b	4	3	3	3	5	4	4		3.71
control - pest/pathogens	III.E.2.c	4	3	3	3	3	5	4		3.57
Non-Native, Invasive & Problem Species Average Score										3.80
Hydrologic/Geologic function, Hydro-Alteration (III.E.1)										
Roads/culverts	III.F.1.a	4	4	4	5	4	5	4		4.29
Ditches	III.F.1.b	4	4	4	4	4	5	4		4.14
Hydrologic/Geologic function, Hydro-Alteration Average Score										4.21
Resource Protection (III.F)										
Boundary survey	III.G.1	5	4	3	4	5	5	4		4.29
Gates & fencing	III.G.2	4	3	3	4	4	4	4		3.71

Signage	III.G.3	4	4	3	4	5	4	4		4.00
Law enforcement presence	III.G.4	4	5	3	5	4	4	4		4.14
Resource Protection Average Score										4.04
Adjacent Property Concerns (III.G)										
Land Use										
Ferries	III.H.1.b	3	3		4	5	4	1		3.33
Inholdings/additions	III.H.2	4	3	3	3	5	4	3		3.57
Discussion of Potential Surplus Land Determination	III.H.3	2	3	1	1	3	2	2		2.00
Surplus Lands Identified?	III.H.4	5	3	5	5	4	5	5		4.57
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	4	4	3	5	5	4	4		4.14
Parking	IV.1.b	4	5	3	4	5	4	4		4.14
Environmental Education & Outreach										
Wildlife	IV.2.a	4	4	2	4	5	4	4		3.86
Invasive Species	IV.2.b	4	4	2	5	5	4	4		4.00
Habitat Management Activities	IV.2.c	4	4	2	4	5	4	4		3.86
Interpretive facilities and signs	IV.3	3	5	3	5	5	4	4		4.14
Recreational Opportunities	IV.4	5	5	4	4	5	4	4		4.43
Management of Visitor Impacts	IV.5	4	5	4	3	5		4		4.17
Public Access & Education Average Score										4.09
Managed Area Uses (VI.A, VI.B)										
Existing Uses										
Recreational Trails	VI.A.1	5	5	5	5	5	3	3		4.43
Hunting	VI.A.2	5	5	5	5	4	4	5		4.71
Fishing	VI.A.3	5	4	5	4	5	3	4		4.29
Horseback Riding	VI.A.4	3	5	4	4	3	4	5		4.00
Birdwatching	VI.A.5	5	3	5	5	5	4	4		4.43
Primitive Camping	VI.A.6	5	4	4	5	5	4	4		4.43
Bicycling	VI.A.7	5	3	4	4	5	3	3		3.86
Color Code:		Excellent		Above Average		Below Average		Poor		See Appendix A for detail
				Missing Vote		Insufficient Information				

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*

2023 Land Management Review Team Report for Lake George State Forest

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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 cases 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 or jurisdictional water management 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.

Property Reviewed in this Report

Name of Site: Lake George State Forest

Managed by: Department of Agriculture and Consumer Services, Florida Forest Service

Acres: 21,186

County: Volusia

Purpose(s) for Acquisition: to protect and restore the natural and cultural values of the property and provide the greatest benefit to the citizens of the state.

Acquisition Program(s): CARL/P2000

Original Acquisition Date: 5/27/93

Area Reviewed: Entire Property

Last Management Plan Approval Date: 12/16/16

Review Date: 10/4/23

Agency Manager and Key Staff:

- Lindsey Bessent, Manager
- Donald King
- Justina Jones

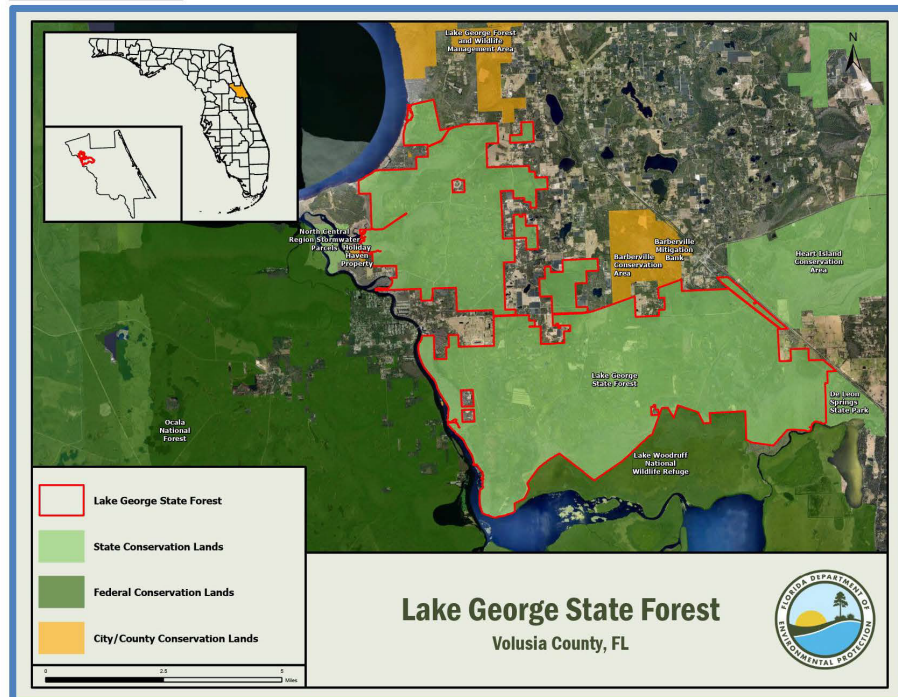
Review Team Members (voting)

- Dustin Allen, DRP District
- Dean Gemeinhardt, Local Gov't.
- Jess Rodriguez, FWC
- Mara Galvez Gonzalez, DEP District
- Joe Bishop, FFS
- Chris Kinslow, SJRWMD
- Jeffrey Graham, Conservation Org.
- Ben Williams, Private Land Manager

Non-Team Members (attending)

- Keith Singleton, DEP/DSL
- Caitlyn Crawford, FWC
- Kris Campbell, FWC

Property Map



Overview of Land Management Review Results

Is the property managed for purposes that are compatible with conservation, preservation, or recreation?

Yes = 7, No = 0

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

Yes = 7, 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	4.43	4.67
Prescribed Fire / Habitat Restoration	4.48	4.62
Hydrology	4.71	4.57
Imperiled Species	4.17	4.17
Exotic / Invasive Species	4.26	4.33
Cultural Resources	4.64	4.71
Public Access / Education / Law Enforcement	4.58	4.36
Infrastructure / Equipment / Staffing	4.29	N/A
Color Code (See Appendix A for detail)		
Excellent	Above Average	Below Average
		Poor

Consensus Commendations for the Managing Agency

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

1. The team commends the Florida Forest Service (FFS) staff for their prescribed fire program particularly their fire return interval maintenance. (7+, 0-)
2. The team commends the FFS staff for the timber management program at this forest. (7+, 0-)
3. The team commends the FFS for transitioning stands to longleaf pine where appropriate. (7+, 0-)
4. The team commends the FFS staff for road improvements and maintaining hydrologic functions. (7+, 0-)

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 the FFS include additional growing season prescribed fires. (7+, 0-)

Managing Agency Response: *The FFS will continue to work toward adding growing season prescribed fires to the rotation as appropriate and as fuel, weather conditions, and staffing allow.*

Field Review Details

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 mesic flatwoods, depression pond/marsh, floodplain marsh, basin marsh, baygall, dome swamp, floodplain swamp, hydric hammock, wet prairie, and xeric hammock.
2. Listed species, animals and plants in general.
3. Natural resource survey/monitoring resources, specifically listed species or their habitat monitoring, fire effects monitoring, other habitat management effects monitoring, and invasive species survey and monitoring.
4. Cultural resources, specifically cultural resource survey, and protection and preservation.
5. Resource management (prescribed fire), specifically area being burned, frequency, and quality.
6. Forest management, specifically timber inventory, timber harvesting, reforestation/afforestation, and site preparation.
7. Non-native, invasive, and problem species, specifically prevention and control of plants, animals, and pests/pathogens.
8. Hydrologic/geologic function hydro-alteration, roads and culverts, and ditches.
9. Resource protection, specifically boundary survey, gates and fencing, signage, and law enforcement presence.
10. Adjacent property concerns, specifically ferneries, and inholdings and additions.
11. Public access, specifically roads, and parking.
12. Environmental education and outreach, specifically wildlife, invasive species, habitat management activities, interpretive facilities and signs, recreational opportunities, and management of visitor impacts.
13. Management resources, specifically waste disposal, sanitary facilities, buildings, equipment, and staff.

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. The maintenance condition of the Natural Communities, specifically sandhill, received a below average score. The review team is asked to evaluate, based on their perspective, what percent of the natural community is in maintenance condition. The scores range from 1 to 5, with 1 being 0-20% in maintenance condition, 2 being 21-40%, 3 being 41-60%, 4 being 61-80% and 5 being 81-100%.

Managing Agency Response: *The age of most of the timber and the stand structure in this relatively small community (173 historic acres) are contributing factors to the current condition. As the forest stands mature, restoration efforts including thinning, burning, mechanical fuel reduction, and*

removing off-site pine will be utilized as appropriate to improve the sandhills on Lake George State Forest.

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 Flatwoods	I.A.1	4	4	4	4	5	4	4		4.14
Depression Pond/Marsh	I.A.2	4	5	4	4	5	5	4		4.43
Scrubby Flatwoods	I.A.3	2	4	3	2	5	3	2		3.00
Floodplain Marsh	I.A.4		5	4	x	5	5	5		4.80
Sandhill	I.A.5	2	3	2	2	4	2	2		2.43
Basin Marsh	I.A.6		4	4	4	5	4	4		4.17
Basin Swamp	I.A.7	4	4	4	4	5	4	4		4.14
Baygall	I.A.8	4	4	4	4	5	4	4		4.14
Dome Swamp	I.A.9	5	4	4	5	5	5	5		4.71
Floodplain Swamp	I.A.10	5	4	4	5	5	5	5		4.71
Hydric Hammock	I.A.11	5	4	5	5	5	5	5		4.86
Wet Flatwoods	I.A.12	3	4	3	3	5	3	3		3.43
Wet Prairie	I.A.13	5	4	4	5	5	5	4		4.57
Xeric Hammock	I.A.14	4	4	5	5	5	5	5		4.71
Natural Communities Average Score										4.16
Listed species: Protection & Preservation (I.B)										
Animals	I.B.1	4	5	4	x	5	4	3		4.17
Plants	I.B.2	4	5	4	x	5	4	3		4.17
Listed Species Average Score										4.17
Natural Resources Survey/Management Resources (I.C)										
Listed species or their habitat monitoring	I.C.2	5	5	4	x	5	4	3		4.33
Fire effects monitoring	I.C.4	5	5	4	5	5	5	4		4.71
Other habitat management effects monitoring	I.C.5	5	5	4	4	5	5	4		4.57
Invasive species survey / monitoring	I.C.6	5	4	4	4	5	5	4		4.43
Cultural Resources (Archeological & Historic sites) (II.A, II.B)										
Cultural Res. Survey	II.A	5	5	4	4	5	5	5		4.71
Protection and preservation	II.B	5	5	4	4	5	4	5		4.57
Cultural Resources Average Score										4.64
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	5	4	4	4	5	5	4		4.43
Frequency	III.A.2	5	5	4	3	5	5	4		4.43
Quality	III.A.3	5	5	4	4	5	4	5		4.57
Resource Management, Prescribed Fire Average Score										4.48
Forest Management (III.C)										

Timber Inventory	III.C.1	5	5	4	4	5	5	5		4.71
Timber Harvesting	III.C.2	5	5	4	3	5	5	5		4.57
Reforestation/Afforestation	III.C.3	x	X	X	x	5	x	X		5.00
Site Preparation	III.C.4	x	5	4	x	5	x	4		4.50
Forest Management Average Score										4.70
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.D.1.a	5	5	4	4	5	4	4		4.43
prevention - animals	III.D.1.b	4	5	4	3	5	4	3		4.00
prevention - pests/pathogens	III.D.1.c	5	5	4	4	5	4	3		4.29
Control										
control - plants	III.D.2.a	5	4	4	4	5	5	3		4.29
control - animals	III.D.2.b	5	5	4	3	5	4	3		4.14
control - pests/pathogens	III.D.2.c	5	5	4	4	5	5	3		4.43
Non-Native, Invasive & Problem Species Average Score										4.26
Hydrologic/Geologic function Hydro-Alteration (III.E.1)										
Roads/culverts	III.E.1.a	5	5	4	4	5	5	5		4.71
Ditches	III.E.1.b	5	5	4	4	5	5	5		4.71
Hydrologic/Geologic function, Hydro-Alteration Average Score										4.71
Resource Protection (III.F)										
Boundary survey	III.F.1	5	5	4	4	5	5	4		4.57
Gates & fencing	III.F.2	5	5	4	5	5	5	4		4.71
Signage	III.F.3	2	4	4	5	5	5	5		4.29
Law enforcement presence	III.F.4	5	5	4	5	5	5	3		4.57
Resource Protection Average Score										4.54
Adjacent Property Concerns (III.G)										
Land Use										
Ferneries	III.G.1.b	4	5	4	4	5	3	3		4.00
Inholdings/additions	III.G.2	5	5	4	4	5	4	3		4.29
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	5	5	4	5	5	5	5		4.86
Parking	IV.1.b	5	5	4	5	5	5	4		4.71
Environmental Education & Outreach										
Wildlife	IV.2.a	5	5	4	4	5	4	5		4.57
Invasive Species	IV.2.b	5	5	4	x	4	4	5		4.50
Habitat Management Activities	IV.2.c	5	5	4	5	5	5	4		4.71
Interpretive facilities and signs	IV.3	4	5	4	3	4	4	5		4.14
Recreational Opportunities	IV.4	5	5	4	5	5	5	5		4.86
Management of Visitor Impacts	IV.5	5	5	4	4	5	5	4		4.57
Public Access & Education Average Score										4.62
Management Resources (V.1, V.2, V.3, V.4)										
Maintenance										
Waste disposal	V.1.a	5	5	4	4	5	5	4		4.57
Sanitary facilities	V.1.b	5	5	4	5	5	5	4		4.71

Infrastructure										
Buildings	V.2.a	5	5	4	4	5	5	3		4.43
Equipment	V.2.b	5	5	3	4	5	4	3		4.14
Staff	V.3	5	5	4	4	5	5	3		4.43
Funding	V.4	5	5	2	3	4	3	2		3.43
Management Resources Average Score										4.29

Color Code:

Excellent

Above
Average

Below
Average

Poor

Missing
Vote

Insufficient
Information

See
Appendix A
for detail

Land Management Plan Review Details

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:

The review team scores did not identify items requiring improvements in the management plan.

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 Flatwoods	I.A.1	5	5	4	4	5	5	5		4.71
Depression Pond/Marsh	I.A.2	5	5	4	5	5	5	5		4.86
Scrubby Flatwoods	I.A.3	5	5	4	4	5	5	5		4.71
Floodplain Marsh	I.A.4	5	5	4	5	5	5	5		4.86
Sandhill	I.A.5	5	5	4	4	4	5	5		4.57
Basin Marsh	I.A.6	5	5	4	5	5	5	5		4.86
Basin Swamp	I.A.7	5	5	4	5	5	5	5		4.86
Baygall	I.A.8	5	5	4	5	5	5	5		4.86
Dome Swamp	I.A.9	5	5	4	5	5	5	5		4.86
Floodplain Swamp	I.A.10	5	5	4	5	5	5	5		4.86
Hydric Hammock	I.A.11	5	5	4	5	5	5	5		4.86
Wet Flatwoods	I.A.12	5	5	4	4	5	5	5		4.71
Wet Prairie	I.A.13	5	5	4	5	5	5	5		4.86
Xeric Hammock	I.A.14	5	5	4	4	5	5	5		4.71
Natural Communities Average Score										4.80
Listed species: Protection & Preservation (I.B)										
Animals	I.B.1	4	5	4	x	5	4	3		4.17

Plants	I.B.2	4	5	4	x	5	4	3		4.17
Listed Species Average Score										4.17
Natural Resources Survey/Management Resources (I.C)										
Listed species or their habitat monitoring	I.C.2	4	5	4	x	5	4	3		4.17
Fire effects monitoring	I.C.4	5	5	4	5	5	4	3		4.43
Other habitat management effects monitoring	I.C.5	5	5	4	4	5	4	3		4.29
Invasive species survey / monitoring	I.C.6	5	5	4	4	5	5	4		4.57
Cultural Resources (Archeological & Historic sites) (II.A, II.B)										
Cultural Res. Survey	II.A	5	5	4	5	5	5	4		4.71
Protection and preservation	II.B	5	5	4	5	5	5	4		4.71
Cultural Resources Average Score										4.71
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	5	5	4	5	5	4	5		4.71
Frequency	III.A.2	5	5	4	5	5	4	5		4.71
Quality	III.A.3	5	5	4	5	5	4	3		4.43
Resource Management, Prescribed Fire Average Score										4.62
Forest Management (III.C)										
Timber Inventory	III.C.1	5	5	4	5	5	4	3		4.43
Timber Harvesting	III.C.2	5	5	4	5	5	4	4		4.57
Reforestation/Afforestation	III.C.3	5	5	4	5	5	5	4		4.71
Site Preparation	III.C.4	5	5	4	5	5	4	3		4.43
Forest Management Average Score										4.54
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.D.1.a	5	5	4	4	5	4	4		4.43
prevention - animals	III.D.1.b	5	5	4	4	5	4	3		4.29
prevention - pests/pathogens	III.D.1.c	5	5	4	4	5	4	3		4.29
Control										
control - plants	III.D.2.a	5	4	4	5	5	4	3		4.29
control - animals	III.D.2.b	5	5	4	5	5	4	3		4.43
control - pests/pathogens	III.D.2.c	5	5	4	4	5	4	3		4.29
Non-Native, Invasive & Problem Species Average Score										4.33
Hydrologic/Geologic function, Hydro-Alteration (III.E.1)										
Roads/culverts	III.E.1.a	5	5	4	5	5	5	3		4.57
Ditches	III.E.1.b	5	5	4	5	5	5	3		4.57
Hydrologic/Geologic function, Hydro-Alteration Average Score										4.57
Resource Protection (III.F)										
Boundary survey	III.F.1	5	5	4	4	5	5	3		4.43
Gates & fencing	III.F.2	5	5	4	5	4	5	3		4.43
Signage	III.F.3	1	5	4	4	5	5	3		3.86
Law enforcement presence	III.F.4	5	5	4	5	5	5	3		4.57
Resource Protection Average Score										4.32
Adjacent Property Concerns (III.G)										
Land Use										

Ferries	III.G.1.b	2	5	4	4	5	3	4		3.86
Inholdings/additions	III.G.2	5	5	4	4	5	4	3		4.29
Discussion of Potential Surplus Land Determination	III.G.3	3	3	4	3	4	2	4		3.29
Surplus Lands Identified?	III.G.4	5	5	4	4	5	4	4		4.43
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	5	5	4	5	5	5	5		4.86
Parking	IV.1.b	5	5	4	5	5	5	5		4.86
Environmental Education & Outreach										
Wildlife	IV.2.a	5	5	4	4	5	4	3		4.29
Invasive Species	IV.2.b	5	5	4	3	4	4	3		4.00
Habitat Management Activities	IV.2.c	5	5	4	4	5	4	3		4.29
Interpretive facilities and signs	IV.3	4	5	4	3	4	4	3		3.86
Recreational Opportunities	IV.4	5	5	4	5	5	4	4		4.57
Management of Visitor Impacts	IV.5	5	5	4	5	5	4	3		4.43
Public Access & Education Average Score										4.39
Managed Area Uses (VI.A, VI.B)										
Existing Uses										
Recreational Trails	VI.A.1		5	4	5	5	5	3		4.50
Hunting	VI.A.2		5	4	5	5	5	3		4.50
Fishing	VI.A.3		5	4	5	5	5	3		4.50
Horseback Riding	VI.A.4		3	4	4	5	5	3		4.00
Birdwatching	VI.A.5		5	4	5	5	5	3		4.50
Primitive Camping	VI.A.6		5	4	5	5	5	3		4.50
Bicycling	VI.A.7		5	4	5	5	5	3		4.50
Color Code:		Excellent	Above Average		Below Average		Poor		See Appendix A for detail	
			Missing Vote		Insufficient Information					

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*

Exhibit S

Compliance with Local Comprehensive Plan (Volusia County)

FLORIDA FOREST SERVICE
(850) 681-5800



THE CONNER BUILDING
3125 CONNER BOULEVARD
TALLAHASSEE, FLORIDA 32399-1650

FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
COMMISSIONER WILTON SIMPSON

June 29, 2026

Carol McFarlane, Director of Planning and Development Services
Volusia County Planning and Development Services
123 W. Indiana Avenue
DeLand, FL 32720
(386) 736-5942
planning@volusia.gov

RE: Lake George State Forest State Forest 10-Year Land Management Plan

Ms. McFarlane,

Greetings from the Florida Forest Service (FFS). Attached is a copy of the Ten-Year Land Management Plan and Exhibits for Lake George State Forest, prepared in accordance with F.S. 253.034. Please review the draft plan at your earliest convenience and reply as to whether the plan is consistent with Volusia County's Comprehensive Plan.

Please address all correspondence concerning the Management Plan on official letterhead to the above mailing address or via e-mail. I can be reached by telephone at (850) 681-5889 or by email at Emily.Marsh@fdacs.gov if you have any questions.

Thank you for assisting us in managing Lake George State Forest resources through a stewardship ethic to ensure they are available for future generations.

Sincerely,

Emily Marsh
State Lands Management Planner
Forest Management Bureau
Florida Forest Service

Exhibit T

State Forest Management Plan Advisory Group Summary

Management Plan Advisory Group Public Hearing
Lake George State Forest
10-Year Land Management Plan

June 4, 2026

10:30 A.M.

Meeting Minutes

MPAG Members Present:

- | | |
|------------------|---|
| • Mike Facente | Orlando Forestry Center Manager, Florida Forest Service (FFS) |
| • R.H. Davis | Regional Land Manager, St. Johns River Water Management District |
| • Michael Nelson | Assistant Regional NE Biologist,
Representing Caitlyn Crawford, Florida Fish and Wildlife Commission |
| • Hunter Folmar | Chief of Land Management, Volusia County Land Management |
| • Roy Pridgeon | Local Property Owner |
| • Syd Thyhsen | Local Property Owner |

MPAG Members Not Present:

- | | |
|-----------------|---|
| • Austin Spivey | Representative, Volusia County Soil and Water Conservation District |
| • Jeff Brower | Volusia County Chair, Volusia County |

FFS Staff:

- | | |
|-------------------|--|
| • Alan Davis | Land Administration Manager |
| • Brian Camposano | Forest Management Assistant Bureau Chief |
| • Justina Jones | Forestry Resource Administrator |
| • Donald King | Forestry Supervisor II |
| • Cindy Venuti | Forester |
| • Emily Marsh | Land Management Planner |

Guests:

- Keith Earle
- Sue Morris
- Mo Earle
- Karen Pando
- Ron Smith
- Heather Greenwell
- Chris Drooker
- Robin Lindsay
- B.J. Horton

Public Meeting Start Time: 9:32 A.M.

- Land Administration Manager, Alan Davis (FFS) opened the meeting by introducing himself and explained the purpose and statutory framework for the Lake George State Forest 10-Year Land Management Plan process. He explained that the Plan is not an annual work plan or detailed operational plan but provides general and conceptual guidance for management of Lake George State Forest (LGSF) for the next 10-year period.

- Mr. Davis confirmed compliance with the Florida Sunshine Law advising MPAG members to not discuss the draft outside of the public meetings. He stated that the meetings are open to the public, recorded, and minutes taken.
- Mr. Davis stated that both MPAG meetings are open to the public and proper notice was given. The meetings were advertised in the West Volusia Beacon Newspaper on April 30, 2026; Florida Administrative Register, FFS webpage, as well as posted at the kiosks in the Orlando Forestry Center. The meetings were announced at the Volusia Board of County Commissioners meeting on April 21, 2026. He noted that the draft plan goes through various approvals before and after the MPAG meetings but that the FFS Director is granted final authority on changes to the draft plan. He described the day's two meetings: The first meeting is informational and provides opportunity for public comment; the 1:00 p.m. Workshop meeting provides opportunity for the MPAG members to discuss the public input and to share their personal comments on the draft plan. The public is welcome to attend the Workshop, but participation is limited to MPAG members.
- Mr. Davis then requested MPAG Member introductions and attendance was taken.
- Mr. Davis asked if there were any questions at this time. None followed.
- Mr. Davis then introduced Forester, Cindy Venuti, who presented a PowerPoint presentation of the 10-Year Plan. Mr. Earle inquired how many trees are involved in the annual timber sale. Mrs. Venuti stated the sale generally comprises a couple hundreds of acres but is dependent on prior years and the data collected. Mr. Davis requested to hold any clarifying questions to the end of the presentation. Mrs. Venuti and Mr. Earle agreed. Mrs. Venuti proceeded with the presentation. Mr. Davis asked if there were any clarifying questions regarding the presentation.
- Ms. Morris stated oh yes, it is. Mr. Davis reiterated that he is asking about clarifying questions to the PowerPoint. Ms. Morris stated that it is and continued to inquire if LGSF staff still plants trees or if they just let them grow haphazardly. Mrs. Venuti stated that they will generally replant the trees, specifically, with a pine species that would historically occur on that specific site.
- Ms. Greenwell added that she knows that a lot of timber debris is left behind and then inquired if that is left behind on purpose. Mrs. Venuti inquired Ms. Greenwell if she's referring to the logging of slash pine. Mrs. Greenwell stated yes. Mrs. Venuti stated that logging can be very messy in the beginning because of the required equipment used for efficiency. She continued to state that the loggers do not want the branches on the trees, only the tree trunks. Mrs. Venuti further stated that one of their practices is to follow up on a timber sale with a prescribed burn for a variety of reasons: the burn is safer due to the vegetation being matted down and it will not burn as intensely when the vegetation is knocked down. Mrs. Venuti concluded by stating that although it looks a little ugly at first, the area is regenerated very quickly after a timber sale with the good vegetation coming back. She further explained that due to the stress that the trees receive from logging and logging equipment, they will conduct a prescribed burn at least one (1) year post logging. Mrs. Venuti stated that the sweet spot for a prescribed burn is 2 years post logging.
- Mr. Davis asked if there were any questions. No questions followed.
- Mrs. Greenwell inquired if loggers are required to not impair cleared trails. She further stated that there are a couple of places that she noted that trails are blocked essentially and are not necessarily from the slash. Mrs. Greenwell stated that along 49, rests an abandoned stack of logs which blocks the trail because the loggers left a couple of trees; which this happened a couple of years ago and are decaying now. She continued to inquire if the loggers had any responsibility to honor the existing trails and recreational areas. Mrs. Venuti stated that it is the Forester's job to work with the loggers regarding those issues and added that they do not want anything left behind on the firelines. She further stated that they encourage folks to use the firelines for recreation and sometimes it just happens and that at the end of the day, the fireline is not, technically, a hiking or equestrian trail, rather it is a service road. Ms. Greenwell stated that the scenario she is referring to is on a numbered trail. She then stated that she does not know why loggers forgot that they had another stack of logs and is not trying to downplay Mrs. Venuti's role. Ms. Greenwell stated that the LGSF staff do a great job and she just wanted to know how the loggers feed into what staff are doing.

- Ms. Jones stated that the contract requires the loggers to scatter the slash, which are the limbs that the group was mentioning because they are not merchantable. She continued to state that they are required to scatter it a certain distance away from any live trees that were left standing. Ms. Greenwell stated that she understood. Ms. Jones stated that it probably got scattered and if the LGSF staff was notified about it then they would have gotten that resolved. Ms. Jones stated that LGSF does not have an equestrian designated trail on the state forest and that the service roads do not get used all of the time. She explained that they are used by in-house employees and personnel and apologized that that happened. Ms. Jones reiterated that if they had been notified, then they would have got someone out there to move the logs. Ms. Greenwell stated her appreciation and that she probably did not know at the time who to call. Ms. Jones expressed that she will provide Ms. Greenwell with her card before she leaves. Ms. Greenwell thanked Ms. Jones.
- Ms. Morris inquired if they have to use those big, boulder rocks for roadwork. She added that they are not good for her horse's feet. Ms. Greenwell stated that that is a good question because they have lost Fawn Trailhead as a viable equestrian trailhead because Fawn Road has no shoulders. She continued to state that they cannot get away from rocks and that she rides with shoes, but most people do not. Ms. Greenwell continued to state that with the big rocks, the trail is no longer a viable horse trail anymore. She then detailed the section where they would ride from Fawn Road to Quarters. Ms. Morris agreed and stated that her horse picked up a stone off of Fawn Road. Ms. Morris continued to state that they lost the whole Marsh-Green-Jim Loop and Quarters because the rocks are too big and there are no shoulders on some of the roads. She further stated that they can get away from, but on the whole loop Marsh-Green-Jim's Road, the rocks have been pushed out into the ditches where the equestrians cannot even ride that. Ms. Morris continued to state that they had not ridden there in two (2) years. She then inquired her group if they have rode out there this year. One member expressed that they tried it and said they could not do it. Ms. Morris concluded by stating that it is essentially a lost trailhead. Mrs. Venuti stated that she will defer to Ms. Jones about this because she knows that this has been a topic of discussion in the past. Ms. Morris then suggested that next time they use a different sized property. Ms. Jones stated that they use DOT-grade lime rock to cap the roads. She then explained that they used to use crushed shell and that does not stay packed, gets down into the ditch and the material is lost, and when they pull the ditches then they will get complaints from drivers due to the grass and roots causing the road to be bumpy. Ms. Jones further stated that they turned to crushed concrete but that was not successful because the magnet at the plant was not working to pull the metal out, so people were getting flat tires, and Risk Management was getting a lot of requests to replace those tires. Ms. Jones concluded by stating that they use lime rock state-wide, and that it stays packed without any metal in it. Ms. Morris interjected and retorted that they cannot ride it. Ms. Jones continued to state that depending on what plant you get it from, but it is usually the statewide road crew that comes to pack it with a packer. She then stated that that might be what Ms. Morris is referring to, as to when they pack down the material, maybe the bigger rocks are pushed to the side. An additional public member suggested laying a grass strip in the middle of the road when they are laying the rock down. Ms. Venuti stated that the public member is referring to the low-water crossing. Mr. Davis stated that these are all really great questions but informed the group to have questions specifically about the management plan. He continued to state that the issues posed can be mitigated in the future outside of this 10-year public meeting. Mr. Davis further stated that the group needs to stick to the plan itself and folks are welcome to come up and fill out a speaker form. He then reiterated that there are operational procedures in place to use the same material across the state and that may or may not hinder something along the way. Mr. Davis then encouraged the group to understand that FFS is a multi-use agency and that they try to appease everything and all recreational user groups on the state forest. Mr. Davis then apologized if some of their operations have to use some of those areas in order to access and haul off their timber. He then requested the group to be patient with FFS and try to understand that they are land managers and are trying to manage the land and have everything else available at the same time. Mr. Davis continued to state that he understands that logs or sticks may be found where they should not be, or rocks that is preventing something.

- A public member suggested that an alternative trail be made for equestrians. Mr. Davis stated that that is something to talk about outside of this public hearing, or that when they come up to speak, to propose something to FFS that can be incorporated into the plan. Mr. Davis then requested the group to please keep the public meeting focused on the plan itself as some of the topics being brought up should be addressed outside of this meeting. He then concluded by stating that they should try to keep the meeting on track.
- Mr. Earle inquired if this plan covers the next five (5) years. Mr. Davis stated that it is for the next 10 years. Mr. Earle observed that FFS is laying the groundwork now and stated that that is good. Mr. Davis stated yes sir and inquired the group if there was anything else before going over the public comments.
- Ms. Morris inquired if Cogongrass is the same as maidencane. Mr. King stated no ma'am. Ms. Morris stated ok. Mr. King stated that it looks like paintroot. Mr. Davis stated that Cogongrass' center stem is offset and is found in more uplands than wetlands. He further stated that maidencane is found more in the wetlands. Ms. Morris stated ok and then inquired how many eagles nests are out on LGSF. Mrs. Venuti stated that between six (6) and seven (7) nests have been documented. Mr. King stated that they are all along the river. Mrs. Venuti agreed and stated that six (6) or seven (7) are documented. Ms. Morris stated that there is one near her property, but loggers took down one, but the eagles moved and are no longer along the river. Mr. Davis inquired of additional questions before going over to the public comments. None followed.
- Ms. Morris joked for Mr. Davis to guess who was first to speak. Ms. Morris thanked everyone for holding the MPAG and that it has been really informative and would like to get the whole rock thing addressed. She then stated that she would like to see horse camping at Jenkins' Ponds. She explained that the space is big enough for horse trailers and that she is obviously an equestrian. Ms. Morris continued to state that she knows that at one time, there was supposed to be a camping area around the corral that is located on the west end. She then stated that there was a biologist that would open the place years ago. She reiterated that she thought there was supposed to be camping in that area and would be nice to see that. Ms. Morris then reiterated her stance about the rocks in the road and concluded by asking Ms. Jones for her card. Mr. Davis thanked Ms. Morris.
- Mr. Earle stated that he did not fill out a speaker form. Mr. Davis stated ok. Mr. Earle inquired if there will be anything written about off highway vehicles (OHVs) in the plan. Ms. Morris exemplified ebikes and other OHVs. Mrs. Venuti stated no. Ms. Jones stated that ebikes are allowed. Mr. Earle inquired if that is a yes or a no. Ms. Jones restated that ebikes are allowed on LGSF. Mr. Earle inquired about four-wheelers and Ms. Jones stated no and explained that it has to be a licensed and insured vehicle and tag. She further stated that if it is road legal then the vehicle can go on the main roads of the Dexter and Mary Farms Tracts.
- Ms. Pando stated that she has a copy of the comments and handed it to Mr. Davis. She then thanked the group and stated that equestrians are passionate about their sport and thanked everyone for showing up. Ms. Pando continued to introduce herself and provide a background on the Southeast Backcountry Horseman Organization and further expressed her gratitude to those that have allowed her and her group to ride. She then thanked the staff regarding the past accomplishments on the state forest, which is impressive. Ms. Pando stated that one of FFS' data points was having 1.4 million visitors in the last 10 years and then inquired if there was a way to breakdown the types of visitors (i.e. fishermen, hikers, bikers, equestrians, etc.). She further stated her curiosity on the matter. Mr. Davis stated that FFS uses Division of Recreational Parks' (DRP) formula to report. Ms. Pando stated ok. Mr. Davis continued to explain that as far as breaking that out, unless someone is out there physically counting visitors and understand what they are doing on the forest, it is hard to accomplish and break that out. Ms. Pando stated ok and that some of the places they go to, there is a sign in log...Ms. Morris interjected and stated that there used to be on both ends. Ms. Pando stated yes and that she thinks that it is tracked when the user pays their recreational fee. Mr. Davis acknowledged the day and annual use passes and stated that there are some ways to decipher what everyone is doing out there but it is not...Ms. Pando interjected and stated that obviously a lot of people visiting this state forest and that is the impressive part. She continued to state that they support the 10-year plan of LGSF overall and appreciate all of the recreational opportunities.

- Ms. Pando stated that under Goal 2, most of her comments are under Goal 2: Public Access and Recreational Opportunities and proceeded to read off objective 1. She then stated that everyone has heard comments now regarding Fawn Road. She continued to state that the Fawn Road parking lot is a nice access point. Ms. Pando continued to state that it is good, is a firm base, and get a lot of horse trailers in there and parking in there. She concluded by stating that that part is good. Ms. Pando stated that the parking lot down Bluffton Road is a great, big, open area, but she would not drive her truck and trailer on it because it is very low, and it appears that people have been mud bogging in that area, doing doughnut circles all over the place; thus, would not want to park there. She continued to state that it is very roomy and has a lot of access to the service roads in that area. She further stated that that parking lot needs some attention as well as the kiosk. Ms. Pando stated that there is not a single sign there that says Bluffton Road Parking Lot or Kiosk like there is on Fawn Road. Ms. Pando explained that unless you knew that was the parking lot then you would just think it is a great, big, open area. She concluded by stating that it needs some clay or something like that, and a kiosk would be nice. She then stated that she already talked about the rocks and will not go there but would be nice not to have that rocky road.
- Ms. Pando then stated that there was a map out there that she picked up and is a great map. She stated that it is the Lake George Forest Road and Trail System and explained that it has all of the service roads numbered and identified. She then stated that this would be a great map to have available at the parking lot as well as a large and printed copy at the kiosks. Ms. Pando reiterated that the roads are numbered on the map and that LGSF has nice signs at the beginning of the service roads, but to know where they are and where you are on the map would be helpful. She further stated that ultimately, down the road, she is not a tech person, but a lot of state forests are using Avenza Maps which allows you to track on Avenza, thus, knows where you are so you don't get lost.
- Ms. Pando then stated that the Withlacoochee State Forest is the Blue Ribbon State Forest for horse trails. She continued to state that they have nice, painted rings around the trees, they are on Avenza maps, and they have loops. Ms. Pando continued to state that it is all maintained by volunteers and FFS. She then stated that she included a picture within her comments. Ms. Pando reiterated that that is the gold standard for horse trails.
- Ms. Pando stated that they already talked about service roads but then stated that bush hogging or mowing is needed. She continued to state that the road is there, but riders are trying to go through foliage. She further stated to do some loops of some of the forest roads to keep them mowed, keep them cleared, and that will keep the horse people happy.
- Ms. Pando added that they like to do loops too and they do not like to go out and back. She then stated that she does not know if it was just her, but another equestrian user stated yes in agreement. Ms. Pando continued to state that going out and back on a 3-mile trail is boring and they like loops. She concluded by stating more loops, the better.
- Ms. Pando stated that in going out to some of the other state forests, some of the things that they like are vault toilets, and picnic pavilions. She stated that there are some really nice ones out on Little Big Econ State Forest and Indian Lake State Forest have some really lovely, covered picnic pavilions.
- Ms. Pando then stated that they would also like mounting blocks, and those that are little and have big horses, need mounting blocks to get onto their horses. She continued to state that their group will provide mounting blocks, hitching posts, and picnic tables at different trailheads at the request of the managers. She continued to state that she included some pictures within her comments which happened to fall under Mr. R.H. Davis' Saint Johns River Water Management District (SJRWMD) property: Sunnyhill West, Sunnyhill North and Ocklawaha Prairie. Ms. Pando then stated that they have put up a lot of picnic tables, mounting blocks and things like that to help the equestrians; especially if it is not in the budget for the state forest, her group is there to help.
- Ms. Pando expressed that Ms. Morris already talked about camping. She then stated that the campground LGSF has is very nice and is a lovely primitive campground. She further stated that you cannot get in there with anything big. Ms. Pando stated to take that plan and magnify it to include horse trailers. Ms. Pando

continued to state that there is a water pump out there, nice roads, beautiful trees and so Ms. Morris mentioned a location at Jenkins' Pond to reference primitive camping for horse trailers.

- Ms. Pando moved onto Goal 2, objective 3 and read off the objective. She then stated that it was mentioned that a liaison committee is already established and inquired if LGSF has an equestrian sitting on that committee. Staff confirmed that there is. Ms. Pando thanked the LGSF staff. One of the members stated that he is the equestrian sitting on the committee. Ms. Pando thanked him and stated that she loves the idea of a liaison committee and wanted to make sure, because her group is a large, talkative, and passionate group of people. Ms. Pando reiterated her gratitude for his representation on the liaison committee.
- Ms. Pando moved onto Goal 2, objective 5 and read off the objective. Ms. Pando commended LGSF staff for posting the 2026 hunting season dates throughout the state forest. She continued to state that there is nothing worse than planning a day of riding and you go on the website and there is nothing there, and you go to the trailhead, and it is a hunting date. She then expressed that she knows of a few trailheads where this has happened on Wildlife Management Areas (WMAs). She continued to state that FFS posted it ahead of time and the group has taken a picture and now they know and thanked the LGSF staff again.
- Ms. Pando stated that they agree on the recruitment of volunteers. She inquired if there was a Friends Chapter for LGSF and stated that some of the state forests have Friends groups out there. Ms. Pando instructed LGSF staff to recruit them and other people in the area to volunteer on the forest. She then stated that FFS just has to get the word out and ask for help, and a lot of times they will get it. Ms. Pando further stated for FFS to just reach out and ask for it. She concluded by stating that she and her group agree with that.
- Ms. Pando then stated that she wanted to share some statistics with the group regarding horses in Florida whether or not it is found to be useful. She stated that Florida is the 3rd most populous state for horses. She then stated that according to two (2) year old data from the Florida Department of Agriculture and Consumer Services, there is a total of 385,000 horses in the State of Florida with 43% of horses used for recreation. She then stated that that is several thousand horses out there riding trails throughout the state and the south end of the state is not as popular as the north half. She further stated that cutting through Orlando, and from Orlando to north is where a lot of the horse people like to go and is where a lot of the horses are. Ms. Pando further stated that thousands of horses come for the winter for training, showing and recreational riding. She stated that she and her group call them "Equine Snowbirds" and the horse camps in Ocala and Lake County are packed in the winter time with people coming as far as Canada to Florida for the winter. Ms. Pando stated that horse trail riding is on the rise in this country. She continued to state that they have to ride on public lands, and that they cannot ride on their own properties because it is boring, but for recreational trail riding, they will get onto public lands, somewhere.
- Ms. Pando concluded by thanking the group for the opportunity to speak and providing the beautiful piece of property that is LGSF. She continued to state that it contains traits of old Florida that the group does not want to lose. She thanked the group once again and stated that she hopes that LGSF staff will put up more of those maps. Mr. Davis thanked Ms. Pando.
- Ms. Greenwell stated that she checked that she did not want to speak and that she had already addressed her comments earlier. Mr. Davis apologized. Ms. Greenwell stated that she thinks there is mitigation for all of these issues that were brought up and LGSF staff does a fantastic job as is. She further expressed her appreciation and even offered to sign up as a volunteer and requested LGSF staff to let her know when they need her help. Mr. Davis stated to not hesitate to reach out to FFS directly and that these topics can be a conversation any time.
- Mr. Davis inquired if there were any additional questions before closing the meeting. None followed.
- Mr. Davis closed the meeting.

Public Meeting End Time: 11:33 A.M.

Management Plan Advisory Group Workshop
Lake George State Forest
10-Year Land Management Plan

June 4, 2026

1:00 P.M.

Meeting Minutes

MPAG Members Present:

- | | |
|------------------|---|
| • Mike Facente | Orlando Forestry Center Manager, Florida Forest Service (FFS) |
| • R.H. Davis | Regional Land Manager, St. Johns River Water Management District |
| • Michael Nelson | Assistant Regional NE Biologist,
Representing Caitlyn Crawford, Florida Fish and Wildlife Commission |
| • Hunter Folmar | Chief of Land Management, Volusia County Land Management |
| • Roy Pridgeon | Local Property Owner |
| • Syd Thyhsen | Local Property Owner |

MPAG Members Not Present:

- | | |
|-----------------|---|
| • Austin Spivey | Representative, Volusia County Soil and Water Conservation District |
| • Jeff Brower | Volusia County Chair, Volusia County |

FFS Staff:

- | | |
|-------------------|--|
| • Alan Davis | Land Administration Manager |
| • Brian Camposano | Forest Management Assistant Bureau Chief |
| • Alan Davis | Land Administration Manager |
| • Brian Camposano | Forest Management Assistant Bureau Chief |
| • Justina Jones | Forestry Resource Administrator |
| • Donald King | Forestry Supervisor II |
| • Cindy Venuti | Forester |
| • Emily Marsh | Land Management Planner |

Guests:

- None

Workshop Meeting Start Time: 1:00 P.M.

- Land Administration Manager, Alan Davis introduced himself and opened the LGSF MPAG Workshop. He reminded the MPAG members of the Florida Sunshine law and that the purpose of the workshop is to review and discuss the draft and that any edits made to the draft would be presented to the FFS Director for approval. He noted that minutes will be recorded and emailed to the MPAG members and will be approved via negative response review. MPAG member appointment will terminate when the final draft is submitted to the Acquisition Restoration Council. Mr. Davis asked the advisory group to elect an MPAG chairperson. Mike Facente was elected to serve as chairperson. Forester Cindy Venuti was available to make proposed changes to the draft during the page-by-page review. Mr. Davis read off submitted public comments to MPAG Committee.
- Mr. Pridgeon stated that the equestrian group is a passionate group of individuals and that that is a good thing. Mr. Thyhsen added that he is unsure that this public hearing is the appropriate forum for them to bid their case.

Mr. Thyhsen continued to state, that, in the future, for FFS to continue the phenomenal work that has been done the last 10 years. He exemplified, specifically, the fuel reduction, prescribed burns and response times to wildfires are all good things. Mr. Thyhsen stated that there was a fire within 300 yards of his house and the FFS was able to extinguish it in time. He reiterated that he commends everything FFS has done in the area and it has reduced the amount of threat. Mr. Thyhsen continued to state that now that has plateaued instead of meeting the status quo and suggested that FFS look at other areas of focus.

- Page 4: Mr. R.H. Davis stated that he has a couple of things under the Forest Management section of the Past Accomplishments. He stated that the numbers reported in the text of the plan for bareroot slash plantings and bareroot longleaf plantings do not match the appendix, which lists more plantings. Mr. Davis inquired Mr. R.H. Davis what he meant by appendix. Mr. Camposano and Ms. Marsh clarified that Mr. R.H. Davis was referring to the exhibits. Mr. R.H. Davis reiterated that there are more plantings listed on the accomplishments than what is reflected in the exhibits. Mrs. Venuti inquired if FFS needs to go back and check their numbers. Mr. R.H. Davis stated yes and added that he did not noted where all of the discrepancies are listed. He then exemplified that the containerized plantings are reflected in the exhibits, but not in the text of the plan. Mr. Davis thanked Mr. R.H. Davis for catching that error. He then requested Mrs. Venuti to add a comment to verify and check that the text of accomplishments and accomplishments in the exhibits match. Mr. Camposano stated that they just need to add the containerized portion since it has all of the bareroot listed. Mr. R.H. Davis stated for FFS not to sell themselves short for all the planting they actually did over the last 10 year period. Mr. Camposano, Mr. Davis and Mrs. Venuti discuss how the changes need to be made (i.e., adding missing categories from the exhibits to the text of the plan).
- Mr. R.H. Davis stated that he has one (1) more thing on the Fire Management section of the Past Accomplishments. He continued to state that it reflects 60 miles of fireline rehabilitated, but the exhibits did not seem to be clear. Mr. R.H. Davis inquired if FFS rehabilitated 60 miles of fireline or maintained 60 miles of fireline. Mr. R.H. Davis continued to state that rehab to him would be pulling the line back in after a fire if they were battling a line. Mrs. Venuti inquired if they should call out "boundary". She followed up by inquiring if she should strike through it and change it now. Mr. Davis stated yes and directed Mrs. Venuti the appropriate strike through track change. Mr. R.H. Davis inquired if LGSF staff do annual maintenance on unit breaks or interior breaks. Ms. Jones stated yes. One of the MPAG members noted that it is listed further down in the Past Accomplishments. Mrs. Venuti stated that this is a little confusing but could still be under Fire Management. Mr. Camposano stated that this is another example where the table has more numbers than the text of the Accomplishments. He continued to state that the exhibits reflect 60 miles of boundary perimeter firebreaks and 97 miles of rehabilitation. Mr. Camposano concluded that that needs to be verified and have the plan and exhibits reflect the same thing. Mr. Davis suggested to highlight...Mr. Camposano stated that this will be an after-the-fact thing. Mrs. Venuti agreed and inquired if she should put in a comment. Ms. Marsh stated yes and to insert the comment right at the header to direct Ms. Marsh to discuss with LGSF staff and verify numbers. Mr. R.H. Davis stated that if that statement is to cover how many miles of firelines maintained on the forest, then to also include the miles of improvement of breaks maintained on an annual basis. Mr. Camposano stated that he believes the 60 miles is actually the perimeter, whereas the other number represents the interior of LGSF and will need to be verified. Mr. R.H. Davis continued to state that if 97 miles is what LGSF is maintaining then it should not be called rehab in the exhibits, rather to call it Fireline Maintenance. Mr. Davis stated that that it is statewide template language. Ms. Marsh agreed. Mr. R.H. Davis stated that, to him, that means he is doing away with that break. Mr. Davis stated that FFS staff will assess that when looking at the other numbers to ensure everything jives. Mr. Camposano stated that he knows what Mr. R.H. Davis means and will clarify the language. Mr. R.H. Davis stated that he does not want FFS to sell themselves short because that may make it look like they are not doing as much as they actually are. He continued to state that FFS needs to make sure to call out exactly what they are doing. Mr. Camposano agreed and added that it needs to be more clear. Mr. R.H. Davis stated that if FFS staff works like his staff, then funding has a lot to do with what FFS does. Mr. Davis thanked Mr. R.H. Davis and inquired the group of any additional changes to page 4. None followed.

- Page 6: Mr. R.H. Davis stated that he has a comment under Goal 3. He continued to commend LGSF on their maintained Fire Return Interval (FRI) acreage and that it is phenomenal. Mr. R.H. Davis reiterated that he wanted to ensure FFS got a shoutout for that because it is pretty phenomenal. Mr. Davis thanked Mr. R.H. Davis. Mr. R.H. Davis joked with the rest of the group that he is the only one talking.
- Page 10: Mr. R.H. Davis stated that it was him again and the group broke into laughter. Mr. R.H. Davis then stated that Relay South is a Conservation Easement, not a Conservation Area. Mrs. Venuti inquired if she should change it. Mr. Davis inquired if it was public. Mr. R.H. Davis stated no. Mr. Davis then instructed Mrs. Venuti to strike it since it probably does not have any public access. Mr. R.H. Davis joked that it used to be 10 years ago. He then stated that Relay South is actually staddles Highway 40. Mr. Camposano stated that if the group reads the top of the table it reads "Lands managed by state, federal and local government or by private entity for conservation of natural or cultural resources within 15 miles of the forest". He continued to state that there has been some back and forth discussion on this in the past. Mr. Camposano continued to state that the table does not have anything to do with access and should probably stay on there, but with the right name. Mr. Davis stated that the title should be changed. Mr. R.H. Davis stated that technically, by definition, easements fall under conservation lands. Mr. Camposano stated that they are conservation lands, but they are private. He continued to state that the group must make a decision to change the language at the top if they are to remove any private entities from the table, and thus, strike it altogether. Mr. Camposano restated that that is something for the group to determine as to what "significant" really means in this context and whether or not to keep private lands listed. Mr. R.H. Davis stated that how he writes his plans includes the easements. Mr. Camposano stated that the way it is written should have the easements on there so if the group is ok with deleting it, then that is the only correction we will need. Mr. Davis stated that the title reads "Public Conservation Lands". Mr. Camposano stated that they can change it and inquired Mrs. Venuti to place a comment to update the title of the table. Mr. Thyhsen inquired to make it "Public/Private" or "Managed Lands". Mr. Camposano stated that both could work. Mr. R.H. Davis stated that if that is how it will be stated then Relay North, which is the old Relay Management Area, is a conservation easement too. He continued to state that Relay South is an easement that the district holds, but Relay North is ARC's. He concluded by stating that that would be another conservation easement that would be within the scope that FFS is talking about. Mr. Camposano instructed Mrs. Venuti to insert a comment to add Relay North to the table.
- Mr. R.H. Davis stated that Haw Creek is part of the Haw Creek Preserve. He further stated that area is not under his management. Mr. Folmar inquired if that is a Flagler County parcel. Mr. R.H. Davis stated that it is actually under DEP's management. Mr. Davis inquired if Relay South was still managed by St. Johns County. Mr. R.H. Davis stated yes and that it is an easement that the district holds, but Relay North is ARC's. Mr. Davis inquired Mrs. Venuti to scroll up to see how it is titled. He then inquired if Mr. R.H. Davis and his team hold title or just manage the land. Mr. R.H. Davis clarified that they administer the easement, but they do not do any management on the property. Mr. Davis stated that it is then private if it is a private entity. He further reiterated that the district holds title to it but does not manage the land, and thus, the title of the tract should be changed.
- Mr. Nelson inquired who the managing entity is for that parcel. Mr. R.H. Davis said the timber company is the land manager, but his team holds the conservation easement over the property. Mr. Nelson agreed and then inquired that the timber company's management is bound by Florida Sunshine Laws. Mr. R.H. Davis stated that each easement is different and depends on how they are managed. Mr. Nelson stated that he understood. Mr. Davis stated that these are all negotiable when it is on the private side; so, they can have developmental rights, bifurcation rights, floating envelopes and permeable surface rights all guide management and are all different. Mr. Nelson stated that he understood and added that everyone negotiates their own contract. Mr. R.H. Davis stated that he looked into the Haw Creek Conservation Area deal, and he knows that his team is not the lead manager of it. He further stated that he thinks it is all incorporated into the Haw Creek Preserve. Mr. Davis inquired of additional questions on page 10. Mrs. Venuti inquired how they wanted her to edit regarding the managing agencies. Mr. Camposano stated that if they are not 100% sure then FFS needs to look into it and inquired if it was Flagler County's management. Mr. R.H. Davis stated again that he thinks it is under DEP's management. Mr. Camposano continued to state that it will be easy for him to find that information when he

gets back to the office. Mrs. Venuti stated ok. Mr. R.H. Davis stated that it shows on his layer as a joint ownership, but he does not believe that to be true. Mrs. Venuti stated ok. Mr. Folmar inquired if the source to this is the FNAI Conservation Lands layer. Mr. Camposano stated yes, usually. Mr. Folmar stated ok.

- Page 12: Mr. Folmar stated that he had a question on page 12 and proceeded to inquire about palmetto drupe sales, as FFS has done these in the past. Mr. Folmar inquired if the palmetto drupe sales are related to individuals or companies. Ms. Jones stated correct and that it is referencing individuals. Mr. Folmar further inquired if it was written anywhere about selling palmetto drupes to companies as a revenue source for LGSF. He further followed up his question by inquiring what the intention is. Ms. Jones stated that she will default to Mr. Camposano on that question. Mr. Camposano stated that he can speak to that and proceeded to state that, to his knowledge, FFS does not allow palmetto drupe sales to individuals since 2016. He continued to state that they do not want to take it off the table, but he does understand the sensitivity with that. Mr. Camposano further stated that, at the end of the day, if FFS does start doing that again, what Mr. Folmar proposed would be the model that FFS would proceed forward with. He then stated that Camp Blanding does that and they do a good job with it. Mr. Camposano then stated that they have a fence all around their perimeter, to which FFS does not have around most of their state forests, which makes it a lot easier to control the movement of drupes in and out of the property, but Mr. Folmar's strategy is one that FFS would consider in the future and model it after what some other agencies have done. Mr. Camposano further stated that it gets chaotic when FFS issues individual permits and collects the revenue throughout the forest. Mr. Pridgeon stated that FFS is spending more money than making it. Mr. Davis inquired of any changes. Mr. Folmar stated no and that it was just for clarification.
- Page 25: Mr. Folmar inquired if someone actually detected a long-tailed weasel on LGSF. Mrs. Venuti stated that she saw that listed on there and got her curious, so she looked it up in the exhibits. Mr. Folmar stated that they are very rare. Mrs. Venuti continued to state that it was not any of the LGSF staff that notated it, rather it came from FNAI. Mr. Camposano further explained and stated that at some point in history, somebody saw that species and has been documented here but does not necessarily mean that it was a recent sighting. Mr. Folmar stated that FWC does have weasel and skunk dog and corrected himself by stating that FWRI has those species. Mr. Davis inquired about the skunk dog. Mr. Nelson stated that the dogs are trained to find skunks and Mr. Folmar included minks as a species that those dogs are trained to find. Mr. Nelson stated that they have done special use authorizations for those species because it was thought that they had the habitat for these species and FWRI had reached out to FWC to conduct a survey on their property regarding these skunk dogs. Mrs. Venuti stated that was good to know and further inquired if the researchers found any on the forest. None were found. Mr. Folmar stated that he thought it was cool and that people usually never hear of that. Mr. Davis agreed and stated that he has never heard of those species before. Mr. Davis inquired of any additional changes on page 25. None followed. Mr. Thyhsen stated that he has noticed that listed too and did not believe that there was a weasel on the property. Mr. Folmar stated that there is, but they are one of the rarest animals in Florida.
- Page 32: Mr. Camposano inquired Mr. Davis to stop and stated that he had a comment to make. Mr. Camposano stated that he did not notice this the first time reading the plan, but it looks like there was an FWRI project from 2023 to 2024 to conduct research investigating on long-tailed weasel and eastern spotted skunk occurrence habitat use on state lands in Central Florida; which, apparently, included this state forest. The MPAG group discussed amongst themselves the timing of that research project was done at the same time the project was occurring on water management district lands. Ms. Jones stated that they were permitted but the group did not come because LGSF staff were conducting some prescribed burns. She continued to state that they notified the researchers where they were going to burn on the other side of Bluffton Road but does not recall the group ever coming to conduct the research. Mrs. Venuti agreed. Mrs. Venuti inquired if that research project should be struck from the plan entirely. Mr. Camposano stated no since FFS issued them the permit.
- Mr. Thyhsen stated that he had a question on page 32 regarding the ground disturbance section. He then inquired if that process occurs when wildlife openings are established. Mr. Camposano inquired Mr. Thyhsen if he means wildlife openings, specifically. Mr. Thyhsen stated yes. Mr. Camposano stated that establishing a wildlife opening is not considered ground disturbance because FFS is not tearing up the ground to implement

the wildlife opening. Mr. Camposano continued to state that if they were incorporating a new fireline, then they would have to go through the ground disturbance process. He continued to state that if it is due to an emergency then they do not have to go through the ground disturbance process. Mr. Facente joked that it also comes into play when hunting weasels. The group laughed. Mr. Davis inquired of any additional changes. None followed.

- Page 35: Mr. R.H. Davis stated that under the Hunter Access section, it lists Heart Island Conservation Area, which is not included in this part of the management area. Mr. Thyhsen agreed and stated that he was going to ask if Heart Island was still part of LGSF. Mr. R.H. Davis stated that he has tried for years to get it split but has had no luck to make it part of the WMA, but it is part of Lake George Wildlife Management Area. Mr. Nelson stated that that was one of Ms. Crawford's comments too that he was going to bring up. Mrs. Venuti inquired what needs to be written to clarify the statement in question. Mr. R.H. Davis directed Mrs. Venuti to the section he was referring to and requested to clarify the Lake George Tracts and to list out all of the conservation areas. Mr. R.H. Davis stated that it is covered by the way it is currently worded, but it does not sound complete when it is read because it does talk about the water management district and Volusia County. Mr. Camposano stated that the intent here is not who all is a member of the WMA because he knows of situations where there are multiple managing agencies a part of the same WMA. He further stated that this section is trying to identify what WMAs are on the state forest, rather than what is included around it. Mr. R.H. Davis stated that if they wanted to clarify it, then FFS can just make it read as "St. Johns River Water Management District lands and the Volusia County Lake George Tract". Mr. Camposano agreed and stated that is easy. Mr. Davis inquired the group if they were satisfied with the change.
- Page 36: Mr. R.H. Davis joked that it was him again and the group broke out into laughter. He continued to state that, under the Prescribed Fire Section, offsite hardwoods are called out but he does not believe that to be true. He continued to state that he is referring to the last sentence in the first paragraph. Mr. Davis directed Mrs. Venuti to the sentence in reference. Mr. R.H. Davis stated that they cannot be deemed offsite hardwoods because they are more than likely indicative to that particular natural community and is more like an encroachment. Mr. Camposano inquired if deleting the word "offsite" would fix the sentence. Mr. R.H. Davis agreed and Mr. Camposano proceeded to direct Mrs. Venuti on the change and where to make said change. Mr. R.H. Davis reiterated that he would not call them offsite because they belong there but remain in a density that....Mr. Camposano interjected and stated that the word "offsite" is a qualifier of the system, and that FFS is not trying to nuke the trees but still believes that the word "offsite" should be stricken. He continued to explain that they would look at it negatively if the species was water oak, for an example. Mr. R.H. Davis suggested to reword to reflect the sentence to say, "reduce the density of hardwoods". Mr. Davis inquired the group if everyone agreed to the change. Mr. R.H. Davis stated that the simple thing is to do what was done right there by striking out the word "offsite", but do not want to make an edit that will cause FFS scrutiny. Mr. Camposano and Mr. Davis assured Mr. R.H. Davis that this was a necessary change as long as everyone agrees. Mr. Davis agreed and inquired the group again if they were satisfied with the proposed change.
- Page 39: Mr. R.H. Davis stated that he has another simple change. Mr. Camposano stated that he is providing the type of changes FFS hoped to hear. Mr. R.H. Davis stated that he has done this so many times over the years. He then stated to delete the word "areas" toward the beginning of the Sensitive Areas subsection to make the sentence read clearer. Mr. Camposano thanked Mr. R.H. Davis and stated that was a good catch. He further stated that a lot of these meetings catch the misspellings and grammar in the draft plan.
- Mr. Folmar stated that he has a comment within the same section. He continued to state that he believes the first sentence is a really good idea. Mr. Camposano thanked Mr. Folmar. Mr. Facente joked that it was his idea to which the group joked that is why he is the chair of the MPAG. Mr. Davis inquired if there was anything else on page 39.
- Page 40: Mr. R.H. Davis stated that he has two (2) changes. He then stated to delete the word "toward" in the paragraph under the Silviculture Operation section in the first sentence. The MPAG group agreed. Mr. Camposano inquired if they are deleting both or just the second one. Mr. R.H. Davis stated it is only the second "toward" that needs to be removed.

- Mr. R.H. Davis then directed the group within the same section to where it talks about herbicide application. He then stated that to invert the ordering of the way the sentence is structured. Mr. Camposano stated that this is fairly stock language and that this is the first time anyone has had a question about it. He further stated that it makes a ton of sense. Mr. R.H. Davis agreed and explained that it tells the story better if site prep was talked about first. Mr. Camposano stated that the group can try to change that now and directed Mrs. Venuti to add a comment indicating to switch the order and will be taken care of when FFS State Office staff return to Tallahassee. Mr. R.H. Davis stated that especially with the way things are getting with public agencies utilizing herbicide work, it is important to describe why FFS is doing it would make a lot more sense. Mr. Camposano and Mr. Davis thanked Mr. R.H. Davis.
- Page 43: Mr. R.H. Davis stated his surprise that LGSF does not have natalgrass along their roads. Ms. Jones stated that they had a small patch of it some time ago, but someone got rid of it...Mr. Camposano joked "knock on wood" in hopes that the natalgrass does not come back. Mr. R.H. Davis provided the LGSF staff kudos for getting it out of there. Mr. Camposano stated that as someone who has treated natalgrass during his time in the field, it is a bear to try to treat because it has seeds every 21 days or something like that. He continued to state that the seeds have to be collected in order to eradicate the invasive species. Mr. R.H. Davis agreed and stated that the seed cycle cannot be broke through typical practice. Mr. Camposano stated that unless you are collecting every single seed that it forms, then it is virtually impossible. Mr. R.H. Davis stated that if LGSF does not have natalgrass then that is wonderful and for them to make sure that they do not get it but joked that some of that lime rock that the staff is buying will bring the invasive species in for them. Mr. Pridgeon joked that folks cannot ride horses and invasives are being brought in due to lime rock. The group laughed.
- Page 45: Mr. Folmar stated that he may have found the piece of sandhill that his agency has but does not have access to and indicated where it sits on Soils Types the map. He then inquired if it was cut off by the bay. A group member stated yes. Mr. Camposano stated that he had to be shown where on that map it was too because of it being cut off.
- Mr. Folmar inquired if LGSF would consider private landowner access to that area. Ms. Jones stated that she was actually talking to Mr. Davis about that earlier in the morning. She continued to explain that, previously, when that area was clearcut and replanted, the new landowner had expressed that they do not want anything in there except for a pickup truck, but that is to be further looked into. Mr. Davis stated that it looks like there are multiple ways to get in there but that needs to be double checked and to make sure that there is nothing that prevents FFS from having legal access to it. Mr. Camposano stated that this was before the State was adamant about having legal access. Mr. Davis stated yes.
- Page 52: Mr. R.H. Davis stated that, regarding the Dome Swamp Management Needs Section, to him, it would be a good idea to describe more of the location. He continued to state that it talks about dome swamps on the Dexter and Mary Farms Tracts and then it just says swamps to the north. Mr. R.H. Davis continued to state that it would be better to list the Astor Tract rather than just saying to the north. He further stated that if someone who is reading the plan and is not familiar with the area, then it might be better to clarify. Mrs. Venuti inquired the group if everyone was good with that change. Mr. R.H. Davis inquired if that made sense. Mr. Camposano stated that if that captures what Mr. R.H. Davis wanted then, yes. Mr. R.H. Davis inquired again if that made sense. Mr. R.H. Davis further stated that if Dexter and Mary Farms are broken out, then he would also list the tracts that they occur on. Mr. Davis inquired the group if they were satisfied with the change.
- Mr. Pridgeon inquired why it states that the swamps on the Astor Tract are often more overgrown. Mr. Camposano stated that this is an artifact of asking FNAI to do FFS' natural community maps for them because they provide FFS with their write-ups and a lot of the time FFS takes it verbatim. Mr. Camposano continued to explain that they gave FFS a management needs section and instead of the group reading it, they just agreed with it. He continued to state that the intricacies that are being pointed out were overlooked previously. Mr. Camposano continued to state that at one point FNAI was out on the forest and they noticed that the Dexter and Mary Farms Tracts burn and the swamps to the north, just generally...Mr. R.H. Davis interjected and inquired if there has been enough fire return on the Astor Tract. Mr. Pridgeon stated that the Dexter and Mary Farms Tracts definitely get burned more often. Ms. Jones agreed. Mr. R.H. Davis also agreed and stated that Dexter and Mary Farms Tract is a little easier to burn. Mr. Pridgeon agreed and continued to state that the way

Dexter and Mary Farms is set up, seems like to be more of the “pet” to LGSF. He followed up by stating that he does not want to say that but seems to be a little more of a pet than the Astor Tract. Mr. Camposano stated that FNAI’s mapping was probably done around (2) years ago, so it is important to determine within the last two (2) years if there has been enough burning that reflect the Astor Tract not as overgrown and to change that. He continued to state that FFS often changes, where they see fit, what FNAI provides because FFS often does when things are too general. Mr. R.H. Davis suggested rewording it in a way but is at a loss for how to word it. Mr. Camposano inquired Mrs. Venuti to add a comment stating to include other tract and check recent burn history and that will key the state office folks on what to do when they get back. Mr. R.H. Davis stated that if most of those have a burn or two, then it is a matter of cleaning the edge, then you may not need to adjust the management needs.

- Mr. Thyhsen inquired how often FFS conducts their aerial surveys of their tracts, such as every three (3) years, or five (5) years. Mr. Camposano stated that FFS is in good standing if they are able to get FNAI out once every 10 years during a plan update. He continued to state that now FFS has capability with drones to get out there and check a lot easier than they could before from an aerial perspective. Mr. R.H. Davis agreed and stated that he was going to mention that.
- Mr. R.H. Davis stated that if 80% of units have dome swamps in them and had fire light up in there then he suggests deleting the sentence entirely. Mr. Camposano stated that in the last two (2) years, he would also include a fire season, and this year FFS virtually had no (0) prescribed burns with one (1) season cut off completely. Mr. R.H. Davis agreed. Mr. Camposano continued to state that they will have to go back and check that. He further stated that he believes Mr. R.H. Davis’ suggestion is a good callout based on the not-so-recent burning of the Astor Tract. An MPAG member joked that the only burning done was caused by lightning. Mr. Camposano agreed and stated that FFS was not lighting too many fires on their own unless they were counter fires. Mr. Davis inquired of any additional changes to page 52. None followed.
- Page 59: Mr. R.H. Davis stated that, in regard to sandhill management needs, proceeding to read of a portion of the section, inquired if FFS determined they succeeded far enough that staff is just comfortable letting them go to hammock or should language be inserted into the management needs to allow staff to do mechanical work in that community. Mrs. Venuti agreed and stated that that is not a bad idea and that she and her staff have talked about it (i.e. restoration activities). She continued to state that she is unsure if putting that kind of language into the plan would paint LGSF staff into a corner when it comes time to do some restoration activities. Mr. Camposano stated yes and no, possibly. He continued to state that the question becomes “how many different occurrences are there in these small sandhills and how many acres is in each one”? Mr. Camposano further stated that it comes down to cost-benefit and explained that if there are a bunch of 5-acre pieces, then it will take extensive amount of money to get those right. Mr. R.H. Davis stated that a chunk of them are those that are off the northeast boundary. Mrs. Venuti agreed and stated that is the Astor Tract. Mr. R.H. Davis continued to state that he is referring to that area around Emporia. Ms. Jones agreed. Mr. Camposano stated that of the 192 acres that FNAI identified has historically occurred on LGSF is basically saying all but 23 has succeeded to successional hardwood forest at this point. Mr. R.H. Davis stated that the statement reads “it remains” so it supports what Mr. Camposano is saying; that some of them have already crossed. He continued to state that it can get to a point where it succeeds far enough to hammock, that it really is not cost effective to try to reverse it. Mr. R.H. Davis then stated that if there are some in there that LGSF staff can, then he would not box himself in to say that that is just what they will settle for if they desire. Mr. R.H. Davis further stated that he would add some language if LGSF staff has some that they want to mess with, that way it is actually in the plan; whether or not staff decide to pull the trigger on it during the next 10-year period. Mr. Camposano stated that an edit at the end of the sentence would clear that up and proceeded to explain the new language and dropping the last part of the sentence and make it about restoration so that it is not excluding those pieces. He continued to state that that way they can try on the ones they determine are maybe ones that are not too far gone. Mr. R.H. Davis stated that FFS might want to have some language in there so that it is easier for FFS to use that option. Mr. Camposano and Ms. Jones agreed.
- Mr. R.H. Davis stated the he knows his team is backed up against that in some of their plans when he has tried to deviate into different areas that they determined that cannot be burned. He continued to state that he may

want to do mechanical work on it instead but then is limited due to what is and/or is not stated in his plan(s) and so then he has to sit on it until the next plan revision. Mr. Camposano inquired the group to determine language now or for that to be converted into a more restoration mindset. He continued to state that he is giving the group the option to work out the language but can be otherwise done when State Office staff get back to Tallahassee. He further stated that he understands the intent at this point. Mr. R.H. Davis stated to put in language stating that areas will be evaluated for use of mechanical treatment in lieu of prescribed fire. Mr. Camposano stated that that is a good statement. Mr. Davis stated that the last half of the sentence could probably be deleted. Mrs. Venuti inquired if she can exit out of the map. Mr. Davis stated yes. He then instructed Mrs. Venuti to add in...Mr. R.H. Davis interjected and stated that he would add in before the comma where it states that "fires may be impossible..." and to put something in there indicating that those areas will be evaluated for possible mechanical treatments in lieu of fire or something like that. Mr. Camposano stated that it is not committing LGSF but at the same time does not close the door on the option. Mr. R.H. Davis stated yes. Mr. Thyhsen stated that LGSF staff have used some mechanical treatment on some of the sandhills over by his property. He further stated that it leaves the option open for LGSF staff. Mr. Facente stated that mitigation teams can also be pulled in to help.

- Mr. Camposano inquired about access. Mr. Davis stated that it talks about access but then goes on to say that it cannot be targeted for burns or other treatment. He continued to state that the landowners around the area have said no, so the language as is, says that LGSF staff cannot and will not but FFS does not know that though. He further stated that they won't if FFS does not have access and they do not know if they have access or not.
- Mr. R.H. Davis instructed Mrs. Venuti about the language to be added in, and someone can wordsmith the rest. Mr. Camposano stated that if everyone is satisfied with the change, then it will be left in track changes for now, and the rest of the sentence will be stricken. Mrs. Venuti agreed. Mr. Thyhsen stated that if explained to landowners that staff can use mechanical forms of treatment, then they would be more in favor of that than with fire. He continued to state that landowners hear "fire" and immediately will say no. Mr. Facente stated that he knows that a couple of small blocks around the edges are pretty well developed around three (3) sides of them. Mr. Facente further stated with those kinds of instances, they would target mechanically rather than trying to do a prescribed burn. Mr. Camposano agreed and stated that if they were to go out there with a drip torch right now, nothing would light up. Mr. R.H. Davis agreed. Mr. Davis inquired about using the word "limited" instead of "no". Mr. R.H. Davis agreed with stating "limited access". Mr. Davis continued to state that to also delete the final part of the sentence. Mr. R.H. Davis stated that they previously talked about some of that stuff being historically sandhill and would rather go with the first statement and delete the other sentence. Mr. Davis agreed and stated that LGSF staff may have to address the access because they may not have that right now, because he does not know if FFS has the access. He further stated that physically there is access, but they need to check if they have legal access. Mr. Camposano stated that you can walk onto it today, but you cannot bring certain equipment onto it. Mr. R.H. Davis agreed and stated that they cannot bring anything on there except for a truck, as stated previously. Mr. Davis continued to state that that may only be a handshake deal instead of a legal deal.
- Mr. R.H. Davis inquired how far across is the nearest road from the swamp. Mr. Davis stated he does not know. Mrs. Venuti stated that it is quite a ways through the swamp. Ms. Jones agreed. Mr. R.H. Davis inquired if upland is off the property as there is road access coming from private property. Mrs. Venuti stated yes. Mr. Facente inquired if they are referring to the swamp off of 40. Mrs. Venuti stated yes. Mr. Camposano stated that he did not know how helpful the maps will be that Mrs. Venuti is trying to navigate to. Mrs. Venuti inquired of the group if they wanted her to show them on the map. Mrs. Venuti proceeded to show the group and inquired Ms. Jones if that was correct. Ms. Jones stated yes. Ms. Jones then stated that they have accessed the property in both ways before. Mr. Davis reiterated that there is physical access but does not know if there is any legal access for FFS. Mr. Camposano stated that they can get equipment in from the swamp side. Ms. Jones agreed and stated that they can come in from the south. Mr. R.H. Davis said that the south side is all wet but may be dry right now. Mr. Camposano stated not for long since it is Florida. Mr. R.H. Davis stated that he is not familiar with the area so he had to ask because if accessing is just crossing a creek drainage or something, then it might be worth the effort in trying to put in a road. Mr. Camposano stated yes and that it was asked

during the development phase and something that the group has talked about because he wanted to know how they had isolated areas, but it makes sense when looking at the map. He continued to state that he likes what Mr. Davis suggested by changing the last sentence to reflect limited access and deleting the rest of the sentence. He continued to state that that way, between now and when the plan goes to ARC, we find out that we have access and that way we can remove it. Mr. R.H. Davis stated that they can just say "limited access"....Mr. Davis interjected by stating to end the sentence there. Mr. Camposano agreed and stated that the rest is irrelevant and that it means what it means. Mr. R.H. Davis stated that the thing is, they can get to it, and at some point, if they have a landowner change...Mr. Davis interjected and stated that if FFS has legal access to it then the landowner does not matter, and is something they need to figure out. Mr. R.H. Davis stated that to also key up this piece of ground in the management plan and maybe FFS can get somebody to start working on an easement negotiated. Mr. Camposano pointed to Mr. Davis and cheekily stated that is this guy. Mr. Thyhsen stated that they can use the word "alter" in there instead since it is a lot more open. An MPAG member stated that that is the one (1) piece of that state forest that you can never get to. Mr. Davis thanked the group for bringing this up and inquired the group if there was anything else on page 59.

- Page 62: Mr. R.H. Davis stated that this is where his other comment about the north and the south earlier comes into light. He directed everyone's attention to the paragraph before Fire Regime section that talks about wet flatwoods being more common to the south. Mr. Davis inquired if it was the south side of the forest. Mr. R.H. Davis stated correct. Mr. Davis stated ok. Mr. R.H. Davis inquired south of what. Mrs. Venuti inquired if they referred to it as the Dexter/Mary Farms Unit elsewhere in the plan. Mr. R.H. Davis stated that it was written as Dexter and Mary Farms in the other one. Mrs. Venuti stated ok. She then inquired Mr. R.H. Davis if that was the only change there. Mr. R.H. Davis stated yes, that was it, because that was the other spot he had anything that referenced to the...Mr. Davis interjected inquiring if he is referring to the north and south. Mr. R.H. Davis stated yes and joked between the union and confederacy. Mr. Davis inquired the group of anything else on page 62. None followed.
- After Mr. Davis finished going through the draft land management plan, Mr. Davis inquired if there were any additional changes to the draft. None followed. He then inquired if any discussion was needed for the exhibits. Mr. Camposano stated that one member had a discrepancy between the text of the plan and the past accomplishments that was previously addressed. Mr. R.H. Davis confessed and stated that he did not read all of the exhibits. He continued to state that he looked at a lot of the ones that specifically referenced to something in the plan and then realized most of them were just copies of other documents that were already approved. Mr. Thyhsen stated that he noticed that the shading of the two (2) greens on the Optimal Management Boundary map are so close together and the area is so small. Mr. Camposano inquired which map Mr. Thyhsen is referring to. Mr. Folmar inquired if he is referring to the Optimal Management Boundary Map because he could not find it himself either, at first. Mr. Thyhsen stated that it could have been and continued to explain that there are two (2) delineations of green so close together that you cannot tell which is which. He further stated that they are such small areas, but it is just trivial as far as he is concerned. Mr. Camposano stated no and that he thinks it is a good call out. Mr. Davis inquired the group if this was the correct map (Optimal Management Boundary map). Mr. Thyhsen stated that he forgot which one it is. He and some additional MPAG members confirmed this was the map in question. Mr. Camposano stated that that is a very easy fix, and they will ask the guy who makes the maps to darken the color a little bit for better contrast, especially when going to ARC to present this plan and it is projected onto a screen that people in the back will not see it very well. Mr. Thyhsen agreed and stated that you cannot really see it. He continued to state that if there is going to be public access associated with it, then you will get a public member that says that they could not see the green. Mr. Camposano stated that they can change it to a different color to provide better contrast and is easier to pick up. Mr. R.H. Davis stated that it seemed pretty trivial to him. Mr. Camposano stated no that those are good, little things that might seem trivial, but anything they can do to improve the plan for anyone who is going to pick this up and use it, is appreciated.
- Mr. R.H. Davis stated that he deals with hunters that come from 60 acres to the north of his agency that is privately owned, and the rest is Lake George. He continued to state that he gets hunters that travel through those 60 acres because it is really not delineated in the overall map. Mr. R.H. Davis continued to state that if

they look at different maps it is, but not every hunter is going to look at everything. Mr. Camposano stated that not every map has every boundary. Mr. R.H. Davis stated exactly. He continued to state that he found it comical when the horse people were asking “to just do this”.

- Mr. Davis asked each MPAG member to comment on the draft plan. Mr. Facente stated that everyone did a great job. Mr. Nelson stated that it was a good job and a good plan and well written. Mr. R.H. Davis stated that it is a good plan and appreciated the opportunity to review it. Mr. Davis thanked him for all of his input. Mr. Davis read off Mr. Spivey’s positive comments about the plan to the MPAG group. Mr. Davis stated that there was no specific context provided but that Mr. Spivey states that he appreciates the plan. Mr. Pridgeon stated that the plan looks good to him and he liked having the group together and come up with good ideas and getting the wording right, as FFS should. Mr. Davis thanked Mr. Pridgeon. Mr. Folmar stated that plan is great and provided kudos to the whole team that was involved with it and thanked the group for being there. Mr. Thyhsen stated that he appreciates the opportunity and has enjoyed it. He continued to state that living in that area and seeing what was done in the previous 10 years, and believes that Mr. Pridgeon can attest to this too, because they both live close to the state forest. He continued to state that with the prescribed burning and now added mechanical treatment options are great. Mr. Thyhsen stated for FFS to go back and see what they can do that is one (1) step further to make it even better; whether that be paint markers around the roads, and calling them designated horse trails. He concluded by stating that that is a simple fix to mediate those groups. Mr. Thyhsen then stated that he knows where they come from, but there are a lot of stakeholders in the state, but he can promise the group that half of the horses that equestrian lady was talking about are down south in Wellington or in Ocala. He further stated that they are not only in North Florida. Mr. Thyhsen continued to state that it is a great plan and instead of sticking to the status quo, he encouraged FFS to look into how to make things better a little bit more. He further stated that he does not have any good ideas other than the creating designated horse and walking trails along with the established hiking trails. Mr. Thyhsen continued to state that this will show FFS going one (1) step further now that a lot of the land has been mitigated, it is being burned and is open; more access is there for more people to take a part of it, and now FFS can probably take it one (1) step further. Mr. Davis thanked Mr. Thyhsen.
- Mr. Davis noted that the draft will be submitted to the Acquisition and Restoration Council for review. Consideration by the Council will likely occur at the October 9, 2026, public meeting.
- Mr. Davis thanked everyone for their time and participation and adjourned the meeting.

Workshop Meeting End Time: 2:01 P.M.

Exhibit U

State Forest Summary Budget

	LAKE GEORGE STATE FOREST 2024-25 EXPENDITURES	Percentages Based on Total Dollar Amount of Expenditures	Assessed Needed Funding Based Upon LMUAC Resource Management
Resource Management	\$ 174,736	26.17%	\$ 264,822.66
Exotic Species Control	\$ 23,178	3.83%	\$ 38,701.97
Prescribed Burning	\$ 40,240	3.98%	\$ 40,239.93
Cultural Resources Management	\$ 1,248	0.21%	\$ 2,084.34
Timber Management	\$ 50,257	8.29%	\$ 83,920.04
Hydrological Management	\$ 3,145	0.52%	\$ 5,251.33
	\$ -		\$ -
<i>OTHER RESOURCE MANAGEMENT</i>	\$ 56,668	9.35%	\$ 94,625.05
<i>Listed Species Management</i>	\$ -		\$ -
<i>Forest Pest and Disease</i>	\$ -		\$ -
<i>Plant Conservation Program</i>	\$ -		\$ -
<i>State Forest Research Projects</i>	\$ -		\$ -
<i>Boundary Surveys for State Forests</i>	\$ -		\$ -
<i>Other Activities Also Include:</i>	\$ -		\$ -
<i>Liaison Community Meetings / Boundary</i>			
<i>Line Maintenance / Forest Inventories</i>			
<i>and Various Other Activities / Wildfire</i>			
<i>Suppression on State Forests</i>			
			\$ -
Administration	\$ -	7.78%	\$ -
Central Office Headquarters	\$ -		\$ -
District/Regions	\$ -	7.78%	\$ -
Units/Projects	\$ -		\$ -
	\$ -		\$ -
	\$ -		\$ -
Support	\$ 197,521	32.60%	\$ 329,821.74
Land Management Planning	\$ 10,901	1.80%	\$ 18,202.57
Land Management Reviews	\$ 1,660	0.27%	\$ 2,772.38
Training/Staff Development	\$ 43,768	7.22%	\$ 73,083.49
Vehicle Purchase	\$ 2,303	0.38%	\$ 3,844.90
Vehicle Operations and Maintenance	\$ 101,709	16.79%	\$ 169,833.36
	\$ -		\$ -
OTHER SUPPORT	\$ 37,181	6.14%	\$ 62,085.04
<i>State Forest Land Acquisition Support</i>			\$ -
<i>Other Support Activities Also Include:</i>	\$ -		\$ -
<i>Computer Maintenance / Radio</i>			
<i>Maintenance / Technical Support /</i>			
<i>Management of Apiary and Cattle</i>			
<i>Leases / State Forest Leases, Lease</i>			
<i>Amendments, Easements and Other</i>			
<i>Various Activities</i>	\$ -		\$ -
			\$ -
Capital Improvements	\$ 114,446	18.89%	\$ 191,101.73
New Facility Construction	\$ 12,549	2.07%	\$ 20,954.71
Facility Maintenance	\$ 101,896	16.82%	\$ 170,147.02
			\$ -
Visitor Services/Recreation	\$ 88,287	14.57%	\$ 147,421.63
Information/Education	\$ 21,723	3.59%	\$ 36,273.61
Operations	\$ 66,564	10.99%	\$ 111,148.01
			\$ -
Law Enforcement	\$ -	0.00%	\$ -
Total	\$ 605,949.29	100.00%	\$ 1,011,816.24

Exhibit V

Arthropod Control Plan

Volusia County



WILTON SIMPSON
COMMISSIONER

Florida Department of Agriculture and Consumer Services
Division of Agricultural Environmental Services

ARTHROPOD MANAGEMENT PLAN - PUBLIC LANDS

Section 388.4111, F.S.
Telephone: (850) 617-7995

Return to:
Mosquito Control Program
3125 Conner Blvd., Bldg. 6,
Tallahassee, FL 32399-1650

For use in documenting an Arthropod Control Plan for lands designated by the State of Florida or any political subdivision thereof as being environmentally sensitive and biologically highly productive therein. Fill this form out if control work is necessary or planned.

Name of Designated Land:

Lake George State Forest

Is Control Work Necessary:

☒ Yes ☐ No

Location:

Multiple parcels located on or near the Lake George State Forest

Land Management Agency:

FL Department of Agriculture and Consumer Services, Florida Forest Service

Are Arthropod Surveillance Activities Necessary?

☒ Yes ☐ No

If "Yes", please explain:

Required as the primary component of an Integrated Mosquito Management (IMM) program.

Which Surveillance Techniques Are Proposed?

Please Check All That Apply:

☒ Landing Rate Counts

☒ Light Traps

☐ Sentinel Chickens

☒ Citizen Complaints

☒ Larval Dips

☒ Other

If "Other", please explain:

Portable "light trap" style trap baited with adult mosquito attractant i.e. carbon dioxide, octenol and/or BG Lure.

Arthropod Species for Which Control is Proposed:

Diptera: Culicidae

Aedes species including but not limited to Ae. albopictus, Ae. atlanticus, Ae. infirmatus.
Culex species including but not limited to Cx. quinquefasciatus, Cx. nigripalpus and Cx. salinarius.
Others including but not limited to Psorophora ferox, Psorophora columblae, Anopheles quadrimaculatus.

Proposed Larval Control:

Proposed larval monitoring procedure: **Dipping, utilizing standard dipper methodology.**

Are post treatment counts being obtained: ☒ Yes ☐ No

Biological Control of Larvae:

Might predacious fish be stocked: ☒ Yes ☐ No

Other biological controls that might be used:

Volusia County Mosquito Control (VCMC) utilizes *Gambusia holbrooki* (Mosquitofish) obtained from an on site fish hatchery and natural local habitats.

See below Biorational agents including Bti and Bs.

Material to be Used for Larvaciding Applications:

(Please Check All That Apply:)

☒ Bti

☒ Bs

☒ Methoprene

☐ Non-Petroleum Surface Film

☒ Other, please specify: Spinosad

Please specify the following for each larvacide:

Chemical or Common name: **Bacillus thuringiensis subsp. israelensis (Bti), Bacillus sphaericus (Bs), Bti/Bs combination, Methoprene, Spinosad**

☒ Ground

☒ Aerial

Rate of application: **Application rate is based on the rates prescribed on the EPA approved product label.**

Method of application: **Hand, Backpack, Buffalo Turbine, ATV, or other Truck-mounted applicator, Helicopter and/or Fixed wing.**

Proposed Adult Mosquito Control:

Aerial adulticiding ☒ Yes ☐ No

Ground adulticiding ☒ Yes ☐ No

Please specify the following for each adulticide:

Chemical or common name: Bifenthrin, Etofenprox, Naled, Permethrin, Prallethrin, Sumithrin, Malathion, Deltamethrin, ReMoa Tri (abamectin, fenpropathrin, C8910 fatty acid blend).

Rate of application: Application rate is based on the rates prescribed on the EPA approved product label.

Method of application: Ultra Low Volume (ULV); Hand-held ULV, ATV-mounted ULV unit, Truck-mounted ULV unit, Helicopter ULV and/or Fixed wing ULV

Proposed Modifications for Public Health Emergency Control: Arthropod control agency may request special exception to this plan during a threat to public or animal health declared by State Health Officer or Commissioner of Agriculture.

VCMC will coordinate closely with the local and state Dept of Health, Division of Env. We follow Best Management Practices for Mosquito Control as defined by the American Mosquito Control and Florida Mosquito Control Association. This control procedure will not change in a public or animal health threat however control activities are likely to increase.

Proposed Notification Procedure for Control Activities:

All treatments will occur following surveillance and include required Florida Department of Agriculture and Consumer Services criteria. Notification will occur 24 hours in advance of an adulticiding event and will include both a phone call and email to the Land Manager as well as any other previously identified land management personnel.

We coordinate closely with the local and state Dept of Health, Division of Env. Public Health that annually publishes the Surveillance and Control of Selected Arthropod-Borne Diseases in Florida -2014 Guidebook which includes a "Response Plan for Mosquito-Borne Diseases" that identifies various levels of threats, the thresholds for those levels, and their respective management responses.

Spraying by air will only commence after coordination between VCMC management and the local Land Manager. Aerial applications will only be considered after a Level 5: Mosquito-Borne Illness Threat for a mosquito-borne threat to human populations.

The treatment area will advocate for buffering of environmentally sensitive and biologically highly productive areas.

Records:

Are records being kept in accordance with Chapter 388, F.S.:

☒ Yes ☐ No

Records Location: VCMC, 801 South St, New Smyrna Beach, Florida

How long are records maintained: 5+ years

Vegetation Modification:

What trimming or altering of vegetation to conduct surveillance or treatment is proposed?

Trimming would only occur if access was required for a specific area and after coordination with the Land Manager

Proposed Land Modifications:

Is any land modification, i.e., rotary ditching, proposed:

N/A

Include proposed operational schedules for water fluctuations:

N/A

List any periodic restrictions, as applicable, for example peak fish spawning times.

N/A

Proposed Modification of Aquatic Vegetation:

N/A

Land Manager Comments:

Arthropod Control Agency Comments:

VCMC has an extensive Integrated Pest (Mosquito) Management Program. We are governed and abide by SS Chapter 388 and FAR 5E-13. In addition to regulatory compliance, we follow Best Management Practices for Mosquito Control as defined by the American Mosquito Control and Florida Mosquito Control Association. Please find Volusia County Mosquito Control's Mission Statement as follows - To proactively use Integrated Pest Management (IPM) strategies to reduce nuisance mosquitoes and risk of mosquito-borne illness in Volusia County. To sustain quality of life, foster stewardship of the environment, provide stellar customer service, and support economic vitality for the community.

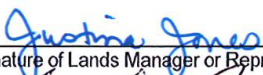
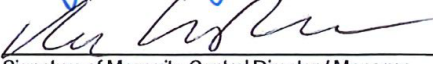
	7/15/25
Signature of Lands Manager or Representative	Date
	15 JUL 25
Signature of Mosquito Control Director / Manager	Date

Exhibit W

FDEP Florida Forever Land Acquisition Projects

Longleaf Pine Ecosystem

Critical Natural Lands

Gilchrist, Hamilton, Marion and Volusia Counties

<i>Year Added to Priority List</i>	1993
<i>Project Acres</i>	23,946
<i>Acquired Acres</i>	14,571
<i>Cost of Acquired Acres</i>	\$35,405,280
<i>Remaining Project Acres</i>	9,375
<i>2023 Assessed Value of Remaining Acres</i>	\$87,315,004

Purpose for State Acquisition

The purpose of the Longleaf Pine Ecosystem project is to conserve the largest and highest quality fragments of old-growth longleaf pine sandhills, which is one of Florida's most distinctive and endangered forest types. State acquisition will help to ensure the survival of numerous imperiled plant and animal species such as the red-cockaded woodpecker and provide the public an opportunity to experience the original and increasingly rare Florida sandhill community.

General Description

The original Longleaf Pine Ecosystem project sites (Ross Prairie Sandhill, Ross Prairie Addition, Bell Ridge Sandhill, Blue Spring Longleaf and Deland Ridge) are some of the highest quality longleaf pine sandhills in Florida. The project will protect a multitude of imperiled species. Archaeological sites are known to occur in the Ross Prairie tract. These sites are vulnerable to logging and fire suppression as well as development.

FNAI Element Occurrence Summary

<u>FNAI Elements</u>	<u>Score</u>
Florida scrub-jay	G1G2/S1S2
Red-cockaded woodpecker	G3/S2
Eastern indigo snake	G3/S2?
Gopher tortoise	G3/S3
Florida mouse	G3/S3
Florida black bear	G5T4/S4
Orange Lake cave crayfish	G1/S1
<i>longspurred mint</i>	G2/S2
<i>sand butterfly pea</i>	G2Q/S2
Equal-clawed gopher tortoise hisster beetle	G2/S2
Gopher tortoise burrow fly	G2/S2S3
Southern hognose snake	G2/S2S3

Public Use

The project is suitable for state parks, state forests and wildlife management areas, with opportunities for hunting, hiking, horseback riding, camping and nature appreciation. Acquisition would also help complete



the Florida National Scenic Trail, a statewide non-motorized trail that crosses several Florida Forever project sites.

Acquisition Planning

1988

On December 15, 1988, Florida Audubon Society received Caraway Lake Sanctuary (15 acres) as a donation, all of which would be in the project boundary when it was created.

1990

On November 15, 1990, Florida Audubon Society received a donation of three parcels (49.3 acres) to expand Caraway Lake Sanctuary, all of which would be in the project boundary when it was created.

1993

On July 23, 1993, Blue Spring Longleaf was added to the project boundary. Deland Ridge (35 acres) was also added to the project boundary.

On November 19, 1993, the Land Acquisition Advisory Council approved the addition of 320 acres to the Ross Prairie Sandhill site.

1998

In 1998, Florida Audubon Society acquired Clifton Sanctuary (41 acres), of which approximately 10.59 acres are within the project boundary.

1999

On July 29, 1999, the Land Acquisition and Management Advisory Council added the 3,040-acre Ross Prairie Addition project to the project boundary.

On December 9, 1999, the Land Acquisition and Management Advisory Council approved the addition of the Bell Ridge project to the project boundary.

2003

On May 29, 2003, the Florida Fish and Wildlife Conservation Commission established the On Top of the World Development of Regional Impact Conservation Area (260.2 acres), of which approximately 207 acres are within the project boundary.

2010

On August 13, 2010, the Acquisition and Restoration Council approved a 3,612-acre reduction to the project boundary due to residential/commercial/infrastructure disturbances.

2011

On December 9, 2011, the Acquisition and Restoration Council placed the project in the Critical Natural Lands category.

2012

On July 3, 2012, the BOT acquired 5.16 acres within the Ross Prairie site for \$8,000.

2013

On April 19, 2013, the Acquisition and Restoration Council approved adding the 986-acre Ellaville Sandhill Tract to the project boundary, bringing the total project acreage to 22,299.





2021

On April 9, 2021, Acquisition and Restoration Council members approved adding the 541-acre Big Pine Preserve project, located in Marion County, to the project boundary.

2023

DEP acquired, in fee, 470 acres in Marion County from Swan-Smiley Preserve, LLC.

Coordination

The Nature Conservancy, Florida Department of Transportation, Trust for Public Land and Florida Audubon Society are acquisition partners on the project.

Management Policy Statement

The primary management goals of the Longleaf Pine Ecosystem project are to conserve and protect environmentally-unique lands that contain native, relatively-unaltered flora and fauna representing a natural area unique to a region of the state or a larger geographic area; conserve and protect significant habitat for native species or endangered and threatened species; conserve, protect, manage or restore important ecosystems, landscapes and forests; and enhance or protect significant surface water, coastal, recreational, timber, fish or wildlife resources which local or state regulator programs cannot adequately protect.

The primary objective of management of the Bell Ridge Sandhills site is to protect and restore the threatened sandhill natural community. A secondary objective is to provide resource-based recreation compatible with protection of the natural and cultural resource values of the project. The site will be managed under the multiple-use concept; management activities will be directed first toward conservation of resources and second toward integrating carefully controlled consumptive uses.

Managers will control access to the site; thoroughly inventory the resources; restore hydrological disturbances; conduct prescribed burning of fire-dependent communities to mimic natural lightning-season fires, using existing fire lines, natural firebreaks, existing roads or foam lines for control; strictly limit timber harvesting in mature stands; and monitor management activities to ensure that they are conserving resources. Managers will limit the number and size of recreation facilities, ensure that they avoid the most sensitive resources and site them in already disturbed areas when possible. The project includes over 3,000 acres of relatively undisturbed land adjacent to an existing area of conservation lands. It consequently appears to have the size and location to achieve its primary and secondary objective.

The Florida Forest Service proposes to manage the project under a multiple-use management system consistent with the state forest system, and in a manner designed to accomplish the acquisition goals and measures for the project as approved by the Acquisition and Restoration Council. These goals and measures are hereby incorporated by reference. The primary land management goal for the Florida Forest Service is to restore, maintain and protect all native ecosystems in perpetuity; to integrate compatible human use; and to ensure long-term viability of populations and species considered rare. This ecosystem approach will guide the Florida Forest Service management activities on the project.





Manager(s)

The Florida Forest Service will manage the Blue Spring Longleaf, Bell Ridge and Ross Prairie sites; this excludes the sites that are part of the Marjorie Harris Carr Cross Florida Greenway and are under an approved management lease to the Division of Recreation and Parks. The Florida Forest Service will manage Bell Ridge under a multiple-use management system.

Management Prospectus

Qualifications for State Designation

The quality, size and diversity of the pine forests on the Blue Spring Longleaf and Ross Prairie sites make them suitable for state forests. The major community represented on the Bell Ridge site is sandhill. The site is also desirable for use and management as a state forest due to its size and diversity. Management by the Florida Forest Service as a state forest is contingent upon the state acquiring fee simple title to the entire project and obtaining some level of legal public access to the site, which is likely since the eastern and northern property boundaries are county-maintained graded roads.

Conditions Affecting Intensity of Management

Blue Spring Longleaf Tract

There are no known major disturbances that will require significant attention, so management intensity is expected to be typical for a state forest. However, on Ross Prairie, the construction of an extension of the Florida Turnpike may hinder fire management activities and public access to the state forest.

Bell Ridge

There are portions of the parcel that have been disturbed and will require restoration efforts. There is at least one linear facility that bisects the parcel, which will be an area of management concern for monitoring unauthorized uses and introduction of invasive exotic species. The sandhill community is considered imperiled and may be sensitive to certain uses and their intensity. As such, any additional facilities other than those that already exist on the project are considered incompatible with the project.

Residential Developments

Adjacent residential developments pose management concerns associated with prescribed burning, public use, unauthorized uses and other natural resource management activities. Areas that have refuse and debris should be removed prior to closing on the core parcel. There are no other known major disturbances that require attention. The initial level of management intensity and related management cost is expected to be moderately high to establish the project as a state forest. Some existing roads will be used as multi-use trails for hiking, horseback riding and off-road biking.

Management Implementation, Public Access, Site Security and Protection of Infrastructure

The Blue Spring Longleaf tract and part of the Ross Prairie Sandhills tract have been acquired. The Florida Forest Service is now providing public access to these tracts for low-intensity, non-facilities-related outdoor recreation. Management on the Blue Spring Longleaf tract will concentrate on maintaining the existing open conditions.

On all three tracts, the Florida Forest Service will provide public access. Long-range plans will address restoring disturbed areas, as well as protecting threatened and endangered species. An all-season burning





program will use existing roads, black lines, foam lines and natural breaks to contain fires. Timber management will mostly involve improvement thinning and regeneration harvests. Plantations will be thinned and reforested where appropriate. Stands will not have a targeted rotation age. Infrastructure will primarily be in disturbed areas and will be the minimum required for management and public access. The Florida Forest Service will promote environmental education.

There are many roads throughout the property, and a road plan will need to be developed to determine those to be used for vehicular use by the public, those that are required for administrative use, and unnecessary access points and roads that should be closed. An inventory of the site's natural resources and threatened and endangered flora and fauna will eventually be conducted to provide a basis for formulation of a management plan. Prior to collection of necessary resource information, management proposals for the project can only be conceptual in nature. Long-range plans for the property will generally be directed toward the restoration of disturbed areas and maintenance of natural communities. To the greatest extent practical, disturbed sites will be restored to conditions that would be expected to occur in naturally functioning ecosystems. Any existing pine plantations will be thinned to achieve a more natural appearance. Off-site species will eventually be replaced with species that would be expected to occur naturally on those specific sites.

Whenever possible, existing roads, black lines, foam lines and natural breaks will be utilized to contain and control prescribed and natural fires. Timber management activities will primarily consist of improvement of thinning and regeneration harvests aimed at maintaining and perpetuating forest ecosystems. Stands will not have a targeted rotation age but will be managed to maintain a broad diversity of age classes ranging from young stands to areas with old growth characteristics. This will provide habitat for the full spectrum of species that would be found in the natural environment and enhance and maintain biodiversity. The resource inventory will be used to identify sensitive areas that need special attention, protection or management, and to locate areas that are appropriate for any recreational or administrative facilities. Recreation and administrative infrastructure development will primarily in already-disturbed areas and will be the absolute minimum required to allow public access for the uses mentioned above, to provide facilities to accommodate public use, and to administer and manage the property. It is anticipated that interpretative and user services recreational facilities will be developed and the use of low impact, rustic facilities will be stressed. High impact, organized recreation areas are not planned because of possible adverse effects on the natural environment. Unnecessary roads, fire lines and hydrological disturbances will be abandoned and/or restored to the greatest extent practical.

Revenue-generating Potential

The Florida Forest Service will sell timber as needed to improve or maintain desirable ecosystem conditions. These sales will provide a variable source of revenue, but the revenue-generating potential for these tracts is expected to be low. It is anticipated that management funding will come from the Conservation and Recreational Lands Trust Fund or its successor.

Cooperators in Management Activities

The Florida Forest Service will cooperate with other state agencies, local government entities and other appropriate groups in management of the property.





Management Cost Summary

<u>FFS (Bell Ridge)</u>	<u>1995/96</u>	<u>1996/97</u>
Source of Funds	CARL	CARL
Salary	\$31,080	\$41,013
OPS	\$0	\$0
Expense	\$25,505	\$11,302
OCO	\$40,626	\$0
FCO	\$0	\$0
TOTAL	\$97,211	\$52,315

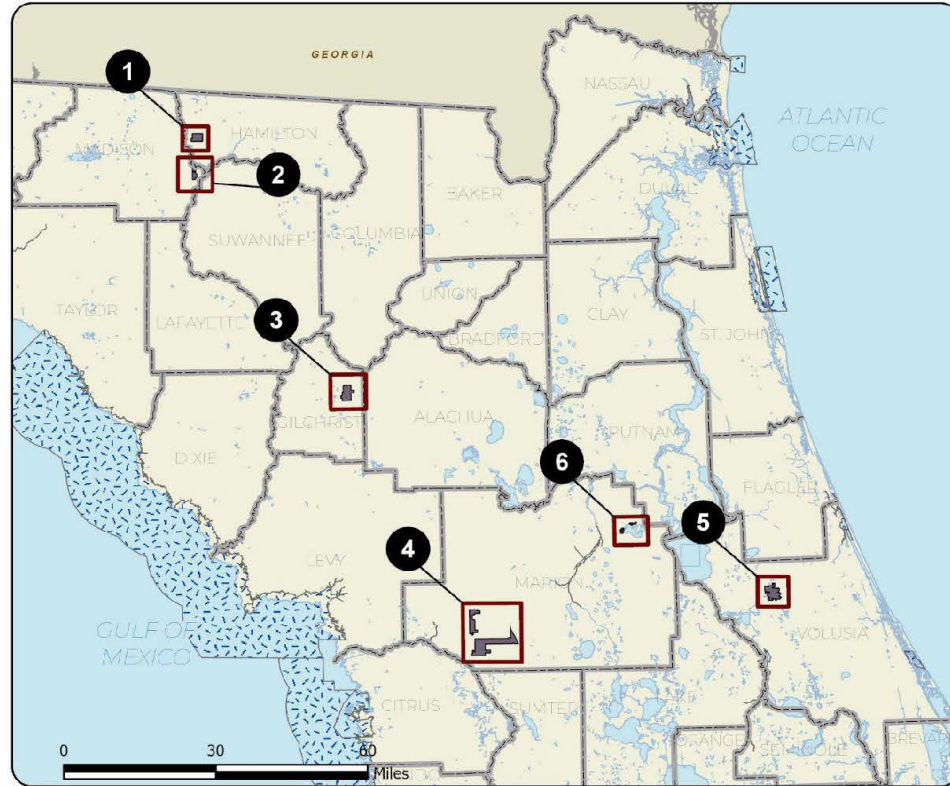
Source: Management Prospectus as originally submitted

Management Cost Summary

<u>FFS (Deland Ridge)</u>	<u>Startup</u>	<u>Recurring</u>
Source of Funds	CARL	CARL
Salary	\$0	\$0
OPS	\$0	\$0
Expense	\$7,000	\$5,000
OCO	\$0	\$0
FCO	\$0	\$0
TOTAL	\$7,000	\$5,000

Source: Management Prospectus as originally submitted



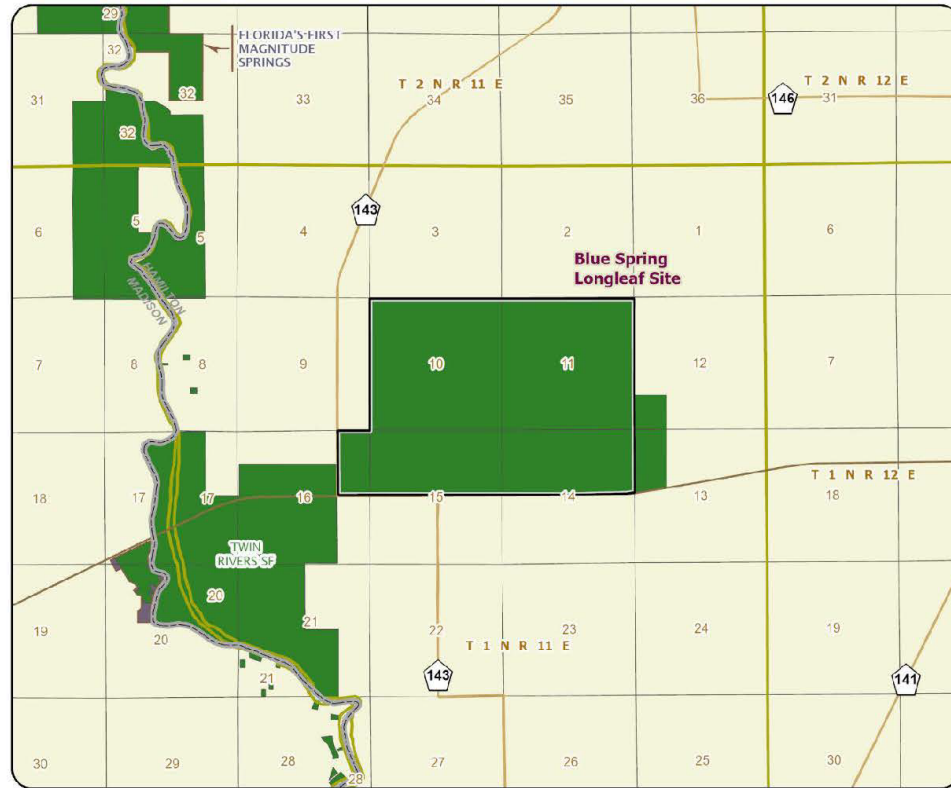


LONGLEAF PINE ECOSYSTEM: OVERVIEW

GILCHRIST, HAMILTON, MADISON, MARION AND VOLUSIA COUNTIES

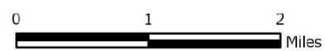
- ☐ Map 1 Blue Spring Longleaf Site
- ☐ Map 2 Ellaville Sandhill Site
- ☐ Map 3 Bell Ridge Sandhills Site
- ☐ Map 4 Ross Prairie Addition Site
- ☐ Map 4 Ross Prairie Sandhill Site
- ☐ Map 5 DeLand Ridge Sandhill Site
- ☐ Map 6 Big Pine Preserve Site

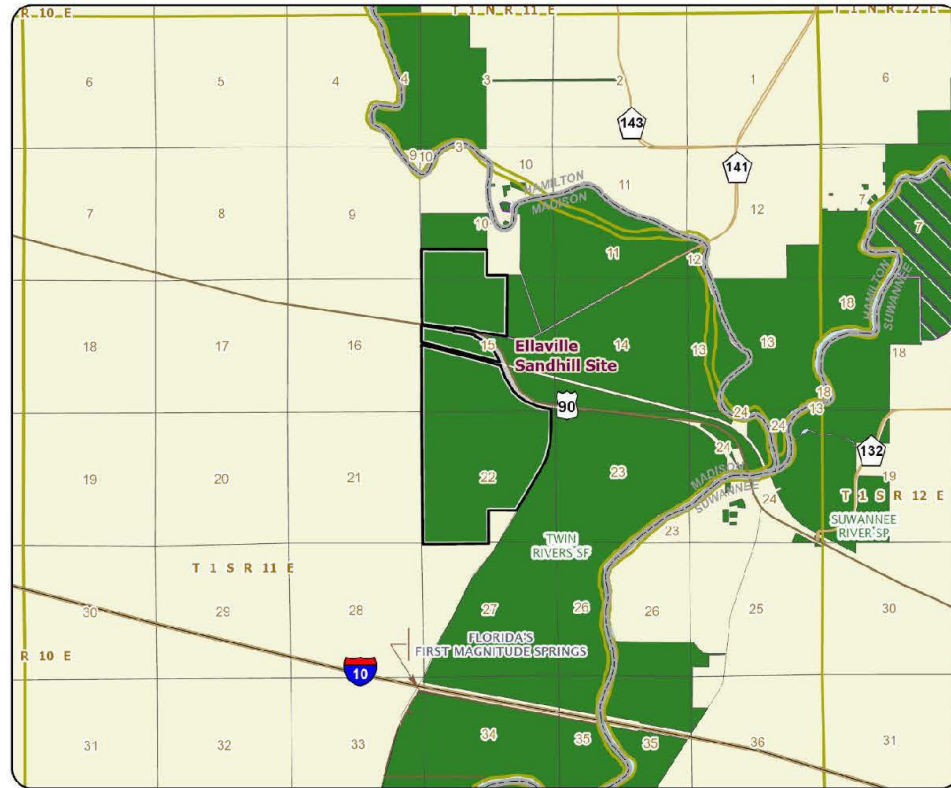




LONGLEAF PINE ECOSYSTEM: MAP 1

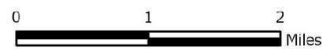
HAMILTON COUNTY

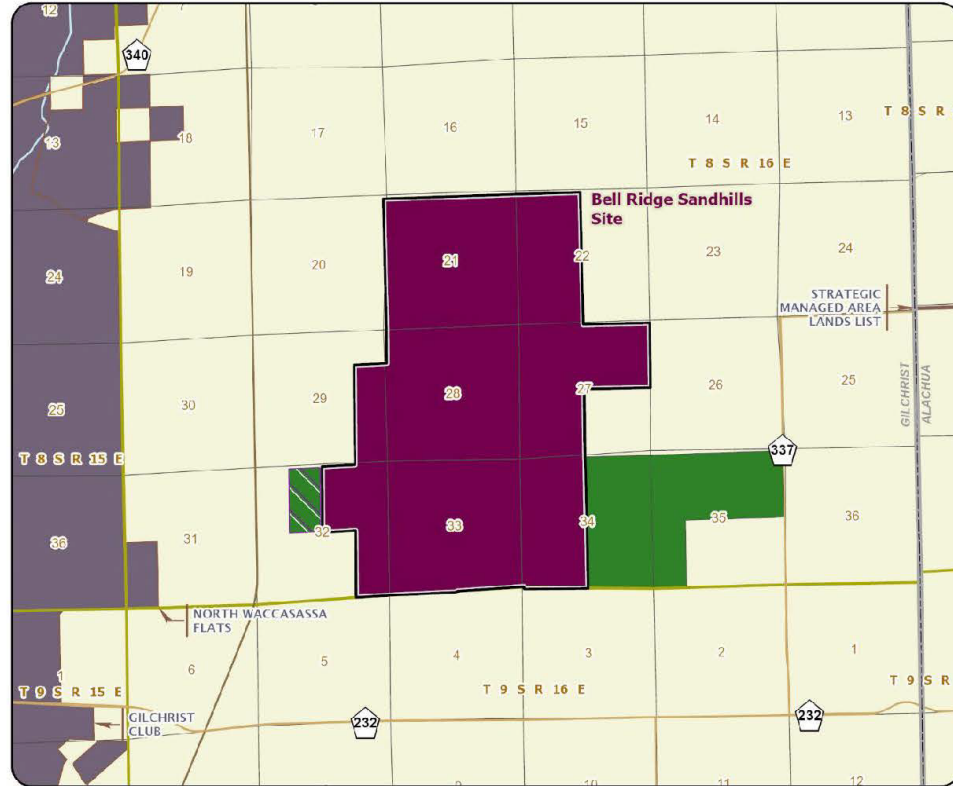




LONGLEAF PINE ECOSYSTEM: MAP 2

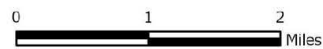
MADISON COUNTY

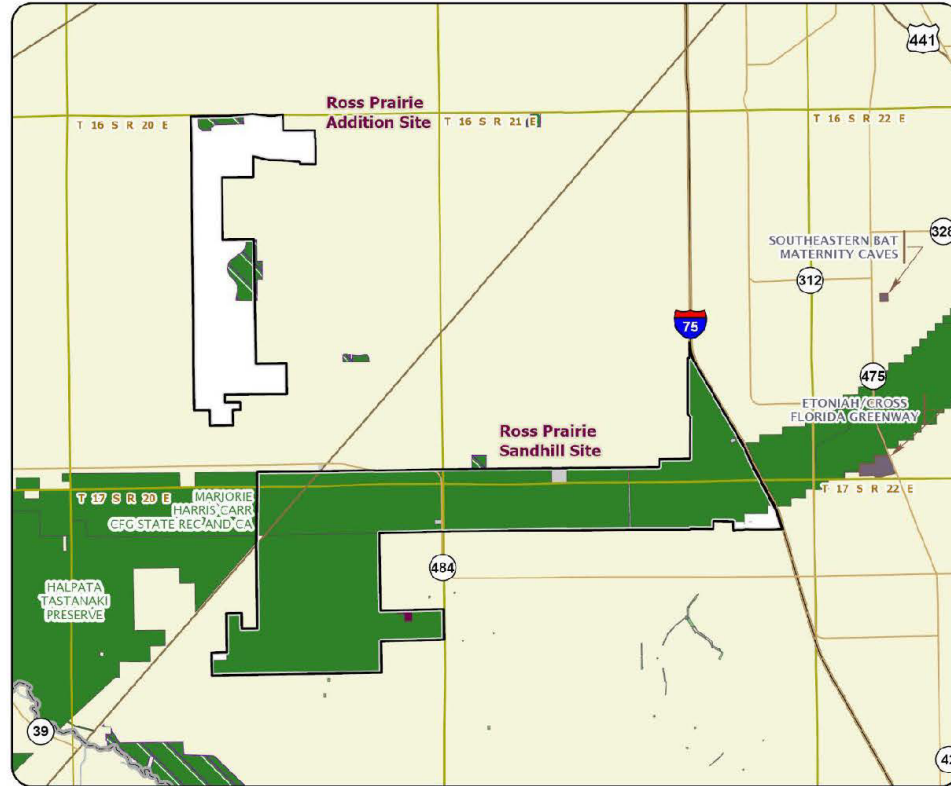




LONGLEAF PINE ECOSYSTEM: MAP 3

GILCHRIST COUNTY

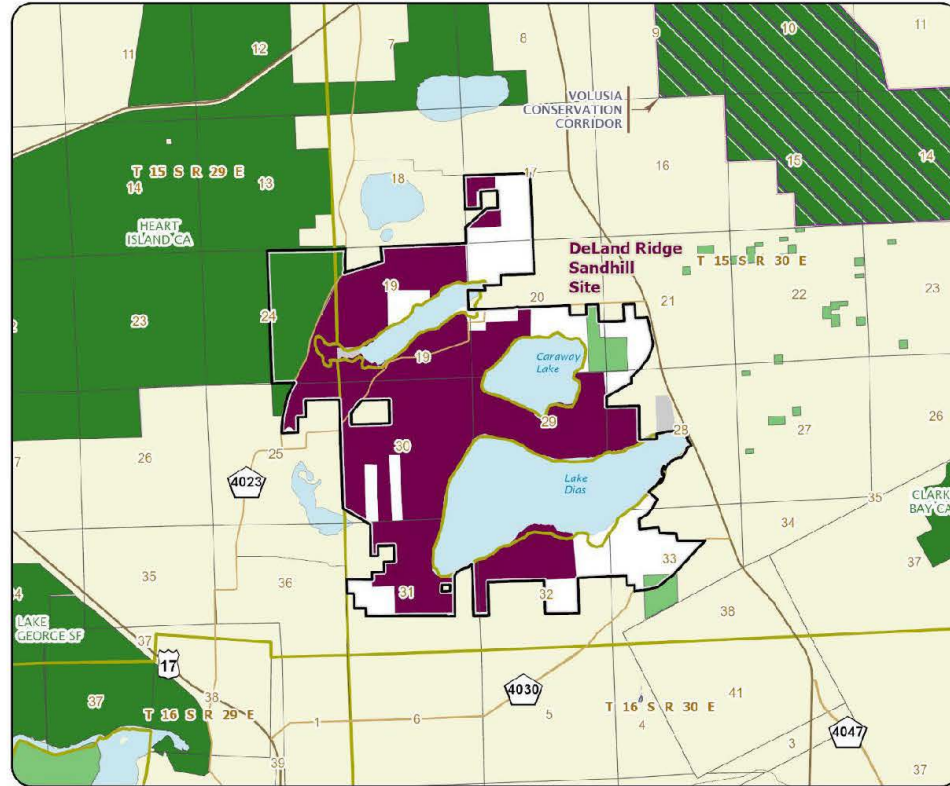




LONGLEAF PINE ECOSYSTEM: MAP 4

MARION COUNTY

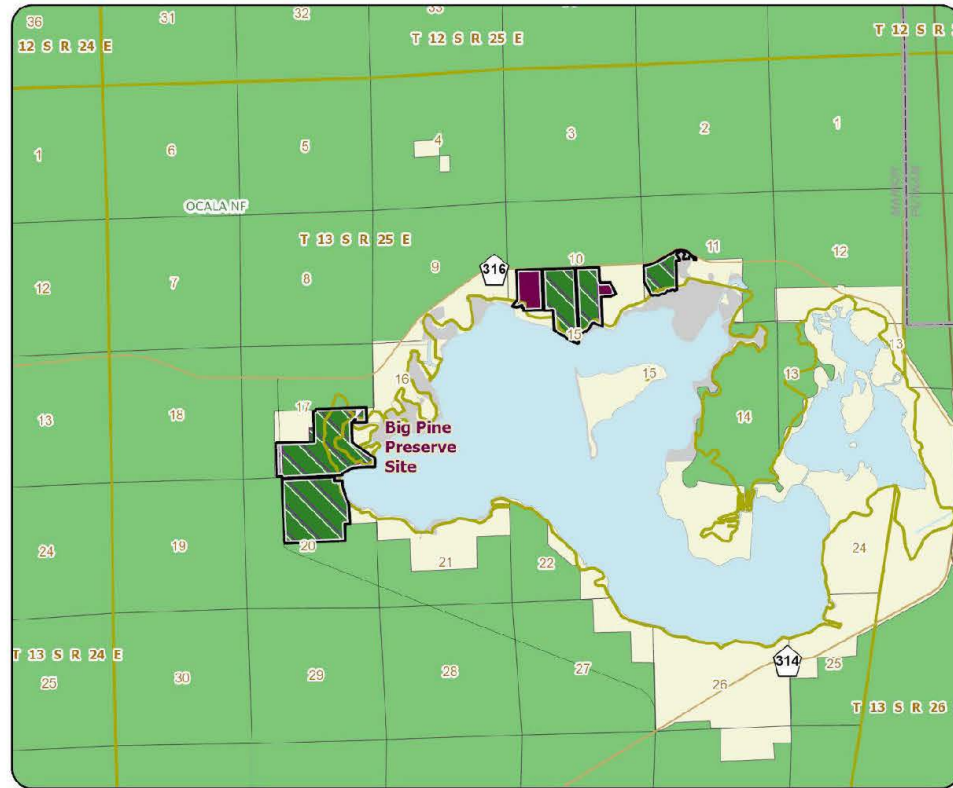




LONGLEAF PINE ECOSYSTEM: MAP 5

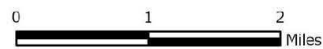
VOLUSIA COUNTY





LONGLEAF PINE ECOSYSTEM: MAP 6

MARION COUNTY



Strategic Managed Area Lands List

Critical Natural Lands

Alachua, Bay, Brevard, Broward, Charlotte, Clay, Collier, Columbia, Dixie, Flagler, Franklin, Gadsden, Gilchrist, Glades, Hamilton, Hernando, Hillsborough, Lafayette, Lake, Lee, Levy, Manatee, Miami-Dade, Orange, Palm Beach, Pasco, Putnam, St. Lucie, Santa Rosa, Sumter, Taylor, Union, Volusia and Wakulla Counties

<i>Year Added to Priority List</i>	<i>2018</i>
<i>Project Acres</i>	<i>9,629</i>
<i>Acquired Acres</i>	<i>727</i>
<i>Cost of Acquired Acres</i>	<i>\$3,935,843</i>
<i>Remaining Project Acres</i>	<i>8,902</i>
<i>2023 Assessed Value of Remaining Acres</i>	<i>\$192,412,581</i>

Purpose for State Acquisition

Acquisition of these specific inholding parcels would enhance or facilitate management of properties already under public ownership. Collectively, acquisition of these fee simple parcels will meet the Florida Forever goal of enhancing the coordination and completion of land acquisition projects (essential natural resources, ecosystem service parcels and connecting linkage corridors as identified and developed by the best available scientific analysis).

General Description

The Strategic Managed Areas Lands List, sponsored by the Division of Recreation and Parks, Office of Greenways and Trails, Office of Resilience and Coastal Protection, Florida Forest Service and Florida Fish and Wildlife Conservation Commission, is a collection of single-owner parcels statewide that would augment or improve management of existing state-managed conservation lands. The parcels included have been identified as part of the optimum management boundary within the approved management plans of state parks, state trail corridors, state forests and wildlife management/environmental areas. None of these parcels are located within the boundary of another Florida Forever project on the priority list. The largest parcel in the project would become part of Blackwater River State Forest in Santa Rosa County. The smallest is 2 acres of beachfront land on the Atlantic Ocean that would become part of Dr. Von D. Mizell-Eula Johnson State Park in Broward County. Over 7,000 acres of these proposals are in Strategic Habitat Conservation Areas.

The properties identified for better management for the Division of Recreation and Parks are properties adjoining existing state parks or railroad rights of way identified by DEP's Office of Greenways and Trails that would extend or further connect existing recreation trails such as the existing Palatka to Lake City Corridor or the new Georgia to Cross City Corridor.



Properties chosen for better management by the Florida Forest Service augment existing state forests. Properties that would augment Florida Fish and Wildlife Conservation Commission lands would improve the management of such areas as the Andrews Wildlife Management Areas in Levy County or the Lafayette Forest Wildlife and Environmental Area in Lafayette County.

Listed species element occurrences were reported by the Florida Natural Areas Inventory by parcel. A total of 48 listed species were identified overall, but some species may be counted more than once as this is a statewide, multi-parcel, multi-county project. The maximum number of listed species at one site was seven.

FNAI Element Occurrence Summary

<u>FNAI Elements</u>	<u>Score</u>
Florida panther	G5T1/S1
Red-cockaded woodpecker	G3/S2
Gopher tortoise	G3/S3
Florida black bear	G5T4/S4
<i>fragrant prickly apple</i>	G1/S1
North Florida spider cave crayfish	G1G2/S1S2
A mayfly	G1G2/S1S2
<i>beautiful pawpaw</i>	G2/S2
Suwannee alligator snapping turtle	G2/S2
<i>pinewoods dainties</i>	G4T2/S2
<i>narrowleaf naiad</i>	G3/S2
Gopher frog	G2G3/S3

Public Use

Because these lands are to be acquired in full fee, they would increase the size of conservation or recreation areas and enhance the experience of such lands for members of the public. The public use would be predicated on the existing management of the adjoining areas. The parcels on the list all help to enhance essential natural resources, providing better operational or environmental management. The resource-based potential public use of the project is generally high, as the various parcels acquired in fee title can accommodate such activities as hiking, natural resource appreciation and education, picnicking, camping, bicycling and horseback riding. Depending on management emphasis, fishing and hunting is also supportable.

Acquisition Planning

As the application requires, the owners of parcels in the project were notified by mail that the Acquisition and Restoration Council would be considering a Florida Forever proposal that included their parcel in the boundary, and if they wished to sell their parcel, state acquisition could be possible using Florida Forever funding. Owners were also made aware that they could remove their parcels from the project's boundary at any time, but that removing the parcel from the boundary would make it ineligible for state acquisition.

2018

In October 2018, the project was approved by the Acquisition and Restoration Council. All the parcels within the boundary are considered essential and proposed for fee simple acquisition.



**2019**

In September 2019, 10 parcels under a single ownership containing 120.19-acres (Florida Fish and Wildlife Conservation Commission Parcel One/Florida Fish and Wildlife Conservation Commission-1) were acquired fee simple from Zemel Family Ventures, LLC with funding from the U.S. Fish and Wildlife Service (79 percent) and the Florida Forever program (21 percent). The property will be managed by the Florida Fish and Wildlife Conservation Commission as part of Fred C. Babcock/Cecil M. Webb Wildlife Management Area.

2020

On August 21, 2020, the Acquisition and Restoration Council approved a Florida Fish and Wildlife Conservation Commission addition of 249.5 acres in Hernando County (Chassahowitzka Wildlife Management Area) and Palm Beach County (J.W. Corbett Wildlife Management Area) to the project boundary.

In 2020, the Acquisition and Restoration Council also approved a Florida Forest Service addition of 41 acres in Lake County (Seminole State Forest) to the project boundary. One parcel was simultaneously removed (Florida Forest Service Parcel Seven - HAU II LLC, 473.28 acres) to maintain a list of 10 agency parcels.

In 2020, Division of Recreation and Parks Parcels Four, Five and Eight containing a total of 66.34 acres were acquired. Parcel Four (River Rise State Park) contains 17.10 acres, Parcel Five (Silver Springs State Park) contains 9.86 acres and Parcel Eight (Dade Battlefield Historic State Park) contains 39.38 acres and will all be managed by the Division of Recreation and Parks as part of the adjacent managed areas.

2021

On April 9, 2021, the Acquisition and Restoration Council approved a Division of Recreation and Parks addition of 184 acres in Columbia and Sumter counties, and a reduction of 91 acres in Washington County. The Acquisition and Restoration Council also approved a Florida Fish and Wildlife Conservation Commission addition of 158 acres in Charlotte County and a reduction of 40 acres in Taylor County.

On August 4, 2021, the Acquisition and Restoration Council approved modifications to the project to include the Office of Resilience and Coastal Protection, remove the limitation on the timing of boundary amendment proposals and increase the number of "ownerships" each agency could include within the project from 10 to 15.

On October 8, 2021, the Acquisition and Restoration Council approved a Division of Recreation and Parks addition of 2.86 acres in Flagler County and an Office of Resilience and Coastal Protection addition of 198.51 acres in Charlotte County.

2022

On July 27, 2022, 160 acres (Division of Recreation and Parks Martin, Revels and Porter) were purchased from the Alachua Conservation Trust and will be managed as part of River Rise Preserve State Park.

On August 12, 2022, the Acquisition and Restoration Council approved two Florida Fish and Wildlife Conservation Commission additions; one for 40.89 acres in Franklin County and one for 123 acres in Glades County.





On December 9, 2002, the Acquisition and Restoration Council approved a Florida Fish and Wildlife Conservation Commission addition of 297 acres in Gadsden County.

2023

In February 2023, the Acquisition and Restoration Council approved the addition of a 40-acre parcel in Santa Rosa County to the project boundary.

In June 2023, the Acquisition and Restoration Council approved the addition of two parcels totaling approximately 249 acres in St. Lucie and Wakulla Counties to the project boundary.

In October 2023, the Acquisition and Restoration Council approved the addition of one parcel totaling approximately 16 acres in Pasco County to the project boundary.

In December 2023, the Acquisition and Restoration Council approved the addition of four parcels totaling approximately 21.51 acres in Hillsborough, Charlotte, Lee and Miami-Dade counties and approved the addition of one parcel totaling approximately 7.25 acres in Brevard County to the project boundary. The Acquisition and Restoration Council also approved adding the 103-acre Lake Powell North project, which is located in Bay County and proposed as a fee simple acquisition with a tax-assessed value of \$1,436,938, to the 2024 Florida Forever Priority List. After its approval, the Acquisition and Restoration Council added the project to the Strategic Managed Area Lands List.

Coordination

These parcels are eligible for Florida Forever program funding. While opportunities for partnerships may present themselves in the years ahead, Florida Forever is the primary funding source.

Management Policy Statement

These acquisitions would fall under the management plan of the existing conservation lands and projects they would be attached to. These are parcels that will improve resource management of state conservation lands.

Manager(s)

Each parcel would be managed by the applicable state agency manager as part of the site they are adjacent to. The managing agencies would be the Florida Forest Service, Florida Fish and Wildlife Conservation Commission, Division of Recreation and Parks, Office of Greenways and Trails and Office of Resilience and Coastal Protection.





Management Prospectus

Qualifications for State Designation

The intent is to improve management efficiency and effectiveness of state-managed conservation lands for citizens, visitors, natural systems and wildlife by adding strategic parcels or ownerships to the management units qualifies the project for state designation. These additions will make for more seamless operation and maintenance at the various sites.

Conditions Affecting Intensity of Management

The conditions affecting intensity of management would vary by parcel but would reflect those of the conservation land management unit contiguous with each parcel.

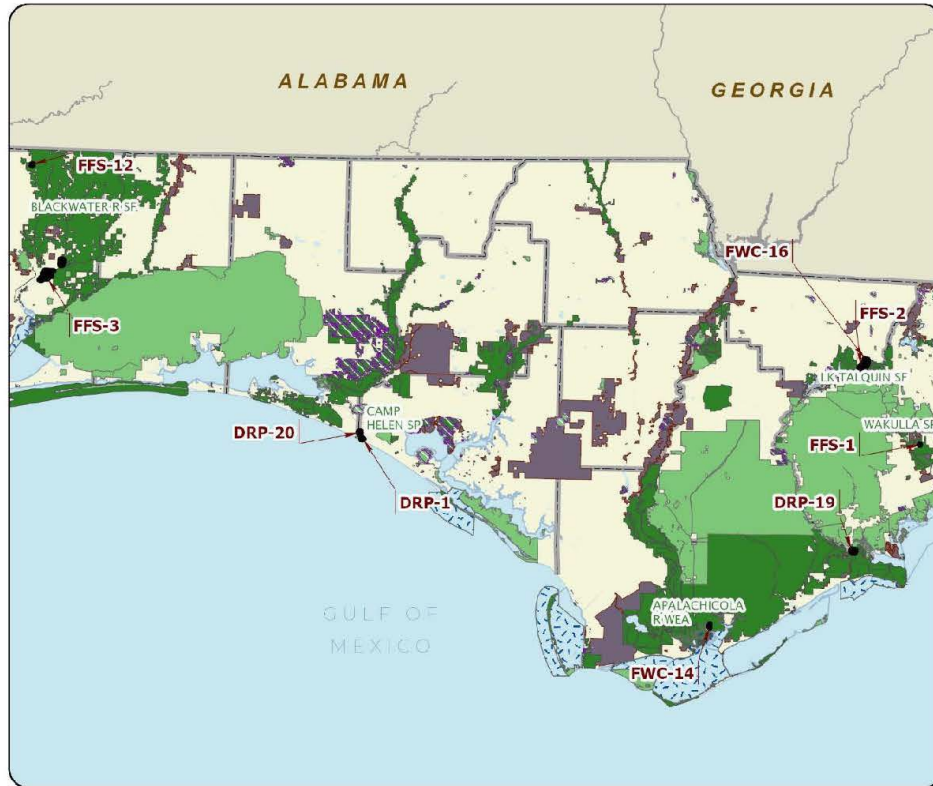
Management Implementation, Public Access, Site Security and Protection of Infrastructure

The timetable for implementing management and provisions for security and protection of infrastructure would become part of the general management of the larger management unit upon acquisition.

Revenue-generating Potential

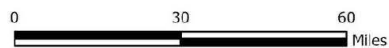
Revenue-generating potential for each parcel would vary, but management efficiencies from these acquisitions could result in a reduction of some management costs.

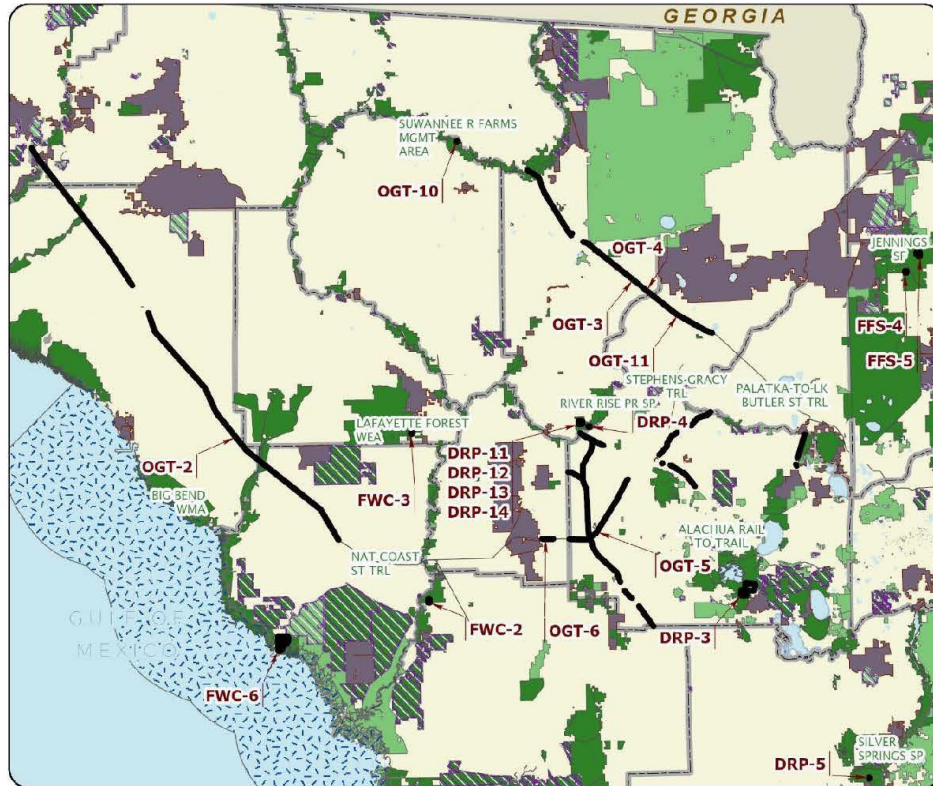




STRATEGIC MANAGED AREA LANDS LIST: MAP 1

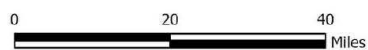
BAY, FRANKLIN, GADSDEN, SANTA ROSA, AND WAKULLA COUNTIES

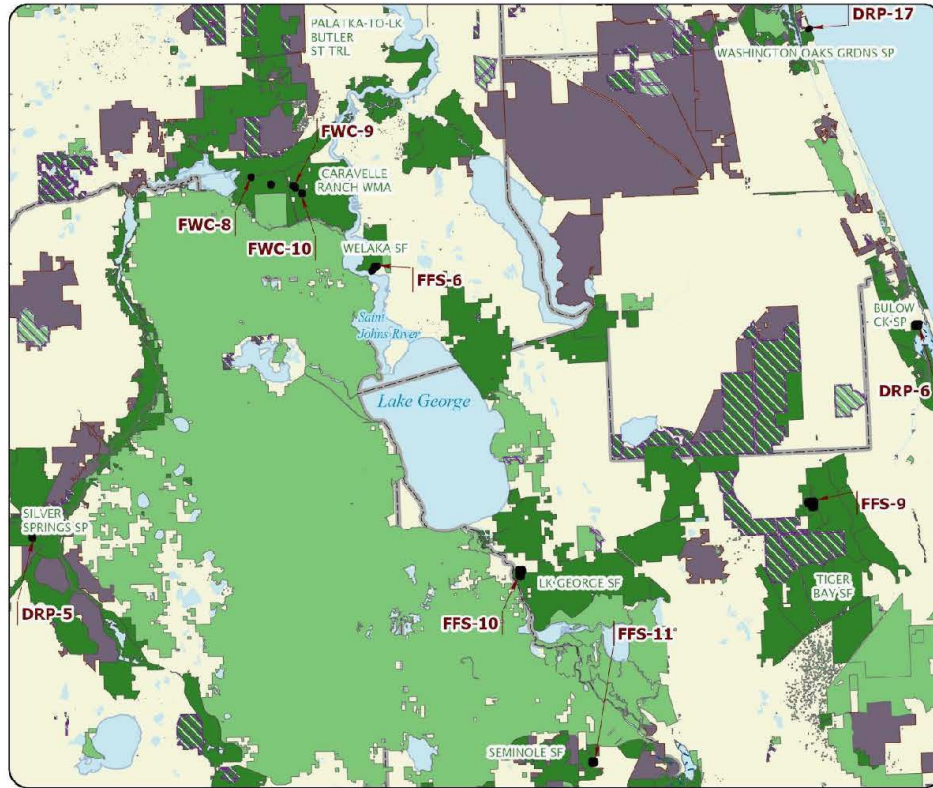




STRATEGIC MANAGED AREA LANDS LIST: MAP 2

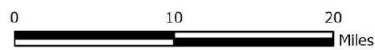
ALACHUA, CLAY, COLUMBIA, DIXIE, FLAGLER, GILCHRIST, HAMILTON, JEFFERSON, LAFAYETTE, LEVY, MARION, TAYLOR, AND UNION COUNTIES

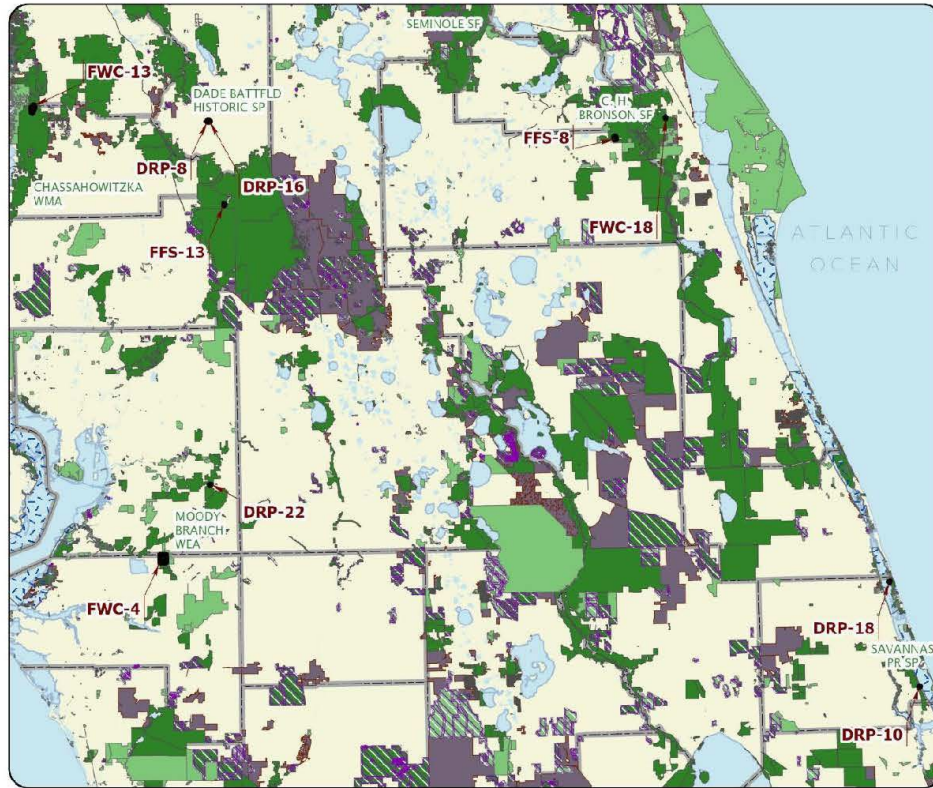




STRATEGIC MANAGED AREA LANDS LIST: MAP 3

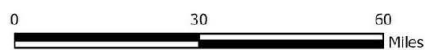
FLAGLER, LAKE, MARION, PUTNAM, AND VOLUSIA COUNTIES

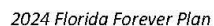




STRATEGIC MANAGED AREA LANDS LIST: MAP 4

BREVARD, HERNANDO, HILLSBOROUGH, MANATEE, ORANGE, PASCO, ST. LUCIE,
AND SUMTER COUNTIES





BROWARD, CHARLOTTE, COLLIER, GLADES, MIAMI-DADE, AND PALM BEACH COUNTIES



Exhibit X

Borrow Pit and Food Plot Map



Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

(DEFINITION)
The map was created by the Florida National Bureau (FNB) Corps-wide Information System (CIS) staff using data from the National Bureau of Intelligence (NBI) and the Defense Intelligence Agency (DIA) to produce a map of the United States and its territories. The map was created by the FNB staff using data from the NBI and the DIA to produce a map of the United States and its territories. The map was created by the FNB staff using data from the NBI and the DIA to produce a map of the United States and its territories.

Exhibit Y

Management Prospectus

CONSERVATION AND RECREATION LANDS
MANAGEMENT PROSPECTUS

LAKE GEORGE

DIVISION OF FORESTRY
DEPARTMENT OF AGRICULTURE & CONSUMER SERVICES

Management Goals

The Lake George Conservation and Recreation Lands (CARL) project encompasses approximately 40,357 acres in northwestern Volusia County and southeastern Putnam County. The Division of Forestry proposes to manage the project in accordance with, and in a manner designed to accomplish, the acquisition goals and objectives as approved by the Land Acquisition Advisory Council. These goals and objectives are hereby incorporated by reference.

The primary land management goal for the Division of Forestry is to restore, maintain and protect in perpetuity all native ecosystems; to integrate compatible human use; and to insure long-term viability of populations and species considered rare. This ecosystem approach will guide the Division of Forestry's management activities on this project.

Qualifications for State Designation

This project contains flatwoods, depression marsh, cypress domes and strands, hydric hammock, freshwater marsh, pine plantation, and considerable frontage along Lake George. Approximately 11 bald eagle nests have also been reported on the tract. The project's size and diversity makes it highly desirable for use and management as a state forest.

Conditions Affecting Intensity of Management

There are no known major disturbances that will require extraordinary attention so the level of management intensity is expected to be typical for a state forest.

Timetable for Implementing Management

Approximately 19,300 acres of the project have been purchased by the St. Johns River Water Management District and Volusia County and are currently under management by those entities. The Department of Environmental Protection has purchased approximately 5,100 acres and has assigned management to the Division of Forestry under an interim management letter.

The Division of Forestry is currently providing public access for low intensity, non-facilities related outdoor recreation activities. Until the

full complement of positions is appropriated, public access will be coordinated through the Division of Forestry's Bunnell District Headquarters and management activities will be conducted utilizing district personnel. The Division of Forestry will cooperate with and seek the assistance of other state agencies, local government entities and interested parties as appropriate.

Initial or intermediate management efforts are concentrating on site security, public and fire management access, resource inventory, and removal of existing trash. Steps are being taken to insure that the public is provided appropriate access while simultaneously affording protection of sensitive resources. Vehicular use by the public is confined to designated roads and unnecessary access points have been closed. An inventory of the site's natural resources and threatened and endangered flora and fauna will be conducted to provide the basis for formulation of a management plan.

Prior to collection of necessary resource information, management proposals for this project can only be conceptual in nature. Long-range plans for this property will generally be directed toward the restoration of disturbed areas and maintenance of natural communities. To the greatest extent practical, disturbed sites will be restored to conditions that would be expected to occur in naturally functioning ecosystems. Management activities will also stress enhancement of the abundance and spatial distribution of threatened and endangered species.

An all season burning program is being established utilizing practices that incorporate recent research findings. Whenever possible, existing roads, black lines, foam lines and natural breaks are utilized to contain and control prescribed and natural fires.

Timber management activities will primarily consist of improvement thinnings and regeneration harvests aimed at maintaining and perpetuating forest ecosystems. Plantations will be thinned to achieve a more natural appearance and, where appropriate, will be reforested with species that would typically be found in a naturally functioning ecosystem. Stands will not have a targeted rotation age but will be managed to maintain a broad diversity of age classes ranging from young stands to areas with old growth characteristics. This will provide habitat for the full spectrum of species that would be found in the natural environment.

The resource inventory will be used to identify sensitive areas that need special attention, protection or management, and to locate areas that are appropriate for any recreational or administrative facilities. Infrastructure development will primarily be located in already disturbed areas and will be the absolute minimum required to allow public access for the uses mentioned above, to provide facilities to accommodate public use, and to administer and manage the property.

The Division will promote recreation and environmental education in the natural environment. As a general practice, if it is determined that a new recreation area is needed, low impact, rustic facilities will be the only kind developed. High impact, organized recreation areas will be discouraged because of possible adverse effects on the natural environment. Unnecessary roads, firelines and hydrological disturbances will be abandoned and/or

restored to the greatest extent practical.

Revenue Generating Potential

As mentioned above, timber sales will be conducted as needed to improve or maintain desirable ecosystem conditions. These sales will primarily take place in upland pine stands and will provide a variable source of revenue dependent upon a variety of factors. Revenue generating potential for this project is expected to be moderate.

Management Costs and Sources of Revenue

It is anticipated that management funding will come from the CARL trust fund. Budget needs for interim management are estimated as follows.

SALARY (2 FTE'S)	\$56,280
EXPENSE	12,000
OPERATING CAPITAL OUTLAY	<u>106,700</u>
TOTAL	<u>\$174,980</u>