



FLORIDA DEPARTMENT OF Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, FL 32399

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

February 16, 2022

Mr. Keith Rowell
Florida Forest Service
Department of Agriculture and Consumer Services
3125 Conner Boulevard, Room 236
Tallahassee, Florida 32399-1650

RE: Pine Log State Forest – Lease No. 3688

Dear Mr. Rowell:

On **February 11, 2022**, the Acquisition and Restoration Council (ARC) recommended approval of the **Pine Log State Forest** management plan. Therefore, Division of State Lands, Office of Environmental Services (OES), acting as agent for the Board of Trustees of the Internal Improvement Trust Fund, hereby approves the **Pine Log State Forest** management plan. The next management plan update is due February 11, 2032.

Pursuant to s. 253.034(5)(a), F.S., each management plan is required to describe both short-term and long-term management goals and include measurable objectives to achieve those goals. Short-term goals shall be achievable within a 2-year planning period, and long-term goals shall be achievable within a 10-year planning period. Upon completion of short-term goals, please submit a signed letter identifying categories, goals, and results with attached methodology to the Division of State Lands, Office of Environmental Services.

Pursuant to s. 259.032(8)(g), F.S., by July 1 of each year, each governmental agency and each private entity designated to manage lands shall report to the Secretary of Environmental Protection, via the Division of State Lands, on the progress of funding, staffing, and resource management of every project for which the agency or entity is responsible.

Pursuant to s. 259.036(2), F.S., management areas that exceed 1,000 acres in size, shall be scheduled for a land management review at least every 5 years.

Pursuant to s. 259.032, F.S., and Chapter 18-2.021, F.A.C., management plans for areas less than 160 acres may be handled in accordance with the negative response process. This process requires small management plans and management plan amendments be submitted to the Division of State Lands for review, and the Acquisition and Restoration

Mr. Keith Rowell

Page 2

February 16, 2022

Council (ARC) for public notification. The Division of State Lands will approve these plans or plan amendments submitted for review through delegated authority unless three or more ARC members request the division place the item on a future council meeting agenda for review. To create better efficiency, improve customer service, and assist members of the ARC, the Division of State Lands will notice negative response items on Thursdays except for weeks that have State or Federal holidays that fall on Thursday or Friday. The Division of State Lands will contact you on the appropriate Friday to inform you if the item is approved via delegated authority or if it will be placed on a future ARC agenda by request of the ARC members.

Conditional approval of this land management plan does not waive the authority or jurisdiction of any governmental entity that may have an interest in this project. Implementation of any upland activities proposed by this management plan may require a permit or other authorization from federal and state agencies having regulatory jurisdiction over those particular activities. Pursuant to the conditions of your lease, please forward copies of all permits to this office upon issuance.

Sincerely,

Deborah Burr

Digitally signed by
Deborah Burr
Date: 2022.02.17
10:33:50 -05'00'

Deborah Burr
Office of Environmental Services
Division of State Lands

TEN-YEAR LAND MANAGEMENT PLAN
FOR THE
PINE LOG STATE FOREST
BAY AND WASHINGTON COUNTIES



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

APPROVED ON
FEBRUARY 11, 2022

TEN-YEAR LAND MANAGEMENT PLAN
FOR THE
PINE LOG STATE FOREST



Approved by:

Erin Albury

Erin Albury, Director
Florida Forest Service

2/21/22

Date

James Roberts

James Roberts, Chief
Forest Management Bureau

2-21-22

Date

**TEN-YEAR LAND MANAGEMENT PLAN
PINE LOG STATE FOREST
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**TEN-YEAR LAND MANAGEMENT PLAN
PINE LOG STATE FOREST
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LAND MANAGEMENT PLAN EXECUTIVE SUMMARY

LEAD AGENCY: Florida Department of Agriculture and Consumer Services (FDACS),
Florida Forest Service (FFS)
COMMON NAME: Pine Log State Forest
LOCATION: Bay and Washington Counties
ACREAGE TOTAL: 8,036.82 acres

Historic Natural Communities*	Approximate Acreage**
Sandhill	2,359
Mesic Flatwoods	1,816
Floodplain Swamp	1,123
Wet Flatwoods	1,088
Wet Prairie	582

Historic Natural Communities*	Approximate Acreage**
Baygall	73
Clastic Upland Lake	60
Dome Swamp	49
Basin Swamp	19
Depression Marsh	1

* 947 Acquisition acres have not been FNAI surveyed

** Acreage discrepancies may occur based on FNAI polygons

TIITF LEASE AGREEMENT NUMBER: 3688

USE: Single ☐ Multiple ☒

MANAGEMENT AGENCY

FDACS, Florida Forest Service
Florida Fish and Wildlife Conservation Commission
Northwest Florida Water Management District
Department of State, Division of Historical Resources

RESPONSIBILITY

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

DESIGNATED LAND USE:

Multiple-Use State Forest

SUBLEASES:

None

ENCUMBRANCES:

None

TYPE ACQUISITION:

Fee Simple

UNIQUE FEATURES:

Home to Blueberry Slash Pine Plantation, one of the oldest slash pine plantations in the Florida panhandle, planted in 1937

ARCHAEOLOGICAL / HISTORICAL:

Four (4) known sites

MANAGEMENT NEEDS:

Adequate funding for recreation plan, reforestation, boundary surveying, road maintenance, listed species survey, and habitat restoration

ACQUISITION NEEDS:

66,782 Additional acreage in the Optimal Management Boundary

SURPLUS ACREAGE:

None

PUBLIC INVOLVEMENT:

Pine Log State Forest Liaison Committee, 2014 and 2019 Land Management Reviews, Management Plan Advisory Group and Public Hearing, and FDEP Acquisition and Restoration Council Public Hearing - -

DO NOT WRITE BELOW THIS LINE (FOR DIVISION OF STATE LANDS USE ONLY)

ARC Approval Date: _____ TIITF Approval Date: _____

Comments:

I. Introduction

Pine Log State Forest (PLSF), Florida's first State Forest, is comprised of approximately 8,036.82 acres located in northwestern Bay and southwestern Washington Counties on State Road 79, about 13 miles north of Panama City Beach. The forest was purchased in 1936 and is managed for timber, wildlife, outdoor recreation, and ecological restoration using an ecosystem management approach.

PLSF is designated for multiple-use management and is managed by the Department of Agriculture and Consumer Services (FDACS), Florida Forest Service (FFS). The unique features of PLSF include the Blueberry Slash Pine Plantation planted in 1937, and Pine Log Creek, which runs through the northern portion of the forest. Little Crooked Creek and Ditch Branch also traverse the property. Landcover consists of mature longleaf pine, stands of young pine, titi swamps, and cypress ponds.

Wildlife common to PLSF includes white-tailed deer, wild turkey, and numerous birds, such as great horned owl, great crested flycatcher, and prothonotary warbler. The forest's natural communities also support several rare and / or threatened species of flora and fauna, including painted bunting, blue-flowered butterwort, whitetop pitcher plant, American alligator, and gopher tortoise.

PLSF offers many recreational opportunities for the outdoor enthusiast including camping, wildlife viewing, picnicking, hiking, bicycling, swimming, fishing, and hunting. The forest is an Operation Outdoor Freedom (OOF) program site and provides recreational and rehabilitative opportunities to wounded veterans.

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 PLSF center on the multiple-use concept, as defined in Sections 589.04(3) and 253.034(2)(a), Florida Statutes (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, and that is consistent with the purpose for which PLSF was acquired. Multiple-use management for PLSF 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 health of associated wetland 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, 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 PLSF for the next ten-year period and outlines the major concepts that will guide management activities on the forest.

B. Past Accomplishments

Data regarding past management activities and public use on PLSF have been compiled monthly and are available from the forest manager. A table has been prepared for this plan that summarizes the accomplishments for each of 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 accomplishments have been the following:

- Forest Management
 - Conducted annual forest inventory
 - Planted 321 acres of longleaf pine
 - Conducted 4 timber harvests from approximately 282 acres
 - Completed herbicide treatments on 116 acres for timber stand improvement
- Fire Management
 - Conducted 20,728 acres of prescribed fire
 - Maintained 13 miles of firelines
- Road / Boundary Management
 - Improved or rebuilt 18 miles of forest roads
 - Graded 169 miles of roads
 - Installed 23 culverts and 2 low-water crossings
 - Maintained 38 miles of forest boundary
- Recreation Management
 - Hosted more than 979,000 day-use forest visits and 136,158 overnight camping visits
 - Installed 8 primitive wood benches by a local boy scout troop
 - FFS staff planned and facilitated 4 deer OOF hunts on PLSF since November 2013, providing 20 disabled veterans a distinctive recreational experience
 - Rebuilt Pine Log picnic shelter after 2018 Hurricane Michael
 - Upgraded Sand Pond Campground with concrete camping pads, and new water and electric hookups
 - Added concrete sidewalks in the pavilion / bath house area
 - Installed a new dump station
 - Constructed two fishing piers
- Biological Management
 - Closely monitored all herbicide application on the forest, paying special attention to proximity of wet prairies with sensitive carnivorous plant species
 - Partnered with consultant and volunteers to map and inventory wet prairie sites, and document species
 - Actively controlled 3 invasive plant species on 33 acres
 - Oversaw installation of 4 bat boxes by a local boy scout troop

- Education / Public Outreach
 - o Hosted 44 forest-related program events (local school programs, clubs, and professional groups)
 - o Produced 20 radio, television, and / or print articles featuring forest activities

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

The following goals and objectives provide direction and focus management resources for the next ten-year planning period. Funding, agency program priorities, and the potential for wildfire during the planning period will determine the degree to which these objectives can be met. Management activities on PLSF 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 recreational 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. Other activities will be completed with minimal overhead expense and existing staff.

➤ **GOAL 1: Sustainable Forest Management**

Objective 1: Continue to update and implement the Five-Year Silviculture Action Plan including reforestation, timber harvesting, prescribed burning, understory 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 non-native invasive species locations). (Ongoing objective)

Performance Measures:

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

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

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

Performance Measure: Number of visitor opportunities per day

Objective 2: Evaluate the potential for additional public access and recreational areas on PLSF that are compatible with multiple-use management. Recreational opportunities will fall under

the scope of multiple-use management in accordance with watershed protection, conservation, ecosystem restoration; and as detailed in the purpose for acquisition. (Short-term objective)

Performance Measure: List of viable access points and visitor opportunities for consideration.

Objective 3: Continue to safely integrate human use into PLSF, follow 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 4: 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 Committee consists of residents, community leaders and special interest group representatives (vendors, hunters, and other recreational users, etc.), environmental group representatives, and other public / private entities. (Ongoing objective)

Performance Measures:

- Liaison Committee remains organized
- Semi-annual meetings continue

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 to be agreed upon at annual cooperator meeting between FFS and FWC. (Ongoing objective)

Performance Measures:

- Annual letter on agreed hunting issues
- Updated rules posted and 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 PLSF currently contains approximately 5,821 acres of fire-dependent communities. PLSF staff will plan and conduct prescribed burns in a manner that benefits these fire-dependent natural communities within the forest. To achieve an average fire-return interval of two (2) to five (5) years for most fire-dependent communities, FFS will attempt to conduct prescribed burns on an average of approximately 2,100 to 2,300 acres per year. Currently FFS staff estimates 4,715 acres at PLSF are within the desired fire-return interval. (Ongoing objective)

Performance Measures:

- Number of acres burned during the dormant and growing seasons
- 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 PLSF 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:

- Evaluation complete
- Should the evaluation 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 reestablishment of native groundcover plants. Restore native groundcover where practical or heavily impacted from historical land use. (Long-term objective)

Performance Measure: Number of acres restored.

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

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

Performance Measures:

- Imperiled species management strategy completed
- Baseline listed and rare species list completed for PLSF

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

➤ **GOAL 5: Non-Native Invasive Species Maintenance and Control**

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

Performance Measures:

- Total number of acres identified and successfully treated
- Annual updates of the Five-Year Ecological Plan completed
- Continue to maintain PLSF non-native invasive database information annually

➤ **GOAL 6: Cultural and Historical Resources**

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

Performance Measure: Number of recorded sites

Objective 2: Monitor recorded sites 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 Silviculture Best Management Practices (BMP) that are applicable to forest road maintenance and construction, construction of pre-suppression firelines, timber stand improvement activities, timber harvesting, sinkholes, etc. (Ongoing objective)

Performance Measure: Percent compliance with Silviculture BMP

Objective 2: Close, rehabilitate, or restore those roads, firelines, and trails that have evidence of erosion into surrounding water bodies causing alterations to the hydrology and / or water quality. (Ongoing objective)

Performance Measures:

- Number of roads, firelines, and trails closed, rehabilitated, and / or restored
- Number of culverts installed or maintained

Objective 3: Conduct or obtain a site assessment / study to identify potential hydrology restoration needs. (Short-term objective)

Performance Measure: Assessment conducted

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

Objective 1: PLSF staff, along with help from volunteers, and / or user groups, will continue maintenance of three (3) parking areas and three (3) trailheads, 25 miles of trails, 37 miles of forest roads, and one (1) boat launch. (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% of the forest boundary will be evaluated and re-marked 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 annually per the State Forest Handbook guidelines
- 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 the Pine Log State Forest (PLSF).

2. Legal Description and Acreage

The PLSF is comprised of 8,036.82 acres, more or less.

PLSF is located in the northwestern portion Bay County and southwestern part of Washington County. It is just south of the town of Ebro and approximately 14 miles north of Panama City Beach. The property occupies portions of Sections 5, 6, 8, and 19, Township 1 South, Range 16 West (Washington County); all of Sections 4, 7, 9, 16, 17, 18, 20 and 21, Township 1 South, Range 16 West (Bay County); and Sections 27, 28, and 29, Township 1 South, Range 16 West (Bay County). A 30-acre inholding is located in Section 8, Township 1 South, Range 16 West. A one-acre inholding is located in Section 6, Township 1 South, Range 16 West. Acreage acquired by funding source is identified in Table 1.

Table 1. PLSF Acreage by Funding Source

Funding Source	Acres
1935 Conservation Committee	6,910.88
Donation	174.84
FDOT Exchange	4.40
FDOT Donation	322.00
Florida Forever	624.70

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

3. Proximity to Other Public Resources

Lands managed by state, federal, or local government for conservation of natural or cultural resources that are located within approximately 25 miles of the PLSF are mapped in Exhibit E and listed in Table 2.

Table 2. Nearby Public Conservation Lands and Easements

Tract	Agency	Distance
Choctawhatchee River Water Management Area	NWFWMD	1 mile NW
Nokuse Plantation Conservation Easements	FDEP	2 miles NW

Panama City Airport Conservation Easement	FDEP	5 miles SE
Seven Runs Creek Conservation Easement	FDEP	6 miles NW
Panama City Beach Conservation Park	COPCB	7 miles SW
Ward Creek West	NFWWMD	8 miles S
Camp Helen State Park	FDEP	10 miles SW
Econfina Creek Water Management Area	NFWWMD	18 miles E
St. Andrews State Park	FDEP	18 miles SE
Deer Lake State Park	FDEP	20 miles SW
Point Washington State Forest	FFS	20 miles SW

FDEP – Florida Department of Environmental Protection
NFWWMD – Northwest Florida Water Management District

COPCB – City of Panama City Beach
FFS – Florida Forest Service

4. Property Acquisition and Land Use Considerations

In the mid-1930s, at the request of President Roosevelt, Florida Governor David Sholtz appointed a Conservation Committee which authorized the acquisition, development, and management of a system of State Forests and parks, and appropriated funds for this purpose. PLSF was the first State Forest obtained through this program. In 1936, 6,670 acres were purchased from Henderson-Waits Lumber Company. In 1938, 240 acres were purchased from private landowners and an additional acre was obtained through a quitclaim deed. Beginning in 2009, 174 acres in the southern part of the forest were donated to PLSF by the Florida Department of Transportation (FDOT) in exchange for land lost due to the widening of Highway 79. See Table 3.

Table 3. Parcel Acquisition

Parcel Name	Lease Date	Lease No.	Acres
Bay County Parcel	1938*	3688	5,199.14
Washington County Parcel	1938*	3688	1,711.74
St. Joe Timberland Exchange	11/21/2005	3688	4.40
FDOT Donation Bay County	12/2/2009	3688	24.68
FDOT Donation Washington County	12/2/2009	3688	23.75
FDOT Donation Bay County	8/24/2012	3688	126.41
FDOT Donation Bay County	2/3/2020	3688	322.00
Washington Crossing	4/27/2021	3688	624.70

* Closing year

B. Management Authority, Purpose, and Constraints

1. Purpose for Acquisition / Management Prospectus

The main objectives for the acquisition of this property are:

- To conserve and protect, through sustainable forest management practices, environmentally unique and irreplaceable lands that contains native flora and fauna that represent a natural area unique to, or scarce within, a region of this state or a larger geographical area;
- To conserve and protect native species habitat and endangered and threatened species;
- To conserve, protect, manage, or restore important ecosystems, landscapes, and forests, if the protection and conservation of such lands is necessary to enhance or protect significant surface water, ground water, coastal, recreational, and timber resources, or to

protect fish or wildlife resources which cannot otherwise be accomplished through local and state regulatory programs;

- To provide amenities that support natural resource-based recreation; and
- To preserve archaeological or historical sites.

See Exhibit Q.

2. Degree of Title Interest Held by the Board

The TIITF holds fee simple title to all 8,036.82 acres of PLSF, with no reservations or encumbrances. On March 17, 1972, the Board of Trustees dedicated 18.59 acres of PLSF to the Town of Ebro for a fire station, community building, and outdoor recreational facilities.

3. Designated Single or Multiple-Use Management

PLSF is managed under a multiple-use concept by the FFS, under the authority of Chapters 253 and 589, F.S. The FFS is the lead managing agency as stated in TIITF Management Lease Number 3688.

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, or water resources so that 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 of 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

A variety of activities on PLSF 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 PLSF include, but are not limited to:

- Timber Harvests – Timber harvests on PLSF will be conducted on a regular basis to improve forest health, promote wildlife habitat, restore plant communities, and provide other benefits.
- Recreation Fees – Fees are currently collected for day use, camping (through an online reservation system), and miscellaneous commercial vendor permits.
- Apiary Leases – Apiary leases may be issued to local vendors as space allows.
- Miscellaneous Forest Product Sales – Other miscellaneous forest product sales, including but not limited to, palm fronds and berries, pinecones, pine straw and firewood, may be considered.

5. Conformation to State Lands Management Plan

Management of PLSF 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 PLSF.

FFS makes every effort to comply with applicable statutes, rules, and ordinances when managing PLSF. For example, when public facilities are developed on State Forests, every effort is made to comply with Public Law 101-336, the Americans with Disabilities Act. As new facilities are developed, the universal access requirements of this law are followed in all cases except where the law allows reasonable exceptions (e.g., where handicap access is structurally impractical or where providing such access would change the fundamental character of the facility being provided).

7. Aquatic Preserve / Area of Critical State Concern

The property 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

PLSF boundary lines, 16 miles total, are managed by State Forest personnel in accordance with the guidelines of the State Forest Handbook. There are 98 gates throughout PLSF that require periodic maintenance. The PLSF boundary lines are to be maintained by periodic clearing, repainting and reposting of State Forest boundary signs by FFS personnel. See Exhibit B.

2. Improvements

There are several improvements located on the property. Nine (9) structures, consisting of a residence, work shed, pavilion, bathhouse, a pump house, a conference room, and 3 new offices are located at the Recreation Area on the Washington County side of the forest, west of State Highway 79.

3. On-Site Housing

There is currently one (1) residence on PLSF occupied by a Senior Forest Ranger. The wood frame structure was built in the 1960s with interior and exterior improvements completed in 2015.

FFS may establish additional on-site housing (mobile / manufactured home) on PLSF if deemed necessary to alleviate security and management issues. The need and feasibility specific 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 the purpose of establishing on-site housing, a notification will be sent to 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 Director.

4. Operations Infrastructure

a. Operations Budget

For Fiscal Year 2020-2021, the total annual budget for PLSF was \$31,544. This amount includes expenses and contractual services. A summary budget for PLSF 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, PLSF maintains a diverse assemblage of equipment that includes three (3) tractor / plow units, one (1) farm tractor, one (1) front-end loader, one (1) dump truck, one (1) Type-6 engine, two (2) 4-wheel drive pickup trucks, two (2) ATVs, two (2) UTVs, and one (1) road grader. Additional equipment can be used from other resources throughout the Chipola Forestry Center, when needed, for management activities.

c. Staffing

Six (6) staff members are assigned to PLSF including one (1) Forester, one (1) Senior Ranger, and four (4) Rangers.

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, recreational facility placement, timber cruising, and sale administration, etc., are the responsibility of the Forester under the direction of the forest Area Supervisor and Center Manager. Forest operations, such as road maintenance, operations / recreational facility maintenance, prescribed burning, etc., are the responsibility of the Forest Area Supervisor under the direction of the Center Manager.

To supplement the staff assigned to PLSF, the Forest Area Supervisor is responsible for recruiting interested volunteers that can bring needed experience and skills to assist with the management of the forest recreation program as well as resource management activities. The Florida Trail Association assists with hiking trail maintenance.

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, communication towers and antennas, 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 State Forest boundaries.

2. Additional Land Needs

There are five (5) parcels of land comprised of 67,433 acres adjacent to the property which should receive priority for acquisition, as 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.

The acquisition of additional land within the optimal management boundary would facilitate restoration, maintenance, and management of the resources on PLSF. See Exhibit C.

3. Surplus Land Assessment

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

The evaluation of PLSF by FFS has determined that all portions of the forest 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 PLSF is recommended for potential surplus.

4. Adjacent Conflicting Uses

There are currently no known conflicting adjacent land uses.

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 Comprehensive Plans

This plan was submitted to the Board of County Commissioners in Bay and Washington Counties for review and compliance with their local comprehensive plans. See Exhibit S.

6. Utility Corridors and Easements

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. Currently there are no (0) established utility corridors on PLSF. The FFS does not consider PLSF suitable for any new linear facilities.

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 where 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 & 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 3688. 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. DHR will be consulted prior to the initiation of ground disturbing activities by the FFS or any other agency involved with the forest as required per DHR guidelines.

FWC assumes law enforcement responsibilities, enforces hunting regulations, cooperatively sets hunting season dates with FFS, and conducts other wildlife management activities with input from FFS.

The NFWFMD will be consulted and involved in matters relating to water resources and hydrological restoration as appropriate.

2. Law Enforcement

Primary law enforcement responsibilities will be handled by FWC law enforcement officers. Rules governing the use of PLSF are stated in Chapter 5I-4, F.A.C. FWC will enforce fish and wildlife regulations and aid in enforcing State Forest rules. FWC does not currently have an officer dedicated to patrolling and enforcement on PLSF. This task is shared among multiple FWC officers who also patrol and enforce laws on properties and waterways outside of PLSF.

The FDACS Office of Agricultural Law Enforcement (OALE) will assist with open burning and wildfire investigations as needed. The Bay County and Washington County Sheriff's Offices provide additional assistance as needed.

Special rules under Chapter 5I-4 of the 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 PLSF.

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 and will be implemented by 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 2014 and 2019. See Exhibit R. The review teams' recommendations are addressed in this plan as appropriate.

A State Forest Liaison Committee of private citizens and representatives of forest user groups meet semi-annually to provide input on forest management activities and share their ideas with FFS staff to improve the forest.

This plan was developed with input from the PLSF Management Plan Advisory Group and was reviewed at a public hearing on September 29, 2021. 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 PLSF. Volunteer activities may be one-time events or long-term recurring projects and routine maintenance. Additional volunteer recruitment will be encouraged to assist with other activities to further the FFS's mission.

6. Friends of Florida State Forest

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

Prior to acquisition in the 1930s, the forest had been primarily used for timber production and hunting. At the time of acquisition (1936-1938), the area was largely cut over and had been subjected to annual fires. The first management activities included the planting of several small slash pine (*Pinus elliottii*) plantations and providing fire protection. Considerable tree planting occurred during 1943-1950 and again during 1958-1961. During these periods, most of the suitable land on the tract was reforested. Unfortunately, the big push of 1958-1961 resulted in

much "off-site" planting of slash pine, a common practice shared by many land managers during that period. Some of these "off-site" areas have been restored (primarily to longleaf pine (*Pinus palustris*) and plans call for additional restoration. Sand pine (*Pinus clausa*) was also planted on some longleaf pine sites.

During the 1970s, more attention was given to wildlife management, environmental activities, and recreation. To encourage these uses, the PLSF Environmental Center and Campground was constructed in 1977.

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 three (3) archaeological sites and one (1) archaeological resource group on PLSF. Site BY823 (Susan's Flake) no longer exists. The site was lost due to the widening of Highway 79. Site BY899 (Pine Log Landing #1) cannot be located and is believed to be lost due to flooding of Pine Log Creek. None of the sites are listed in the National Register of Historic Places. See Table 4 and Exhibit F for a cultural resource roster.

Table 4. Historical Sites on PLSF

Site ID	Site Name	Site Type
BY823	Susan's Flake	Archaeological Site
BY898	Buckhorn Branch #1	Archaeological Site
BY899	Pine Log Landing #1	Archaeological Site
BY940	The Ekanachatee Trail	Resource Group

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 G. 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 "List of ARC / Division of State Lands Approved Interim Management Activities".

D. Survey and Monitoring

Currently one (1) local district FFS staff is trained by DHR as an ARM Monitor. 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 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 trained FFS staff 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 may 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 PLSF is protection of wetlands and associated 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 PLSF. If problems arise, corrective action will be implemented by FFS staff under the direction of FFS's Forest Hydrology Section. Efforts will be made to monitor and protect PLSF's waterbodies and their associated water quality and native plants and animals.

PLSF falls within the jurisdiction of the NFWFMD. FFS will coordinate with NFWFMD and / or DEP, 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 NFWFMD 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 PLSF was obtained from the United States Department of Agriculture Natural Resources Conservation Service (NRCS). The predominant soils listed by the NRCS include: Foxworth sand, Blanton-Lakeland complex, Chipley sand, and Pamlico-Dorovan complex. Detailed information on all soils extant on PLSF may be found in Exhibit H.

2. Soil Protection

Currently there are no major or significant soil erosion problems on PLSF. Management activities will be executed in a manner to minimize soil erosion. 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.

B. Water Resources

The water resources on PLSF 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 wetland restoration into the overall resource management program as opportunities arise, particularly where wetland systems have been

impaired or negatively impacted by previous management activities or natural disasters. See Exhibit J for a map of the water resources at PLSF.

1. Resources

The PLSF has three (3) streams within its boundaries: Pine Log Creek, Little Crooked Creek, and Ditch Branch. Little Crooked Creek and Ditch Branch flow into Pine Log Creek. Additionally, one (1) small sandhill pond and three (3) natural cypress lakes are located in close proximity to the Pine Log Recreation Area.

2. Water Classification

The Florida Department of Environmental Protection, Standards Development Section reports there are no waters on or near the site listed as exceptions to Class III in Subparagraphs 62-302.400(17)(b)3, F.A.C.; therefore, all of the surface waters on or adjacent to the site 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(15), F.A.C.

According to Subsection 62-302.700(9), F.A.C., there are no Outstanding Florida Waters (OFW) on or adjacent to PLSF. The nearest OFW is the Choctawhatchee River “Special Water” OFW approximately 0.3 mile to the northwest (Subsection 62-302.700(9)(i)7, F.A.C. See Exhibit I.

3. Water Protection

An objective for the acquisition and management of this public land was to optimize ecological restoration, protect and manage existing natural resources, and facilitate sensible public use. Concern 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 BMP guidelines as described in the most current version of Silviculture BMP Manual.

4. Swamps, Marshes, and Other Wetlands

In addition to the waterways, PLSF contains approximately 1,346 acres in seven (7) hydric communities: floodplain swamp, baygall, clastic upland lake, dome swamp, wet prairie, basin swamp, and depression marsh. Maintenance of naturally occurring wetlands communities is a high priority and will be accomplished through appropriate management activities, including prescribed fire when necessary, and adherence to Silviculture BMP.

Swamp communities are small in size and scattered throughout PLSF and areas adjacent to Pine Log Creek. A wet prairie occurs on the south side of Carbody Road. This community contains white-top pitcher plants and other delicate and rare flora. It is maintained through prescribed fire.

5. Wetlands Restoration

Wetland restoration objectives on the State Forest 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, non-native invasive species control, site preparation and re-vegetation with native wetland 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, PLSF 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 wetlands restoration.

6. **Florida Department of Environmental Protection Basin Management Action Plan**

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.

The PLSF is currently not within a BMAP project area.

C. **Floral and Faunal Resources**

1. **Rare, Threatened, and Endangered Species**

The intent of FFS is to manage PLSF in a fashion 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.

Table 5. Rare, Threatened, or Endangered Species Documented on PLSF

Common Name	Scientific Name	FNAI Global Rank*	FNAI State Rank*	Federal Status*	State Status*
A caddisfly	<i>Hydroptila alabama</i>	G4	S2	N	N
A mayfly	<i>Stenacron floridense</i>	G3G4	S3S4	N	N
Alligator snapping turtle	<i>Macrochelys temminckii</i>	G3G4	S3	N	N
Blue-flowered butterwort	<i>Pinguicula caerulea</i>	G4	S3S4	N	LT

Common Name	Scientific Name	FNAI Global Rank*	FNAI State Rank*	Federal Status*	State Status*
Catesby's lily	<i>Lilium catesbaei</i>	G4	S4	N	LT
Chapman's crownbeard	<i>Verbesina chapmanii</i>	G3	S3	N	LT
Eastern indigo snake	<i>Drymarchon couperi</i>	G3	S3	T	FT
Elerob's microcaddisfly	<i>Oxyethira elerobi</i>	G3G4	S2S3	N	N
Florida cernotinan caddisfly	<i>Cernotina truncona</i>	G4	S3	N	N
Florida finger-net caddisfly	<i>Chimarra florida</i>	G4	S3S4	N	N
Giant water cowbane	<i>Tiedemannia filiformis ssp. greenmanii</i>	G3	S3	N	E
Gopher tortoise	<i>Gopherus polyphemus</i>	G3	S3	C	ST
Gulf lilliput	<i>Toxolasma sp. 1</i>	G2	S2	N	N
Molson's dinky light summer sedge	<i>Hydroptila molsonae</i>	G2	S2	N	N
Morse's dinky light summer sedge	<i>Nyctiophylax morsei</i>	G2	S2	N	N
Panhandle meadowbeauty	<i>Rhexia salicifolia</i>	G2	S2	N	T
Pescador's bottle-cased caddisfly	<i>Oxyethira pescadori</i>	G3G4	S3	N	N
Reticulated flatwoods salamander	<i>Ambystoma bishopi</i>	G2	S1S2	E	FE
Southern hognose snake	<i>Heterodon simus</i>	G2	S2	N	N
Southern milkweed	<i>Asclepias viridula</i>	G2	S2	N	T
Southeastern spinyleg	<i>Dromogomphus armatus</i>	G4	S3	N	N
Spiny softshell	<i>Apalone spinifera</i>	G5	S3	N	N
Springloving psiloneuran caddisfly	<i>Agarodes libalis</i>	G3	S3	N	N
Whitetop pitcher plant	<i>Sarracenia leucophylla</i>	G3	S3	N	LE
Wingtail crayfish	<i>Procambarus latipleurum</i>	G2	S2	N	N
Wiregrass gentian	<i>Gentiana pennelliana</i>	G3	S3	N	E

*** STATUS / RANK KEY**

FNAI Global Rank: G1= Critically Imperiled, G2= Imperiled, G3= Rare, G4= Secure, G5= Demonstrably Secure, G#Q= Rare but questionable whether it is species or subspecies

FNAI State Rank: S1= Critically Imperiled in Florida, S2= Imperiled in Florida, S3= Rare in Florida, S4= Secure in Florida, S5= Demonstrably secure in Florida

Federal Status (USFWS): 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, N= Not currently listed, T= Threatened, SAT= Treated as Threatened due to similarity of appearance.

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

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. FNAI has reported the following:

a. Element Occurrences

FNAI reports several documented Element Occurrences of rare or endangered species within the vicinity of the property. Documented species are listed in Table 5.

Documented habitat includes basin swamp, baygall, clastic upland lake, depression marsh, dome swamp, floodplain swamp, mesic flatwoods, sandhill, successional hydric shrubland, wet flatwoods, and wet prairie.

b. Likely and Potential Habitat for Rare Species

In addition to documented occurrences, other rare species and natural communities may be identified on or near the PLSF. Rare species and communities that have not been documented but that are likely or potential at the site are listed in Exhibit K.

c. Land Acquisition Projects

Florida Forever is Florida's leading conservation and recreation lands acquisition program for conserving natural resources and renewing Florida's commitment to conserve the state's natural and cultural heritage.

On December 12, 2019 ARC approved a boundary amendment of the Seven Runs Creek Final Phase Florida Forever Project, adding the Washington Crossing, LLC tract which is adjacent to PLSF in Washington County. The tract consists of approximately 620 acres: 500 acres of uplands, 120 acres of wetlands, and 1 mile of Pine Log Creek frontage. See Exhibit W. This addition will be managed as a silvicultural tract as part of PLSF and will expand public access, as well as potentially host Operation Outdoor Freedom activities for the State of Florida.

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 information and records provided by the FWC include:

- a.** PLSF is located adjacent to a Strategic Habitat Conservation Area for Cooper's hawk and Florida black bear.
- b.** PLSF is located within an area of moderate Species Richness which indicates the total number of species within potential habitat identified in a specific location.
- c.** PLSF is adjacent to Priority Wetlands, which are wetlands significant to listed wetland-dependent vertebrates.
- d.** FWC's response includes a map indicating multiple species locations.

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 L.

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

The FWC further recommends the review of management guidelines in FWC's published Species Action Plans for the management of imperiled, rare, and focal 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 MyFWC.com.

4. Game Species and Other Wildlife

Wildlife management plays an important role in the management of resources on PLSF. FWC provides cooperative technical assistance in managing the wildlife and fish populations, setting hunting seasons, establishing bag and season limits, and overall wildlife and fish law enforcement on the forest.

The PLSF was first included in the Point Washington Wildlife Management Area (WMA) in 1960. The area was opened to public hunting in 1965. With changes in the size and boundary of Point Washington WMA, in July 2002, PLSF was established as an independent WMA. Today, PLSF and Pine Log WMA are synonymous.

Game species on the WMA include white-tailed deer (*Odocoileus virginianus*), wild turkey (*Meleagris gallopavo*), wild hog (*Sus scrofa*), gray squirrel (*Sciurus carolinensis*), eastern cottontail rabbit (*Sylvilagus floridanus*), mourning dove (*Zenaida macroura*), and northern bobwhite quail (*Colinus virginianus*). Visit MyFWC.com for released quail permit information and hunting dates.

Other notable wildlife species found on PLSF include gopher tortoise (*Gopherus polyphemus*), wingtail crayfish (*Procambarus latipleurum*), southern hognose snake (*Heterodon simus*), and reticulated flatwoods salamander (*Ambystoma bishopi*). Alligator snapping turtles (*Macrochelys temminckii*) and river otters (*Lontra canadensis*) may occur along the creeks.

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

FFS and FWC cooperatively maintain approximately 49 acres of permanent wildlife openings and planted food plots on the PLSF. Wildlife openings and food plots are established and maintained in accordance with the FFS State Forest Handbook.

5. Survey and Monitoring

FFS will 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.

a. Gopher Tortoises

Surveys for gopher tortoise burrows have been conducted by FFS and FWC staff intermittently, as needed. All surveys are done in cooperation with FWC. From 2016 through 2019, approximately 1,036 acres of gopher tortoise habitat has been improved. This project was designed and implemented by FWC to selectively, yet aggressively, remove hardwoods [primarily turkey oak (*Quercus laevis*) and bluejack oak (*Quercus incana*) and sand pine in previously delineated and agreed upon treatment sites for improving gopher tortoise (*Gopherus polyphemus*) habitat on Pine Log WMA.

b. Florida Black Bear

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

c. Listed Plant Species

All known locations of listed or rare flora are GIS mapped and location data are shared with FNAI.

d. Other Rare Biota Surveys

Surveys are done as time and staffing allow. High quality plant communities continue to incur ad hoc surveys for both listed plants and animals.

Most of the isolated PLSF 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 FNAI annually.

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

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 occur on PLSF.

F. Mineral Resources

No mineral resources of commercial value are known to exist on the property.

G. Unique Natural Features and Outstanding Native Landscapes

The PLSF is home to one of the oldest slash pine plantations in the Florida panhandle. Forty acres were planted in slash pine one year after acquisition in 1936 as Florida's first State Forest. This area is called the Blueberry Plantation because it was planted in an old blueberry field that was part of a larger blueberry farm in the 1920s. A seed-tree harvest was done in this area during the spring of 2015. Approximately 10 trees per acre were left from the original slash pine population in order to try and promote natural regeneration across the stand. This procedure did not produce the desired results. Therefore, a decision was made to underplant the stand with containerized longleaf. A mechanical herbicide treatment was applied in the summer of 2019. The area was prescribed burned in December of 2019. In January of 2020, the stand was handplanted with containerized longleaf at a density of 605 trees per acre. The current understory still has a large component of blueberry bushes and is a favorite local blueberry picking location. Although it is not a true natural feature, it is unique nonetheless because of its age and historical characteristics.

H. Research Projects / Specimen Collection

Research projects may be performed 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 staffing are available.

All research proposed on PLSF must be considered in accordance with the guidelines stated in the State Forest Handbook. Any requests for research shall be submitted in writing to the appropriate field staff and 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 PLSF 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:

- Oklahoma State University (Fishbein/Ksepka). 2016. Conduct tissue sampling for genetic research on multiple State Forests of species genus *Asclepias* (milkweeds).
- University of Florida / Institute of Food and Agriculture, Florida Medical Entomology Laboratory (Burkett-Cadena/Sloyer). 2017. Conduct research on PLSF and other State Forests of spatial and temporal distributions of biting midges (*Culicoides* spp.).
- University of North Carolina, Chapel Hill (Weakley/Schoonover). 2018. Genetic and morphological analyses, species distribution and evolutionary trends on PLSF and other State Forests of *Trichostema* populations in the southeastern United States.
- USDA (Scheffer). 2017. Conduct research on multiple State Forests on the systematics and evolution of leafminer insects (genus *Phytomyza*) and their host hollies (genus *Ilex*).
- Florida Museum of Natural History (Miller). 2018. Research on multiple forests on the biology and systematics of the Florida duskywings (*Lepidoptera:Hesperiidae:Erynnis*).

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, recreational trails, or other low-impact recreational 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, NFWMD and the Acquisition and Restoration Council (ARC), as appropriate.

V. Public Access and Recreation

The primary recreation objective is to provide the public with dispersed outdoor recreational activities that are dependent on the natural environment. FFS will continue to promote and encourage public access and recreational use by the public 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 Recreational Opportunities

A variety of recreational opportunities are available on PLSF. Recreation activities include hiking, camping, horseback riding, wildlife viewing, picnicking, bicycling, swimming, fishing, and hunting. PLSF is part of the Florida National Scenic Trail, the FFS Trailwalker Program, and the FFS Trailtrotter Program. See Exhibit D for a map of the Recreation, Facilities, and Improvements.

- Recreational Trails – PLSF has over 13 miles of hiking and biking trails of which 8 miles are the Florida National Scenic Trail (foot traffic only), and 9 miles of equestrian trail. The PLSF is a site listed on the Great Florida Birding and Wildlife Trail with the best birding experienced via the Campground Loop and Dutch Tiemann Trails.
- Hunting and Fishing – PLSF is managed cooperatively with FWC as the Pine Log Wildlife Management Area. Wildlife hunted on PLSF includes deer, quail, wild hogs, rabbits, squirrels, and turkeys. Fishing is popular from two piers in the Sand Pond Recreation Area where largemouth bass, bream, catfish, and other fish are frequently caught. A winding boardwalk through a cypress pond is accessible from the Campground Loop Trail.
- Camping – Primitive campsites are available and are dispersed along Pine Log Creek. The Sand Pond Recreation Area campground sites are fully equipped with electric and water hook-ups. Restrooms with showers and a sanitary dumping station are located on-site.

B. Planned Recreational Opportunities

The FFS will continue to assess plans for additional recreational 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, as well as related activities will be evaluated. Any plans will be incorporated into the Five-Year Outdoor Recreational Plan on file at PLSF.

1. Public Access and Parking

Within this ten-year planning cycle, the potential for new parking and forest access points will be evaluated and considered for use. In addition, current parking and forest access points will continually to be evaluated for updates and improvements.

2. Recreational Trails

The construction, maintenance and improvements of nature and hiking trails will be on-going.

3. Camping

The construction, maintenance and improvements of primitive and group camping sites will be on-going.

4. Recreational Vehicle (RV) Camping

The construction, maintenance, and improvements of RV camping sites will be on-going.

5. Environmental Education

Self-guided tours will continue at PLSF as well as guided tours for schools and scouting groups (girls and boys), FFA training events and competitions, as well as Working Forest Week programs for adults and youth. The Chipola Forestry Center is looking to expand the

volunteer program by partnering with local colleges and technical schools to provide opportunities for internships.

6. Bird Watching

The PLSF is a member of The Great Florida Birding and Wildlife Trail. This trail is composed of 510 premier wildlife viewing sites across the state of Florida. Internally, a birding checklist for PLSF has been developed and will be updated as needed.

7. Equestrian, Hunter, Hiker and Bike Trail User Education

Continuing education concerning littering is required. FFS will evaluate the best methods for communicating concerns and solutions to all user groups.

8. Bike Trails - Trails will be monitored for impacts from recreational use. Negative impacts will be mitigated and may include blocking access and rerouting the trail away from environmentally sensitive areas, as appropriate.

The Florida Forest Service will handle permitting requests for recreational activities.

C. Hunter Access

PLSF is open to regulated hunting. The Florida Fish and Wildlife Conservation Commission (FWC) manages hunting on PLSF. Hunting season dates, limits, and methods are established annually by FWC, in cooperation with the FFS. Pine Log Wildlife Management Area (WMA) regulations are updated annually and are identified in the current WMA brochure available at MyFWC.com.

Operation Outdoor Freedom (OOF) may host multiple events on PLSF. These events involve many aspects of outdoor recreation activities including, but not limited to, hunting, fishing, hiking, camping, clay shooting, and any other activity that is developed as an outdoor activity for wounded veterans. The supporting personnel include state and private volunteers and any support personnel necessary for the operation, support, or funding of such events. Events can be recreational, fundraising, or planning in nature. The OOF program's needs may include the upgrading of existing or construction of new facilities for lodging and recreation of participants, other logistical needs, and operational needs of the program. On-site and off-site fundraising for the benefit of OOF may occur to assist in these efforts and will be conducted under the guidelines of the Friends of Florida State Forests, Inc.

Non-hunting recreation users are encouraged to check the WMA regulations and season dates before visiting PLSF.

D. Education

The FFS may create partnerships with local K-12 schools and / or universities for the development and implementation of educational opportunities on PLSF. Once developed, the Five-Year Outdoor Recreation Plan will guide management activities as they pertain to future educational opportunities PLSF may provide to the public.

VI. Forest Management Practices

A. Prescribed Fire

Forest management practices on PLSF are important in the restoration and maintenance of forest ecosystems and provide a variety of socio-economic benefits to Floridians. Management practices on PLSF include a prescribed fire program which is an effective tool in controlling the encroachment of shrubs and off-site 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 Chipola Forestry Center 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.

A ten-year fire history table detailing the recent history of prescribed burns and wildfires at PLSF is available in Exhibit M.

The FFS has access to four (4) tractor-plow units, one (1) Type-6 engine, and one (1) Bobcat with bucket and grapple serving Bay County. Additional support is available from neighboring counties. Personnel and equipment stationed at PLSF 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.

The annual forest prescribed burning program produces multiple benefits. The purposes of prescribed burning on PLSF are to facilitate forest management operations; enhance wildlife and listed species habitat; decrease fuel loading; enhance public safety; and restore, maintain, and protect all native ecosystems, ecotones, and their ecological processes. FFS personnel are responsible for planning and implementing the annual prescribed burn program for PLSF, 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 PLSF are executed by Florida Certified Prescribed Burn Managers in accordance with 590.125, F.S. and Chapter 5I-2, F.A.C.

According to FNAI, historic fire-dependent natural communities on PLSF are estimated to have occupied approximately 5,646 acres. The majority of these communities would have exhibited fire-return intervals ranging from 2 to 10 years. Current fire-dependent communities encompass 5,821 acres. Based on current conditions and management objectives, PLSF will plan for 2,100 to 2,300 acres to be prescribed burned annually. 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 4,715 acres of PLSF are within the desired fire-return interval.

1. Fire Management

The fire management plan will serve as a working tool and an informational document for PLSF. The plan will provide guidelines regarding wildfire suppression and prescribed fire management. It will specify burn units, burn unit prescriptions, appropriate fire-return

intervals, and fire 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 PLSF 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 (2017) 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. 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. Wildfires, Prevention, Fire / Prescribed Fire Strategies

The 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 Chipola 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 PLSF Fire Management Plan.

1. Suppression Strategies

If a wildfire occurs on PLSF, 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 absolutely 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. Fire Breaks and Firelines

A system of permanent fire breaks will be developed and maintained around and within the boundaries of PLSF 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 BMP implemented as soon as practical after the fire is suppressed.

4. Sensitive Areas

The PLSF has 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 PLSF. When possible, fire staff will avoid line construction in wetland ecotones throughout the forest.

5. Firewise Communities

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

6. Adjacent Neighbor Contacts

The staff at PLSF 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 State Forest to assess impacts on timber and habitat. Based on the evaluations, 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 through the maintenance of GIS data. These records are intended to provide data for future management decisions.

C. Sustainable Forestry & Silviculture

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

1. Strategies

The following strategies will apply to silvicultural practices on PLSF:

- 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 PLSF will be directed toward improving forest health, wildlife habitat, ecological and economical sustainability, and recovery from past management practices that are not in accordance with the objectives of this plan. Stands of off-site species with merchantable volume will be scheduled for harvest, followed by reforestation with the appropriate tree species. Herbicide applications may be necessary to control woody competition and to re-establish desired natural species of both overstory and groundcover. Site preparation methods may include prescribed fire, mechanical vegetation control, and /

or herbicide applications. 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.

All silvicultural activities, including timber harvesting and reforestation, will meet or exceed the standards in FFS's Silviculture BMP 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 of PLSF forest will be re-inventoried annually to provide an accurate estimation of the standing timber and to ensure that stands will be managed sustainably.

Commercial forest resources available on the property include pine species such as slash pine, longleaf pine, and sand pine. Cypress, cedar, and most hardwood species are generally not harvested from PLSF since most are in wetland or Special Management Zone (SMZ) areas.

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 and in accordance with FFS Policies and Procedures.

5. Cattle Grazing

Cattle grazing activities assist in maintaining pastures and controlling non-native plants, support the maintenance of fences and gates, and provide a source of income to the forest.

There are currently no cattle leases on PLSF.

D. Non-Native Invasive Species Control

FFS employees continually monitor the forest for non-native invasive species while conducting management activities. FFS will locate, identify, and apply control measures with the intent to control non-native invasive species. Table 6 lists the general treatment, acres impacted, and population stability trend for non-native invasive plant species occurring on PLSF. Also see Exhibit N.

On-going maintenance and monitoring strategies are outlined in the Five-Year Ecological Management Plan which is developed to locate, identify, and control non-native invasive plant species. Occurrences of non-native invasive species are recorded in the PLSF 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 will be approached in an effort to cooperate on control measures. FFS works to control the spread of non-native invasive species by decontaminating agency equipment and equipment used by private contractors according to the State Forest Handbook.

FFS will enlist support from FWC in efforts to control non-native invasive animals. Feral hogs (*Sus scrofa*) are present on PLSF but are not believed to occur in substantial numbers at this time. FWC has issued a feral hog control permit to FFS for all State Forests and FFS will allow for feral hog removal on PLSF 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 non-native invasive plants will be coordinated with the Forest Management Bureau's Forest Health Section. Control of non-native invasive species will be target-specific and use a variety of methods including appropriately labeled and efficacious herbicides.

Table 6. Non-Native Invasive Plant Species Occurring on PLSF

Common Name	Scientific Name	Treatment Strategy	Acres Impacted	Increasing /Decreasing
Chinese tallow	<i>Triadica sebifera</i>	Not treated	<1	Increasing
Cogongrass	<i>Imperata cylindrica</i>	Spot treatment with herbicide	7	Decreasing
Japanese climbing fern	<i>Lygodium japonicum</i>	Spot treatment with herbicide	1	Decreasing
Mimosa	<i>Albizia julibrissin</i>	Not treated	<1	Increasing
Torpedograss	<i>Panicum repens</i>	Spot treatment with herbicide	<1	Decreasing

E. Insects, Disease and Forest Health

Currently there are no insect or disease problems on PLSF. State forest staff monitor for incidental outbreaks of pine bark beetles (*Ips* spp.) throughout the forest. These outbreaks typically affect no more than a couple of acres. Aerial surveys are conducted every June for southern pine beetle (*Dendroctonus frontalis*) outbreaks. In the event of an outbreak of any disease or insects, consultation with the Forest Management Bureau's Forest Health Section will be sought to formulate an appropriate and effective 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 Bay and Washington Counties will be notified of the approval of this plan, documenting this designation.

As a result, prior to conducting any arthropod control activities on PLSF, 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 PLSF. This public lands control plan must be in compliance with FDACS guidelines and utilize the appropriate FDACS form. The plan must then be approved and mutually adopted by the county, FFS, and FDACS, prior to initiation of any arthropod control activities. Should the local mosquito control district not propose any arthropod 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 PLSF. The opportunities for outsourcing land management work include, or are anticipated to include:

1. Herbicide applications
2. Restoration activities
3. Reforestation activities
4. Timber harvesting
5. Biological assessments and mapping

VII. Proposed Management Activities for Natural Communities

In 2017, FNAI completed an inventory and natural community mapping project on PLSF. Current and historic natural community cover types can be found in Exhibits O and P, and Table 7. This inventory included managed and altered community 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 swamp	19	19
Baygall	73	73
Clastic upland lake	60	68
Depression marsh	1	1
Dome swamp	49	54
Floodplain swamp**	1,123	1,104
Mesic flatwoods	1,816	1,290
Sandhill	2,359	1,675
Wet flatwoods	1,088	496
Wet prairie	582	156
Managed and Altered landcover types***	0	2,224
Acquisition parcels not surveyed	947	947
TOTAL	8,117	8,107

* Acreage discrepancies may occur based on FNAI polygons

** Inclusions in bottomland forest and mesic hammock

*** See Tables 8 and 9

Table 8. Managed Community Types

Community Type	Current Acres*
Pine plantation	1,973

* Acreage discrepancies may occur based on FNAI polygons

Table 9. Altered Landcover Types

Landcover Type*	Current Acres**
Road	178
Successional hydric shrubland / forest	38
Artificial pond	18
Abandoned fields / pastures	10
Developed	6
Clearing	1
Canal/ditch	1
TOTAL	252

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

** Acreage discrepancies may occur based on FNAI polygons

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. 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 operational 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 PLSF

Habitat Type	Historic Fire-Return Interval**	PLSF Fire Frequency Goal (Local)	Comments
Basin swamp	Varies	2 – 5 years	Fire intervals in basin swamps are highly variable. The lowest portions of basin swamps rarely burn. Graminoid-dominated ecotones burn in conjunction with the adjacent uplands, as frequently as every 2 to 5 years.
Baygall	Rare	N/A	Baygall burns infrequently, perhaps only a few times each century in the deepest baygalls.

Habitat Type	Historic Fire-Return Interval**	PLSF Fire Frequency Goal (Local)	Comments
Clastic upland lake	Varies	N/A	Clastic upland lakes experience fire only at their fringe. Frequent fires will produce an herbaceous-dominated fringe while infrequent fires will result in a more shrub-dominated fringe and may give rise to basin swamp vegetation.
Depression marsh	Varies	2 – 10 years	Frequency of fire in depression marshes is dependent on the fire-return interval of the surrounding community.
Dome swamp	Varies	2 – 10 years	Dome swamps on Pine Log State Forest are generally small and it is likely that natural fires during the spring and early summer creep through the entire swamp.
Floodplain swamp	N/A	N/A	Floodplain swamps are usually too wet to support fires. However, fires in surrounding uplands that creep into the swamp edges are important to reduce pine and bay species invasion.
Mesic flatwoods*	2 – 4 years	2 – 3 years	Mesic flatwoods depend on frequent, low-intensity fires to maintain diverse herbs and short-statured shrubs.
Pine plantation	Varies	2 – 3 years	Historically, the pine plantations were sandhill, wet prairie, and mesic and wet flatwoods communities; plantations are burned using historical community type definitions when and where it is appropriate based on stand characteristics and timeline in relation to harvesting.
Sandhill*	1 – 3 years	1 – 3 years	Sandhills depend on frequent, low-intensity fires to maintain a diverse herbaceous layer and to reduce hardwood invasion.
Successional Hydric shrubland / Forest	Varies	N/A	Refer to the historic community.
Wet flatwoods*	3 – 10 years	3 – 10 years	Wet flatwoods require frequent, low intensity fires to maintain an herbaceous dominated understory.
Wet prairie*	2 – 3 years	2 – 3 years	Frequent fires prevent the invasion of weedy shrubs and trees that shade out the herbaceous species.

* Includes restoration community acreage

** As determined by FNAI

The following community descriptions, existing condition descriptions, and management recommendations are taken from a 2017 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 PLSF.

To achieve the objectives outlined in this plan, the following management activities will be performed in the natural and managed communities at PLSF 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 Swamp** **Description:**

Typically, basin swamps are forested depressions that are large and / or embedded in a non-

pyrogenic community and thus are not heavily influenced by frequent fires from the surrounding landscape. The soils are generally acidic, nutrient-poor peats overlying an impervious soil layer. This community type is dominated by hydrophytic trees and shrubs that can withstand inundation for most or all of the year. A mature canopy is usually closed and dominated by pond cypress (*Taxodium ascendens*) and swamp tupelo (*Nyssa sylvatica* var. *biflora*). Red maple (*Acer rubrum*), Carolina ash (*Fraxinus caroliniana*), myrtle dahoon (*Ilex cassine* var. *myrtifolia*), swamp dogwood (*Cornus foemina*), and Coastalplain willow (*Salix caroliniana*) may be found in varying amounts and form a semi-open subcanopy. Shrubs dominate the understory vegetation and consist of coastal sweet pepperbush (*Clethra alnifolia*), fetterbush (*Lyonia lucida*), titi (*Cyrilla racemiflora*), black titi (*Cliftonia monophylla*), and hawthorns (*Crataegus* spp.), among others. Herbs are sparse due to the closed overstory and long hydroperiod. Herbs present include flatsedge (*Cyperus* spp.), sedge (*Carex* spp.), spikerush (*Eleocharis* spp.), pipewort (*Eriocaulon* spp.), Carolina redroot (*Lachnanthes caroliniana*), maidencane (*Panicum hemitomon*), beaksedge (*Rhynchospora* spp.), bulltongue arrowhead (*Sagittaria lancifolia*), pickerelweed (*Pontederia cordata*), bladderwort (*Utricularia* spp.), Virginia chain fern (*Woodwardia virginica*), and yelloweyed grass (*Xyris* spp.). Epiphytes and vines may be common and include Spanish moss (*Tillandsia usneoides*), resurrection fern (*Pleopeltis polypodioides*), poison ivy (*Toxicodendron radicans*), laurel greenbrier (*Smilax laurifolia*), and climbing hydrangea (*Decumaria barbara*).

Current Conditions:

On PLSF, two basin swamps occur near the northwestern corner of the property. Although they are not associated with the seepage streams that drain into Pine Log Creek, some flow may be exchanged between the two swamps and the seepage stream south of the swamps during extreme high-water events. Currently the basin swamps of PLSF resemble desired conditions but show some evidence of past timbering activities. The canopy includes mostly mature pond cypress. The subcanopy and shrub layers are dominated by black titi, sweetbay (*Magnolia virginiana*), and titi. Sweet pepperbush, myrtle-leaved holly, and large gallberry (*Ilex coriacea*) are also present. Herbs are not common and include spikerush, Carolina redroot, maidencane, and yelloweyed grass. Vines present are laurel greenbrier and muscadine (*Vitis rotundifolia*).

Fire Regimes:

Fire-return intervals in basin swamps are highly variable. The lowest portions of basin swamps rarely, if ever, burn. Graminoid-dominated ecotones and the more open-canopied variation burn in conjunction with the adjacent uplands, and these may burn as frequently as every 2 to 5 years.

Management Needs:

Minimize hydrologic disturbances, such as ditches and roads. Prescribed fires in the flatwoods should be allowed to burn and extinguish naturally at or within the wetlands and encouraged to “push” into wetlands in ecotones. Fires should be encouraged to burn completely in smaller, isolated wetlands under dry conditions, when safety considerations allow.

B. Baygall

Description:

Baygall is a closed canopy evergreen forest that can develop at the bases of slopes with

seepage from surrounding uplands or in basins where high-water tables maintain saturated conditions. Soils are acidic and generally composed of peat. Baygalls at PLSF are mostly linear features along narrow drainages on the western side of the forest.

Characteristic canopy trees include loblolly bay (*Gordonia lasianthus*), sweetbay, swamp bay (*Persea palustris*), pond pine (*Pinus serotina*), and slash pine. Common shrubs and small trees include fetterbush, wax myrtle (*Myrica cerifera*), large gallberry, and highbush blueberry (*Vaccinium corymbosum*). A dense overstory and low light levels typically restrict development of herbaceous plants. However, herbs such as Virginia chain fern, beaksedges, sedges, sphagnum moss, Carolina redroot, and cinnamon fern (*Osmunda cinnamomea*) may be present. Epiphytes are infrequent to absent. Vines are found occasionally and may include laurel greenbrier and muscadine.

Where baygalls can be distinguished on historic aerial photography, they show a uniform, almost black signature.

Current Conditions:

Current conditions in baygall communities on PLSF include a canopy of mostly sweetbay with some red maple and slash pine, and to a lesser extent tuliptree (*Liriodendron tulipifera*), pond pine, water oak (*Quercus nigra*), and cypress. The subcanopy includes smaller canopy species, black titi and titi. Shrubs are dominated by black titi and also included sweet pepperbush, titi, large gallberry, fetterbush, wax myrtle, azalea (*Rhododendron* spp.), highbush blueberry, and possumhaw (*Viburnum nudum*). Switchcane (*Arundinaria gigantea*) is one of the few herbs present. Vines are common and include cat greenbrier (*Smilax glauca*), laurel greenbrier, and muscadine.

Fire Regimes:

Baygall burns infrequently, perhaps only a few times each century in the deepest baygalls. Although the saturated soils and humid conditions within baygalls typically inhibit fire, droughts may create conditions that allow them to burn catastrophically. These fires not only destroy the canopy, but also may ignite the deep peat layers that can smolder for weeks, or even months. The drier edges of these communities must be maintained by growing season fires that are allowed to burn into the baygall. Generally, a lack of these hot fires has contributed to the gradual expansion of the baygall community into the neighboring communities.

Management Needs:

Management activities for baygall on PLSF should focus on maintaining historically occurring baygall. Avoid any further hydrologic alterations, such as the creation of ditches or roads. Where practical, restore natural hydrology and limit mechanical soil disturbance in ecotones between baygall and the adjacent uplands.

C. Clastic Upland Lake

Description:

Clastic upland lakes are shallow to relatively deep, irregular- shaped depressions or basins occurring in uplands on clay substrates. They are lentic water bodies with surface inflows but often without significant outflows. Water is generally dissipated through evaporation and

transpiration, but it may also disappear, especially during prolonged droughts, through sinks that connect with the aquifer.

On PLSF, three clastic upland lakes are found in the northwestern part of the forest within mesic flatwoods, wet prairie, and to a lesser extent, sandhill. Two of the lakes have a fringe of pond cypress, included basin swamp) surrounding them and the smaller of the three has a narrow band of wet flatwoods and wet prairie surrounding it, representing the sloping ecotone from the surrounding sandhill. These lakes can have a canopy dominated by pond cypress around the margin of the lake or no canopy. Other than the pond cypress canopy, the open water lake is characterized by an outer fringe of vegetation dominated by herbaceous species. Shrubs are infrequent to occasional in this fringe and consist of peelbark St. John's wort (*Hypericum fasciculatum*) and wax myrtle. Herbaceous species include yelloweyed grass, maidencane, rushes (*Juncus* spp.), bladderwort, beaksedge, spikerush, meadowbeauty (*Rhexia* spp.), arrowhead (*Sagittaria* spp.), and pickerelweed, among others.

Current Conditions:

Currently two of the clastic upland lakes surrounded by basin swamp meet desired future conditions. However, Sand Pond has non-native invasive torpedograss (*Panicum repens*) in the herbaceous fringe surrounding it.

These lakes were mapped as sandhill upland lake in 2006. FNAI reclassified them as clastic upland lakes here because they are mostly surrounded by mesic and wet flatwoods and wet prairie (as opposed to well-drained uplands), have a cypress dominated edge, and are not sand-bottomed and thus fit better into the clastic upland lake category.

Fire Regimes:

Clastic upland lakes experience fire only at their fringe. Frequent fires will produce a herbaceous-dominated fringe while infrequent fires will result in a more shrub-dominated fringe and may give rise to basin swamp vegetation. The lake fringe should be allowed to burn along with the surrounding uplands. Firebreaks should not be constructed around clastic upland lakes.

Management Needs:

Minimize hydrological disturbance. Fires should be allowed to burn into, or extinguish naturally at, the swamp edge. For the lake east of the road leading to the campgrounds, torpedograss should be treated as soon as possible to control its spread to the other lakes.

D. Depression Marsh

Description:

Depression marshes are isolated, non-forested wetland basins that are imbedded in a pyrogenic matrix community such as pine flatwoods or sandhill. These marshes typically have concentric zones of vegetation related to the length of hydroperiod and depth of flooding. Depression marshes are distinguished from basin marshes principally by their landscape position which subjects them to more frequent fires. At PLSF, depression marshes occur in association with mesic or wet flatwoods. While only one depression marsh is mapped, others were observed but comprise less than half an acre, the minimum-mapping unit used in this project.

Depression marshes on PLSF include a canopy of trees and shrubs that is generally sparse or absent. The herbaceous layer is moderate to dense. Typical species include graminoids such as blue maidencane (*Amphicarpum muhlenbergianum*), Walter's sedge (*Carex striata*), sawgrass (*Cladium jamaicense*), velvet witchgrass (*Dichanthelium scoparium*), rushes, maidencane, shortbristle horned beaksedge (*Rhynchospora corniculata*), wool grass (*Scirpus cyperinus*), and Baldwin's nutrush (*Scleria baldwinii*). Flag species such as pickerelweed, bulltongue arrowhead, and Chapman's arrowhead (*Sagittaria graminea* var. *chapmannii*), as well as floating aquatics such as white waterlily (*Nymphaea odorata*) and purple bladderwort (*Utricularia purpurea*), are common. Peelbark St. John's wort and occasionally wax myrtle form a zone around the edge of the marsh along with herbs such as false foxglove (*Agalinis* spp.), threeawn (*Aristida* spp.), wrinkled jointtail grass (*Coelorachis rugosa*), tickseed (*Coreopsis* spp.), buttonweed (*Diodia* spp.), sundew (*Drosera* spp.), pipeworts, Baldwin's spikerush (*Eleocharis baldwinii*), flattop goldenrod (*Euthamia caroliniana*), meadowbeauty, beaksedges, rosegiant (*Sabatia* spp.), Virginia chain fern, Elliott's yelloweyed grass (*Xyris elliotii*), and fringed yelloweyed grass (*Xyris fimbriata*). Epiphytes and vines are absent.

Depression marshes are smooth, very dark circles on the historic aerial photographs.

Current Conditions:

Currently the single depression marsh mapped on PLSF is encroached by woody species and has slash pine planted through the northern portion of it. The herbaceous species component contains many of the species mentioned above, such as maidencane, shortbristle horned beaksedge, yellow-eyed grass, velvet witchgrass, combleaf mermaidweed, eastern purple bladderwort, Baldwin's spikerush, rosy camphorweed, Virginia chain fern, and Chapman's arrowhead. Other herbaceous species include purple bluestem (*Andropogon glomeratus* var. *glaucoptis*), big carpetgrass (*Axonopus furcatus*), spadeleaf (*Centella asiatica*), fourpetal St. John's wort (*Hypericum tetrapetalum*), and crowngrass (*Paspalum* spp.). Epiphytes and vines are absent.

Fire Regimes:

Frequency of fire in depression marshes is dependent on the fire-return interval of the surrounding community. Fire is important in limiting hardwood encroachment and peat buildup, while encouraging herbaceous growth in depression marshes.

Management Needs:

Management of the depression marshes on PLSF should focus on allowing fires from the surrounding landscape to burn into the marsh and extinguish naturally. Firebreaks should be avoided as they damage the herbaceous ecotone between the marsh and upland. Managers should survey areas prior to logging to identify and mark depression marsh boundaries so that heavy equipment does not pass through the marsh. This will aid in minimizing hydrologic and soil disturbances.

E. Dome Swamp

Description:

Dome swamps are isolated, shallow, forested wetland basins imbedded in a pyrogenic matrix community. These swamps have domed profiles resulting from smaller trees growing around the edges and larger trees growing in the interior. Dome swamps have peat soils that are thickest

toward the center and are generally underlain with acidic soils and a limestone layer. Dome swamps are distinguished from basin swamps principally by their often more circular shape, smaller size, shorter hydroperiod, and higher historical fire frequency due to landscape position within a pyrogenic community. Dome swamps are scattered throughout PLSF, typically associated with mesic or wet flatwoods and sandhill.

Dome swamps have a closed to semi-closed canopy dominated by pond cypress. Swamp tupelo, red maple, and myrtle-leaved holly comprises an open subcanopy and may be present in the canopy as well. The understory consists primarily of shrubs, due to the closed canopy and subcanopy, and a diverse herb layer may be present. Understory shrubs include coastal sweet pepperbush, titi, black titi, fetterbush, peelbark St. John's wort, and highbush blueberry. Herbs include sawgrass, shortbristle horned beaksedge, spreading beaksedge (*Rhynchospora divergens*), Carolina redroot, Virginia chain fern, tenangle pipewort (*Eriocaulon decangulare*), eastern purple bladderwort, false nettle (*Boehmeria cylindrica*), sedges, flatsedges, marsh pennywort (*Hydrocotyle* spp.), combleaf mermaidweed (*Proserpinaca pectinata*), yelloweyed grasses, and rose gentians. Epiphytes are occasional and consist of Spanish moss. Vines are occasional and consist of laurel greenbrier and climbing hydrangea.

Current Conditions:

Currently the dome swamps within PLSF are in good condition and on track to meet desired conditions. Evidence of past logging is present in the dome swamps in the form of large, cut stumps and, in some cases, the absence of pond cypress. In a few instances, hydrologic disturbances, such as roads, are present. The dome swamps have a semi-closed canopy of pond cypress and occasionally sweetbay, swamp tupelo, and slash pine. The presence of slash pine in the dome swamps is likely due to exclusion of fire. The subcanopy consists of younger canopy species as well as red maple. The shrub layer was comprised of myrtle-leaved holly, black titi, coastal sweet pepperbush, fetterbush, large gallberry, and Apalachicola St. John's wort (*Hypericum chapmanii*). Herbs are sparse and consist of spadeleaf, sawgrass, pink sundew (*Drosera capillaris*), flattened pipewort (*Eriocaulon compressum*), tenangle pipewort, Carolina redroot, maidencane, combleaf mermaidweed, shortbristle horned beaksedge, Virginia chain fern, eastern purple bladderwort, and yellow-eyed grass. Sphagnum moss is present in some dome swamps. Vines are occasional and consist of laurel greenbrier, cat greenbrier, and muscadine.

Fire Regimes:

Fire is essential for maintaining the dome swamp community. In the absence of fire, baygall species and pines may invade the community. The periphery of the dome swamp experiences fire more often than the center, as fire will often creep into the swamp from surrounding uplands but extinguish itself before reaching the center. The peripheral areas may naturally experience fire every 2 to 5 years, while the center may go 100 to 150 years. However, the dome swamps on PLSF are generally small and it is likely that natural fires during the spring and early summer crept through the entire swamp.

Management Needs:

Minimize hydrological disturbances and allow fires from surrounding uplands to creep into the swamps. During silvicultural activities in surrounding uplands, create a buffer around each

swamp to help minimize hydrological and soil disturbances, and avoid placing roads and ditches near dome swamps. Prescribed fires in surrounding uplands should be allowed to creep into the dome swamps.

F. Floodplain Swamp

Description:

Floodplain swamp is a closed-canopy forest of hydrophytic trees occurring on frequently or permanently flooded hydric soils adjacent to stream and river channels and in depressions and oxbows within floodplains. Floodplain swamp traverses PLSF dissecting the landscape along several drainages, namely Pine Log Creek, Little Crooked Creek, and Ditch Branch (names from 1994 USGS 7.5-minute topographic map), along with many smaller, unnamed streams that flow through the property.

Floodplain swamp has a semi-closed to closed canopy dominated by pond cypress with occasional red maple, water hickory (*Carya aquatica*), swamp tupelo, swamp laurel oak (*Quercus laurifolia*), and American elm (*Ulmus americana*). Subcanopy species often include younger canopy species as well as Carolina ash, water locust (*Gleditsia aquatica*), and coastalplain willow. Shrubs can be infrequent to dense and include common buttonbush (*Cephalanthus occidentalis*) and wax myrtle. Herb species may include spiderlily (*Hymenocallis* spp.), royal fern (*Osmunda regalis* var. *spectabilis*), pickerelweed, common arrowhead (*Sagittaria latifolia*), lizard's tail (*Saururus cernuus*), climbing aster (*Symphotrichum carolinianum*), and Virginia chain fern.

Current Conditions:

At PLSF, floodplain swamp is often found in a mosaic with bottomland forest where the ridge and swale topography of the floodplain creates a mixture of habitats including low depressions that hold water most of the year. Additionally, within the floodplain on drier banks of Pine Log Creek are areas (too narrow to map) of mesic hammock. Some of the floodplain swamps currently found on PLSF have been affected by past logging activities (evidenced by old stumps) and are dominated by baygall vegetation, likely caused by lack of fire along the periphery of the swamps and past cypress harvest.

The mixed canopy is open to closed and consists of pond cypress, slash pine, sweetbay, sweetgum (*Liquidambar styraciflua*), swamp tupelo, tuliptree, and pond pine. The subcanopy is typically closed and made up of swamp laurel oak, swamp bay, red maple, myrtle-leaved holly, Carolina ash, and southern magnolia (*Magnolia grandiflora*). The understory is typically shrub dominated, with herbs abundant in light gap areas. Shrubs include titi, black titi, large gallberry, fetterbush, dwarf palmetto (*Sabal minor*), buttonbush, odorless bayberry (*Myrica inodora*), azaleas, and coastal sweet pepperbush. Herbs include wood oats (*Chasmanthium* spp.), tall nutgrass (*Scleria triglomerata*), switchcane, witchgrass (*Dichantherium* spp.), panicgrass (*Panicum* spp.), cinnamon fern, and shortbristle horned beaksedge. Spanish moss is an infrequent epiphyte and vines are occasional and consist of laurel greenbrier and Carolina jessamine (*Gelsemium sempervirens*).

Floodplain swamps on PLSF often include bottomland forest communities on areas of higher ground. In these areas the canopy is not dominated by pond cypress, but consists of a mixture

of swamp laurel oak, water oak, tuliptree, sweetbay, slash pine, and less often red maple, southern magnolia, and pond cypress. Shrubs include smaller canopy species and sweet pepperbush, black titi, dahoon (*Ilex cassine*), fetterbush, wax myrtle, coastalplain willow, and highbush blueberry. The herbaceous layer includes switchcane, woodoats, flattened pipewort, sneezeweed (*Helenium* spp.), cinnamon fern, spoonflower (*Peltandra sagittifolia*), violet (*Viola* spp.), netted chain fern (*Woodwardia areolata*), and Virginia chain fern. Vines are diverse and common and include crossvine (*Bignonia capreolata*), yellow jessamine, trumpet honeysuckle (*Lonicera sempervirens*), cat greenbrier, laurel greenbrier, eastern poison ivy, and muscadine.

Narrow, linear streams that connect wider swamps along the creek floodplain often do not contain a diversity of large trees, but instead are shrub-dominated. Titi, black titi, and sweetbay form a thicket along these narrow drainageways, where fire is extinguished by the saturated soils along the stream. Fires may occasionally burn across these streams and create an open stream amidst the surrounding upland community.

Fire Regimes:

Floodplain swamps are usually too wet to support fires. However, fires in surrounding uplands that creep into the swamp edges are important to reduce pine and bay species invasion. The smaller, narrow stretches of swamp likely burned more frequently when the surrounding uplands burned or during periods of drought. These linear streams, depending on soil moisture at the time, could have burned through, leaving an open seepage stream amidst the surrounding uplands.

Management Needs:

Maintain natural hydrology and allow fires from surrounding uplands to creep into the swamps. Natural hydrology is crucial for maintaining species diversity and water quality. Hydrologic alterations associated with roads, especially SR 20 and SR 79, should be minimized as much as possible. Allowing fires from surrounding uplands to creep into the swamps will enhance diversity in ecotones and decrease baygall and pine encroachment.

G. Mesic Flatwoods

Description:

Mesic flatwoods are relatively open-canopy forests of longleaf pine. Slash pine is also present but is usually more frequent in wetter areas. There is little or no subcanopy and very few tall shrubs, but a dense ground cover of herbs and short shrubs is typically present. The latter help maintain community structure by fueling prescribed fires. Frequent, low intensity fires maintain species composition and diversity in mesic flatwoods. On PLSF, mesic flatwoods occur in association with sandhill and wet flatwoods, often as a transition between these two communities.

Transitional areas near wetlands may contain pond pine or slash pine in the canopy. The subcanopy is typically sparse and patchy, consisting of young pine saplings. The understory harbors a diverse assemblage of low statured shrubs and herbs. Common shrubs include saw palmetto (*Serenoa repens*), coastalplain staggerbush (*Lyonia fruticosa*), gallberry (*Ilex glabra*), wax myrtle, tarflower (*Bejaria racemosa*), dwarf huckleberry (*Gaylussacia dumosa*), blue huckleberry (*Gaylussacia frondosa* var. *tomentosa*), shiny blueberry (*Vaccinium myrsinites*),

running oak (*Quercus elliotii*), and dwarf live oak (*Quercus minima*). Mesic flatwoods are noted for their herbaceous species diversity. Common species include wiregrass (*Aristida stricta* var. *beyrichiana*), arrowfeather threeawn (*Aristida purpurascens*), bottlebrush threeawn (*Aristida spiciformis*), lopsided Indiangrass (*Sorghastrum secundum*), witchgrasses, beaksedges, queensdelight (*Stillingia sylvatica*), narrowleaf silkgrass (*Pityopsis graminifolia*), and Curtiss' dropseed (*Sporobolus curtissii*), among others. Epiphytes are absent, and vines are infrequent and consist of Carolina jessamine, muscadine, and saw greenbrier (*Smilax bona-nox*).

Current Conditions:

A high-quality stand of mesic flatwoods is present in the east central portion of the property. This dry “runner oak flatwoods” is in excellent condition with a nice stand of older mature pines and an excellent structure of low shrubs and diverse herbs. Most of the mesic flatwoods on PLSF are either recovering from past silvicultural activities, have recently been clearcut, or are recovering from past fire exclusion (mapped as “restoration” mesic flatwoods). These areas, with continued application of prescribed fire will, with time, move closer to more natural community structure and species composition.

In recently disturbed sites and restoration areas, weedy species, primarily broomsedge (*Andropogon* spp.), are prevalent. When factors such as fire suppression, soil compaction, and silvicultural beds are allowed, the encroachment of these species – gallberry, large gallberry, and black titi – are likely to dominate the understory and make a dense subcanopy.

Currently at PLSF, the canopy of mesic flatwoods is composed of slash pine, longleaf pine, and occasionally pond pine. Pure stands of longleaf pine do exist but are uncommon. The subcanopy in areas that have not been recently clearcut is denser than desired and consists of woody species that have encroached as a result of fire exclusion. These include common persimmon (*Diospyros virginiana*), sweetbay, swamp laurel oak, and water oak. Mesic flatwoods near sandhills can support some turkey oak and post oak (*Quercus stellata*). Tall shrubs included smaller canopy species and titi, yaupon (*Ilex vomitoria*), and bluejack oak. Short shrubs include pawpaw (*Asimina* spp.), slimleaf pawpaw (*Asimina angustifolia*), titi, common persimmon, dwarf huckleberry, blue huckleberry, woolly huckleberry (*Gaylussacia mosieri*), St. John's wort (*Hypericum* spp.), fourpetal St. John's wort, large gallberry, gallberry, yaupon, gopher apple (*Licania michauxii*), fetterbush, hairy laurel (*Kalmia hirsuta*), dwarf wax myrtle (*Myrica cerifera* var. *pumila*), slash pine, longleaf pine, dwarf live oak, water oak, runner oak (*Quercus pumila*), winged sumac (*Rhus copallinum*), sawtooth blackberry (*Rubus pensilvanicus*), saw palmetto, horse sugar (*Symplocos tinctoria*), sparkleberry (*Vaccinium arboreum*), highbush blueberry, Darrow's blueberry (*Vaccinium darrowii*), and shiny blueberry.

The herbaceous layer is diverse and includes bracken fern (*Pteridium aquilinum*), blackroot (*Pterocaulon pycnostachyum*), savannah meadowbeauty (*Rhexia alifanus*), yellow colicroot (*Aletris lutea*), purple bluestem, Elliott's bluestem (*Andropogon gyrans*), bluestem, wiregrass, longleaf milkweed (*Asclepias longifolia*), coastalplain honeycomb-head (*Balduina angustifolia*), gopherweed (*Baptisia lanceolata*), vanillaleaf (*Carphephorus odoratissimus*), rabbitbells (*Crotalaria rotundifolia*), toothache grass (*Ctenium aromaticum*), witchgrass, lovegrass (*Eragrostis* spp.), early whitetop fleabane (*Erigeron vernus*), Mohr's thoroughwort (*Eupatorium mohrii*), eryngo (*Eryngium* spp.), button rattlesnakemaster (*Eryngium yuccifolium*), Elliott's

milkpea (*Galactia elliottii*), milkpea (*Galactia* spp.), stiff sunflower (*Helianthus radula*), whitehead bogbutton (*Lachnocaulon anceps*), piedmont pinweed (*Lechea torreyi*), gayfeather (*Liatris* spp.), Catesby's lily (*Lilium catesbaei*), sensitive brier (*Mimosa quadrivalvis*), beaked panicum (*Panicum anceps*), narrowleaf silkgrass, orange milkwort (*Polygala lutea*), candyroot (*Polygala nana*), meadowbeauty, shortleaf rosegentian (*Sabatia brevifolia*), little bluestem (*Schizachyrium scoparium*), tall nutgrass, kidneyleaf rosinweed (*Silphium compositum*), goldenrod (*Solidago* spp.), anisescented goldenrod (*Solidago odora*), lopsided Indiangrass, pineywoods dropseed (*Sporobolus junceus*), scaleleaf aster (*Symphyotrichum adnatum*), Walter's aster (*Symphyotrichum walteri*), coastalplain yelloweyed grass (*Xyris ambigua*), and yelloweyed grass. In areas that have been recently clearcut, a mix of weedy herbs is found. These include bushy bluestem, broomsedge bluestem (*Andropogon virginicus*), slender flattop goldenrod, and yankeeweed (*Eupatorium compositifolium*). Epiphytes are absent, and vines are infrequent, consisting of yellow jessamine, earleaf greenbrier (*Smilax auriculata*), cat greenbrier, and muscadine.

Fire Regimes:

Mesic flatwoods depend on frequent, low-intensity fires to maintain diverse herbs and short-statured shrubs. Mesic flatwoods require repeated applications of fires on a 2 to 4-year cycle with most burns conducted during late spring and early summer (March through June) once in maintenance condition. Many plant species in mesic flatwoods rely on these fires for reproduction.

Management Needs:

Minimize soil disturbances during tree thinning and / or harvesting, maintain an open, uneven-aged pine canopy of longleaf pine and keep prescribed burns on a 2 to 4-year schedule primarily during March through June. Minimizing soil disturbances during silvicultural activities will preserve the wiregrass component of the understory, which is crucial to carrying fire through the community. Maintaining an open, uneven-aged pine canopy will aid in increasing herbaceous species diversity by allowing good light penetration to the forest floor. Longleaf pine should be used in any new plantings in mesic flatwoods and slash pine could be an option in consistently wetter areas. With restoration, these areas may become seed sources for future reseeding projects. Groundcover plants may need to be seeded in areas of heavy disturbance.

H. Sandhill

Description:

Sandhills occur 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. Sandhill is important for aquifer recharge because the porous sands allow water to percolate rapidly with little runoff and minimal evaporation. The deep, sandy soils and a lack of near-surface hardpan or water table contribute to a xeric environment. Sandhills are forests of longleaf pine trees, typically with a sparse subcanopy of turkey oak, bluejack oak, and / or sand post oak (*Quercus margaretta*), and a fairly dense groundcover of herbs, particularly wiregrass. The greatest plant diversity within sandhill is in the herbaceous groundcover. Dominant grasses, in addition to wiregrass, include other threeawns, pineywoods dropseed, lopsided indiangrass, several species of bluestems, and little bluestem. Sandhill is the dominant upland community type at PLSF.

Sandhills on PLSF consist of an open canopy of longleaf pine. The subcanopy is open and contains younger longleaf pine, as well as turkey oak with an occasional sand post oak. The understory consists of a diverse assemblage of shrubs and herbs, with herbs being slightly more abundant. Shrubs include saw palmetto, dwarf live oak, gallberry, shiny blueberry, deerberry (*Vaccinium stamineum*), sparkleberry, huckleberry (*Gaylussacia* spp.), Adam's needle (*Yucca filamentosa*), gopher apple, common persimmon, yaupon, winged sumac, slimleaf pawpaw, and sassafras (*Sassafras albidum*). Wiregrass is dominant in the herb layer. Other typical herbs include, narrowleaf silkgrass, bracken fern, queensdelight, aniscented goldenrod, pineland wild indigo (*Baptisia lecontei*), milkpeas, whitetop aster (*Aster tortifolius*), tall ironweed (*Vernonia angustifolia*), summer farewell (*Dalea pinnata*), greeneyes (*Berlandiera pumila*), gayfeather, pinweeds (*Lechea* spp.), frostweed (*Helianthemum* spp.), pineywoods dropseed, butterflyweed (*Asclepias tuberosa*), jointweed (*Polygonella* spp.), dogtongue wild buckwheat (*Eriogonum tomentosum*), lupine (*Lupinus* spp.), forked bluecurls (*Trichostema dichotomum*), witchgrass, sandyfield beaksedge (*Rhynchospora megalocarpa*), lopsided Indian grass, partridge pea (*Chamaecrista fasciculata*), coastalplain honeycomb head, square flower (*Paronychia erecta*), goldenaster (*Chrysopsis* spp.), sensitive brier, and bluestem (*Schizachyrium* spp.). Epiphytes are absent. Vines are infrequent and include earleaf greenbrier and muscadine.

Current Conditions:

Many of the sandhills on PLSF are under silvicultural management and mapped as pine plantation in the current map or have been either recently clearcut, thinned, or recently planted. Stands that have received some thinning and fire, but that remain highly disturbed or still have a moderate pine canopy, are mapped as "restoration" sandhill to indicate that management is moving the community towards a more natural structure. A few sandhills in relatively undisturbed condition do exist on the forest.

The canopy layer typically consists of a moderately dense canopy of longleaf pine and / or slash pine. The subcanopy is open and consists of smaller canopy species and turkey oak, bluejack oak, swamp laurel oak, sand post oak, live oak (*Quercus virginiana*), water oak, sand live oak (*Quercus geminata*), common persimmon, and southern magnolia. Shrubs often dominate the understory and include smaller canopy and subcanopy species such as dwarf huckleberry, blue huckleberry, gallberry, yaupon, gopher apple, wax myrtle, pricklypear (*Opuntia humifusa*), winged sumac, sand blackberry (*Rubus cuneifolius*), blackberry (*Rubus* spp.), saw palmetto, sparkleberry, highbush blueberry, Darrow's blueberry, and deerberry. Herbaceous species are not abundant in some areas due to previous silvicultural practices that have disturbed the soil to an extent that many of the herbs, especially wiregrass, have not come back. Herbs include Elliott's bluestem, threeawn), wiregrass, pineywoods milkweed (*Asclepias humistrata*), coastalplain honeycomb-head, gopherweed, littleleaf buckbrush (*Ceanothus microphyllus*), sensitive pea (*Chamaecrista* spp.), woody goldenrod (*Chrysoma pauciflosculosa*), goldenaster, tread-softly (*Cnidoscolus stimulosus*), rabbitbells, silver croton (*Croton argyranthemus*), tick-trefoil (*Desmodium* spp.), witchgrass, tall elephantsfoot (*Elephantopus elatus*), dogtongue wild buckwheat, eryngo, dogfennel (*Eupatorium capillifolium*), greater Florida spurge (*Euphorbia floridana*), Elliott's milkpea, milkpea, gayfeather, sensitive brier, narrowleaf silkgrass, October flower (*Polygonella polygama*), bracken fern, beaksedge, coastalplain dawnflower (*Stylisma patens*), hoary-pea (*Tephrosia* spp.), hairyflower spiderwort (*Tradescantia hirsutiflora*),

spiderwort (*Tradescantia* spp.), wavyleaf noseburn (*Tragia urens*), and nettleleaf noseburn (*Tragia urticifolia*). Epiphytes are absent. Vines are infrequent, and consist of yellow jessamine, earleaf greenbrier, and muscadine.

In the restoration sandhill areas, the canopy layer is sometimes absent because of removal of slash pine but can include slash pine, longleaf pine, bluejack oak, and turkey oak. Shrubs are variable and include the same species listed above. Herbs are similar to those listed above but include a variety of weedier species such as bluestem, chalky bluestem, and yankeeweed.

Fire Regimes:

Sandhills depend on frequent, low-intensity fires to maintain a diverse herbaceous layer and to reduce hardwood invasion. Sandhills naturally burn every 1 to 3 years, historically ignited by lightning in late spring and early summer. Prescribed fires should be implemented within this natural burn cycle and during the early spring and late summer to encourage herbaceous species growth, diversity, and reproduction once fuels are in maintenance condition. Variability in the season, frequency, and intensity of fire is important for preserving species diversity, since different species in the community flourish under different fire regimes.

Management Needs:

Minimize soil disturbance during pine harvesting and planting. Roller chopping, or other mechanical site preparation are not recommended due to the fragility of groundcover vegetation under xeric conditions. Minimizing soil disturbances should increase herbaceous species abundance, especially wiregrass, in recently harvested areas. Reduce sand pine and woody encroachment by application of prescribed fire at recommended intervals (1 to 3 years). Conduct prescribed fire during the late spring and early summer to increase herbaceous species diversity and reduce hardwood encroachment. Mechanical removal of sand pines followed by a frequent fire-return interval (every 2 years) may aid in reducing the encroachment of this species in the more heavily invaded areas.

During all management activities, every effort should be made to minimize any detrimental effects to the gopher tortoise (*Gopherus polyphemus*) population (and its burrows) within this community, as this species is considered a keystone ecosystem component.

I. Wet Flatwoods

Description:

Wet flatwoods are flat, poorly drained pine woodlands with a diverse understory of hydrophytic herbs and shrubs. On PLSF, wet flatwoods cover a broad area along Pine Log Creek and many of the floodplain swamps throughout the property. The characterization of these areas as wet flatwoods versus wet prairie is based on the presence of trees on the historic aerials. Many of the areas mapped as wet flatwoods include small areas of wet prairie that are difficult to delineate on current and / or historic aerial photographs. Two areas of wet flatwoods in the eastern central portion of the property occur on slopes between mesic flatwoods upslope and swamp include unmappable seepage slope (the only areas of this community type on PLSF). Seepage slopes are boggy areas at the base of a slope where moisture is maintained via downslope seepage through adjacent uplands. Vegetation in these seepage slopes is mostly herbaceous and similar to wet prairie, containing numerous pitcherplants and other carnivorous species.

The canopy of longleaf pine, pond pine, and / or slash pine dominates wet flatwoods. The subcanopy is sparse and consists of younger canopy trees. Although the forest structure of wet flatwoods is similar to mesic flatwoods, species composition in wet flatwoods has more hydrophytic species. The understory is herb dominated, with scattered shrubs throughout. Shrubs include gallberry, large gallberry, fourpetal St. John's wort, and wax myrtle with an occasional titi and black titi. Herbs include wiregrass, which is dominant, along with southern club moss (*Lycopodiella appressa*), spreading beaksedge, shortbristle horned beaksedge, tenangle pipewort, yelloweyed grass, pineland rayless goldenrod (*Bigelovia nudata*), toothache grass, Chapman's crownbeard (*Verbesina chapmannii*), savannah aster (*Aster chapmanii*), thistleleaf aster (*Aster eryngiifolia*), nutrush (*Scleria* spp.), savannah meadowbeauty, gayfeather, oneflower honeycombhead (*Balduina uniflora*), Texas tickseed (*Coreopsis linifolia*), coastalplain tickseed (*Coreopsis gladiata*), panicgrass, witchgrass, shortleaf rosegentian, milkwort (*Polygala* spp.), pink sundew, Catesby's lily, piedmont cowbane (*Oxypolis ternata*), colicroot (*Aletris* spp.), bogbutton (*Lachnocaulon* spp.), and grassleaf Barbara's buttons (*Marshallia graminifolia*). Epiphytes are absent. Vines are absent or infrequent. Shrubby wet flatwoods may have a more continuous cover of hydrophytic shrubs and may be very similar to shrub bogs. However, the slightly drier conditions and more frequent fire regime should limit the height of these shrubs.

Current Conditions:

The wet flatwoods on PLSF are, for the most part, heavily invaded by woody species such as titi, black titi, sweetbay, myrtle-leaved holly, and swamp tupelo as a result of fire exclusion. There are a few wet flatwoods on the property that meet desired future conditions, most notably the excellent condition wet flatwoods with included seepage slope in the eastern central portion of the property. Stands that have received some thinning and fire, but that remain highly disturbed or still have a moderate pine canopy, are mapped as "restoration" wet flatwoods to indicate that management is moving the community towards a more natural structure.

In much of the current wet flatwoods the canopy is open, and consists of slash pine, pond pine, and / or longleaf pine. The subcanopy is relatively open and consists of sweetbay, myrtle-leaved holly, swamp tupelo, swamp bay, tuliptree, and swamp laurel oak. The shrub layer is dense and consists of smaller canopy species and is dominated by titi, black titi, red maple, coastal sweet pepperbush, dwarf huckleberry, blue huckleberry, woolly huckleberry, peelbark St. John's wort, large gallberry, gallberry, fetterbush, wax myrtle, evergreen bayberry (*Myrica caroliniensis*), sawtooth blackberry, saw palmetto, poison sumac (*Toxicodendron vernix*), dwarf live oak, and highbush blueberry. Herbs are sparse in the current and often woody invaded areas and include yellow colicroot, woolly witchgrass (*Dichanthelium scabriusculum*), Carolina redroot (*Lachnanthes caroliana*), whitehead bogbutton, pink sundew, purple bluestem, bluestem, wiregrass, switchcane, spadeleaf, Le Conte's thistle (*Cirsium lecontei*), Fernald's pogonia (*Cleistes bifaria*), Georgia tickseed (*Coreopsis nudata*), toothache grass, witchgrass, pink sundew, early whitetop fleabane, flattened pipewort, tenangle pipewort, dogfennel, spurge (*Euphorbia* spp.), stiff sunflower, Carolina redroot, whitehead bogbutton, golden crest (*Lophiola aurea*), foxtail club-moss (*Lycopodiella alopecuroides*), cinnamon fern, maidencane, camphorweed (*Pluchea* spp.), orange milkwort, bracken fern, savannah meadowbeauty, beaksedge, blue-eyed grass (*Sisyrinchium* spp.), crowpoison (*Stenanthium densum*), Virginia

chain fern, and yelloweyed grass. Vines include earleaf greenbrier, laurel greenbrier, and muscadine.

The stands of wet flatwoods in the eastern central portion of PLSF that include areas of seepage slope are in excellent condition and have an open canopy layer of mostly slash pine. The shrub layer includes sweet pepperbush, black titi, titi, woolly huckleberry, large gallberry, and gallberry. The dense herbaceous layer is dominated by graminoids and herbs similar to that of seepage slope or wet prairie including species such as Tracey's sundew (*Drosera tracyi*), rush featherling (*Pleea tenuifolia*), coastal false asphodel (*Tofieldia racemosa*), yellow pitcherplant (*Sarracenia flava*), and parrot pitcherplant (*Sarracenia psittacina*).

Restoration wet flatwoods that have recently undergone pine thinning/harvesting often contain a weedier herbaceous species assemblage along with more typical shrubs. These weedy species include broomsedge bluestem, bushy bluestem, and lovegrass. Some areas still contain modest wiregrass cover.

Fire Regimes:

Wet flatwoods require frequent, low intensity fires to maintain an herbaceous dominated understory. In the absence of fire, hardwoods, especially titi and black titi, encroach upon, and eventually dominate, the area converting the wet flatwoods to a baygall type community. These areas are difficult to restore back to wet flatwoods due to the general incombustibility and moisture of the fuels. Wet flatwoods naturally burn every 3 to 10 years, naturally ignited by lightning storms during the late spring and early summer. For restoration and management purposes, a prescribed fire interval of 2 to 4 years is recommended. Prescribed fires should be conducted during the natural fire season to reduce hardwood abundance and encourage herbaceous species growth where fuel conditions allow.

Management Needs:

Restore hardwood-invaded areas, minimize soil-disturbing practices, and utilized prescribed fire at the recommended intervals. Restoration of bay-invaded areas may be achieved by either burning these areas or by mechanical removal of bays and titi prior to burning. However, care should be taken not to disrupt the soil surface severely, which is crucial for ensuring recovery of the herbaceous layer, especially wiregrass.

J. Wet Prairie

Description:

Wet prairie is a herbaceous community found on continuously wet, but not inundated, soils on somewhat flat or gentle slopes between lower lying depression marshes, shrub bogs, or dome swamps and slightly higher wet or mesic flatwoods. Trees and shrubs are absent or very sparse. It is typically dominated by dense wiregrass in the drier portions, along with foxtail club-moss, cutover muhly (*Muhlenbergia expansa*), yellow butterwort (*Pinguicula lutea*), and savannah meadowbeauty. In the wetter portions, wiregrass may occur with, or be replaced by, species in the sedge family, such as plumed beaksedge (*Rhynchospora plumosa*), featherbristle beaksedge (*Rhynchospora oligantha*), Baldwin's nutrush, or slenderfruit nutrush (*Scleria georgiana*), plus longleaf threeawn (*Aristida palustris*). Also common in wetter areas are carnivorous species, such as pitcherplants (*Sarracenia* spp.), sundews, butterworts (*Pinguicula* spp.), and

bladderworts. Other characteristic species in this community include toothache grass, pineland rayless goldenrod, flattened pipewort, water cowbane (*Oxypolis filifolia*), and coastalplain yelloweyed grass.

Current Conditions:

Many areas of historic wet prairie on PLSF are invaded by shrubs due to past fire exclusion and are mapped as successional hydric shrubland / forest or have been planted with a dense canopy of slash pine and have a depauperate understory caused by the dense canopy and are mapped as pine plantation. Stands that have received some thinning and fire, but that remain highly disturbed or still have a moderate pine canopy, are mapped as “restoration” wet prairie to indicate that management is moving the community towards a more natural structure.

Wet prairie on PLSF occasionally contains slash pine or longleaf pine. Shrubs include sweet pepperbush, black titi, titi, dwarf huckleberry, woolly huckleberry, peelbark St. John's wort, myrtle-leaved holly, large gallberry, gallberry, evergreen bayberry, and wax myrtle. The herbaceous layer is diverse and includes yellow colicroot, purple bluestem, bluestem, wiregrass, pale grasspink (*Calopogon pallidus*), spadeleaf, pineland daisy (*Chaptalia tomentosa*), Fernald's pogonia, Georgia tickseed, toothache grass, woolly witchgrass, witchgrass, pink sundew, spoon-leaved sundew (*Drosera intermedia*), dewthreads, spikerush, fleabane (*Erigeron* spp.), early whitetop fleabane, flattened pipewort, tenangle pipewort, spurge, thistleleaf aster (*Eurybia eryngiifolia*), common sneezeweed, sneezeweed, Carolina redroot, whitehead bogbutton, white lobelia (*Lobelia paludosa*), golden crest, foxtail club-moss, club-moss (*Lycopodiella* spp.), yellow flowered butterwort, grassleaf goldenaster (*Pityopsis oligantha*), rush featherling, orange milkwort, savannah meadowbeauty, meadowbeauty, starrush white-top (*Rhynchospora colorata*), beaksedge, yellow pitcherplant, whitetop pitcherplant (*Sarracenia leucophylla*), parrot pitcherplant, tall nutgrass, crowpoison, savannah aster (*Symphyotrichum chapmanii*), Chapman's crownbeard (*Verbesina chapmanii*), and yelloweyed grass. Vines include laurel greenbrier, and muscadine.

Fire Regimes:

Historically, the fire-return interval in wet prairie is 2 to 3 years. These frequent fires prevent the invasion of weedy shrubs and trees that shade out the herbaceous species.

Management Needs:

Management of the restoration wet prairie on PLSF should focus on returning a more natural fire regime to historic wet prairie and restoring hydrology. Pine stands could potentially be thinned further to achieve a more open canopy. Pine needle drape may also assist with carrying fire through the silviculture furrows and areas of sparse herbaceous cover.

Prescribed burning should be applied to historic wet prairie on a 2 to 3-year cycle, with frequent growing season burns. This will reduce woody encroachment, sustain herbaceous species, and aid in prevention of catastrophic wildfires.

K. Managed Communities

Pine plantations and pastures represent vegetative communities that the FFS manages as integral components of the agency's multi-use management approach. These managed communities

provide 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 and pastures within the State Forests is conducted to further ensure compatibility with other management goals and objectives.

1. Pine Plantation

Description:

Pine plantations on PLSF occupy areas of historic sandhill, wet prairie, and mesic and wet flatwoods, and have desired future conditions matching those communities.

Current Conditions:

Pine plantations are areas altered by silvicultural activities. These can include lands where either 1) planted pines are having or will have an ongoing detrimental effect on native groundcover, 2) the history of planted pines has damaged ground cover to the point where further restoration beyond thinning and burning is required, and / or 3) the method of planting (e.g. bedding) has severely impacted groundcover.

Some historic pine flatwoods and prairies on PLSF that were converted to pine plantation in the past have since been thinned to a more natural basal area and frequently burned to restore a natural groundcover structure and composition. These were mapped as the natural community or restoration areas (mesic flatwoods, wet flatwoods, wet prairie, and sandhill have restoration areas).

Pine plantations on PLSF have a dense canopy of longleaf pine or slash pine. Subcanopy species may include black titi, titi, common persimmon, tuliptree, sweetbay, slash pine, longleaf pine, bluejack oak, and turkey oak.

Shrub species may include groundsel tree (*Baccharis halimifolia*), American beautyberry (*Callicarpa americana*), sweet pepperbush, black titi, flowering dogwood (*Cornus florida*), common persimmon, dwarf huckleberry, blue huckleberry, peelbark St. John's wort, fourpetal St. John's wort, myrtle-leaved holly, large gallberry, gallberry, yaupon, gopher apple, fetterbush, sweetbay, pricklypear, laurel oak (*Quercus hemisphaerica*), bluejack oak, turkey oak, swamp laurel oak, dwarf live oak, runner oak, winged sumac, sand blackberry, sassafras, saw palmetto, sparkleberry, highbush blueberry, Darrow's blueberry, and Adam's needle.

The herbaceous layer may be sparse to moderate, depending on the history of thinning, burning, and / or herbicide treatments. Herbaceous species may be extremely diverse as they contain elements of the various historic communities they once were. Bedded pine plantations with a dense pine canopy often have a thick layer of pine needles and contain very little herbs. Herbaceous species may include yellow colicroot, purple bluestem, bluestem, wiregrass, longleaf milkweed, gopherweed, vanillaleaf, spadeleaf, goldenaster, silver croton, toothache grass, woolly witchgrass, witchgrass, dewthreads, lovegrass, fleabane, early whitetop fleabane, flattened pipewort, tenangle pipewort, button rattlesnakemaster, dogfennel, yankeeweed, milkpea, variableleaf sunflower (*Helianthus heterophyllus*), stiff sunflower, Carolina redroot, whitehead bogbutton, gayfeather, golden

crest, foxtail club-moss, club-moss, sensitive brier, whitetop aster (*Oclemena reticulata*), cinnamon fern, crowngrass, narrowleaf silkgrass, grassleaf goldenaster, camphorweed, orange milkwort, candyroot, October flower, bracken fern, blackroot, savannah meadowbeauty, meadowbeauty, beaksedge, yellow pitcher plant, kidneyleaf rosinweed, crowpoison, scaleleaf aster, nettleleaf noseburn, Chapman's crownbeard, Virginia chain fern, and yelloweyed grass.

The vines may include yellow jessamine, earleaf greenbrier, laurel greenbrier, and muscadine.

Fire Regimes:

Refer to the historic community. Historic pyrogenic communities may require more frequent fire in the beginning than is typical for the historic natural community.

Management Needs:

Thinning of pines in historically pyrogenic sites would promote restoration to desired future conditions but planting of native species such as longleaf pine and wiregrass, as well as frequent prescribed burns, would provide the greatest benefit. In areas with good quality ground cover, especially where wiregrass is present, avoid using herbicides to reduce shrub and grass competition when planting longleaf pines. Priority should be given to burning areas of higher quality groundcover, using frequent growing-season fires to encourage herbaceous species, especially wiregrass, to reproduce naturally.

L. Altered Landcover Types

Altered landcover types are areas where the natural community has been overwhelmingly altered as a result of human activity.

1. Successional Hydric Shrubland / Forest

Description:

Successional hydric shrubland / forest mapped in PLSF are historic wet prairies and wet flatwoods, and have desired future conditions matching those communities.

Current Conditions:

Successional hydric shrubland / forest was delineated at PLSF for two reasons: either 1) the historic natural community was evidently open and herbaceous on the 1949 aerials but currently is dominated by trees and shrubs (but not a pine plantation), or 2) the historic natural community was a forested wetland such as a dome or basin swamp which was then planted as a pine plantation, cleared of pine trees and currently a shrub thicket (generally titi and / or black titi).

Shrubland or closed-canopied forest occupying disturbed areas and dominated by fast growing hydrophilic hardwoods such as titi, black titi, sweet gallberry, sweet gum, red maple, water oak, swamp laurel oak, wax myrtle, blackberry (*Rubus argutus*), and groundsel tree. Weedy vines such as smilax (*Smilax* spp.) and muscadine, and non-native invasive plants may be common in the subcanopy and shrub layers. These shrubland/forests may invade herbaceous habitats (i.e., wet prairie, wet flatwoods, seepage slope, depression marsh, basin

marsh, and floodplain marsh) due to lengthy fire-suppression and / or hydrological alterations, or forested wetlands (dome swamp, basin swamp, and strand swamp) that have been cleared and are not succeeding to swamp but to highly disturbed shrubland or forest dominated by hydrophilic hardwoods. Successional hydric shrubland/forests are often shrub thickets with few of the characteristic herbaceous or canopy (e.g. *Taxodium*) species from the former community remaining. They can resemble naturally occurring shrub bogs and can be distinguished from them by occurring in areas of historically herbaceous communities, where fire suppression and / or hydrological alterations have taken place or in former forested swamps that have been logged or undergone severe hydroperiod disruptions. Although some shifts in community type may be better described with a natural community designation, the use of “successional hydric shrubland/forest” 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.

Fire Regimes:

Refer to the historic community. If the goal is restoration of the historic pyrogenic community, more frequent fire may be required than is typical for the historic community in order to reduce woody cover.

Management Needs:

Management should primarily focus on returning a more natural fire regime to successional hydric shrubland/forest. Areas with remnant or restored herbaceous vegetation should be high priorities for burning and burned with late spring / early summer fires to stimulate wiregrass flowering and seed viability. Dense pine canopies may need to be thinned to promote a more herbaceous understory.

2. Other Altered Landcover Types

Description:

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 ruderal habitat is dependent on the historic community. Please refer to the appropriate community type for a more specific explanation of the desired future condition.

Current Conditions:

Altered landcover types on PLSF consist of pine plantation, successional hydric shrubland, abandoned fields/pastures, artificial ponds, canals/ditches, clearings, development, and roads.

Abandoned fields/abandoned pastures (10 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*). Generally designated for old pastures when weedy cover from woody species (*Rubus* spp., *Myrica cerifera*, etc.) is greater than 20 percent. There is one abandoned field at PLSF. The historical natural community type was sandhill. Plant species included are silver croton, dogfennel, panicgrass, and goldenrod.

Artificial pond (18 acres) – water retention ponds, cattle ponds, etc. There are two artificial ponds mapped on PLSF. There was no canopy layer recorded. The shrub layer includes titi and St. John's wort, and herbs includes panicgrass.

Canal/ditch (0.5 acres) – Artificial drainageway.

Clearing – (0.7 acres) – Recent or historic clearings that have significantly altered the groundcover and / or overstory of the original natural community (old homesites, etc.), clearings of unknown origin. There is only one clearing at PLSF of less than an acre.

Developed (6 acres) – These areas include parking lots, campground area, picnic area, and a graveyard. The canopy layer includes longleaf pine and turkey oak. The shrub layer includes yaupon, gopher apple, sand live oak, and blackberry). The herbaceous layer includes pinewoods milkweed, dogfennel, greater Florida spurge, panicgrass), narrowleaf silkgrass, and pineland scalypink (*Stipulicida setacea*).

Road (178 acres) – Paved or unpaved. Roads ≥ 5 meters wide are delineated on the current natural community map. For the most part, ditches are included in the road polygons.

Fire Regimes:

N/A

Management Needs:

It may not be practical or desirable to restore some of the altered landcover types (e.g., developed land, roads, etc.) to the historic natural community. However, long term hydrology restoration that includes the removal of certain roadbeds and ditches would be highly beneficial to the natural communities on the site.

VIII. References

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IX. Glossary of Abbreviations

ARC	Acquisition and Restoration Council
BMP	Best Management Practice
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 the Florida Forest Service
FNAI	Florida Natural Areas Inventory
F.S.	Florida Statutes
FWC	Florida Fish and Wildlife Conservation Commission
NRCS	Natural Resources Conservation Service
NWFWMD	Northwest Florida Water Management District
OALE	DACS Office of Agricultural Law Enforcement
OFW	Outstanding Florida Waters
OOF	Operation Outdoor Freedom
PLSF	Pine Log State Forest
SHCA	Strategic Habitat Conservation Area
TIITF	Board of Trustees of the Internal Improvement Trust Fund
TMDL	Total Maximum Daily Load
WMA	Wildlife Management Area

PINE LOG STATE FOREST
2022 LAND MANAGEMENT PLAN

EXHIBITS

Exhibit A

Ten-Year Management Accomplishment Summary

Pine Log State Forest			
10-Year Accomplishments Summary			
Site Preparation	Chop Single Pass	No.	232
	Burning	Acres	321
	Herbicide	Acres	477
Planting	Longleaf Containerized	Acres	321
Seedling survival checks	Planting Checks	Acres	270
Timber Stand Improvement	Herbicide Treatment	Acres	116
	Mechanical Treatment	Acres	62
Timber Sales	Marking	Acres	146
	Cruising	Acres	146
	Harvest	Acres	282
		Tons	1,632
Timber Inventory	Inventory Update	Acres	6,588
	Plots	Acres	555
Invasive Control	Cogongrass	Acres	31
	Japanese climbing fern	Acres	2
	Torpedograss	Acres	<1
Fire	Wildfire	Acres	0
	Prescribed Burns	Acres	20,728
Recreation	Day Use Estimated Forest Visitors	No.	979,529
	Overnight Camping	No.	136,158
	Annual Entrance Pass	No.	22
	OOF Hunts	No.	4
Roadwork	Roads Graded	Miles	143
	Roads Rebuilt	Miles	9
	Culverts Installed	No.	16
Boundary Maintenance	Maintenance/Marking	Miles	39
I&E Activities	Programs/Tours	No.	44
	Radio/TV Articles	No.	20
Other Activities	Trail Maintenance	Miles	88
	Archaeological Sites Monitored	No.	4
	Hogs Trapped	No.	16
	Commercial Vendor Permit	No.	1

Exhibit B

Boundary and Road Map



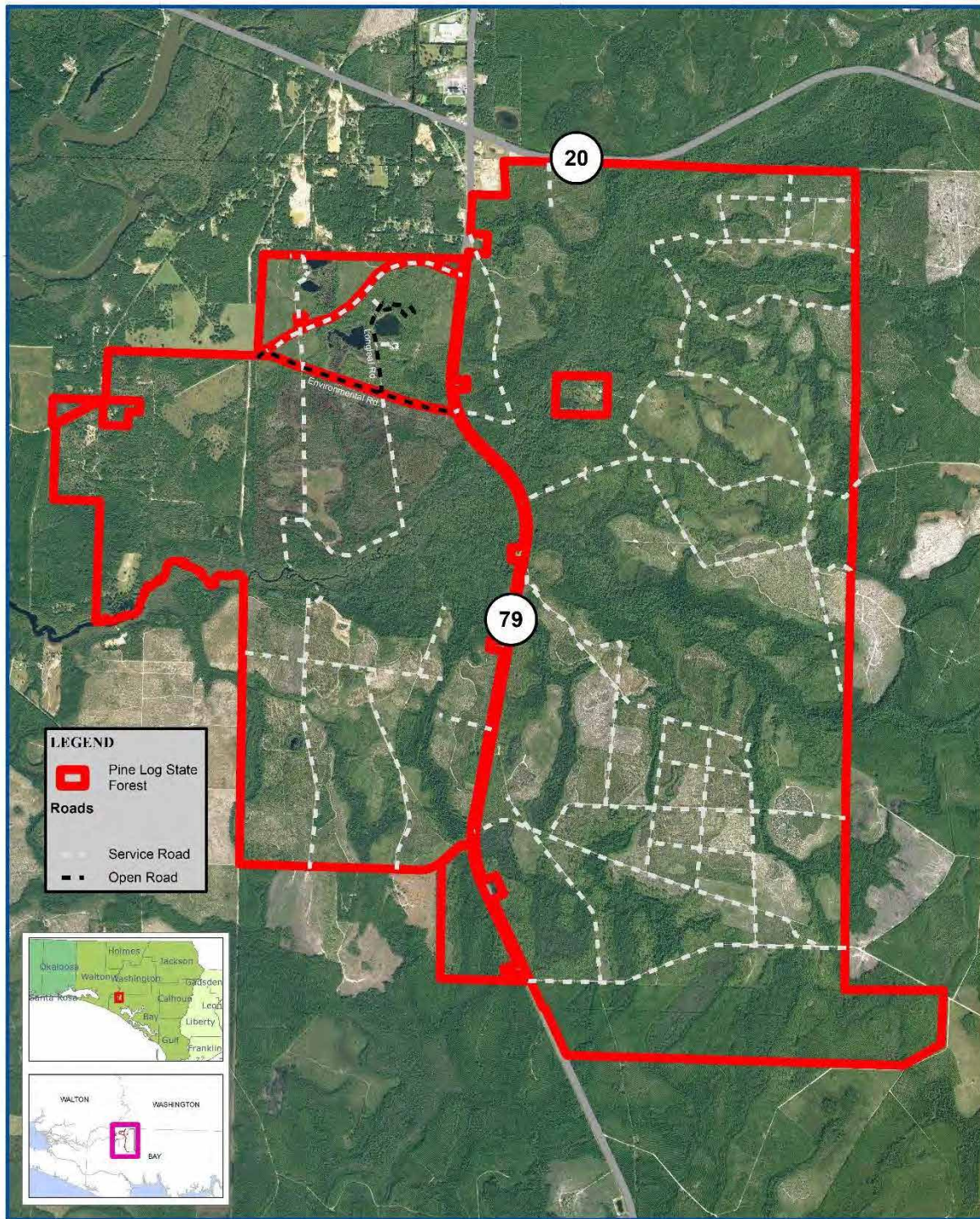
Pine Log State Forest

Boundary and Road Map

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

DISCLAIMER:
The views expressed in this Periodic Policy Statement (PPS) do not necessarily represent those of the U.S. Environmental Protection Agency (EPA). EPA does not intend to use this PPS to enforce the law. This PPS is not intended to be used as a basis for enforcement action. EPA does not intend to use this PPS to enforce the law. This PPS is not intended to be used as a basis for enforcement action. EPA does not intend to use this PPS to enforce the law. This PPS is not intended to be used as a basis for enforcement action.

Wetland Area boundaries courtesy of
the Florida Natural Areas Inventory
formerly used Defense Base #80451
from the US Army Corps of Eng. Accts



0.5 0.25 0 Miles



Map Month/Year: July 2021

Exhibit C

Optimal Management Boundary Map

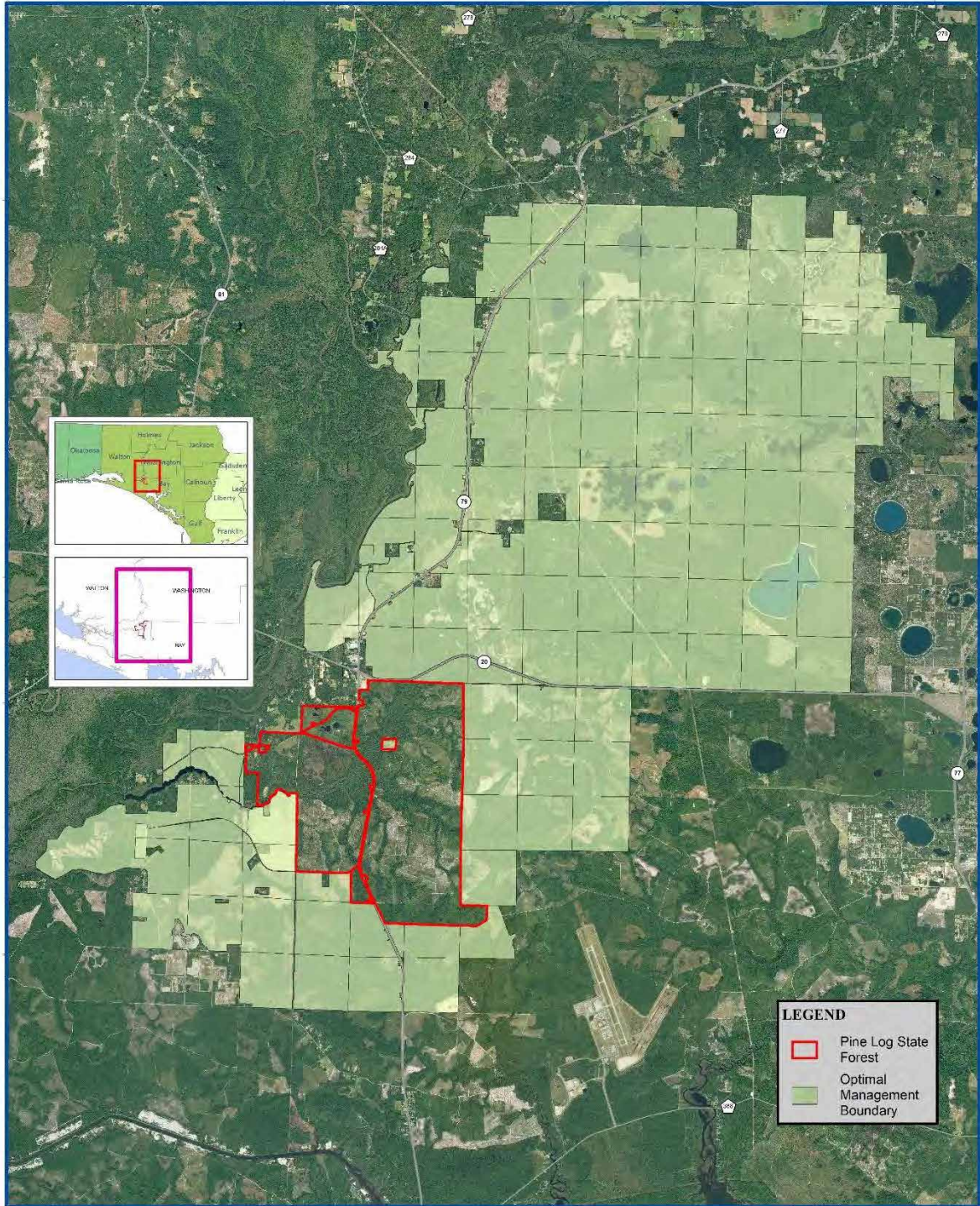


Florida Forest Service

Pine Log State Forest Optimal Management Boundary Map

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

DISCLAIMER:
This map was prepared by the Florida Forest Service, Department of Natural Resources, for the purpose of providing information to the public. It is not intended to be used for any other purpose. The Florida Forest Service does not warrant the accuracy or completeness of the information provided on this map. The Florida Forest Service is not responsible for any errors or omissions on this map. The Florida Forest Service is not responsible for any damages or losses resulting from the use of this map. The Florida Forest Service is not responsible for any claims or liabilities resulting from the use of this map. The Florida Forest Service is not responsible for any claims or liabilities resulting from the use of this map.



0 0.5 1 1.5 2 2.5 Miles



Map Month/Year: July 2011

0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000 Yards

Exhibit D

Facilities, Recreation, and Improvements Map



Florida Forest Service

Pine Log State Forest

Facilities, Recreation, and Improvements Map

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

DISCLAIMER:
This map is intended to provide general information only. It is not intended to be used for legal purposes. The Florida Forest Service does not warrant the accuracy or completeness of the information provided on this map. The Florida Forest Service is not responsible for any errors or omissions on this map. The Florida Forest Service is not responsible for any damages, including consequential damages, arising from the use of this map. The Florida Forest Service is not responsible for any claims, including consequential claims, arising from the use of this map. The Florida Forest Service is not responsible for any claims, including consequential claims, arising from the use of this map.

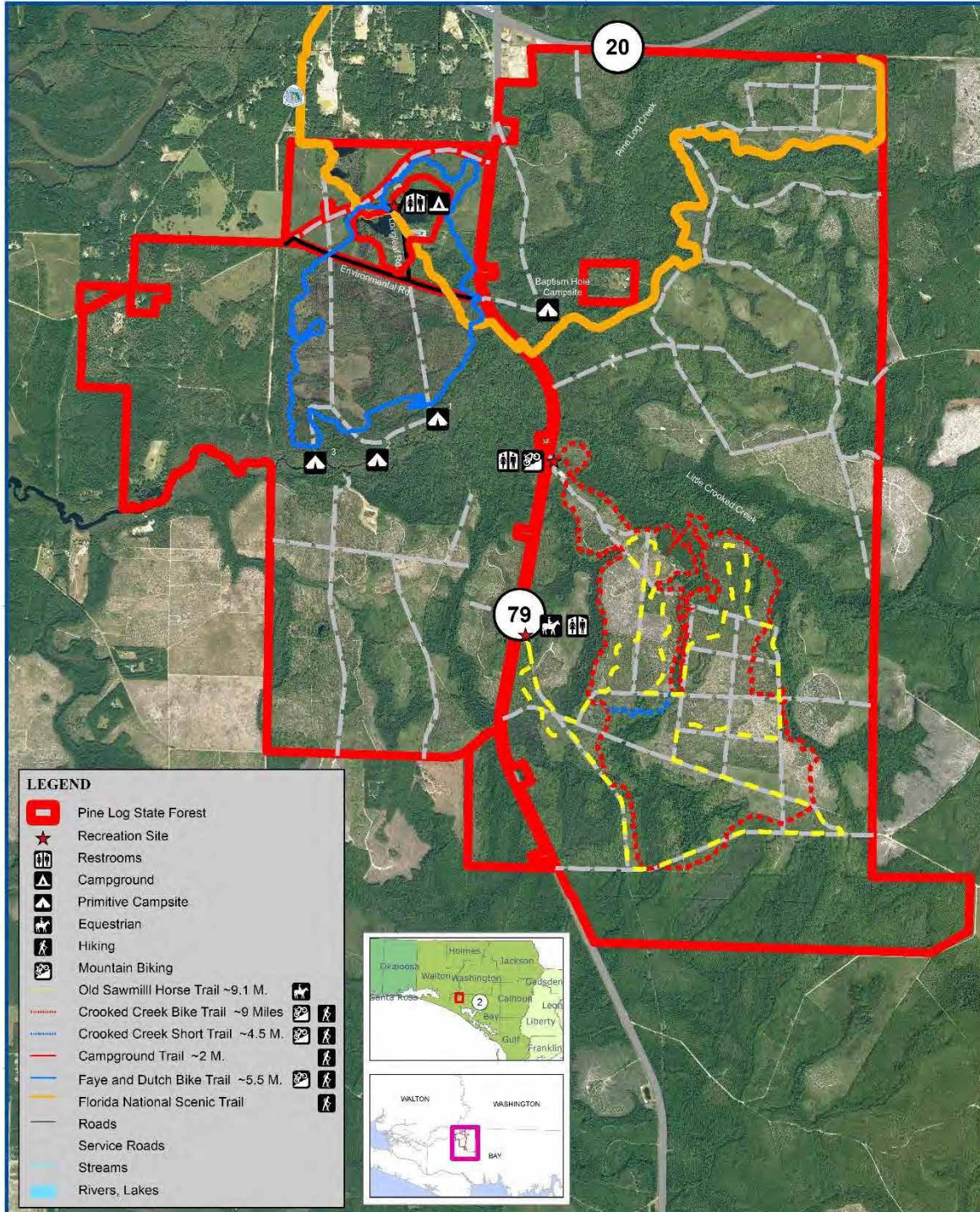


Exhibit E

Proximity to Significant Managed Lands



Florida Forest Service

Pine Log State Forest

Proximity to Significant Managed Lands Map

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

DISCLAIMER:
This map was prepared by the Florida Forest Service, Department of Natural Resources, and is intended for informational purposes only. It is not a warranty, representation, or guarantee of accuracy. The Florida Forest Service is not responsible for any errors or omissions, or for any consequences arising from the use of the information contained herein. The Florida Forest Service is not responsible for any damages, including consequential damages, arising from the use of the information contained herein.

Managed Areas include the boundaries of the following: National Forest System, State Forests, and Private Lands. The Florida Forest Service is not responsible for any damages, including consequential damages, arising from the use of the information contained herein.

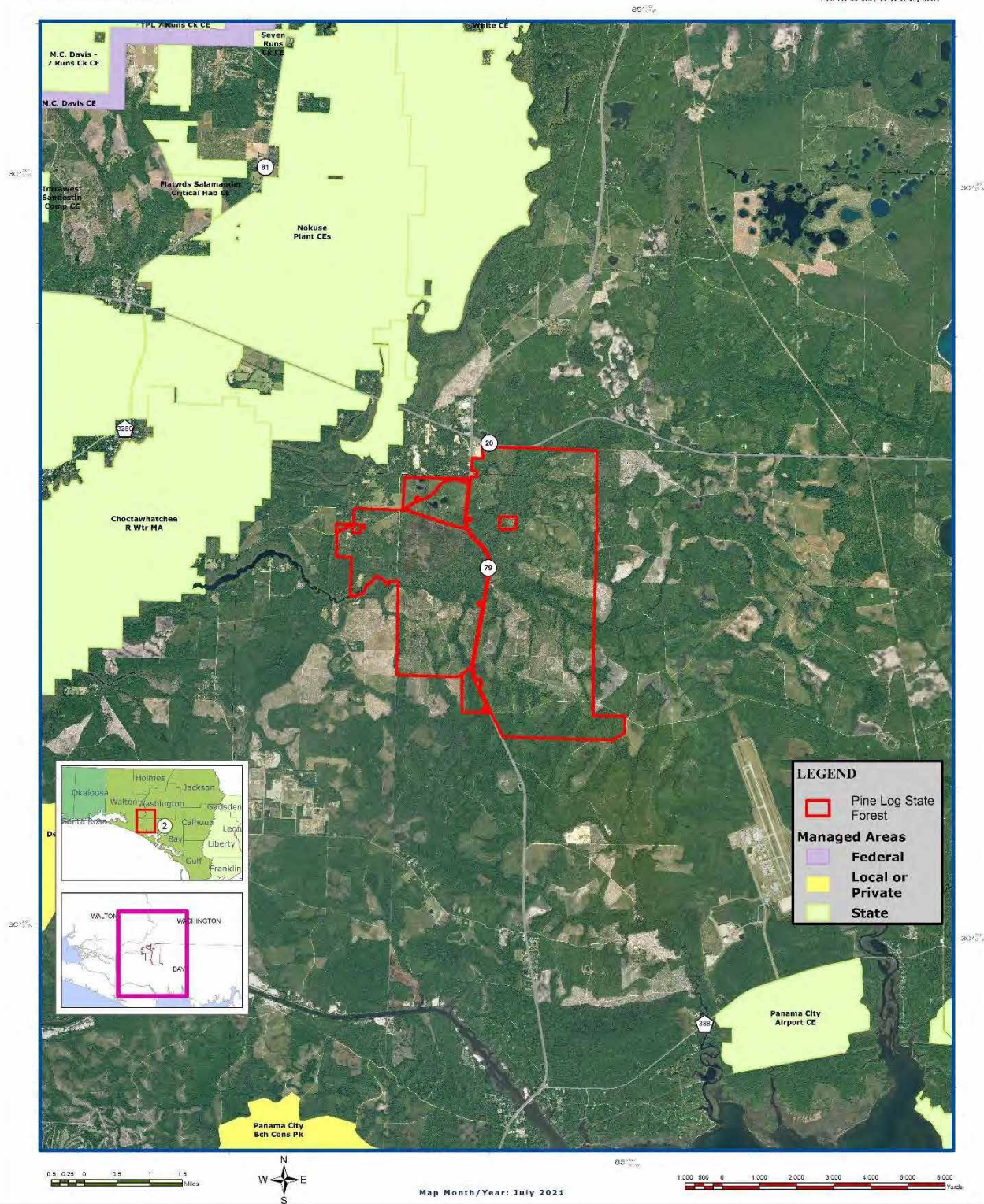


Exhibit F

Department of State Report on Archaeological Sites and Historical 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 850-245-6333 for project review information.

June 28, 2019

Patti Anderson
OPS Land Management Planner
Florida Forest Service
Florida Department of Agriculture and Consumer Services
Phone: (850) 681-5889
E-mail: Patricia.Anderson@FreshFromFlorida.com

Re: Pine Log State Forest

In response to your inquiry of June 28, 2019, the Florida Master Site File lists three archaeological sites and one resource group found at the designated area of Pine Log State Forest in Bay and Washington Counties, Florida

When interpreting the results of our 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.
- Because vandalism and looting are common at Florida sites, we ask that you limit the distribution of location information on archaeological sites.
- While many of our records document historically significant resources, the documentation of a resource at the Florida Master Site File does not necessarily mean the resource is historically significant.
- 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 850-245-6333.

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

Sincerely,

Eman M. Vovsi, Ph.D.
Florida Master Site File
Eman.Vovsi@DOS.MyFlorida.com

Exhibit G

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 September 2019)

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

A. General Discussion

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

B. Agency Responsibilities

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

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

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

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

C. Statutory Authority

Statutory Authority and more in-depth information can be found at:

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

D. Management Implementation

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

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

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

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

E. Minimum Review Documentation Requirements

In order to have a proposed project reviewed by the Division, certain information must be submitted for comments and recommendations. The minimum review documentation requirements can be found at:

https://dos.myflorida.com/media/31392/minimum_review_documentation_requirements.pdf

* * *

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

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

Email: Robin.Jackson@DOS.MyFlorida.com
Phone: (850) 245-6496
Toll Free: (800) 847-7278
Fax: (850) 245-6439

Exhibit H

Soil Types Map and Descriptions



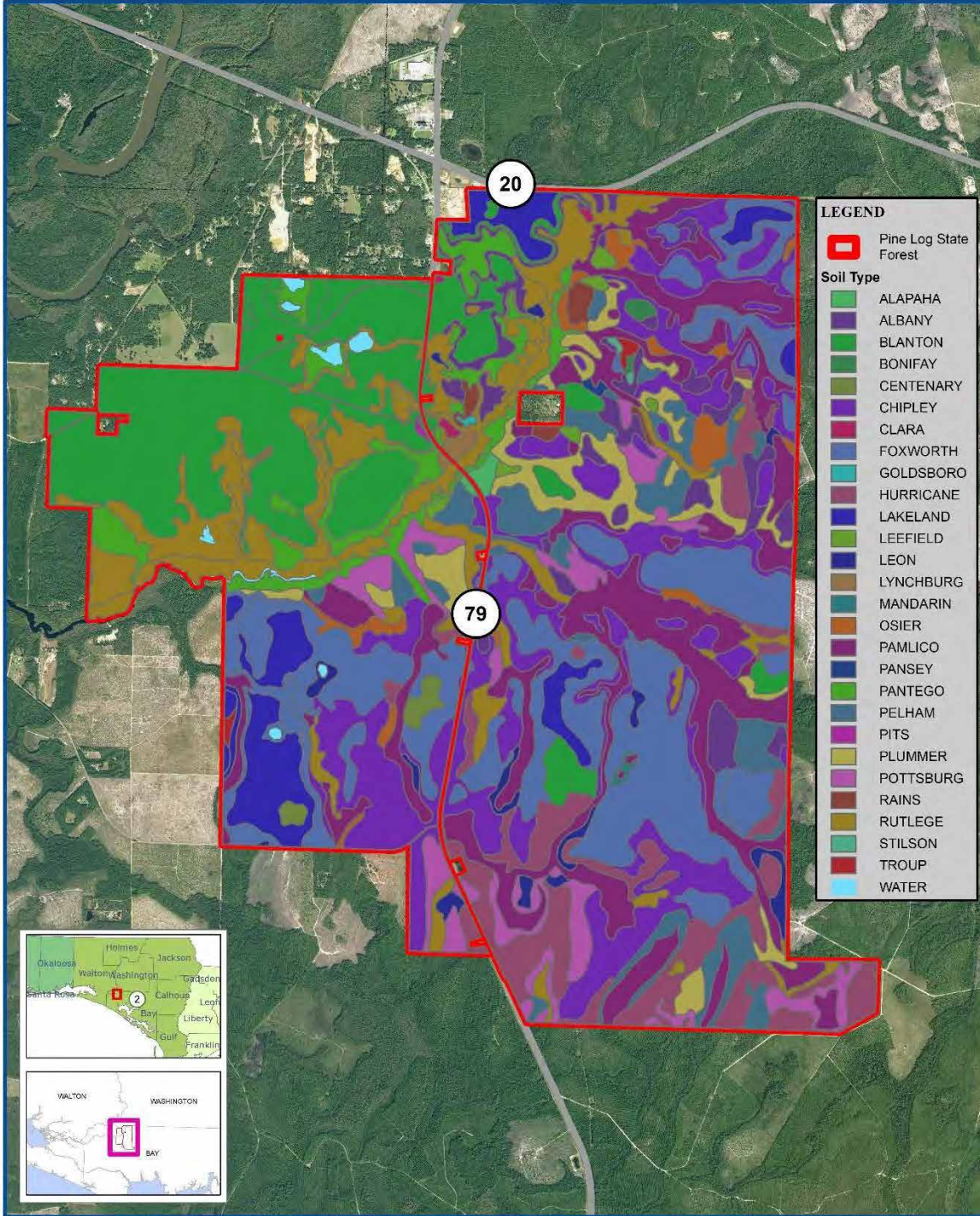
Florida Forest Service

Pine Log State Forest

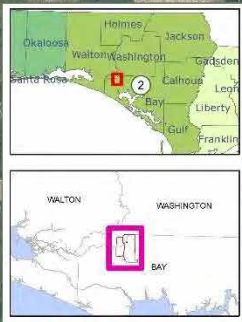
Soils Map

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

DISCLAIMER:
This map was prepared by the Florida Forest Service (FFS) using data provided by the United States Department of Agriculture (USDA) National Inventory of Soil and Water Resources (NISWR) and the United States Army Corps of Engineers (USACE) National Inventory of Soil and Water Resources (NISWR). The FFS is not responsible for any errors or omissions in the data provided by the USDA or USACE. The FFS is not responsible for any errors or omissions in the data provided by the USDA or USACE. The FFS is not responsible for any errors or omissions in the data provided by the USDA or USACE.



- LEGEND**
- Pine Log State Forest
- Soil Type**
- ALAPAHA
 - ALBANY
 - BLANTON
 - BONIFAY
 - CENTENARY
 - CHIPLEY
 - CLARA
 - FOXWORTH
 - GOLDSBORO
 - HURRICANE
 - LAKELAND
 - LEEFIELD
 - LEON
 - LYNCHBURG
 - MANDARIN
 - OSIER
 - PAMLICO
 - PANSEY
 - PANTEGO
 - PELHAM
 - PITS
 - PLUMMER
 - POTTSBURG
 - RAINS
 - RUTLEGE
 - STILSON
 - TROUP
 - WATER



0.5 0.25 0 Miles



Map Month/Year: July 2021

0 500 1,000 Feet
0 500 1,000 Yards

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)

Bay County, Florida

Map Unit: 1—Albany sand, 0 to 2 percent slopes

Component: Albany (90%)

The Albany component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on flats, 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 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 54 inches during January, February, March, December. Organic matter content in the surface horizon is about 1 percent. 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: Bonifay (4%)

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

Component: Blanton (4%)

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

Component: Chipley (2%)

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

Map Unit: 2—Albany sand, 2 to 5 percent slopes**Component: Albany (85%)**

The Albany component makes up 85 percent of the map unit. Slopes are 2 to 5 percent. This component is on ridges 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 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 21 inches during January, February, March, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3e. 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: Blanton (3%)

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

Component: Lakeland (2%)

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

Component: Leefield (2%)

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

Component: Stilson (2%)

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

Component: Chipley (2%)

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

Component: Foxworth (2%)

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

Component: Bonifay (2%)

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

Map Unit: 3—Blanton fine sand, 0 to 5 percent slopes**Component: Blanton (85%)**

The Blanton 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. 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 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 60 inches during January, February, March, December. Organic matter content in the surface horizon is about 2 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: Bonifay (3%)

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

Component: Foxworth (3%)

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

Component: Lakeland (3%)

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

Component: Troup (3%)

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

Component: Albany (3%)

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

Map Unit: 4—Blanton fine sand, 5 to 8 percent slopes**Component: Blanton (85%)**

The Blanton component makes up 85 percent of the map unit. Slopes are 5 to 8 percent. This component is on ridges 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 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 60 inches during January, February, March, December. Organic matter content in the surface horizon is about 2 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: Bonifay (3%)

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

Component: Troup (3%)

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

Component: Chipley (2%)

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

Component: Lakeland (2%)

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

Component: Stilson (2%)

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

Component: Foxworth (2%)

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

Component: Albany (1%)

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

Map Unit: 5--Bonifay sand, 0 to 5 percent slopes**Component:** Bonifay (88%)

The Bonifay component makes up 88 percent of the map unit. Slopes are 0 to 5 percent. This component is on — Error in Exists On —. 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 well 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 57 inches during January, February, March, April, May, June, July, August, September. 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: Troup (5%)

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

Component: Foxworth (4%)

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

Component: Lakeland (3%)

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

Map Unit: 9--Lakeland sand, 0 to 5 percent slopes**Component:** Lakeland (80%)

The Lakeland component makes up 80 percent of the map unit. Slopes are 0 to 5 percent. This component is on hills, 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 excessively 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. Irrigated land capability classification is 4s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Troup (6%)

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

Component: Bonifay (5%)

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

Component: Foxworth (5%)

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

Component: Chipley (2%)

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

Component: Albany (2%)

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

Map Unit: 11--Lakeland sand, 8 to 12 percent slopes

Component: Lakeland (80%)

The Lakeland component makes up 80 percent of the map unit. Slopes are 8 to 12 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 excessively 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 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: Troup (8%)

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

Component: Blanton (3%)

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

Component: Bonifay (3%)

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

Component: Albany (2%)

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

Component: Foxworth (2%)

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

Component: Chipley (2%)

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

Map Unit: 12--Leefield sand, 0 to 2 percent slopes

Component: Leefield (85%)

The Leefield 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 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 23 inches during January, February, March, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. 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: Alapaha (5%)

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

Component: Stilson (4%)

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

Component: Albany (2%)

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

Component: Pelham, non-hydric (2%)

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

Component: Chipley (1%)

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

Component: Foxworth (1%)

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

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

Component: Leon (80%)

The Leon component makes up 80 percent of the map unit. Slopes are 0 to 2 percent. This component is on flatwoods, marine terraces, 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 January, February, March, April, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 4w. Irrigated 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: Leon, hydric (5%)

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

Component: Hurricane (4%)

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

Component: Pottsburg (4%)

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

Component: Mandarin (3%)

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

Component: Pickney (2%)

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

Component: Rutlege (2%)

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

Map Unit: 15--Stilson sand, 0 to 5 percent slopes

Component: Stilson (85%)

The Stilson 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. 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 moderately well 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 33 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2s. 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: Leefield (5%)

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

Component: Bonifay (5%)

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

Component: Blanton (3%)

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

Component: Albany (2%)

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

Map Unit: 16—Stilson sand, 5 to 8 percent slopes

Component: Stilson (85%)

The Stilson component makes up 85 percent of the map unit. Slopes are 5 to 8 percent. This component is on ridges 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 moderately well 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 33 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. 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: Bonifay (5%)

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

Component: Blanton (5%)

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

Component: Leefield (3%)

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

Component: Albany (2%)

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

Map Unit: 17—Troup sand, 0 to 5 percent slopes**Component: Troup (80%)**

The Troup component makes up 80 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridges 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 somewhat excessively 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. 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 R133AY002FL Longleaf Pine-turkey Oak Hills 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: Blanton (10%)

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

Component: Foxworth (5%)

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

Component: Lakeland (5%)

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

Map Unit: 20—Foxworth sand, 0 to 5 percent slopes

Component: Foxworth (95%)

The Foxworth component makes up 95 percent of the map unit. Slopes are 0 to 5 percent. This component is on ridges, 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 low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 57 inches during June, July, August, September, October. Organic matter content in the surface horizon is about 1 percent. This component is in the R133AY002FL Longleaf Pine-turkey Oak Hills ecological site. Nonirrigated land capability classification is 3s. Irrigated land capability classification is 4s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Lakeland (4%)

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

Component: Chipley (1%)

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

Map Unit: 21—Foxworth sand, 5 to 8 percent slopes

Component: Foxworth (88%)

The Foxworth component makes up 88 percent of the map unit. Slopes are 5 to 8 percent. This component is on ridges 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 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 57 inches during January, February, March, December. Organic matter content in the surface horizon is about 1 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: Lakeland (3%)

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

Component: Bonifay (3%)

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

Component: Blanton (3%)

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

Component: Troup (3%)

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

Map Unit: 22—Pamlico-Dorovan complex

Component: Pamlico (40%)

The Pamlico component makes up 40 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 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 frequently flooded. It is frequently ponded. A seasonal zone of water saturation is at 6 inches during January, February, March, April, May, December. Organic matter content in the surface horizon is about 50 percent. 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: Dorovan (35%)

The Dorovan component makes up 35 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 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 moderately high. 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 4 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 50 percent. 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: Rutlege (10%)

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

Component: Pantego (3%)

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

Component: Plummer (3%)

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

Component: Pottsburg, hydric (3%)

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

Component: Pansey (2%)

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

Component: Alapaha (2%)

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

Component: Rains (2%)

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

Map Unit: 23—Chipley sand, 0 to 5 percent slopes**Component: Chipley (90%)**

The Chipley component makes up 90 percent of the map unit. Slopes are 0 to 5 percent. This component is on — Error in Exists On —. 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 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 30 inches during January, February, March, April, December. 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: Foxworth (5%)

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

Component: Lakeland (5%)

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

Map Unit: 24—Chipley sand, 5 to 8 percent slopes**Component: Chipley (85%)**

The Chipley component makes up 85 percent of the map unit. Slopes are 5 to 8 percent. This component is on knolls 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 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 January, February, March, April, December. Organic matter content in the surface horizon is about 1 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: Blanton (4%)

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

Component: Foxworth (4%)

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

Component: Albany (4%)

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

Component: Stilson (3%)

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

Map Unit: 25—Hurricane sand, 0 to 2 percent slopes**Component: Hurricane (90%)**

The Hurricane component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on — Error in Exists On —. 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 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 33 inches during January, February, March, April, November, December. Organic matter content in the surface horizon is about 1 percent. This component is in the R133AY004FL North Florida Flatwoods 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: Foxworth (5%)

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

Component: Chipley (5%)

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

Map Unit: 26—Centenary sand, 0 to 5 percent slopes

Component: Centenary (90%)

The Centenary component makes up 90 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. 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. A seasonal zone of water saturation is at 51 inches during January, February, March, December. 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: Lakeland (6%)

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

Component: Chipley (4%)

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

Map Unit: 27—Mandarin sand, 0 to 2 percent slopes**Component: Mandarin (85%)**

The Mandarin 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 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, December. Organic matter content in the surface horizon is about 1 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.

Component: Chipley (5%)

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

Component: Hurricane (4%)

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

Component: Resota (3%)

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

Component: Foxworth (3%)

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

Map Unit: 29—Rutlege sand, 0 to 2 percent slopes**Component: Rutlege (85%)**

The Rutlege component makes up 85 percent of the map unit. Slopes are 0 to 2 percent. This component is on — Error in Exists On —. The parent material consists of sandy marine deposits and/or fluviomarine 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 3 inches during January, February, March, April, May, December. Organic matter content in the surface horizon is about 6 percent. This component is in the R138XY004FL North Florida Flatwoods 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: Pickney (5%)

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

Component: Plummer (5%)

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

Component: Scranton (5%)

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

Map Unit: 30—Pottsburg-Pottsburg, wet, sand, 0 to 2 percent slopes

Component: Pottsburg (65%)

The Pottsburg component makes up 65 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 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, March, July, August, September, October, November, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4w. Irrigated 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: Pottsburg, wet (25%)

The Pottsburg, wet component makes up 25 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 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 January, February, March, July, August, September, October, November, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4w. Irrigated 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: Leon, non-hydric (6%)

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

Component: Allanton (2%)

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

Component: Chipley (2%)

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

Map Unit: 31—Osier fine sand

Component: Osier (85%)

The Osier component makes up 85 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 alluvium. 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 4 inches during January, February, March, November, December. Organic matter content in the surface horizon is about 2 percent. 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: Leon, non-hydric (2%)

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

Component: Allanton (2%)

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

Component: Chipley (2%)

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

Component: Albany (2%)

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

Component: Pottsburg, hydric (2%)

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

Component: Mandarin (2%)

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

Component: Rutlege (2%)

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

Component: Pamlico (1%)

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

Map Unit: 32—Plummer sand**Component: Plummer (85%)**

The Plummer 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 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 January, February, March, April, May, December. Organic matter content in the surface horizon is about 2 percent. 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: Pelham, hydric (4%)

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

Component: Rutlege (3%)

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

Component: Albany (3%)

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

Component: Pottsburg, hydric (3%)

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

Component: Rains (2%)

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

Map Unit: 33—Pelham sand**Component: Pelham, hydric (65%)**

The Pelham, 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 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 frequently flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during January, February, March, April. Organic matter content in the surface horizon is about 2 percent. 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: Pelham, non-hydric (20%)

The Pelham, non-hydric component makes up 20 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 frequently flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during January, February, March, April. Organic matter content in the surface horizon is about 2 percent. 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: Allanton (2%)

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

Component: Leefield (2%)

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

Component: Plummer (2%)

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

Component: Osier (2%)

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

Component: Chipley (2%)

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

Component: Albany (2%)

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

Component: Alapaha (2%)

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

Component: Stilson (1%)

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

Map Unit: 36—Alapaha loamy sand**Component: Alapaha (80%)**

The Alapaha component makes up 80 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 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 occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 4 inches during January, February, March, April, May, December. Organic matter content in the surface horizon is about 2 percent. 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: Pelham, hydric (5%)

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

Component: Leefield (3%)

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

Component: Pansey (3%)

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

Component: Albany (2%)

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

Component: Osier (2%)

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

Component: Plummer (2%)

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

Component: Rains (2%)

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

Component: Pamlico (1%)

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

Map Unit: 37—Rains sand**Component: Rains (85%)**

The Rains 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 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 6 inches during January, February, March, April, November, December. Organic matter content in the surface horizon is about 4 percent. 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: Pelham, hydric (5%)

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

Component: Rutlege (3%)

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

Component: Pantego (3%)

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

Component: Plummer (2%)

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

Component: Hurricane (2%)

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

Map Unit: 38—Pansey loamy sand**Component: Pansey (85%)**

The Pansey 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 loamy fluviomarine 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 low. 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 6 inches during January, February, March, December. Organic matter content in the surface horizon is about 1 percent. 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: Pantego (3%)

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

Component: Alapaha (3%)

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

Component: Pelham, hydric (3%)

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

Component: Albany (2%)

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

Component: Leefield (2%)

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

Component: Plummer (2%)

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

Map Unit: 39—Pantego sandy loam

Component: Pantego (85%)

The Pantego component makes up 85 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 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 rarely flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April. Organic matter content in the surface horizon is about 7 percent. 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: Pansey (4%)

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

Component: Rutlege (2%)

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

Component: Albany (2%)

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

Component: Leefield (2%)

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

Component: Pelham, hydric (2%)

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

Component: Alapaha (2%)

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

Component: Pamlico (1%)

Generated brief soil descriptions are created for major soil components. The Pamlico 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.

Washington County, Florida

Map Unit: 2—Rutlege, Pickney and Pamlico soils, frequently flooded

Component: Rutlege (40%)

The Rutlege component makes up 40 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains on marine terraces on coastal plains. The parent material consists of sandy marine deposits and/or fluviomarine 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 frequently flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September. Organic matter content in the surface horizon is about 4 percent. 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: Pickney (25%)

The Pickney component makes up 25 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains on marine terraces on coastal plains. The parent material consists of sandy marine deposits and/or fluviomarine 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 frequently flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September. Organic matter content in the surface horizon is about 6 percent. 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: Pamlico (19%)

The Pamlico component makes up 19 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 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 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. Organic matter content in the surface horizon is about 40 percent. 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: Dorovan (6%)

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

Component: Leon (4%)

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

Component: Bibb (3%)

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

Component: Plummer (3%)

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

Map Unit: 9—Albany, Chipley, Leon complex, 0 to 5 percent slopes

Component: Albany (38%)

The Albany component makes up 38 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 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 very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March, April, July, August, September, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. 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: Chipley (20%)

The Chipley component makes up 20 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. 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 low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 23 inches during January, February, March, July, August, September. Organic matter content in the surface horizon is about 4 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: Leon (16%)

The Leon component makes up 16 percent of the map unit. Slopes are 0 to 5 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 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 January, February, March, July, August, September. Organic matter content in the surface horizon is about 2 percent. 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: Clara (6%)

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

Component: Pamlico (6%)

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

Component: Ocilla (6%)

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

Component: Plummer, hydric (3%)

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

Component: Osler (3%)

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

Component: Lynchburg (2%)

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

Map Unit: 56—Albany-Ocilla complex, 5 to 8 percent slopes

Component: Albany (72%)

The Albany component makes up 72 percent of the map unit. Slopes are 5 to 8 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 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 very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 18 inches during January, February, March, April, July, August, September, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. 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: Ocilla (16%)

The Ocilla component makes up 16 percent of the map unit. Slopes are 5 to 8 percent. This component is on rises 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 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 21 inches during January, February, March, April, September, December. Organic matter content in the surface horizon is about 3 percent. 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: Leefield (7%)

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

Component: Hurricane (4%)

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

Component: Chipley (1%)

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

Map Unit: 63—Lakeland sand, 0 to 5 percent slopes**Component:** Lakeland (80%)

The Lakeland component makes up 80 percent of the map unit. Slopes are 0 to 5 percent. This component is on hills, 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 excessively 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. Irrigated land capability classification is 4s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Troup (6%)

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

Component: Bonifay (5%)

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

Component: Foxworth (5%)

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

Component: Chipley (2%)

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

Component: Albany (2%)

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

Map Unit: 72—Lynchburg loamy fine sand, 2 to 5 percent slopes**Component:** Lynchburg (88%)

The Lynchburg component makes up 88 percent of the map unit. Slopes are 2 to 5 percent. This component is on rises on marine terraces on coastal plains. The parent material consists of 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 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 January, February, March, July, August, September. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. 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: Leefield (12%)

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

Map Unit: 87—Clara and Plummer soils, occasionally ponded

Component: Clara (50%)

The Clara component makes up 50 percent of the map unit. Slopes are 0 to 2 percent. This component is on semi-open 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 moderate. Shrink-swell potential is low. This soil is not flooded. It is occasionally 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 0 percent. 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: Plummer, hydric (30%)

The Plummer, hydric component makes up 30 percent of the map unit. Slopes are 0 to 2 percent. This component is on semi-open 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 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 occasionally ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November. Organic matter content in the surface horizon is about 6 percent. 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: Chipley (10%)

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

Component: Albany (5%)

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

Component: Plummer, non-hydric (5%)

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

Map Unit: 90—Rains and Bayboro soils, depressional**Component: Rains (56%)**

The Rains component makes up 56 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 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 January, February, March, July, August, September. Organic matter content in the surface horizon is about 4 percent. 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: Bayboro (40%)

The Bayboro component makes up 40 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 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 moderate. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 6 inches during January, February, March, June, July, August, September. Organic matter content in the surface horizon is about 7 percent. 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: Lynchburg (4%)

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

Map Unit: 98—Rutlege loamy fine sand, depressional**Component: Rutlege, depressional (75%)**

The Rutlege, depressional component makes up 75 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 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 6 percent. 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: Clara (13%)

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

Component: Bibb (5%)

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

Component: Pamlico (4%)

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

Component: Leon (2%)

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

Component: Plummer, hydric (1%)

Generated brief soil descriptions are created for major soil components. The Plummer, 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.

Map Unit: 100—Leon-Chipley complex**Component: Leon (54%)**

The Leon component makes up 54 percent of the map unit. Slopes are 0 to 2 percent. This component is on hillslopes 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 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 January, February, March, July, August, September. Organic matter content in the surface horizon is about 2 percent. 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: Chipley (32%)

The Chipley component makes up 32 percent of the map unit. Slopes are 0 to 2 percent. This component is on hillslopes 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 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 23 inches during January, February, March, July, August, September. Organic matter content in the surface horizon is about 4 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: Hurricane (12%)

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

Component: Clara (2%)

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

Map Unit: 106—Pantego and Clara soils, ponded**Component: Pantego (55%)**

The Pantego 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 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 January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 5 percent. 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: Clara (30%)

The Clara 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, 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 poorly drained. Water movement in the most restrictive layer is 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 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 0 percent. 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: Chipley (10%)

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

Component: Leon (3%)

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

Component: Bibb (1%)

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

Component: Plummer, hydric (1%)

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

Map Unit: 113—Pits-Udorthents complex, reclaimed, 0 to 90 percent slopes

Component: Pits (80%)

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

Component: Udorthents (19%)

The Udorthents component makes up 19 percent of the map unit. Slopes are 0 to 30 percent. This component is on marine terraces, 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 well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. 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 6e. This soil does not meet hydric criteria.

Component: Arens (1%)

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

Map Unit: 116—Blanton-Lakeland complex, 0 to 5 percent slopes**Component: Blanton (50%)**

The Blanton component makes up 50 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 sandy and loamy 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 48 inches during January, February, March, July, August, September. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2s. 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: Lakeland (40%)

The Lakeland component makes up 40 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 sandy eolian deposits and/or 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 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: Foxworth (10%)

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

Map Unit: 117—Blanton-Lakeland complex, 5 to 8 percent slopes

Component: Blanton (55%)

The Blanton component makes up 55 percent of the map unit. Slopes are 5 to 8 percent. This component is on hillslopes 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 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 48 inches during January, February, March, July, August, September. 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: Lakeland (38%)

The Lakeland component makes up 38 percent of the map unit. Slopes are 5 to 8 percent. This component is on hillslopes on marine terraces on coastal plains. The parent material consists of sandy eolian deposits and/or 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 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 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: Foxworth (7%)

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

Map Unit: 119—Blanton-Lakeland complex, 8 to 12 percent slopes

Component: Blanton (70%)

The Blanton component makes up 70 percent of the map unit. Slopes are 8 to 12 percent. This component is on hillslopes 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 moderately well 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 48 inches during January, February, March, July, August, September. Organic matter content in the surface horizon is about 1 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: Lakeland (30%)

The Lakeland component makes up 30 percent of the map unit. Slopes are 8 to 12 percent. This component is on hillslopes on marine terraces on coastal plains. The parent material consists of sandy eolian deposits and/or 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 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 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: 121—Goldsboro loamy sand, 0 to 2 percent slopes

Component: Goldsboro (80%)

The Goldsboro 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 moderately well 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 30 inches during January, February, March, April, August, September, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. 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: Lynchburg (12%)

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

Component: Dunbar (5%)

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

Component: Bladen (2%)

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

Component: Rains (1%)

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

Map Unit: 128—Blanton-Bonneau complex, 0 to 5 percent slopes

Component: Blanton (70%)

The Blanton component makes up 70 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 sandy and loamy 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 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 48 inches during January, February, March, July, August, September. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2s. 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: Bonneau (30%)

The Bonneau component makes up 30 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 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 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 51 inches during January, February, March, April, August, September, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2s. 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.

Data Source Information

Soil Survey Area: Bay County, Florida
Survey Area Data: Version 20, Jun 10, 2020

Soil Survey Area: Washington County, Florida
Survey Area Data: Version 17, Jun 12, 2020

Exhibit I

Department of Environmental Protection
Outstanding Florida Waters



FLORIDA DEPARTMENT OF Environmental Protection

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

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

January 10, 2019

Ms. Patti Anderson
Florida Forest Service Land Management Plan Coordinator
Florida Department of Agriculture and Consumer Services
3125 Conner Boulevard, Suite I-262, Mail Stop C-25
Tallahassee, FL 32399-1650

RE: Pine Log State Forest

Dear Ms. Anderson:

Thank you for your inquiry regarding the surface water quality classification of waters on and near Pine Log State Forest in Bay and Washington Counties. There are no waters on or near the site listed as exceptions to Class III in subparagraphs 62-302.400(17)(b)3. or 67., Florida Administrative Code (F.A.C.); therefore, all of the surface waters on or adjacent to the site 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(15), F.A.C.

As requested, we also checked to see if there are any Outstanding Florida Waters (OFWs) near the state forest. According to subsection 62-302.700(9), F.A.C., there are no OFWs on or adjacent to, the state forest. The nearest OFW is the Choctawhatchee River "Special Water" OFW approximately 0.3 mile to the northwest (see subsection 62-302.700(9)(i)7., F.A.C.).

While there are several other parcels on, adjacent, or nearby that are considered conservation lands at a Federal, State or Local level (according to the Florida Natural Areas Inventory Managed Areas data layer), they have not been designated as OFWs.

If you have any questions or need additional information, please feel free to contact me at the letterhead address (mail station 6511), by phone at 850-245-8427, or via E-mail at Janet.Klemm@FloridaDEP.gov.

Sincerely,

A handwritten signature in blue ink that reads "Janet Klemm".

Janet Klemm
Environmental Specialist
DEP Water Quality Standards Program

Exhibit J

Water Resources Map



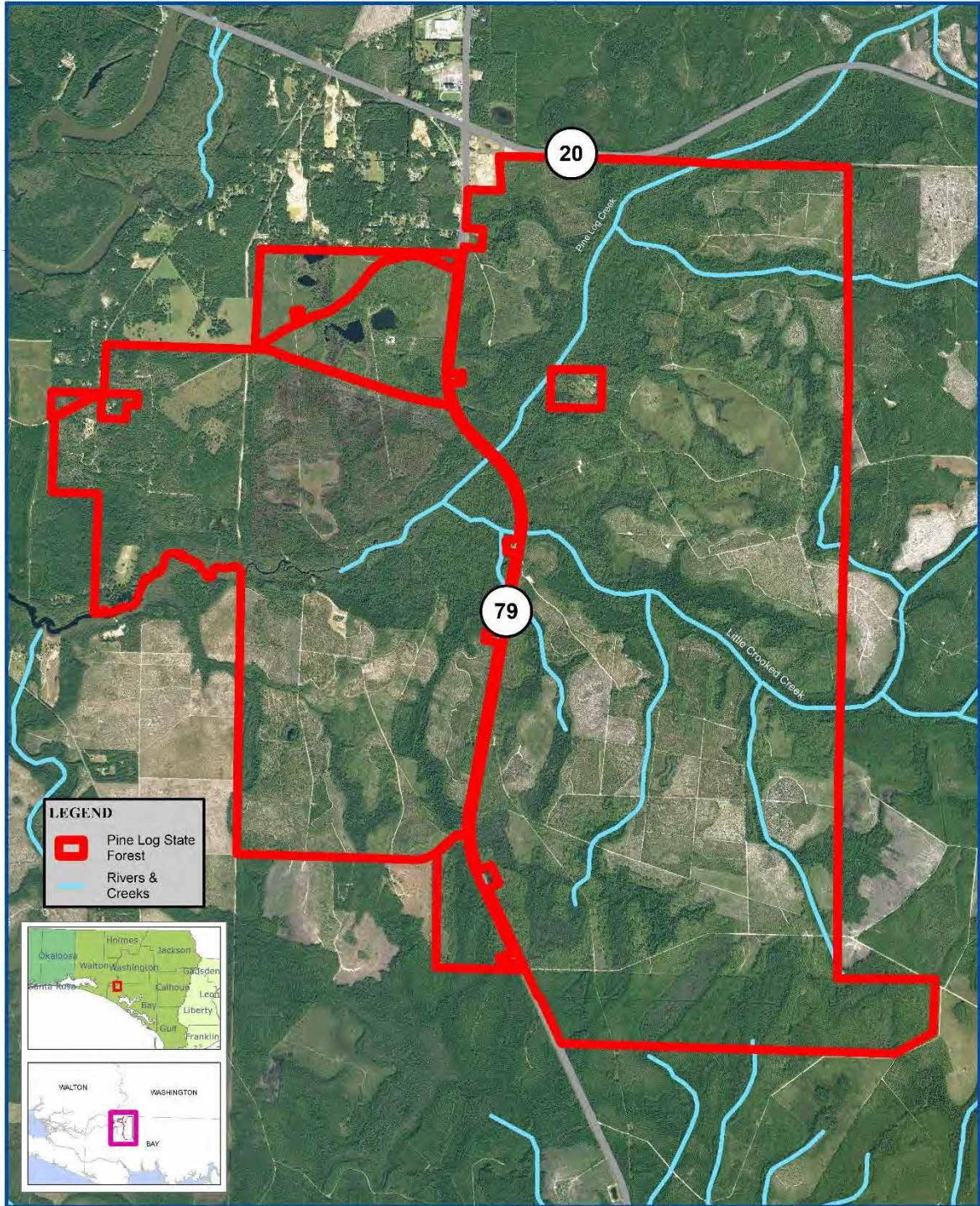
Florida Forest Service

Pine Log State Forest

Water Resources Map

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

DISCLAIMER:
This map was prepared by the Florida Forest Service, Department of Natural Resources, for informational purposes only. It is not intended to be used for legal or other purposes. The Florida Forest Service does not warrant the accuracy or completeness of the information contained herein. The Florida Forest Service is not responsible for any errors or omissions, or for any consequences arising from the use of the information contained herein. The Florida Forest Service is not responsible for any damages, including consequential damages, arising from the use of the information contained herein. The Florida Forest Service is not responsible for any damages, including consequential damages, arising from the use of the information contained herein.



LEGEND



Pine Log State Forest



Rivers & Creeks



0.5 0.25 0
Miles



Map Month/Year: July 2011

1,000 500 0 1,000
Yards

Exhibit K

Florida Natural Areas Inventory Managed Area Tracking Record



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Suite 200-C
Tallahassee, FL 32303
850-224-8207
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July 19, 2021

Patti Anderson
Florida Forest Service
FL Dept of Agriculture & Consumer Services
3125 Conner Boulevard, Suite I-258, Mail Stop C-25
Tallahassee, FL 32399-1650

Dear Ms. Anderson,

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: Pine Log State Forest
Date Received: 7/13/2021
Location: Washington County

Based on the information available, this site appears to be located in a significant region of natural areas and habitat for several rare species.

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.

Federally Listed Species

Our data indicate federally listed species are present on or very near this site, specifically Reticulated Flatwoods Salamander (*Ambystoma bishopi*) (see enclosed map and tables for details). This statement should not be interpreted as a legal determination of presence or absence of federally listed species on a property.

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.



Florida Resources
and Environmental
Analysis Center

Institute of Science
and Public Affairs

The Florida State University

Tracking Florida's Biodiversity

*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.*

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 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 Pine Log 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.

Land Acquisition Projects

This site appears to be located within the Seven Runs Creek Final Phase Florida Forever BOT Project, which is part of the State of Florida's Conservation and Recreation Lands land acquisition program. For more information on this Florida Forever Project, contact the Florida Department of Environmental Protection, Division of State Lands.

Florida Forever Board of Trustees (BOT) projects are proposed and acquired through the Florida Department of Environmental Protection, Division of State Lands. The state has no specific land management authority over these lands until they are purchased.

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/trackinglist.cfm 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.

Sincerely,

Kerri Brinegar

Kerri Brinegar
GIS / Data Services

Encl

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FLORIDA Natural Areas INVENTORY

Element Occurrences

- Animals
- Plants
- Communities
- Other
- Data Sensitive

- Point Indicates General Vicinity of Element
- U.S. Fish & Wildlife Service Scrub Jay Survey 1992-96

Conservation Lands

- Federal
- State
- Local
- Private
- State Aquatic Preserves

Land Acquisition Projects

- Florida Forever
- Board of Trustees Projects

- FNAI Rare Species Habitat
- FNAI Biodiversity Matrix Square Mile Units

- County Boundary
- Roads
- Water

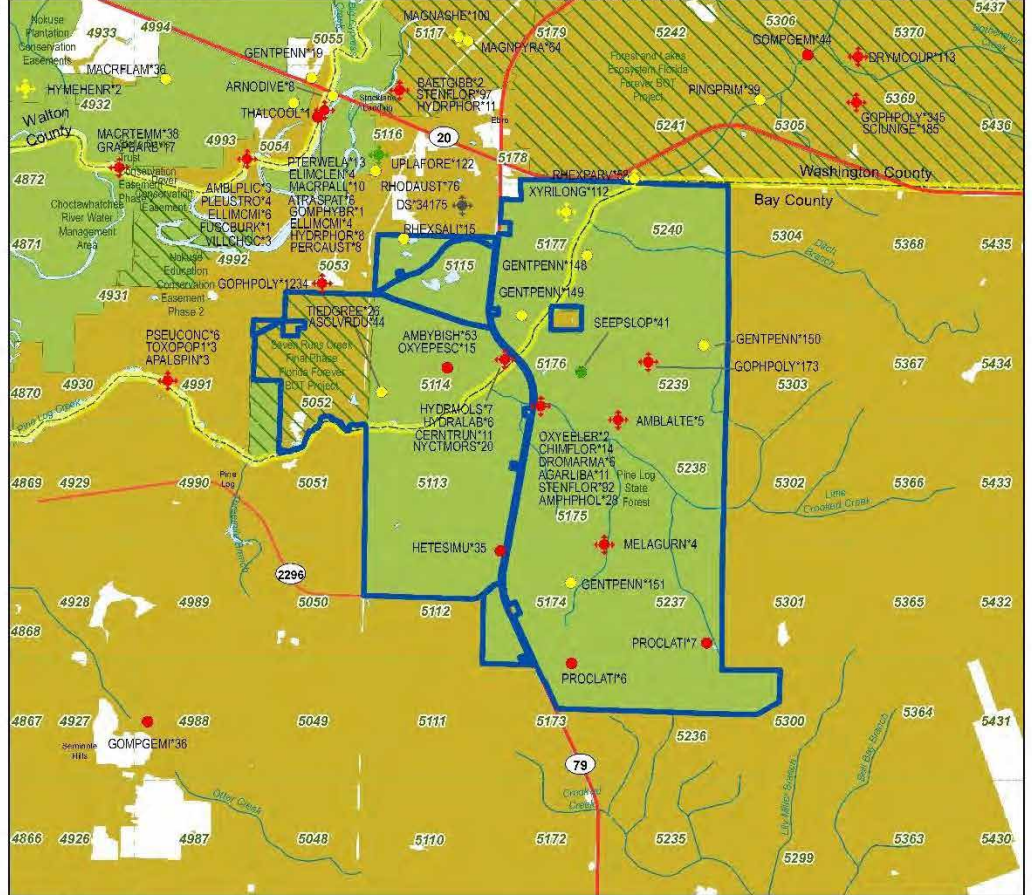
NOTE

This map contains environmentally sensitive information. Please do not distribute or publish without prior consent from FNAI. Map should not be interpreted without accompanying documents.

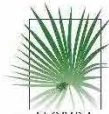
Pine Log State Forest

Site boundaries are approximate

Washington County



Map produced by KAB
7/19/2021



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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

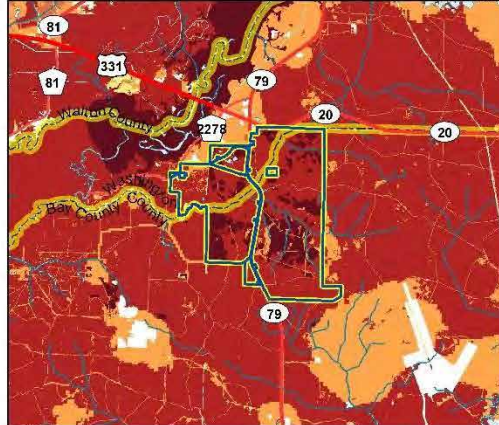
Map should not be interpreted without accompanying documents.

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.

Pine Log State Forest

Site boundaries are approximate.

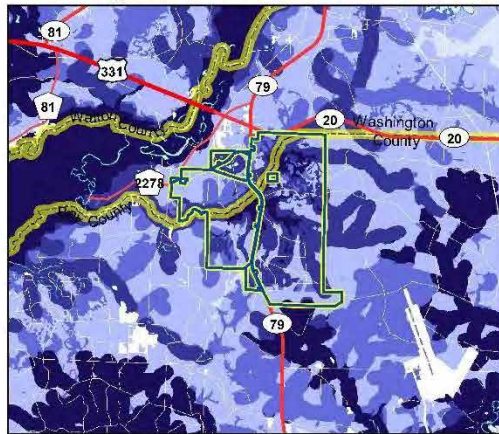
Washington County



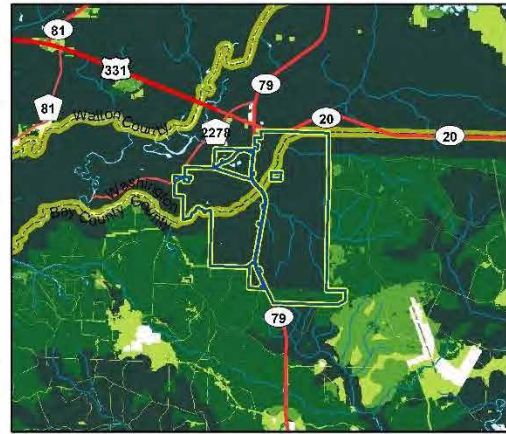
CLIP Biodiversity Resource Priorities



CLIP Landscape Resource Priorities



CLIP Surface Water Resource Priorities



CLIP Aggregated Resource Priorities



Map produced by KAB
7/19/2021

FNAI ELEMENT OCCURRENCE REPORT on or near
Pine Log State Forest



Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
AQARLIBA*11	<i>Agarodes libatis</i>	Spring-loving Psiloneuron Caddisfly	G3	S3	N	N	2007-05-11	2007-05-11: No description given other than that it was near a creek (U09RAS01FLUS). 2002-04-28: No description given (U06RAS01FLUS).	2007-05-11: Ten specimens were collected at the Pine Log Creek site using a 15 watt black light over an alcohol-filled white pan (U09RAS01FLUS, U06RAS01FLUS). 2002-04-28: One specimen was collected at the Little Crooked Creek site using ultraviolet light (U06RAS01FLUS).
AMBALJTE*5	<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N	2007-05-27	2007-05-27: The state forest has sandhills, flatwoods, cypress ponds, and hill swamps. There are 3 named streams running through the forest (http://www.fl-dof.com/state_forests/pine_log.html) (PNDJUE02FLUS).	One adult was found on the North American Butterfly Association butterfly count (P09FR101FLUS).
AMBPLUC*3	<i>Amblema plicata</i>	Threelodge	G5	S1	N	N	1934-06	No general description given	1934-06: 2 specimens (UF 3237) collected by L. M. Rushing (PNDJUE01FLUS).
AMBYSISH*3	<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE	2005-04-21	Depression marsh	None found in dipnet and drift fence survey by FWC in 2009 (U09FWC02FLUS). At least one larval salamander observed in 2005, 2002, 1993, 1992.
AMPHPHOL*20	<i>Amphiuma pholeter</i>	One-toed Amphiuma	G3	S3	N	N	1983-03-31	FLOODPLAIN MUCKS ALONG CREEK IN LOWER CHOCTAWHATCHEE DRAINAGE	SPECIMEN COLLECTED 1983-03-31 BY MOLER, MANSELL AND ABERCROMBIE
APALSPIN*3	<i>Apalpine spinifera</i>	Spiny Softshell	G5	S3	N	N	2012-05-11	Choctawhatchee River is a generally alluvial river but with some clear-water tributaries. Sandy Creek is a clear-water stream tributary.	This occurrence is documented by multiple records extending from 1969-2012.
ARNODIVE*8	<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T	1990-05-25	HARDWOOD FLOODPLAIN - MUCKY SAND IN DEEP SHADE WITH SAURURUS CERNUUS AND COMMELINA VIRGINICA.	CA. 30 PLANTS, FLOWERING VOUCHER (CA 12814 (FSU), NEW COUNTY OF RECORD
ASCLVROU*44	<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T	1988-08-23	No general description given	1 PLANT FLOWERING

FNAI ELEMENT OCCURRENCE REPORT on or near
Pine Log State Forest



Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
ATRASPAT*6	<i>Atractosteus spatula</i>	Alligator Gar	G3G4	S3	N	N	2007-09-05	alluvial stream with some spring fed tributaries	1 individual collected by USFWS in 2007, FCREPA and others list the species as common in Choctawhatchee River, common in Holmes Creek, occasional in Pine Log Creek and also taken in the brackish portions of Choctawhatchee Bay
BAETGIBB*2	<i>Baetisca gibbata</i>	A Mayfly	G5	S1S2	N	N	1961-11-13	1961-11-13: No description given (U09DEP01FLUS)	1961-11-13: Staff from the Florida Department of Environmental Protection collected this species (U09DEP01FLUS)
CERNTRUN*11	<i>Ceriodina trancosa</i>	Florida Cermotian Caddisfly	G4	S3	N	N	2007-05-11	2007-05-11: No description given other than that the locality was near a creek (U09RAS01FLUS)	2007-05-11: Three specimens were collected using a 15 watt black light over an alcohol-filled white pan (U09RAS01FLUS, U09RAS01FLUS)
CHIMFLOR*14	<i>Chimarra florida</i>	Floridan Finger-not Caddisfly	G4	S3S4	N	N	2007-05-11	2007-05-11: No description given other than that it was near a creek (U09RAS01FLUS). 2002-04-26: No description given (U06RAS01FLUS)	2007-05-11: Two specimens were collected using a 15 watt black light over an alcohol-filled white pan at the Pine Log Creek site (U09RAS01FLUS, U06RAS01FLUS). 2002-04-26: Two specimens were collected on 2002-04-26 using ultraviolet light at the Little Crooked Creek site (U06RAS01FLUS)
DROMARMA*5	<i>Dromogomphus armatus</i>	Southeastern Spinyleg	G4	S3	N	N	2001-07-31	2001-07-31: No description given (U09DEP01FLUS)	2001-07-31: Staff from the Florida Department of Environmental Protection collected this species (U09DEP01FLUS)
DROMARMA*90	<i>Dromogomphus armatus</i>	Southeastern Spinyleg	G4	S3	N	N	2010-09-21	2008-2010: larva collected in soupy muck along seepage stream ravine that descends from former sandhill, also at other seepage stream or floodplain sites (U11KEP01FLUS, PNDKEP02FLUS, U11KEP03FLUS)	2008-2010: E. Keppner collected species at multiple sites within Knight Trust Property, includes 1) larvae in Red Head Branch (2006-10-06), first record for county; 2) larvae collected 2010-09-08 in Pine Log Creek along logging road just north of SR-20; 3) species (presumably larvae) collected 2010-09-21 at small stream crossing at Cedar Tree Landing Road just east of Graveyard Branch (U11KEP01FLUS, 43, 45, PNDKEP02FLUS, U11KEP03FLUS)
DRYMOLUP*13	<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT	1967	No general description given	1967: T. CRUTCHFIELD OBSERVED SHED SKIN OF INDIGO SNAKE HERE (P. MOLER INTERVIEW OF 3 NOV 1981, U82MOL01FLUS)
DS*34175	Data Sensitive Element	Data Sensitive	G4	S2S3	N	N	2009-09-24	Data Sensitive	Data Sensitive

FNAI ELEMENT OCCURRENCE REPORT on or near
Pine Log State Forest



Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
ELIMCLEN*4	<i>Elimia clenchii</i>	Stackwater Elimia	G3Q	S1S2	N	N	1972-08-14	SNAILS COLLECTED ALONG W BANK OF RIVER OVER SILT-SAND BOTTOM. ELIMIA, LIOFLAX, CAMPELOMA, POMACEA, NOTOGILLIA, AMNICOLA, CLAMS, LARGE STERNOTHERUS PRESENT.	SPECIMEN COLLECTED 1972-08-14 (F.G. THOMPSON, 1893, UNCATALOGED SM)
ELIMJ3M*4	<i>Elipito mcmichaeli</i>	Fluted Elephant-ear	G2G3	S1S2	N	N	1956 pre	1956-Pre: large alluvial river (A56CLE01FLUS)	1956-Pre: no details known, collection probably housed at MCZ. EO lies across river from Choctawhatchee River Management Area (A56CLE01FLUS).
ELIMJ3M*5	<i>Elipito mcmichaeli</i>	Fluted Elephant-ear	G2G3	S1S2	N	N	1934-08	1934-08: large alluvial river (A56CLE01FLUS)	1934-08: L. M. Rushing collected many specimens, catalogued as follows (number of specimens in parentheses): UF 1379 (7), UF 1380 (8), UF 1436 (8), UF 2894 (8), UF 2901 (17), UF 2903 (12), UF 8347 (1) (A56CLE01FLUS).
FUSCBURR*1	<i>Ruscocaula burkei</i>	Tapered Pigtoe	G2G3	S2	T	FT	1934-08	1934-08: large alluvial river (PNDBUT01FLUS)	1934-08: L. M. Rushing collected specimen (UF-4138) (PNDBUT01FLUS).
GENTPEN*149	<i>Gentiana pennelliana</i>	wiregrass gentian	S3	S3	N	E	2006-01-18	2006-01-18: Recently burned wet flatwoods of Pinus elliotii, Pinus palustris, Magnolia virginiana, Ilex coriacea, Cyrtia racemiflora, Aristida stricta, Lycopodium appressa, Eriocaulon decangulare, Rhynchospora fasciculans, Rhynchospora divergens, Xyris sp., and Sarracenia leucophylla (F06FNA16FLUS).	2006-01-18: One individual found in flower/bud, covering less than one square meter, in wet flatwoods (F06FNA16FLUS).
GENTPEN*149	<i>Gentiana pennelliana</i>	wiregrass gentian	S3	S3	N	E	2006-01-19	2006-01-19: Recently burned wet flatwoods of Pinus elliotii, Pinus palustris, Magnolia virginiana, Ilex coriacea, Ilex glabra, Gaylussacia sp., Aristida stricta, Ctenium aromaticum, and Andropogon virginicus (F06FNA16FLUS).	2006-01-19: One individual found in flower/bud, covering less than one square meter, in wet flatwoods (F06FNA16FLUS). Species present in a separate location in 2020.

FNAI ELEMENT OCCURRENCE REPORT on or near
Pine Log State Forest



Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
GENTPEN*150	<i>Gentiana pennsylvanica</i>	wiregrass gentian	G3	S3	N	E	2006-01-18	2006-01-18: Wet flatwoods with some woody encroachment (F06FNA16FLUS).	2006-01-18: Point 1 with one individual found in flower/fruit, covering less than one square meter, in wet flatwoods. Point 2 with one individual found in flower/fruit covering less than one square meter, in wet flatwoods (F06FNA16FLUS).
GENTPEN*151	<i>Gentiana pennsylvanica</i>	wiregrass gentian	G3	S3	N	E	2006-01-19	2006-01-19: Wet flatwoods with some woody encroachment (F06FNA16FLUS).	2006-01-19: Two individuals found in flower/fruit, covering 1 to 10 square meters, in wet flatwoods (F06FNA16FLUS).
GOMPGEN*44	<i>Gomphus geminatus</i>	Two-striped Clubtail	G3G4	S3	N	N	2009-04-22	2009-04-22: Pine Log Creek floodplain with probable cypress (2004 DOQQ aerial photograph), specimens presumably collected at or very near two ungraded forest road crossings, most of surrounding upland is in pine plantation, formerly sandhill (U11KEP01FLUS, PNDKEP02FLUS).	2009-04-22: E. Reppner collected adults at two sites, ca. 975 floodplain meters apart, first record for county (U11KEP01FLUS: 44, 45; U11KEP03FLUS, PNDKEP02FLUS).
GOMPHY03*1	<i>Gomphus hyacinus</i>	Cocoa Clubtail	G4	S1	N	N	2011-04-26	None provided but the Choctawhatchee River basin is one of the more pristine river basins in the Florida Panhandle. There were even scientific surveys to look for Ivory-billed Woodpeckers along this river.	2011-04-26: One individual seen (U11KEP07FLUS). 2010-03-19: One individual seen (A11DAI01FLUS).
GOPHPOLY*1234	<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST	2007-10-01	2007-10-01: burrows observed by Aresco were near edges of large pasture with remnant trees, probably live oaks; possibly former mesic flatwoods with some sandhill characteristic (DOQQ aerial photograph interpretation by D. Jackson) (PNDARE01FLUS).	2007-10-01: Aresco observed many burrows but provided only 5 gps points; appears that he stayed near the bordering roads (U07ARE02FLUS).
GOPHPOLY*173	<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST	2005-10-12	Recorded as sandhill in 2005. Aerial images look like pine plantation. Forestry operation disturbance recorded.	1987-pre: Species occurrence noted here in Diemer's unpublished map set (U86DIE01FLUS). 2005: 1 active burrow.

FNAI ELEMENT OCCURRENCE REPORT on or near
Pine Log State Forest



Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
GCPHPLY345	<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST	2010	2011: Large private tract managed for pine production, with most uplands converted from sandhill to plantation; scattered wetlands; ponds, lakes are less disturbed, two highways, many miles of ungraded roads, plus power line corridors (U11KEP01FLUS, PNDWIL08FLUS, PNDKEP02FLUS, 2006, recorded as sandhill)	2009-2010: E. and L. Keppner and G. Wilson recorded multiple burrows on Washington County portion of Knight Trust Property, mostly near property perimeter, considered population to be low for such a large area (U11KEP01FLUS, Fig. 21, PNDWIL08FLUS, PNDKEP03FLUS, PNDKEP02FLUS). 1987-Pre: two sites noted here in Diemer's unpublished map set (U88DIE01FLUS, PNDIE01FLUS). 2006: 1 active burrow
GRAPBARB17	<i>Graptemys barbouri</i>	Barbour's Map Turtle	G2	S2	N	ST	2018-05-23	The Choctawhatchee River is a moderately sized alluvial stream with some blackwater characteristics. The Pea River is a medium-small, relatively shallow tributary that can be tannic to sometimes fairly clear, with sandy bottom and abundant snags (U9RWAL01FLUS)	Based on multiple records extending from 1999-2018, there appears to be a substantial population. Its origins are problematic.
HETESIMU35	<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N	2008-06-16	Pine Log State Forest, 2006 sandhill habitat (A13DRA01FLUS)	Based on 1 record from 2008, but may be a good, stable population.
HYDRALAB6	<i>Hydroptila alabama</i>	A. Caddisfly	G4	S2	N	N	2007-05-11	2007-05-11: No description given other than that the locality was near a creek (U09RAS01FLUS)	2007-05-11: One specimen was collected using a 15 watt black light over an alcohol-filled white pan (U09RAS01FLUS, U08RAS01FLUS)
HYDRMOL57	<i>Hydroptila molsonae</i>	Molson's Microcaddisfly	G2	S2	N	N	2007-05-11	2007-05-11: No description given other than that the locality was near a creek (U09RAS01FLUS)	2007-05-11: One specimen was collected using a 15 watt black light over an alcohol-filled white pan (U09RAS01FLUS, U08RAS01FLUS)
HYDRPHOR11	<i>Hydropsyche phosmidia</i>	A. Stonefly	G8	S2	N	N	1982-03-08	1982-03-08: No description given (U09DEP01FLUS)	1982-03-08: Staff from the Florida Department of Environmental Protection collected this species on this date and on 1980-01-14 (U09DEP01FLUS)

FNAI ELEMENT OCCURRENCE REPORT on or near
Pine Log State Forest



Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
HYDRPHOR05	<i>Hydroperla phormida</i>	A Stonefly	G3	S2	N	N	1982-03-08	1982-03-08: No description given (U07RAS01FLUS)	1982-03-08: Two nymphs were collected using a dip net (U07RAS01FLUS). 1981-02-09: Three nymphs were collected using a dip net (U07RAS01FLUS). 1981-02-09: One specimen was collected (U07RAS01FLUS). 1980-01-14: Seven specimens were collected using a dip net (U07RAS01FLUS). 1980-01-14: An unknown number of specimens were collected (U07RAS01FLUS). 1979-02-15: One nymph was collected using a dip net (U07RAS01FLUS). 1979-02-14: An unknown number of specimens were collected (U07RAS01FLUS). 1977-02-22: An unknown number of specimens were collected (U07RAS01FLUS).
HYMEHENR02	<i>Hymenocallis hentyae</i> var. <i>hentyae</i>	Henry's spiderlily	G2TNR	S2	N	E	2019	Floodplain of the East River on the Choctawhatchee River WMA in Washington County.	2019 - Large flowering population observed (P20ARE01FLUS)chr >Flowering specimen (UF #145318) collected (S7IDA01FLUS).
MAURITEMM08	<i>Macrochelys temminckii</i>	Alligator Snapping Turtle	G3	S3	N	N	2017-10-15	Choctawhatchee River system and tributaries, including Holmes Creek.	Known from multiple records extending from at least 1977-2017.
MAGNASHET100	<i>Magnolia ashei</i>	Ashie's magnolia	G3	S2	N	E	2008-11-08	Slope forest	Present on site
MAGNOPYRA04	<i>Magnolia pyramidalis</i>	pyramid magnolia	G4	S3	N	E	2008-11-08	upland hardwood forest	present on site
MELAGURN04	<i>Melanocopus gurneyi</i>	Gurney's Spurnthroat Grasshopper	G1G2	S1S2	N	N	2001-10-15	2001-10-15: No description given (N05LAM01FLUS).	2001-10-15: Four specimens were collected (N05LAM01FLUS).
NYCTMORSE20	<i>Nyctophylax morsei</i>	Morse's Dinky Light Summer Sedge	G2	S2	N	N	2007-05-11	2007-05-11: No description given other than that it was near a creek (U09RAS01FLUS)	2007-05-11: Thirty-one specimens were collected using a 15 watt black light over an alcohol-filled white pan at the Little Crooked Creek site (U09RAS01FLUS, U08RAS01FLUS). 2007-05-11: Two specimens were collected using a 15 watt black light over an alcohol-filled white pan at the Pine Log Creek site (U09RAS01FLUS, U08RAS01FLUS).

FNAI ELEMENT OCCURRENCE REPORT on or near
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Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
OXYEELER2	<i>Oxyethira ekurbi</i>	Eleroy's Microcaddisfly	G3G4	S2S3	N	N	2007-05-11	2007-05-11: No description given other than that it was near a creek (U09RAS01FLUS). 2002-04-28: No description given (U06RAS01FLUS)	2007-05-11: Fifty-four specimens were collected using a 15 watt black light over an alcohol-filled white pan at the Pine Log Creek site (U09RAS01FLUS, U06RAS01FLUS). 2002-04-28: Six specimens were collected at the Little Crooked Creek site using ultraviolet light (U06RAS01FLUS)
ONYEPESC15	<i>Oxyethira poscedori</i>	Pescador's Bottle-Cased Caddisfly	G3G4	S3	N	N	2007-05-11	2007-05-11: No description given other than that it was near a creek (U09RAS01FLUS)	2007-05-11: One specimen was collected using a 15 watt black light over an alcohol-filled white pan at the Little Crooked Creek site (U09RAS01FLUS, U06RAS01FLUS). 2007-05-11: Ten specimens were collected using a 15 watt black light over an alcohol-filled white pan at the Pine Log Creek site (U09RAS01FLUS, U06RAS01FLUS)
PINOPRIM39	<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E	2009-03-09	Blackwater stream (Pine Log Creek)	present on site
PLEUSTRO4	<i>Pleurobema strodeanum</i>	Fuzzy Pigtoe	G2G3	S2	T	FT	1934-08	No general description given	1934-08: L. M. Rushing collected 7 specimens (U014041) (PND01FLUS)
PROCLAT6	<i>Procambarus latipleurum</i>	Wiretail Crayfish	S2	S2	N	N	1994-02-17	Area is included within a state forest. 1994: Franz described site as a shallow Hypoxylon wetland in planted flatwoods (U04FRA01FLUS). A 2004 DOQQ aerial photograph shows a more natural pineland surrounding the marsh north of the forest road, and planted pineland around the little bit of marsh that continues on the southern side (before draining into a swamp)	Unknown population size and extent. This occurrence is documented by a single report in 1994.
PROCLAT7	<i>Procambarus latipleurum</i>	Wiretail Crayfish	S2	S2	N	N	1994-02-17	Area is included within a state forest. 1994: Franz described site as a small depression in flatwoods (U04FRA01FLUS). A 2004 DOQQ aerial photograph shows a relatively natural pineland surrounding the site, which is bordered or crossed by a forest road.	Unknown population size and extent. This occurrence is documented by a single report in 1994.

FNAI ELEMENT OCCURRENCE REPORT on or near
Pine Log State Forest



Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
P8EUC000'S	<i>Pseudemys concinna concinna</i>	Eastern River Cooter	G5T5	S3	N	N	2003 pre	Choctawhatchee River is a generally alluvial river but with some clear-water tributaries. Sandy Creek is a clear-water stream tributary.	Known from multiple records (from 1953-1999 at least) and sites spanning much of Choctawhatchee River system.
RHEXPARV'S8	<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E	1993-07-19	Cypress-gum flats	Flowering and fruiting specimen collected (S93KRA01FLUS)
RHEXSALI'15	<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T	2012-05-17	2012-05-17: Edge of Sandhill Upland Lake (now mostly dry). Well-mowed from adjacent residential area citizens. Dianthus spp., Eupatorium compositifolium, Scintella asiatica in area (U13JEN02FLUS). 1995: SANDY PEAT OF SHORES OF "SAND POND". PLANTS ARE ALSO FOUND, THOUGH ARE MUCH SCARCER, AT LARGER PONDS RINGED BY CYPRESS AND HOLLY THAT LIE ACROSS THE NORTH-SOUTH ACCESS ROAD AND IMMEDIATELY WEST OF SAND POND (U95FWS05FLUS). 1988: POND CYPRESS, XIRIS, HYPERICUM FASCICULATA, RHYNCHOSPORA INUNDATA (U88FNA03FLUS).	2012-05-17: 460 total stems, at least 2 in flower (U13JEN02FLUS). 1992: LARGE HEALTHY POPULATIONS ON ALL SIDES OF SAND POND, THOUGH MOWING HAS GOTTEN TOO NEAR THE SHORE IN SOME PLACES (U95FWS05FLUS). 1988: 2 PLANTS FLOWERING (U88FNA03FLUS).
RHODAUSTR'06	<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E	2010-04-07	2010-04-07: Mature upland hardwood forest on east side of the Choctawhatchee River, on slope up from river floodplain (PNDHES03FLUS).	2010-04-07: at least 2 plants in flower, seen at 2 locations ca. 200 feet apart on slope of upland hardwood forest, area not thoroughly searched (PNDHES03FLUS).

FNAI ELEMENT OCCURRENCE REPORT on or near
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Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	Listing	Observation Date	Description	EO Comments
SCUNIGE*85	<i>Sciurus niger niger</i>	Southeastern Fox Squirrel	G5T5	S3	N	N	2010	20011 Large private tract managed for pine production, with most uplands converted from sandhill to plantation; scattered wetlands; ponds, lakes are less disturbed; two highways, many miles of ungraded roads; plus power line corridors; squirrels (2008-2010 observations) mostly in seed pine plantation near clearcuts or newly planted areas (U11KEP01FLUS: 54, PNDWL08FLUS, PNDKEP02FLUS)	2008-2010 E. and L. Keppner and G. Wilson observed species at multiple, unspecified sites throughout uplands on Washington County portion of Knight Trust Property (U11KEP01FLUS: 54, U11KEP02FLUS, U11WL02FLUS (photos: Court Martial Lake), PNDWL08FLUS, PNDKEP03FLUS, PNDKEP02FLUS).
SEEPSLOP*41	Seepage slope		G2	S2	N	N	2004	Managed flatwoods where burning has opened meadows associated with seepage areas; pitcher plant bog with open meadow aspect.	2010 Prior to the 2010 natural community reclassification effort this EO had been known as Wet prairie EO number 41 (see U10FNA01FLUS for updated community descriptions). 2004: Update to last obs date was based on interpretation of aerial photography (previous value was 1994-02-17) (U05FNA02FLUS) 1994-02-17 Present on site (U94FRA01)
STENFLOR*02	<i>Stenacron floridense</i>	A Mayfly	G3G4	S3S4	N	N	2001-07-31	2001-07-31 No description given (U09DEP01FLUS).	2001-07-31 Staff from the Florida Department of Environmental Protection collected this species on this date and on the following dates: 1999-01-21, 1996-07-16, 1992-08-27 (U09DEP01FLUS).
STENFLOR*02	<i>Stenacron floridense</i>	A Mayfly	G3G4	S3S4	N	N	1977-01-25	1977-01-25 No description given (U09DEP01FLUS).	1977-01-25 Staff from the Florida Department of Environmental Protection collected this species (U09DEP01FLUS).
TIEDGREE*25	<i>Tiedemannia tiliformis</i> ssp. <i>greenmani</i>	giant water cowbane	G3	S3	N	E	1998-08-23	No general description given	No EO data given
TOXOPOP*21	<i>Toxolasma sp. 1</i>	Gulf Liliptut	G2	S2	N	N	2014 pre	Choctawhatchee River system, including Holmes Creek and Pea River.	Williams et al. (2014) depict at least 21 sites from which this occurrence has been documented within this river system in Florida



FNAI ELEMENT OCCURRENCE REPORT on or near
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Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
UPLAFOR122	Upland hardwood forest		G5	S3	N	N	2010-04-07	2010-04-07: mature forest on east side of the Choctawhatchee River, on slope up from river floodplain (PNDNES03FLUS)	2010-04-07: ca. 17 acres of mature, scenic forest on slope down to the Choctawhatchee River; canopy species include mature southern magnolia, sweetgum, white oak, sourwood, American beech, tulip trees with midstory that includes Florida anise, American holly, horse sugar, and Florida flame azalea (PNDNES03FLUS)
VILLCHOC*3	<i>Viburnum choctawensis</i>	Choctaw Bean	G2G3	S1S2	E	FE	1934-08	1934-08: large alluvial river (PNDOUT01FLUS)	1934-08: L.M. Rusing collected specimen (UF-3151) (PNDOUT01FLUS)
XYLONG*112	<i>Xyris longispala</i>	karst pond xyle	G1G3	S2S3	N	E	1991-08-27	Sandy peaty shores and shadows of doline.	Flowering specimen (FSU #190919) collected.



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Florida Natural Areas Inventory Biodiversity Matrix Report



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Matrix Unit ID: 4991					
Documented					
<i>Apalone spinifera</i>	Spiny Softshell	G5	S3	N	N
<i>Toxolasma sp. 1</i>	Gulf Lilliput	G2	S2	N	N
Likely					
<i>Acipenser oxyrinchus desotoi</i>	Gulf Sturgeon	G3T2T3	S2?	T	FT
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
<i>Elimia clenchi</i>	Slackwater Elimia	G3Q	S1S2	N	N
<i>Fusconaia burkei</i>	Tapered Pigtoe	G2G3	S2	T	FT
Mesic flatwoods		G4	S4	N	N
<i>Pleurobema strodeanum</i>	Fuzzy Pigtoe	G2G3	S2	T	FT
<i>Pseudemys concinna concinna</i>	Eastern River Cooter	G5T5	S3	N	N
<i>Villosa choctawensis</i>	Choctaw Bean	G2G3	S1S2	E	FE
Potential					
<i>Agrimonia incisa</i>	Incised groove-bur	G3	S2	N	T
<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Amoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Atractosteus spatula</i>	Alligator Gar	G3G4	S3	N	N
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E
<i>Calamintha dentata</i>	toothed savory	G3	S3	N	T
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S1	N	N
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eurybia spinulosa</i>	pinewoods aster	G1	S1	N	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Gratemys barbouri</i>	Barbour's Map Turtle	G2	S2	N	ST
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Macranthera flammea</i>	hummingbird flower	G3	S2	N	E
<i>Macrhybopsis pallida</i>	Florida Chub	G3	S2	N	N
<i>Magnolia ashei</i>	Ashe's magnolia	G3	S2	N	E
<i>Matelea alabamensis</i>	Alabama spiny-pod	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena ssp. ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Paronychia chartacea var. minima</i>	Crystal Lake nailwort	G3T1	S1	T	E
<i>Percina austroperca</i>	Southern Logperch	G3	S2	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Pteronotropis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E

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Florida Natural Areas Inventory Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E
<i>Tephrosia mohrii</i>	pineland hoary-pea	G3	S3	N	T
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T
Matrix Unit ID: 5050					
Likely					
<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N
Potential					
<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Andropogon arctatus</i>	pinewoods bluestem	G3	S3	N	T
<i>Amoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Dichanthelium nudicaule</i>	naked-stemmed panic grass	G3Q	S3	N	T
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eurybia spinulosa</i>	pinewoods aster	G1	S1	N	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lachnocaulon digynum</i>	pineland bogbutton	G3G4	S3	N	T
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula ionantha</i>	Godfrey's butterwort	G2	S2	T	E
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Pteronotropis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Quercus arkansana</i>	Arkansas oak	G3	S3	N	T
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E

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<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T4	S4	N	N
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T
Matrix Unit ID: 5051					
Documented					
<i>Apalone spinifera</i>	Spiny Softshell	G5	S3	N	N
<i>Toxolasma</i> sp. 1	Gulf Lilliput	G2	S2	N	N
Likely					
<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N
<i>Pseudemys concinna concinna</i>	Eastern River Cooter	G5T5	S3	N	N
Sandhill		G3	S2	N	N
Potential					
<i>Acipenser oxyrinchus desotoi</i>	Gulf Sturgeon	G3T2T3	S2?	T	FT
<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Amoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Atractosteus spatula</i>	Alligator Gar	G3G4	S3	N	N
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E
<i>Calamintha dentata</i>	toothed savory	G3	S3	N	T
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Dichantherium nudicaule</i>	naked-stemmed panic grass	G3Q	S3	N	T
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eurybia spinulosa</i>	pinewoods aster	G1	S1	N	E
<i>Gentiana pennelliana</i>	wiregrass gentian	G3	S3	N	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Graptemys barbouri</i>	Barbour's Map Turtle	G2	S2	N	ST
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lachnocaulon digynum</i>	pineland bogbutton	G3G4	S3	N	T
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Macranthera flammea</i>	hummingbird flower	G3	S2	N	E
<i>Macrhybopsis pallida</i>	Florida Chub	G3	S2	N	N
<i>Magnolia ashei</i>	Ashe's magnolia	G3	S2	N	E
<i>Matelea alabamensis</i>	Alabama spiny-pod	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N

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<i>Percina austroperca</i>	Southern Logperch	G3	S2	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula ionantha</i>	Godfrey's butterwort	G2	S2	T	E
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Pteronotopis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Quercus arkansana</i>	Arkansas oak	G3	S3	N	T
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Tephrosia mohrii</i>	pineland hoary-pea	G3	S3	N	T
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T4	S4	N	N
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Matrix Unit ID: 5052

Likely

<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N

Potential

<i>Acipenser oxyrinchus desotoi</i>	Gulf Sturgeon	G3T2T3	S2?	T	FT
<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Atractosteus spatula</i>	Alligator Gar	G3G4	S3	N	N
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E
<i>Calamintha dentata</i>	toothed savory	G3	S3	N	T
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Gentiana pennelliana</i>	wiregrass gentian	G3	S3	N	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Graptemys barbouri</i>	Barbour's Map Turtle	G2	S2	N	ST
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T

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Florida Natural Areas Inventory

Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Macrhybopsis pallida</i>	Florida Chub	G3	S2	N	N
<i>Magnolia ashei</i>	Ashe's magnolia	G3	S2	N	E
<i>Matelea alabamensis</i>	Alabama spiny-pod	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Paronychia chartacea</i> var. <i>minima</i>	Crystal Lake nailwort	G3T1	S1	T	E
<i>Percina austroperca</i>	Southern Logperch	G3	S2	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Pteronotropis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Tephrosia mohrii</i>	pineland hoary-pea	G3	S3	N	T
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Matrix Unit ID: 5053

Documented

<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Macrochelys temminckii</i>	Alligator Snapping Turtle	G3	S3	N	N

Likely

<i>Acipenser oxyrinchus desotoi</i>	Gulf Sturgeon	G3T2T3	S2?	T	FT
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
<i>Elimia clenchi</i>	Slackwater Elimia	G3Q	S1S2	N	N
<i>Fusconaia burkei</i>	Tapered Pigtoe	G2G3	S2	T	FT
Mesic flatwoods		G4	S4	N	N
<i>Pleurobema strodeanum</i>	Fuzzy Pigtoe	G2G3	S2	T	FT
Sandhill		G3	S2	N	N
<i>Villosa choctawensis</i>	Choctaw Bean	G2G3	S1S2	E	FE

Potential

<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Amblema plicata</i>	Threeridge	G5	S1	N	N
<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Amphiuma pholeter</i>	One-toed Amphiuma	G3	S3	N	N
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Atractosteus spatula</i>	Alligator Gar	G3G4	S3	N	N
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E

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<i>Calamintha dentata</i>	toothed savory	G3	S3	N	T
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S1	N	N
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Elliptio mcMichaeli</i>	Fluted Elephant-ear	G2G3	S1S2	N	N
<i>Gratemys barbouri</i>	Barbour's Map Turtle	G2	S2	N	ST
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Macrhybopsis pallida</i>	Florida Chub	G3	S2	N	N
<i>Magnolia ashei</i>	Ashe's magnolia	G3	S2	N	E
<i>Matelea alabamensis</i>	Alabama spiny-pod	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Paronychia chartacea</i> var. <i>minima</i>	Crystal Lake nailwort	G3T1	S1	T	E
<i>Percina austroperca</i>	Southern Logperch	G3	S2	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Pteronotropsis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E
<i>Tephrosia mohrii</i>	pineland hoary-pea	G3	S3	N	T
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Matrix Unit ID: 5111

Likely

<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N

Potential

<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Andropogon arctatus</i>	pinewoods bluestem	G3	S3	N	T
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E

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<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eurybia spinulosa</i>	pinewoods aster	G1	S1	N	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula ionantha</i>	Godfrey's butterwort	G2	S2	T	E
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Quercus arkansana</i>	Arkansas oak	G3	S3	N	T
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Matrix Unit ID: 5112

Likely

<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N

Potential

<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Andropogon arctatus</i>	pinewoods bluestem	G3	S3	N	T
<i>Amorpha canescens</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eurybia spinulosa</i>	pinewoods aster	G1	S1	N	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N

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<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowli	G5T2	S2	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula ionantha</i>	Godfrey's butterwort	G2	S2	T	E
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Quercus arkansana</i>	Arkansas oak	G3	S3	N	T
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Matrix Unit ID: 5113

Likely

<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N

Potential

<i>Acipenser oxyrinchus desotoi</i>	Gulf Sturgeon	G3T2T3	S2?	T	FT
<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Amphiuma pholeter</i>	One-toed Amphiuma	G3	S3	N	N
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Atractosteus spatula</i>	Alligator Gar	G3G4	S3	N	N
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E
<i>Calamintha dentata</i>	toothed savory	G3	S3	N	T
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eurybia spinulosa</i>	pinewoods aster	G1	S1	N	E
<i>Gentiana pennelliana</i>	wiregrass gentian	G3	S3	N	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Graptemys barbouri</i>	Barbour's Map Turtle	G2	S2	N	ST
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Macranthera flammea</i>	hummingbird flower	G3	S2	N	E
<i>Macrhybopsis pallida</i>	Florida Chub	G3	S2	N	N

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<i>Matelea alabamensis</i>	Alabama spiny-pod	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Percina austroperca</i>	Southern Logperch	G3	S2	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula ionantha</i>	Godfrey's butterwort	G2	S2	T	E
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Pteronotropis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Tephrosia mohrii</i>	pineland hoary-pea	G3	S3	N	T
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T
Matrix Unit ID: 5114					
Documented					
<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Gertiana pennelliana</i>	wiregrass gentian	G3	S3	N	E
Documented-Historic					
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
Likely					
<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N
Potential					
<i>Acipenser oxyrinchus desotoi</i>	Gulf Sturgeon	G3T2T3	S2?	T	FT
<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Amphiuma pholeter</i>	One-toed Amphiuma	G3	S3	N	N
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Atractosteus spatula</i>	Alligator Gar	G3G4	S3	N	N
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E
<i>Calamirtha dentata</i>	toothed savory	G3	S3	N	T
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E

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Florida Natural Areas Inventory Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Graptemys barbouri</i>	Barbour's Map Turtle	G2	S2	N	ST
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Macranthera flammea</i>	hummingbird flower	G3	S2	N	E
<i>Macrhybopsis pallida</i>	Florida Chub	G3	S2	N	N
<i>Magnolia ashei</i>	Ashe's magnolia	G3	S2	N	E
<i>Matelea alabamensis</i>	Alabama spiny-pod	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Percina austroperca</i>	Southern Logperch	G3	S2	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Pteronotropis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Tephrosia mohrii</i>	pineland hoary-pea	G3	S3	N	T
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Matrix Unit ID: 5115

Documented

<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
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Likely

<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N
Sandhill upland lake		G3	S2	N	N

Potential

<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Amphiuma pholeter</i>	One-toed Amphiuma	G3	S3	N	N
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E

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<i>Calamintha dentata</i>	toothed savory	G3	S3	N	T
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S1	N	N
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Elimia clenchi</i>	Slackwater Elimia	G3Q	S1S2	N	N
<i>Elliptio mcMichaeli</i>	Fluted Elephant-ear	G2G3	S1S2	N	N
<i>Gentiana pennelliana</i>	wiregrass gentian	G3	S3	N	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lachnocaulon digynum</i>	pineland bogbutton	G3G4	S3	N	T
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Magnolia ashei</i>	Ashe's magnolia	G3	S2	N	E
<i>Matelea alabamensis</i>	Alabama spiny-pod	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Tephrosia mohrii</i>	pineland hoary-pea	G3	S3	N	T
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Matrix Unit ID: 5173

Likely

<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
<i>Melanoplus gurneyi</i>	Gurney's Spurthroat Grasshopper	G1G2	S1S2	N	N
Mesic flatwoods		G4	S4	N	N
<i>Procambarus latipleurum</i>	Wingtail Crayfish	G2	S2	N	N

Potential

<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Amphiuma pholeter</i>	One-toed Amphiuma	G3	S3	N	N
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T

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<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eurybia spinulosa</i>	pinewoods aster	G1	S1	N	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula ionantha</i>	Godfrey's butterwort	G2	S2	T	E
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T
Matrix Unit ID: 5174					
Documented					
<i>Gentiana pennelliana</i>	wiregrass gentian	G3	S3	N	E
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
Likely					
<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
<i>Melanoplus gurneyi</i>	Gurney's Spurthroat Grasshopper	G1G2	S1S2	N	N
Mesic flatwoods		G4	S4	N	N
<i>Procambarus latipleurum</i>	Wingtail Crayfish	G2	S2	N	N
Sandhill		G3	S2	N	N
Potential					
<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Amphiuma pholeter</i>	One-toed Amphiuma	G3	S3	N	N
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eurybia spinulosa</i>	pinewoods aster	G1	S1	N	E

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Florida Natural Areas Inventory

Biodiversity Matrix Report



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<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula ionantha</i>	Godfrey's butterwort	G2	S2	T	E
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringed orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Pteronotopis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Matrix Unit ID: 5175

Documented

<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
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Likely

<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
<i>Melanoplus gurneyi</i>	Gurney's Spurthroat Grasshopper	G1G2	S1S2	N	N
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N

Potential

<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Amphiuma pholeter</i>	One-toed Amphiuma	G3	S3	N	N
<i>Amoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E
<i>Calamintha dentata</i>	toothed savory	G3	S3	N	T
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eurybia spinulosa</i>	pinewoods aster	G1	S1	N	E
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E

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<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Macranthera flammea</i>	hummingbird flower	G3	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula ionantha</i>	Godfrey's butterwort	G2	S2	T	E
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Pteronotropis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Thalictrum cooley</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Matrix Unit ID: 5176

Documented

<i>Agarodes libalis</i>	Spring-loving Psiloneuran Caddisfly	G3	S3	N	N
<i>Ceratomyxa truncona</i>	Florida Cermotinan Caddisfly	G4	S3	N	N
<i>Chimarra florida</i>	Floridian Finger-net Caddisfly	G4	S3S4	N	N
<i>Dromogomphus armatus</i>	Southeastern Spinyleg	G4	S3	N	N
<i>Gentiana pennelliana</i>	wiregrass gentian	G3	S3	N	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Hydroptila alabama</i>	A Caddisfly	G4	S2	N	N
<i>Hydroptila molsonae</i>	Molson's Microcaddisfly	G2	S2	N	N
<i>Nyctiophylax morsei</i>	Morse's Dinky Light Summer Sedge	G2	S2	N	N
<i>Oxyethira elerobi</i>	Elerob's Microcaddisfly	G3G4	S2S3	N	N
<i>Oxyethira pescadori</i>	Pescador's Bottle-Cased Caddisfly	G3G4	S3	N	N
Seepage slope		G2	S2	N	N
<i>Stenacron floridense</i>	A Mayfly	G3G4	S3S4	N	N

Likely

<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
<i>Melanoplus gurneyi</i>	Gurney's Spurthroat Grasshopper	G1G2	S1S2	N	N
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N

Potential

<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Amphiuma pholeter</i>	One-toed Amphiuma	G3	S3	N	N
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T

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Florida Natural Areas Inventory

Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Atractosteus spatula</i>	Alligator Gar	G3G4	S3	N	N
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E
<i>Calamintha dentata</i>	toothed savory	G3	S3	N	T
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eurybia spinulosa</i>	pinewoods aster	G1	S1	N	E
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Macranthera flammula</i>	hummingbird flower	G3	S2	N	E
<i>Matelea alabamensis</i>	Alabama spiny-pod	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula ionantha</i>	Godfrey's butterwort	G2	S2	T	E
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Pteronotopis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Tephrosia mohrii</i>	pineland hoary-pea	G3	S3	N	T
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Matrix Unit ID: 5177

Documented

<i>Gentiana pennelliana</i>	wiregrass gentian	G3	S3	N	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST

Likely

<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
Sandhill		G3	S2	N	N
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E

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Florida Natural Areas Inventory Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Potential					
<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Amphiuma pholeter</i>	One-toed Amphiuma	G3	S3	N	N
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Atractosteus spatula</i>	Alligator Gar	G3G4	S3	N	N
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lachnocaulon digynum</i>	pineland bogbutton	G3G4	S3	N	T
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Matelea alabamensis</i>	Alabama spiny-pod	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Pteronotopis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Tephrosia mohrii</i>	pineland hoary-pea	G3	S3	N	T
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T
Matrix Unit ID: 5178					
Documented					
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
Likely					
<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
Sandhill		G3	S2	N	N
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
Potential					
<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T

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Florida Natural Areas Inventory Biodiversity Matrix Report



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<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E
<i>Calamintha dentata</i>	toothed savory	G3	S3	N	T
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Gentiana pennelliana</i>	wiregrass gentian	G3	S3	N	E
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lachnocaulon digynum</i>	pineland bogbutton	G3G4	S3	N	T
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Magnolia ashei</i>	Ashe's magnolia	G3	S2	N	E
<i>Matelea alabamensis</i>	Alabama spiny-pod	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Paronychia chartacea</i> var. <i>minima</i>	Crystal Lake nailwort	G3T1	S1	T	E
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Poanes yehl</i>	Yehl Skipper	G4	S2S3	N	N
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Sciurus niger niger</i>	Southeastern Fox Squirrel	G5T5	S3	N	N
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Tephrosia mohrii</i>	pineland hoary-pea	G3	S3	N	T
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Matrix Unit ID: 5236

Likely

<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
<i>Melanoplus gurneyi</i>	Gurney's Spurthroat Grasshopper	G1G2	S1S2	N	N
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N

Potential

<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Amphiuma pholeter</i>	One-toed Amphiuma	G3	S3	N	N
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T

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Florida Natural Areas Inventory

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<i>Calamintha dentata</i>	toothed savory	G3	S3	N	T
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eurybia spinulosa</i>	pinewoods aster	G1	S1	N	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Macranthera flammea</i>	hummingbird flower	G3	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowli	G5T2	S2	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula ionantha</i>	Godfrey's butterwort	G2	S2	T	E
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Pteronotropis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Matrix Unit ID: 5237

Documented

<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Procambarus latipleurum</i>	Wingtail Crayfish	G2	S2	N	N

Likely

<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
<i>Melanoplus gurneyi</i>	Gurney's Spurthroat Grasshopper	G1G2	S1S2	N	N
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N

Potential

<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Amphiuma pholeter</i>	One-toed Amphiuma	G3	S3	N	N
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E

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<i>Calamintha dentata</i>	toothed savory	G3	S3	N	T
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eurybia spinulosa</i>	pinewoods aster	G1	S1	N	E
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Macranthera flammea</i>	hummingbird flower	G3	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula ionantha</i>	Godfrey's butterwort	G2	S2	T	E
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Pteronotropis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Thalictrum cooley</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Matrix Unit ID: 5238

Documented

<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
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Likely

<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
<i>Melanoplus gurneyi</i>	Gurney's Spurthroat Grasshopper	G1G2	S1S2	N	N
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N

Potential

<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Amphiuma pholeter</i>	One-toed Amphiuma	G3	S3	N	N
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E
<i>Calamintha dentata</i>	toothed savory	G3	S3	N	T
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T

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Florida Natural Areas Inventory

Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Eurybia spinulosa</i>	pinewoods aster	G1	S1	N	E
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Macranthera flammea</i>	hummingbird flower	G3	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlii	G5T2	S2	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula ionantha</i>	Godfrey's butterwort	G2	S2	T	E
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Pteronotropsis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Matrix Unit ID: 5239

Documented

<i>Gentiana pennelliana</i>	wiregrass gentian	G3	S3	N	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST

Likely

<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N
Sandhill		G3	S2	N	N

Potential

<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Amphiuma pholeter</i>	One-toed Amphiuma	G3	S3	N	N
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E
<i>Calamintha dentata</i>	toothed savory	G3	S3	N	T
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E

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<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eurybia spinulosa</i>	pinewoods aster	G1	S1	N	E
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Macranthera flammea</i>	hummingbird flower	G3	S2	N	E
<i>Matelea alabamensis</i>	Alabama spiny-pod	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula ionantha</i>	Godfrey's butterwort	G2	S2	T	E
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Pteronotropis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Tephrosia mohrii</i>	pineland hoary-pea	G3	S3	N	T
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Matrix Unit ID: 5240

Documented

<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
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Likely

<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
Sandhill		G3	S2	N	N

Potential

<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Amphiuma pholeter</i>	One-toed Amphiuma	G3	S3	N	N
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Atractosteus spatula</i>	Alligator Gar	G3G4	S3	N	N
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E
<i>Calamintha dentata</i>	toothed savory	G3	S3	N	T

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Florida Natural Areas Inventory

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<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eurybia spinulosa</i>	pinewoods aster	G1	S1	N	E
<i>Gentiana pennelliana</i>	wiregrass gentian	G3	S3	N	E
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lachnocaulon digynum</i>	pineland bogbutton	G3G4	S3	N	T
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Macranthera flammea</i>	hummingbird flower	G3	S2	N	E
<i>Matelea alabamensis</i>	Alabama spiny-pod	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula ionantha</i>	Godfrey's butterwort	G2	S2	T	E
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Pteronotropis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Tephrosia mohrii</i>	pineland hoary-pea	G3	S3	N	T
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Matrix Unit ID: 5241

Documented

<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
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Likely

<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E

Potential

<i>Agrimonia incisa</i>	incised groove-bur	G3	S2	N	T
<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Amphiuma pholeter</i>	One-toed Amphiuma	G3	S3	N	N
<i>Amoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T

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<i>Atractosteus spatula</i>	Alligator Gar	G3G4	S3	N	N
<i>Baptisia megacarpa</i>	Apalachicola wild indigo	G2	S1	N	E
<i>Calamintha dentata</i>	toothed savory	G3	S3	N	T
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T
<i>Carex baltzellii</i>	Baltzell's sedge	G3	S3	N	T
<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E, PT	FE
<i>Eurybia spinulosa</i>	pinewoods aster	G1	S1	N	E
<i>Gentiana pernelliana</i>	wiregrass gentian	G3	S3	N	E
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lachnocaulon digynum</i>	pineland bogbutton	G3G4	S3	N	T
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Macranthera flammea</i>	hummingbird flower	G3	S2	N	E
<i>Magnolia ashei</i>	Ashe's magnolia	G3	S2	N	E
<i>Matelea alabamensis</i>	Alabama spiny-pod	G2	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Paronychia chartacea</i> var. <i>minima</i>	Crystal Lake nailwort	G3T1	S1	T	E
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Pteronotropsis welaka</i>	Bluenose Shiner	G3G4	S3S4	N	ST
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E
<i>Sciurus niger niger</i>	Southeastern Fox Squirrel	G5T5	S3	N	N
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Tephrosia mohrii</i>	pineland hoary-pea	G3	S3	N	T
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris longisepala</i>	karst pond xyris	G2G3	S2S3	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Matrix Unit ID: 5300

Likely

<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S2?	T	FT
Mesic flatwoods		G4	S4	N	N

Potential

<i>Ambystoma bishopi</i>	Reticulated Flatwoods Salamander	G2	S1	E	FE
<i>Amphiuma pholeter</i>	One-toed Amphiuma	G3	S3	N	N
<i>Arnoglossum diversifolium</i>	variable-leaved Indian-plantain	G2	S2	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Calamintha dentata</i>	toothed savory	G3	S3	N	T
<i>Calamovilfa curtissii</i>	Curtiss' sandgrass	G3	S3	N	T

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<i>Coreopsis integrifolia</i>	ciliate-leaf tickseed	G1G2	S1	N	E
<i>Eurybia spinulosa</i>	pinewoods aster	G1	S1	N	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Lithobates capito</i>	Gopher Frog	G2G3	S3	N	N
<i>Litsea aestivalis</i>	pondspice	G3?	S2	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Macranthera flammea</i>	hummingbird flower	G3	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G2	S2	N	N
<i>Nuphar advena</i> ssp. <i>ulvacea</i>	West Florida cowlily	G5T2	S2	N	N
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula ionantha</i>	Godfrey's butterwort	G2	S2	T	E
<i>Pinguicula primuliflora</i>	primrose-flowered butterwort	G3G4	S3	N	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Rhynchospora crinipes</i>	hairy-peduncled beaksedge	G3	S3	N	E
<i>Stachydeoma graveolens</i>	mock pennyroyal	G2G3	S2S3	N	E
<i>Thalictrum cooleyi</i>	Cooley's meadowrue	G1	S1	E	E
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Xyris isoetifolia</i>	Quillwort yellow-eyed grass	G2	S2	N	E
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

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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.

FNAT 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).
- GNRTNR** = Neither the element nor the taxonomic subgroup has yet been ranked.

FNAT 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 = Partial status: some but not all of the species' infraspecific taxa have federal

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.

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 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/>.

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.

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).



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FLORIDA
Natural Areas
INVENTORY

Florida Natural Areas Inventory

Managed Area Element Summary

Pine Log State Forest



SCIENTIFIC NAME	COMMON NAME	Global rank	State rank	Federal status	State status
PLANTS					
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Gentiana pennelliana</i>	wiregrass gentian	G3	S3	N	E
<i>Rhexia salicifolia</i>	Panhandle meadowbeauty	G2	S2	N	T
<i>Tiedemannia filiformis</i> ssp. <i>greenmanii</i>	giant water cowbane	G3	S3	N	E
AMPHIBIANS					
<i>Amphiuma pholeter</i>	One-toed Amphiuma	G3	S3	N	N
REPTILES					
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
MAMMALS					
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T4	S4	N	N
INVERTEBRATES					
<i>Agarodes libalis</i>	Spring-loving Psiloneuran Caddisfly	G3	S3	N	N
<i>Amblyscirtes alternata</i>	Dusky Roadside-Skipper	G2G3	S2	N	N
<i>Ceratomyia truncona</i>	Florida Cernotinan Caddisfly	G4	S3	N	N
<i>Chimarra florida</i>	Floridian Finger-net Caddisfly	G4	S3S4	N	N
<i>Dromogomphus armatus</i>	Southeastern Spinyleg	G4	S3	N	N
<i>Hydroptila alabama</i>	A Caddisfly	G4	S2	N	N
<i>Hydroptila molsonae</i>	Molson's Microcaddisfly	G2G3	S2	N	N
<i>Melanoplus gurneyi</i>	Gurney's Spurthroat Grasshopper	G1G2	S1S2	N	N
<i>Nyctiophylax morsei</i>	Morse's Dinky Light Summer Sedge	G2	S2	N	N
<i>Oxyethira elerobi</i>	Elerob's Microcaddisfly	G3G4	S2S3	N	N
<i>Oxyethira pescadori</i>	Pescador's Bottle-Cased Caddisfly	G3G4	S3	N	N
<i>Procambarus latipleurum</i>	Wingtail Crayfish	G2	S2	N	N
<i>Stenacron floridense</i>	A Mayfly	G3G4	S3S4	N	N
BIRDS					
<i>Peucaea aestivalis</i>	Bachman's sparrow	G3	S3	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

Pine Log State Forest



SCIENTIFIC NAME	COMMON NAME	Global rank	State rank	Federal status	State 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).
- GNRTNR = 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

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

Pine Log State Forest



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
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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 L

Florida Fish and Wildlife Conservation Commission Listed Species Occurrence Records



**Florida Fish
and Wildlife
Conservation
Commission**

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Fax: (727) 823-0166
Hearing/speech-impaired:
(800) 955-8771 (T)
(800) 955-8770 (V)
MyFWC.com/Research

Patti Anderson

July 14, 2021
3125 Conner Boulevard
Tallahassee, FL 32399-1650

Dear Patti:

This letter is in response to your request for listed species occurrence records and critical habitats for Pine Log State Forest project located in Washington and Bay County, Florida. Records from The Florida Fish and Wildlife Conservation Commission's database indicate that listed species occurrence data and critical habitats are located within the project area. Records of Florida black bear, Giant water cowbane, Southern milkweed, Reticulated Flatwoods salamander, Panhandle meadowbeauty, Wiregrass gentian, Karst pond xyris, Spring-loving Psiloneuran Caddisfly, Floridian Finger-net Caddisfly, Elerob's Microcaddisfly, Morse's Dinky Light Summer Sedge, Pescador's Bottle-Cased Caddisfly, Florida Cernotinan Caddisfly, Alabama Caddisfly, Molson's Microcaddisfly, Southeastern Spinyleg, Seepage slope, Wingtail Crayfish, Southern Hognose Snake, Wiregrass gentian, Ironcolor shiner, Indigo Snake and Eastern diamondback rattlesnake were found on the property. SHCAs were found for Florida black bear and Cooper's Hawk within the property. Enclosed are 8.5 x 11 maps prioritized SHCA's, species richness, priority wetlands for listed species, species locations and land cover for the project site.

This letter and attachments should not be considered as a review or an assessment of the impact upon threatened or endangered species of the project site. It provides FWC's most current data regarding the location of listed species and their associated habitats.

Our SHCA recommendations are intended to be used as a guide. Land development and ownership in Florida is ever-changing and priority areas identified as SHCA might already have been significantly altered due to development or acquired into public ownership. Onsite surveys, literature reviews, and coordination with FWC biologists remain essential steps in documenting the presence or absence of rare and imperiled species and habitats within the project area.

Our fish and wildlife location data represents only those occurrences recorded by FWC staff and other affiliated researchers. It is important to understand that our database does not necessarily contain records of all listed species that may occur in a given area. Also, data on certain species, such as gopher tortoises, are not entered into our database on a site-specific basis.

Therefore, one should not assume that an absence of occurrences in

Patti Anderson
Page 2
July 14th, 2021

our database indicates that species of significance do not occur in the area.

The Florida Natural Areas Inventory (FNAI) maintains a separate database of listed plant and wildlife species, please contact FNAI directly for specific information on the location of element occurrences within the project area.

Because FNAI is funded to provide information to public agencies only, you may be required to pay a fee for this information. County-wide listed species information can be located at their website (<http://www.fnai.org>).

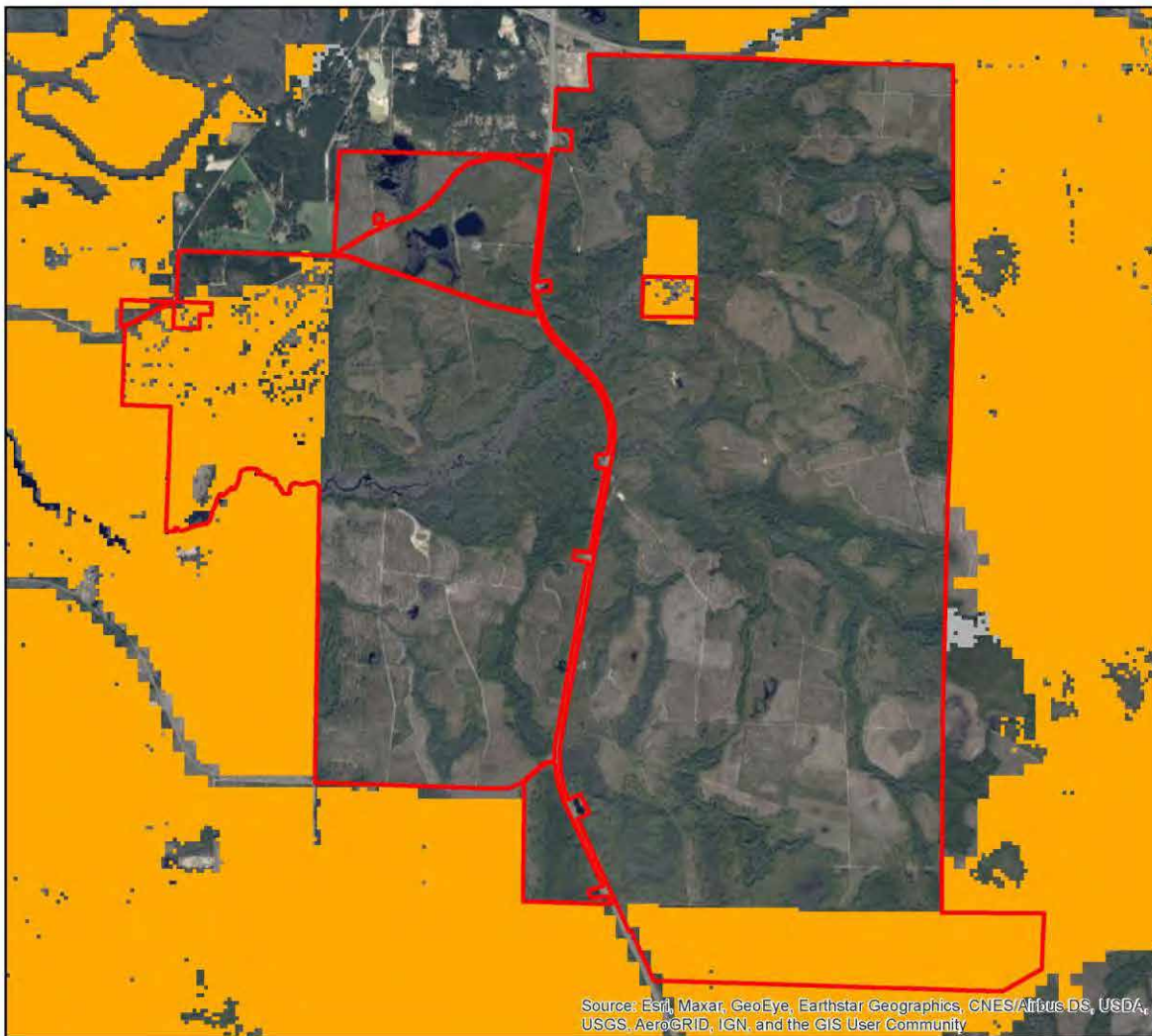
Please credit the Florida Fish and Wildlife Conservation Commission in any publication or presentation of these data. If you have any questions or further requests, please contact me at (850) 488-0588 or gisrequests@myfwc.com.

Sincerely,

Steven Nicholl

Steven Nicholl

Environmental Specialist I/GIS Technician
Center for Spatial Analysis
Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
100 8th Avenue S.E.
St. Petersburg, FL 33701



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Prioritized SHCA's

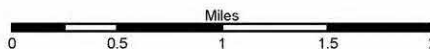


 Approximate site boundary and 1-mile buffer



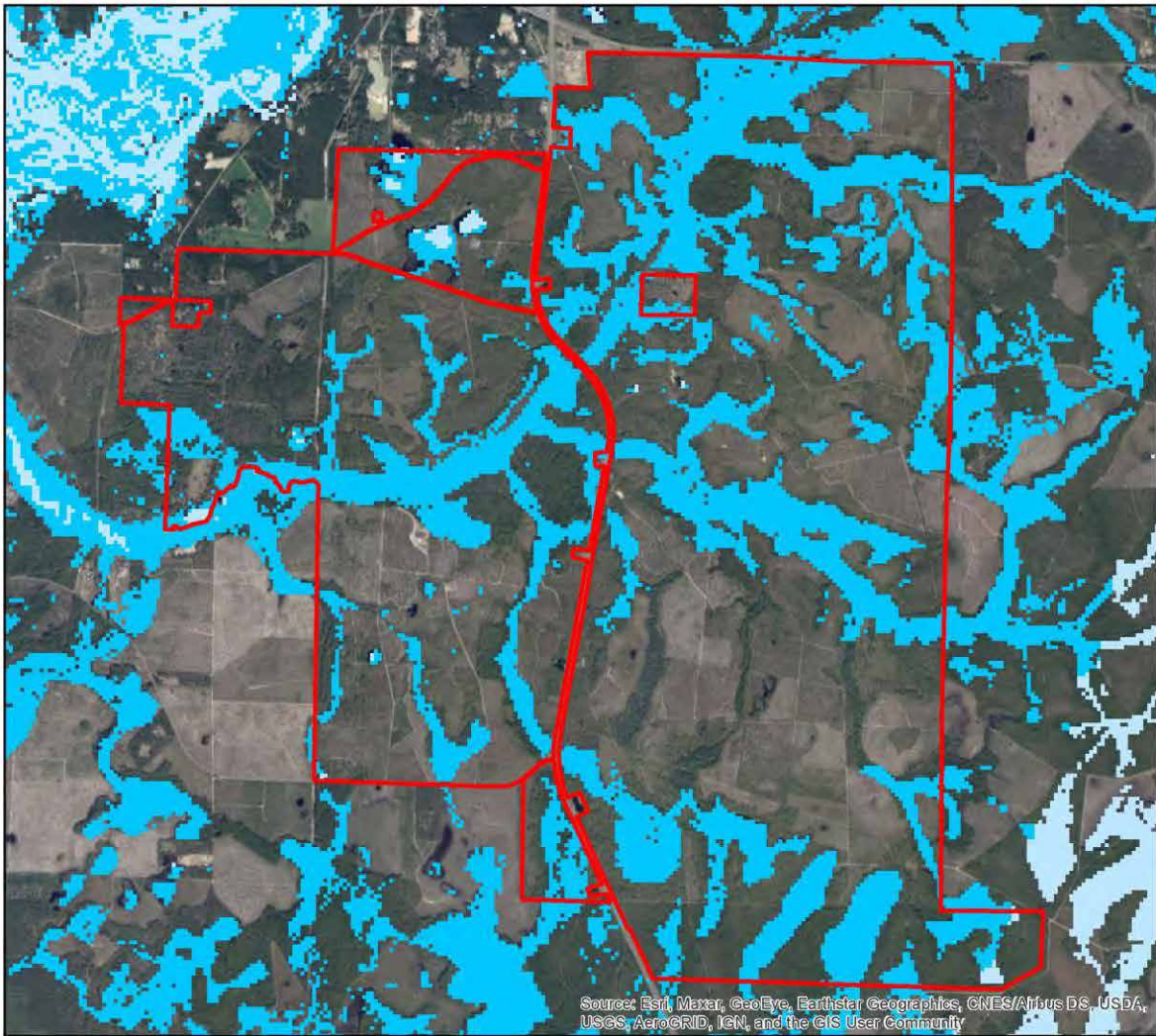
Pine Log State Forest Project Site

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 fragility.



Florida Fish and Wildlife
Conservation Commission
MyFWC.com

FWC ID: 2021_6510 July 14, 2021



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Priority Wetlands

-  1-3 Species, Wetlands habitat
-  4-6 Species, Wetlands habitat
-  7-9 Species, Wetlands habitat
-  10-11 Species, Wetlands habitat

 Approximate site boundary and 1-mile buffer

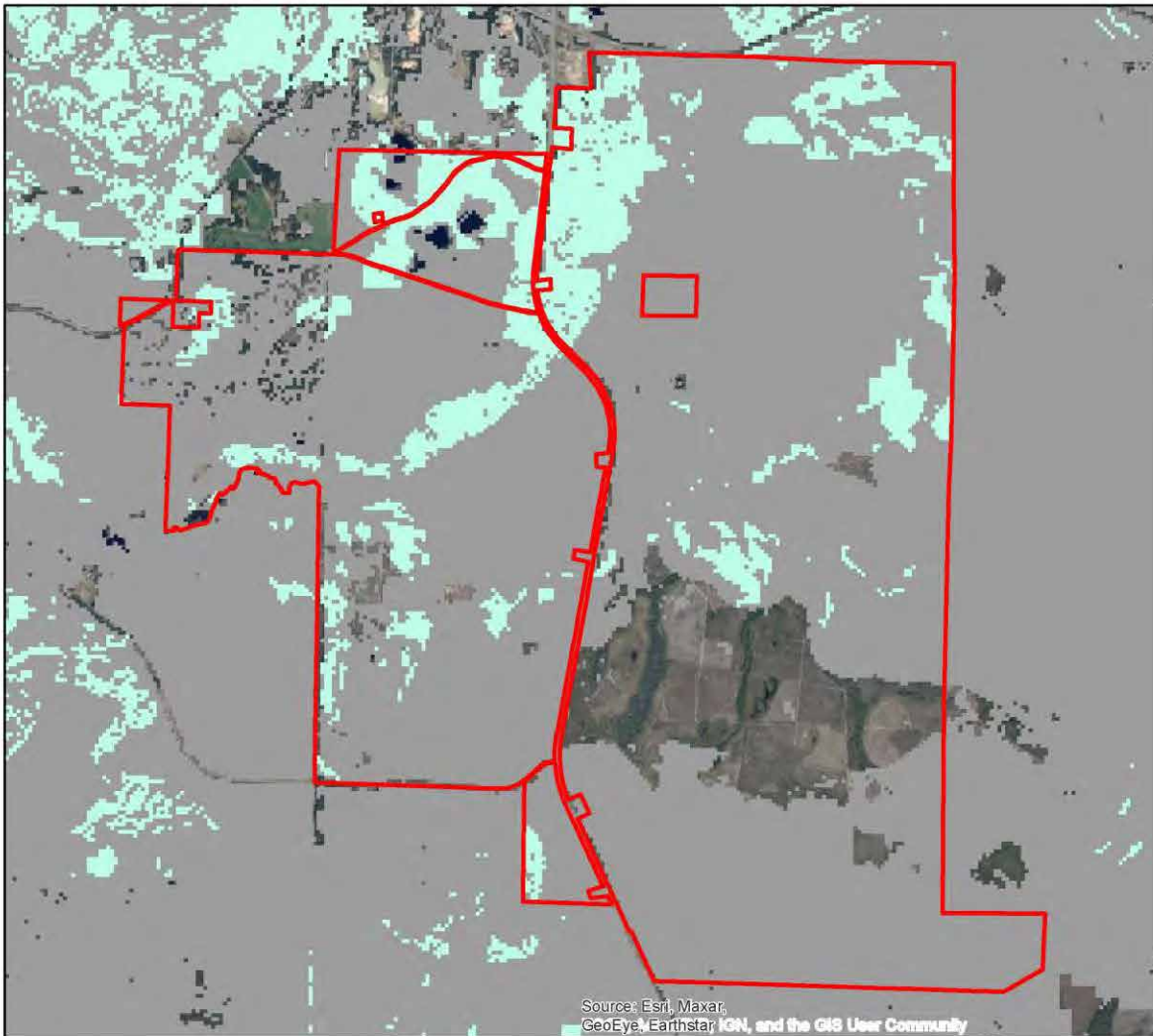


Pine Log State Forest
Project Site

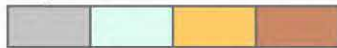


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Species Richness



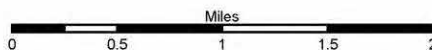
1-3 4-6 7-9 10-13



Approximate site boundary and 1-mile buffer



Pine Log State Forest
Project Site



Florida Fish and Wildlife
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FWC ID: 2021_6510 July 14, 2021

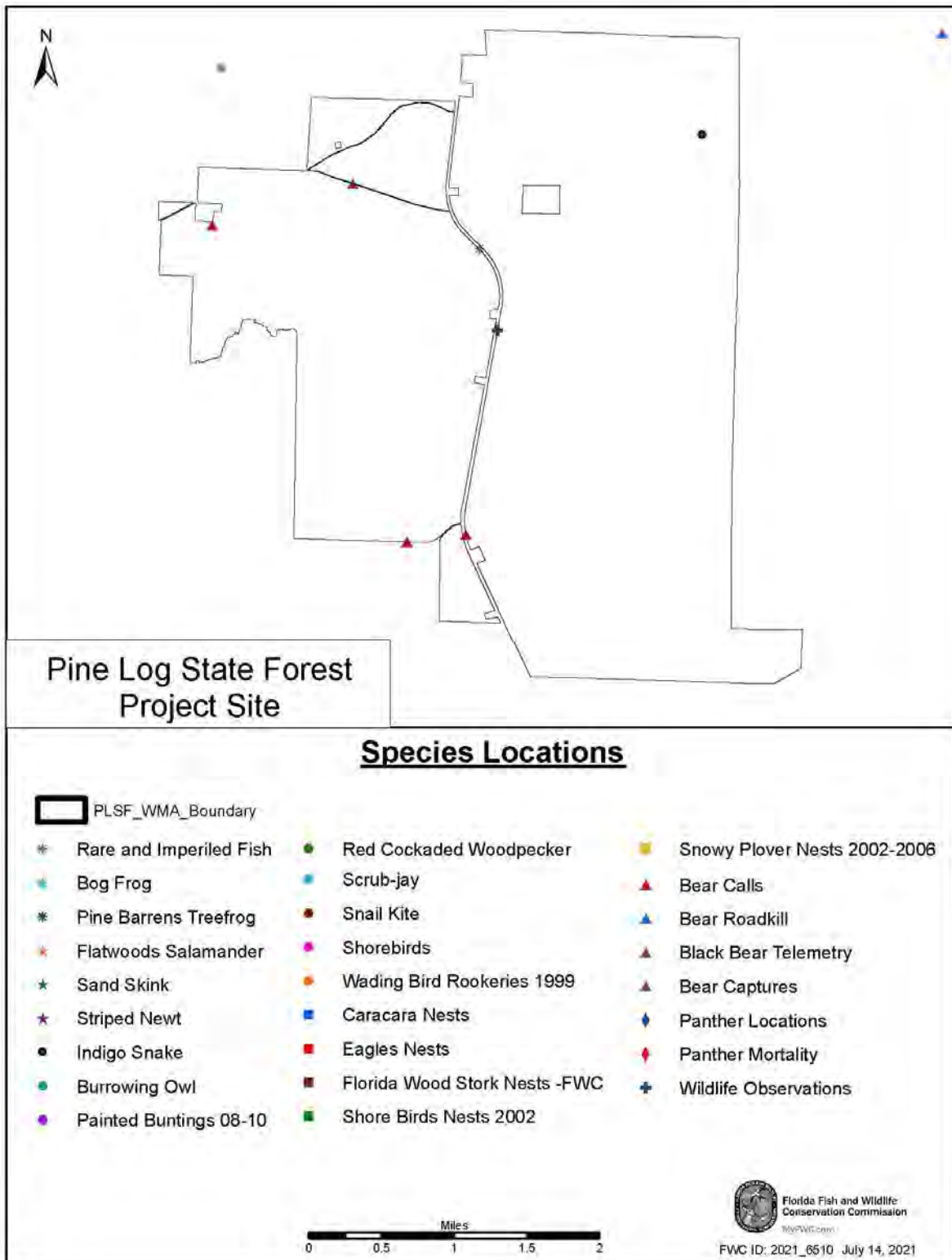


Exhibit M

Ten-Year Fire History

Pine Log State Forest Burn Acres by Fiscal Year

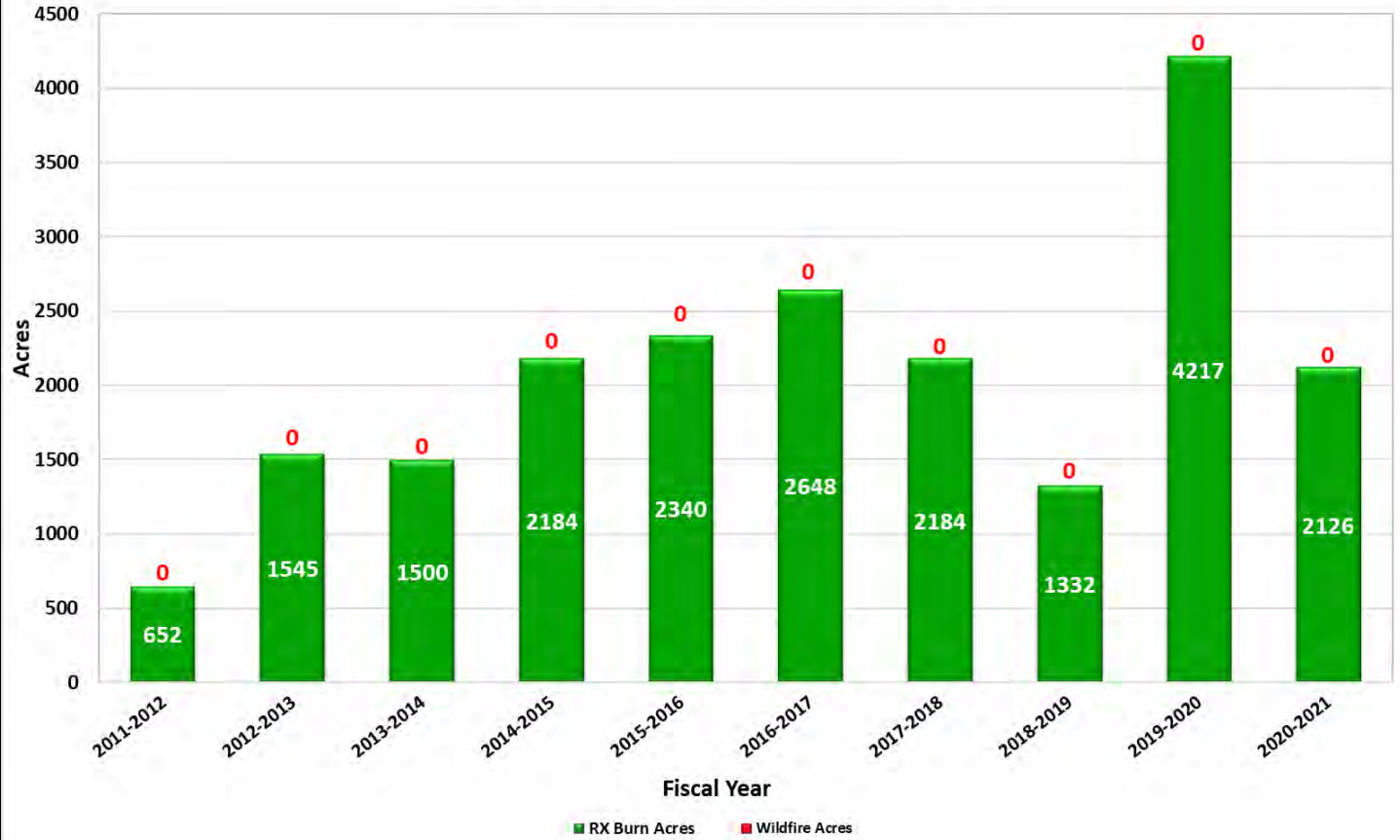


Exhibit N

Non-Native Invasive Species



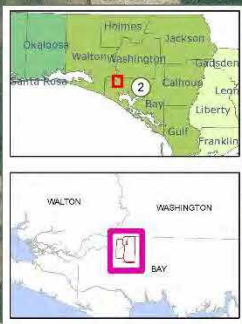
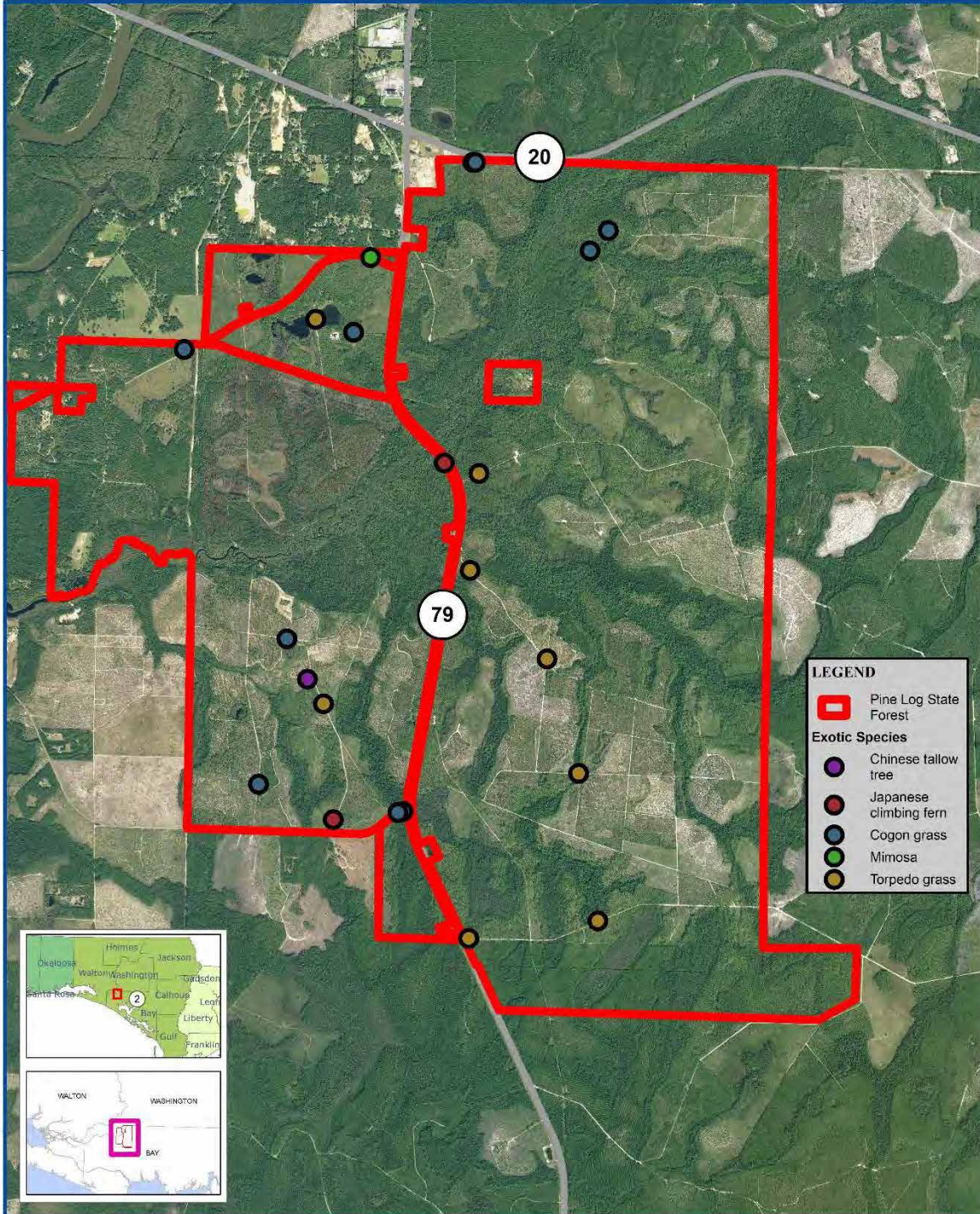
Florida Forest Service

Pine Log State Forest

Non-Native Invasive Species Map

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

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damages, arising from the use of this map.
Revised: June 2021 by the Florida Forest Service
The Florida Forest Service is a part of the
Florida Department of Natural Resources.
Florida, USA. Date: June 1, 2021
From the US Army Corps of Engineers
95° 15' W



0.5 0.25 0
Kilometers



Map Month/Year: July 2021

1,000 500 0 1,000
Feet

Exhibit O

Current Natural Communities Map



Florida Forest Service

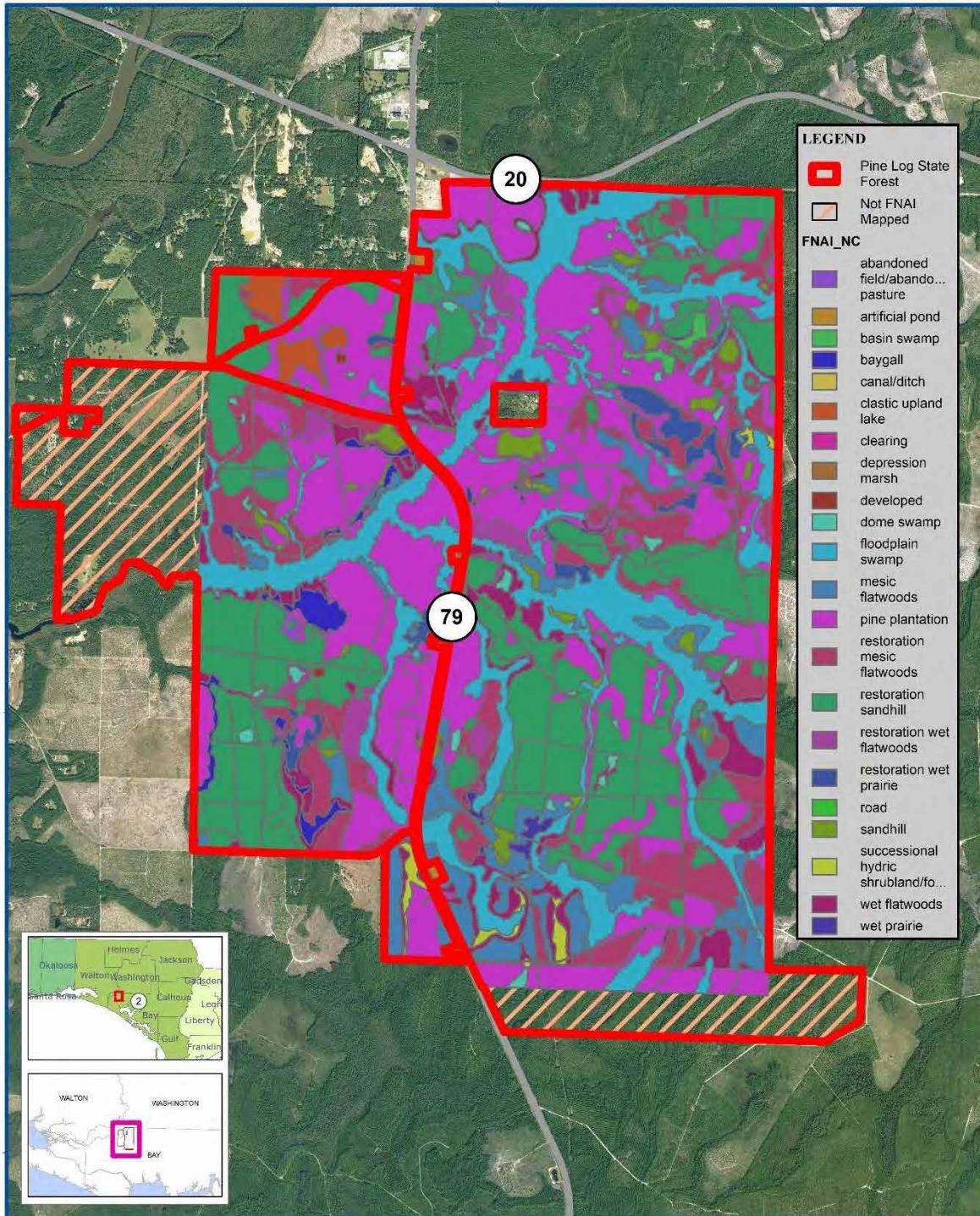
Pine Log State Forest

Current FNAI Natural Communities Map

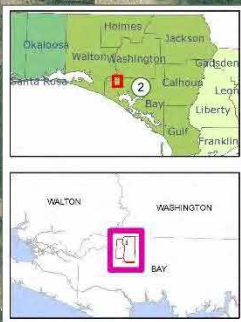
Coordinate System: Florida Albers
High Accuracy Reference Network (HARN) Datum

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accuracy. The Florida Forest Service is not
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map is based on the best available information
and is subject to change without notice. The
Florida Forest Service is not responsible for
any damages or losses resulting from the use
of this map.

Revised and corrected by the
Florida Forest Service
Florida State Road 79
From the US Army Corps of Engineers
8/2/2010



- LEGEND**
- Pine Log State Forest
 - Not FNAI Mapped
- FNAI_NC**
- abandoned field/abando... pasture
 - artificial pond
 - basin swamp
 - baygall
 - canal/ditch
 - clastic upland lake
 - clearing
 - depression marsh
 - developed
 - dome swamp
 - floodplain swamp
 - mesic flatwoods
 - pine plantation
 - restoration mesic flatwoods
 - restoration sandhill
 - restoration wet flatwoods
 - restoration wet prairie
 - road
 - sandhill
 - successional hydric shrubland/fo...
 - wet flatwoods
 - wet prairie



0.5 0.25 0 Miles



Map Month/Year: July 2011

1,000 500 0 1,000 Feet

Exhibit P

Historic Natural Communities Map



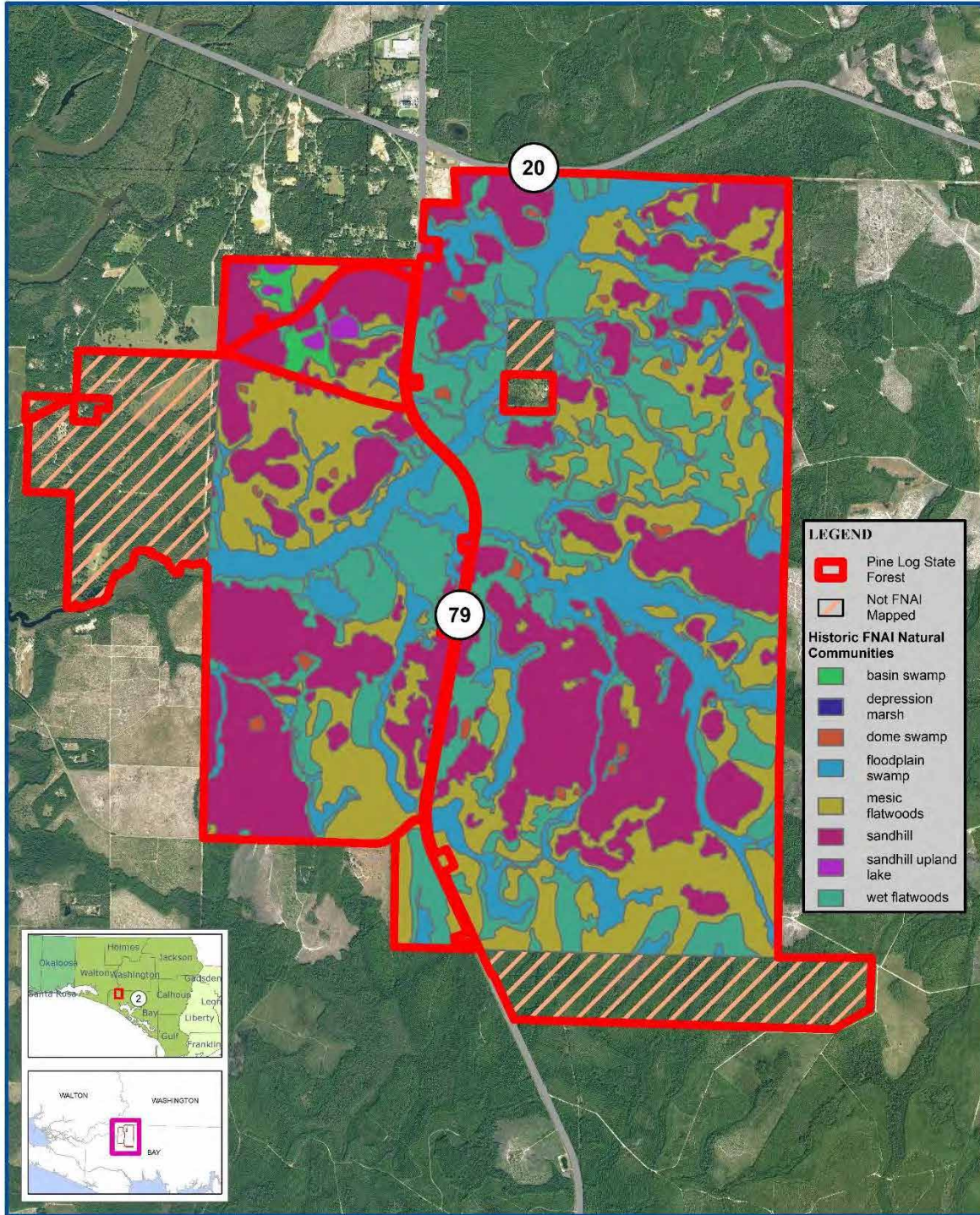
Florida Forest Service

Pine Log State Forest

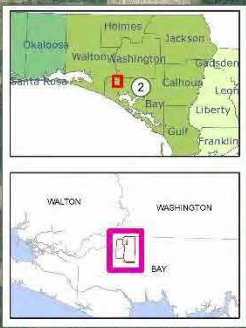
Historic FNAI Natural Communities Map

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

DISCLAIMER:
This map was prepared by the Florida Forest Service
and is not intended to be used for any purpose other than
general information. It is not a legal document and should not
be used for any legal purpose. The Florida Forest Service
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any damages or losses resulting from the use of this
map.



- LEGEND**
- Pine Log State Forest
 - Not FNAI Mapped
 - Historic FNAI Natural Communities**
 - basin swamp
 - depression marsh
 - dome swamp
 - floodplain swamp
 - mesic flatwoods
 - sandhill
 - sandhill upland lake
 - wet flatwoods



0.5 0.25 0 Miles



Map Month/Year: July 2021

1,000 500 0 Feet

Exhibit Q

Management Prospectus

CONSERVATION AND RECREATION LANDS
MANAGEMENT PROSPECTUS

Pine Log State Forest

DIVISION OF FORESTRY
DEPARTMENT OF AGRICULTURE & CONSUMER SERVICES

Management Goals

Pine Log State Forest is Florida's first State Forest. Established in 1936, Pine Log State Forest is located north of Panama City Beach in Florida's panhandle. The Forest occupies 6,973.14 acres in Bay and Washington Counties. 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 ensure 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

Major communities for this project are comprised of flatwoods (hydric, and mesic) blackwater streams, basin swamp, bottomland forest, sandhill lake, dome swamp and sandhills. The project's size and diversity make it highly desirable for use and management as a state forest.

Conditions Affecting Intensity of Management

There are areas of cutover lands that will require reforestation and restoration efforts. These areas however will not be able to be replanted soon due to the current budget. These clear-cuts will need to be maintained to keep vegetation at a manageable level in order to plant when the budget allows.

Timetable for Implementing Management

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 Chipola River 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 ensure 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 will be 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 thinning 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 of Forestry 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 of this project is expected to be low.

Management Costs and Sources of Revenue

It is anticipated that management funding will come from the Conservation and Recreation Lands trust fund. Budget needs for interim management are estimated as follows.

SALARY (4 FTE's)	\$105,640
EXPENSE	\$20,000
OPERATING CAPITAL OUTLAY	\$741,300
TOTAL	\$866,940

SALARY

Senior Forest Ranger (1) @ \$28,140	\$28,140
Forest Ranger (2) @ \$24,500	\$49,000
Forester (1)	\$28,500
TOTAL	\$105,640

EXPENSE	\$20,000
---------	----------

OPERATING CAPITAL OUTLAY

Pickup Truck, 4x4, diesel (2) @ \$23k	\$46,000
Farm Tractor	\$10,000
Harrow, 7 foot	\$14,000
Water Tank & Pump (2) @ \$1,400	\$2,800
Mobile Radio (7) @ \$1,200	\$8,400
Bush Hog	\$4,500
Portable Radio (4) @ 800	\$3,200
4-wheeler with fire Pod	\$7,200
Disc, 7 foot	\$12,000
Transports and 650j Dozers (2) @ \$180k	\$360,000
Lowboy Transport and D6 Dozer	\$188,000
Tanker	\$21,500
Frontend Loader	\$25,000
Road Grader	\$30,000
Gravely Mower	\$3,000
John Deere 4x4 Gator	\$5,000
Box Blade	\$700
TOTAL	\$741,300

This Prospectus was recorded December 2009 for perpetuity and to meet the Acquisition and Restoration Council's Land Management Plan requirements.

Exhibit R

Land Management Reviews (2014 & 2019)

2014 Land Management Review Team Report for Pine Log 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 case where the managed areas exceed 1,000 acres in size, such a review must be scheduled at least every five years. In conducting this review, a statutorily constructed review team "shall evaluate the extent to which the existing management plan provides sufficient protection to threatened or endangered species, unique or important natural or physical features, geological or hydrological functions or archaeological features. The review shall also evaluate the extent to which the land is being managed for the purposes for which it was acquired and the degree to which actual management practices, including public access, are in compliance with the adopted management plan."

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

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

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

1.1. Property Reviewed in this Report

Name of Site: Pine Log State Forest

Managed by: Florida Forest Service

Acres: 6,961.00

County(ies): Bay/Washington County

Purpose(s) for Acquisition:

Acquisition Program(s):

Area Reviewed: Entire Property

Original Acquisition Date: __/__/__

Last Management Plan Approval Date: __/__/__

Review Date: 5/22/2014

Agency Manager and Key Staff Present:

- Aaron Kincaid, Manager

- John Sabo

Review Team Members Present (voting)

- DRP: John McKenzie
- FWC: Diana Pepe
- FFS: Bill Korn
- DEP: Jeanne Williams

- SWCD: Clifford White
- Local gov't: Jamie Jones
- Conservation organization: Debbie Fable
- Private land manager: Steve Rutherford

Other Non-Team Members Present (attending)

- Keith Singleton, DEP/DSL
- Aric Larson, DEP/DSL

- Mike Wisenbaker, DOS/DHR
- Daniel Young, FFS

1.2 Property Map



1.3. Overview of Land Management Review Results

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

Yes = 8, No = 0

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

Yes = 8, 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	4.76	4.73
Prescribed Fire / Habitat Restoration	4.78	4.75
Hydrology	4.21	3.86
Imperiled Species	4.85	4.79
Exotic / Invasive Species	4.27	4.02
Cultural Resources	4.06	4.31
Public Access / Education / Law Enforcement	4.41	4.25
Infrastructure / Equipment / Staffing	3.71	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 FFS for the excellent job of balancing natural resource management with providing extensive visitor services. (8+, 0-)
2. The team commends the FFS for meeting annual burn objectives, even with the challenges of the airport and Highway 79. (8+, 0-)
3. The team commends the FFS for protection of biologically productive wet prairie sites and routine burning in conjunction with the surrounding fire type natural communities. (8+, 0-)
4. The team commends the FFS and FWC staff for an excellent level of cooperation on both managing hunts and monitoring game animal populations and routine survey and monitoring of imperiled species, including flatwoods salamander and gopher tortoise. (8+, 0-)

5. The team commends the FFS staff for their efforts to organize and manage Wounded Warrior hunts. (8+, 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 FFS develop more public awareness of special park features, such as wet prairies (the crown jewels of the park). (8+, 0-)

Managing Agency Response: Agree. The Chipola Forestry Center is currently planning a new marketing campaign to highlight our local State Forest and its unique features such as wet prairies, campgrounds and other recreational opportunities.

2. The team recommends that FFS conduct a plant inventory of each of the well delineated wet prairie sites, with emphasis on documenting locations and relative abundance of imperiled species. (8+, 0-)

Managing Agency Response: Agree. The Chipola Forestry Center is currently working with a consultant (Tom Greene) and other volunteers to map and inventory wet prairie sites and document species found.

3. The team recommends that FFS include growing season burns into the overall/long-term fire regime, particularly for flatwoods sites currently dominated by understory woody shrubs. A goal may be to have a growing season burn perhaps every 3 to 4 burn rotations. (8+, 0-)

Managing Agency Response: Agree. Local staff has been instructed to identify and implement growing season burns within the normal prescribed burn rotation of the forest.

4. The team recommends that FFS use care when applying herbicide for control of oak species in upslope proximity of wet prairies as carnivorous plants are particularly sensitive to these impacts. (8+, 0-)

Managing Agency Response: Agree. The Chipola Forestry Center will continue to closely monitor any herbicide application on the forest, paying special attention to proximity of wet prairies.

5. The team recommends that FFS explore opportunities for additional private and public partnerships to not only market, but also maintain the resource/facilities. (8+, 0-)

Managing Agency Response: Agree. The Chipola Forestry Center is looking to expand the volunteer program by going into local Colleges and Tech Schools to provide opportunities for internships. Examples would be utilizing students in the Resource, Construction or Equipment Maintenance fields.

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 sandhill, mesic flatwoods, wet flatwoods, blackwater stream, basin swamp, bottomland forest/floodplain swamp, sandhill upland lake, dome swamp and wet prairie:
2. Listed Species Protection and Preservation, specifically animals, flatwoods salamander, herps and gopher tortoise, and plants:
3. Natural Resources Survey/Monitoring Resources, specifically listed species or their habitat monitoring, other non-game species or their habitat, 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. Restoration, specifically sand pine to sandhill restoration, pine plantation to wet prairie:
6. Forest Management, specifically timber inventory, timber harvesting, reforestation/afforestation and site preparation:
7. Non-Native, Invasive & Problem Species, specifically prevention and control of animals, plants and pests/pathogens:
8. Hydrologic/Geologic function Hydro-Alteration, specifically roads/culverts:
9. Ground Water Monitoring, specifically ground water quality:
10. Resource Protection, specifically boundary survey, gates and fencing, signage and law enforcement presence:
11. Adjacent Property Concerns, specifically inholdings/additions:
12. Public Access and Education, specifically roads and parking:
13. Environmental Education & Outreach, specifically wildlife, invasive species, habitat management activities and recreational opportunities:
14. Management Resources, specifically waste disposal and sanitary facilities:

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. Management Resources, specifically funding, received a below average score. The review team is asked to evaluate, based on information provided by the managing agency, whether management resources are sufficient.

Managing Agency Response: Agree. The Chipola Forestry Center will continue to seek budget and special funding opportunities for purchases related to routine operational expenses required to manage the site; for purchase of replacement equipment (such as the farm tractor and ATV equipment mentioned by the LMR team); and for possible additional staff positions to perform management duties on this forest.

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)										
Sandhill	I.A.1	5	5	4	5	5	5	5	4	4.75
Mesic Flatwoods	I.A.2	5	5	5	5	5	5	4	4	4.75
Wet Flatwoods	I.A.3	5	5	5	5	5	5	5	4	4.88
Blackwater Stream	I.A.4	5	5	4	5	5	5	5	4	4.75
Basin Swamp	I.A.5	5	5	5	5	5	5	5	4	4.88
Bottomland Forest/Floodplain Swamp	I.A.6	5	5	5	5	5	5	5	4	4.88
Sandhill Upland Lake	I.A.7	5	5	5	5	5	5	5	4	4.88
Dome Swamp	I.A.8	5	5	5	5	5	5	5	4	4.88
Wet Prairie	I.A.9	5	5	5	5	5	5	5	4	4.88
Natural Communities Average Score										4.83
Listed species:Protection & Preservation (I.B)										
Animals	I.B.1	5	5	5	5	5	5	4	4	4.75
Flatwoods Salamander	I.B.1.a	5	5	5	5	5	5	4	4	4.75
Herps	I.B.1.b	5	5	5	5	5	5	5	4	4.88
Gopher Tortoise	I.B.1.c	5	5	5	5	5	5	5	4	4.88
Plants	I.B.2	5	5		5	5	5		5	5.00
Listed Species Average Score										4.85
Natural Resources Survey/Management Resources (I.C)										
Sport fish or their habitat monitoring	I.C.1	4	3	4	5	4	3	4	X	3.86
Listed species or their habitat monitoring	I.C.2	5	5	5	5	5	5	5	3	4.75
Other non-game species or their habitat monitoring	I.C.3	5	5	5	5	5	5	5	3	4.75
Fire effects monitoring	I.C.4	5	5	4	5	5	4	4	5	4.63
Other habitat management effects monitoring	I.C.5	5	4	4	5	5	4	4	4	4.38

Invasive species survey / monitoring	I.C.6	5	5	4	5	5	4		3	4.43
Cultural Resources (Archeological & Historic sites) (II.A, II.B)										
Cultural Res. Survey	II.A	5	4	4	5	3	4	3	4	4.00
Protection and preservation	II.B	5	4	4	5	3	4	4	4	4.13
Cultural Resources Average Score										4.06
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	5	5	4	5	5	5	5	5	4.88
Frequency	III.A.2	5	5	4	5	5	5	5	5	4.88
Quality	III.A.3	5	5	4	5	5	5	5	5	4.88
Resource Management, Prescribed Fire Average Score										4.88
Restoration (III.B)										
Sand Pine to Sandhill Restoration	III.B.1	5	5	4	5	5	3	5	4	4.50
Pine Planation to Wet Prairie	III.B.2	5	5	5	5	5	5	5	4	4.88
Restoration Average Score										4.69
Forest Management (III.C)										
Timber Inventory	III.C.1	5	5	4	5	5	5	5	4	4.75
Timber Harvesting	III.C.2	5	5	3	5	5	5	5	4	4.63
Reforestation/Afforestation	III.C.3	5	5	4	5	5	4	5	4	4.63
Site Preparation	III.C.4	5	5	4	5	5	5		4	4.71
Forest Management Average Score										4.68
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.D.1.a	5	4	4	4	4	5	5	3	4.25
prevention - animals	III.D.1.b	5	5	4	4	4	5	5	4	4.50
prevention - pests/pathogens	III.D.1.c	5	4	4	4	4	5	5	3	4.25
Control										
control - plants	III.D.2.a	5	5	4	4	4	5	5	3	4.38
control - animals	III.D.2.b	5	5	4	4	4	5	4	3	4.25
control - pest/pathogens	III.D.2.c	5	3	4	4	4	5	4	3	4.00
Non-Native, Invasive & Problem Species Average Score										4.27
Hydrologic/Geologic function Hydro-Alteration (III.E.1)										
Roads/culverts	III.E.1.a	5	4	4	5	3	4	4	4	4.13
Hydrologic/Geologic function, Hydro-Alteration Average Score										4.13
Ground Water Monitoring (III.E.2)										
Ground water quality	III.E.2.a	5	5	4	5		5	5	1	4.29
Ground Water Monitoring Average Score										4.29
Resource Protection (III.F)										
Boundary survey	III.F.1	5	5	4	5	5	5	4	4	4.63
Gates & fencing	III.F.2	5	4	4	5	5	5	4	4	4.50
Signage	III.F.3	5	5	4	5	5	5	4	4	4.63
Law enforcement presence	III.F.4	5	4	3	5	3	5	3	4	4.00
Resource Protection Average Score										4.44

Adjacent Property Concerns (III.G)											
Land Use											
Inholdings/additions	III.G.2	5	4	4		4	5	4	4		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	4	5	4		4.63
Parking	IV.1.b	5	5	4	5	5	4	5	4		4.63
Environmental Education & Outreach											
Wildlife	IV.2.a	5	4	4	5	5	5	5	2		4.38
Invasive Species	IV.2.b	5	4	3	5	5	4	5	2		4.13
Habitat Management Activities	IV.2.c	5	4	3	5	5	5	5	2		4.25
Interpretive facilities and signs	IV.3	5	3	3	4	4	4	5	2		3.75
Recreational Opportunities	IV.4	5	5	4	5	5	5	5	4		4.75
Management of Visitor Impacts	IV.5	5	5	4	5	5	5	5	3		4.63
Public Access & Education Average Score											4.39
Management Resources (V.1, V.2, V.3, V.4)											
Maintenance											
Waste disposal	V.1.a	5	4	4	5	5	5	5	3		4.50
Sanitary facilities	V.1.b	5	4	4	5	5	5	5	3		4.50
Infrastructure											
Buildings	V.2.a	3	3	3	5	5	4	4	3		3.75
Equipment	V.2.b	3	3	3	5	5	4	3	3		3.63
Staff	V.3	5	4	3	5	3	4	3	3		3.75
Funding	V.4	1	2	2	3	2	2	2	3		2.13
Management Resources Average Score											3.71

Color Code:

Excellent

Above Average

Below Average

Poor

Missing Vote

Insufficient Information

See Appendix A for detail

3. Land Management Plan Review Details

3.1 Items Requiring Improvements in the Management Plan

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

There were no low checklist findings.

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)										
Sandhill	I.A.1	5	5	5	5	5	5	5	4	4.88
Mesic Flatwoods	I.A.2	5	5	4	5	5	5	4	4	4.63
Wet Flatwoods	I.A.3	5	5	4	5	5	5	5	4	4.75
Blackwater Stream	I.A.4	5	5	4	5	5	5	5	4	4.75
Basin Swamp	I.A.5	5	5	5	5	5	5	5	4	4.88
Bottomland Forest/Floodplain Swamp	I.A.6	5	5	5	5	5	5	5	4	4.88
Sandhill Upland Lake	I.A.7	5	5	4	5	5	5	5	4	4.75
Dome Swamp	I.A.8	5	5	5	5	5	5	5	4	4.88
Wet Prairie	I.A.9	5	3	4	5	5	5	5	4	4.50
Natural Communities Average Score										4.76
Listed species: Protection & Preservation (I.B)										
Animals	I.B.1	5	4	5	5	5	5	4	4	4.63
Flatwoods Salamander	I.B.1.a	5	5	5	5	5	5	4	4	4.75
Herps	I.B.1.b	5	5	5	5	5	5	5	4	4.88
Gopher Tortoise	I.B.1.c	5	5	5	5	5	5	5	4	4.88
Plants	I.B.2	5	4		5	5	5		5	4.83
Listed Species Average Score										4.79
Natural Resources Survey/Management Resources (I.C)										
Sport fish or their habitat monitoring	I.C.1	4	3	4	5	4	5	4	1	3.75
Listed species or their habitat monitoring	I.C.2	5	5	5	5	5	5	5	4	4.88
Other non-game species or their habitat monitoring	I.C.3	5	4	5	5	5	5	5	3	4.63
Fire effects monitoring	I.C.4	5	5	4	5	5	4	4	5	4.63
Other habitat management effects monitoring	I.C.5	5	4	4	5	5	4	4	3	4.25
Invasive species survey / monitoring	I.C.6	5	5	3	5	5	4	5	3	4.38
Cultural Resources (Archeological & Historic sites) (II.A,II.B)										
Cultural Res. Survey	II.A	5	4	4	5	4	4	3	5	4.25
Protection and preservation	II.B	5	4	4	5	4	4	4	5	4.38
Cultural Resources Average Score										4.31
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	5	5	4	5	5	4	5	5	4.75
Frequency	III.A.2	5	5	4	5	5	4	5	5	4.75
Quality	III.A.3	5	5	4	5	5	4	5	5	4.75
Resource Management, Prescribed Fire Average Score										4.75
Restoration (III.B)										
Sand Pine to Sandhill Restoration	III.B.1	5	5	4	5	5	5	5	4	4.75
Pine Planation to Wet Prairie	III.B.2	5	5	4	5	5	5	5	4	4.75
Restoration Average Score										4.75

Forest Management (III.C)										
Timber Inventory	III.C.1	5	5	4	5	5	5	5	4	4.75
Timber Harvesting	III.C.2	5	5	4	5	5	5	5	4	4.75
Reforestation/Afforestation	III.C.3	5	5	4	5	5	5	5	4	4.75
Site Preparation	III.C.4	5	4	4	5	5	5		4	4.57
Forest Management Average Score										4.71
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.E.1.a	5	3	3	4	4	5	5	3	4.00
prevention - animals	III.E.1.b	5	3	3	4	4	5	5	3	4.00
prevention - pests/pathogens	III.E.1.c	5	3	3	4	4	5	5	3	4.00
Control										
control - plants	III.E.2.a	5	5	3	4	4	5	5	3	4.25
control - animals	III.E.2.b	5	4	3	4	4	5	4	3	4.00
control - pest/pathogens	III.E.2.c	5	3	3	4	4	5	4	3	3.88
Non-Native, Invasive & Problem Species Average Score										4.02
Hydrologic/Geologic function, Hydro-Alteration (III.E.1)										
Roads/culverts	III.F.1.a	5	4	3	5	4	4	4	3	4.00
Hydrologic/Geologic function, Hydro-Alteration Average Score										4.00
Ground Water Monitoring (III.E.2)										
Ground water quality	III.F.2.a	5	4	3	5		4	4	1	3.71
Ground Water Monitoring Average Score										3.71
Resource Protection (III.F)										
Boundary survey	III.G.1	5	4	3	5	5	5	4	4	4.38
Gates & fencing	III.G.2	5	4	3	5	5	5	4	4	4.38
Signage	III.G.3	5	4	3	5	5	5	4	4	4.38
Law enforcement presence	III.G.4	5	4	3	5	4	5	3	4	4.13
Resource Protection Average Score										4.31
Adjacent Property Concerns (III.G)										
Land Use										
Inholdings/additions	III.H.2	5	5	3		4	5	4	4	4.29
Discussion of Potential Surplus Land Determination	III.H.3	5	4	3	3	4	4	4	3	3.75
Surplus Lands Identified?	III.H.4	5	4	4	5	4	5	4	3	4.25
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	5	4	4	5	4	4	5	4	4.38
Parking	IV.1.b	5	4	4	5	4	4	5	4	4.38
Environmental Education & Outreach										
Wildlife	IV.2.a	5	4	3	5	5	4	4	2	4.00
Invasive Species	IV.2.b	5	4	3	5	5	4	4	2	4.00
Habitat Management Activities	IV.2.c	5	4	3	5	5	4	5	2	4.13
Interpretive facilities and signs	IV.3	5	3	3	4	3	4	5	2	3.63
Recreational Opportunities	IV.4	5	5	4	5	5	5	5	4	4.75

Management of Visitor Impacts	IV.5	5	4	4	5	5	4	4	3	4.25
Public Access & Education Average Score										4.19

Managed Area Uses (VI.A, VI.B)										
Existing Uses										
Recreational Trails	VI.A.1	5	5	4	5	5	5	5	3	4.63
Camping	VI.A.2	5	5	4	5	5	5	5	3	4.63
Nature Appreciation	VI.A.3	5	5	4	5	5	5	5	3	4.63
Hunting	VI.A.4	5	5	4	5	5	5	5	3	4.63
Fishing	VI.A.5	5	5	4	5	5	5	5	3	4.63
Silviculture	VI.A.6	4		4	5	5	5		3	4.33
Proposed Uses										

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*

2019 Land Management Review Team Report for Pine Log 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: Pine Log State Forest

Managed by: Department of Agriculture and Consumer Services, Florida Forest Service

Acres: 6,974

County: Bay and Washington

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):

Original Acquisition Date:

Area Reviewed: Entire Property

Last Management Plan Approval Date: 4/28/10

Review Date: 1/31/19

Agency Manager and Key Staff Present:

- Daniel Young, Manager
- Bryce Thomas

Review Team Members Present (voting)

- Daryl Hatfield, DRP District
- Danielle Dangleman, Local Gov't.
- Diana Pepe, FWC
- Mark Gillman, DEP District
- Heather Schmiede, FFS
- Mark Herndon, NFWFMD
- Debra Fable, Cons. Organization
- Tom Beitzel, Private Land Manager

Other Non-Team Members Present (attending)

- Keith Singleton, DEP/DSL
- Shelby Sutton, 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*.

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 implementing an effective prescribed fire program that incorporates appropriate fire return intervals (7+, 0-)
2. The team commends the FFS for management of the sandhill community. (7+, 0-)
3. The team commends the FFS for management and development of the camping area, and the switch to Reserve America in order to spread the word about camping nationwide. (7+, 0-)
4. The team commends the FFS for their willingness to cooperate with FWC on habitat management for gopher tortoise. (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 continue to work on conducting growing season burns. (7+, 0-)

Managing Agency Response: We will continue to conduct as many growing season burns as possible according to Pine Log State Forests management plan.

Table 1: Results at a glance.

Major Land Management Categories	Field Review	Management Plan Review
Natural Communities / Forest Management	4.76	4.76
Prescribed Fire / Habitat Restoration	4.85	4.57
Hydrology	4.50	4.21
Imperiled Species	4.86	4.24
Exotic / Invasive Species	4.56	4.19
Cultural Resources	4.00	4.21
Public Access / Education / Law Enforcement	4.62	4.22
Infrastructure / Equipment / Staffing	4.48	N/A

Color Code (See Appendix A for detail)

Excellent	Above Average	Below	Poor
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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 sandhill, mesic flatwoods, wet flatwoods, blackwater stream, basin swamp, bottomland forest/floodplain swamp, sandhill upland lake, dome swamp, and wet prairie.
2. Listed species, animals and plants in general, and specifically gopher tortoise
3. Natural resource survey/monitoring resources, specifically sport fish or their habitat monitoring, listed species or their habitat monitoring, other non-game species or their habitat monitoring, fire effects monitoring, other habitat management effects monitoring, and invasive species survey/monitoring..
4. Cultural resources, specifically cultural resource survey.
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 pest/pathogens.
8. Hydrologic/geologic function, specifically roads and culverts.
9. Ground water monitoring, specifically quality.
10. Resource protection, specifically boundary survey, gates and fencing, signage, and law enforcement presence.
11. Adjacent property concerns, land use, specifically inholdings and additions.
12. Public access, specifically roads and parking.
13. Environmental education and outreach, specifically wildlife, invasive species, habitat management activities, recreational opportunities, and management of visitor impacts.
14. Management resources, specifically waste disposal, sanitary facilities, buildings, equipment, 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:

The review team scores did not identify items requiring improvement in the field

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)										
Sandhill	I.A.1	5	4	5	5	5	5	5		4.86
Mesic Flatwoods	I.A.2	4	4	4	5	4	4	4		4.14
Wet Flatwoods	I.A.3	4	4	4	5	4	4	4		4.14
Blackwater Stream	I.A.4	5	5	5	5	5	5	4		4.86
Basin Swamp	I.A.5	5	5	5	5	5	5	5		5.00
Bottomland Forest/Floodplain Swamp	I.A.6	5	5	5	5	5	5	5		5.00
Sandhill Upland Lake	I.A.7	5	5	5	5	5	x	5		5.00
Dome Swamp	I.A.8	5	5	5	5	5	5	5		5.00
Wet Prairie	I.A.9	4	5	5	5	5	5	5		4.86
Natural Communities Average Score										4.76
Listed species: Protection & Preservation (I.B)										
Animals	I.B.1	5	4	5	5	4	5	5		4.71
Gopher Tortoise	I.B.1.c	5	5	5	5	5	5	5		5.00
Plants	I.B.2	4	5	5	5	5	5	5		4.86
Listed Species Average Score										4.86
Natural Resources Survey/Monitoring Resources (I.C)										
Sport fish or their habitat monitoring	I.C.1	4	3	4	5	4	x	4		4.00
Listed species or their habitat monitoring	I.C.2	4	5	4	5	x	5	4		4.50
Other non-game species or their habitat monitoring	I.C.3	4	5	4	5	4	5	4		4.43
Fire effects monitoring	I.C.4	5	5	4	5	5	5	5		4.86
Other habitat management effects monitoring	I.C.5	5	4	4	5	4	4	4		4.29
Invasive species survey / monitoring	I.C.6	5	5	5	5	5	5	5		5.00
Cultural Resources (Archeological & Historic sites) (II.A, II.B)										
Cultural Res. Survey	II.A	4	4	3	5	4	5	5		4.29
Protection and preservation	II.B	3	4	3	2	4	5	5		3.71
Cultural Resources Average Score										4.00
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	5	5	5	5	5	5	5		5.00
Frequency	III.A.2	5	5	5	5	5	5	5		5.00
Quality	III.A.3	5	4	5	5	4	5	5		4.71
Resource Management, Prescribed Fire Average Score										4.90
Restoration (III.B)										
Sand Pine to Sandhill Restoration	III.B.1	5	5	4	5	4	5	5		4.71
Pine Plantation to Wet Prairie	III.B.2	4	5	5	5	5	5	5		4.86
Restoration Average Score										4.79
Forest Management (III.C)										
Timber Inventory	III.C.1	5	5	4	5	5	5	5		4.86
Timber Harvesting	III.C.2	5	5	4	5	5	4	5		4.71
Reforestation/Afforestation	III.C.3	5	5	4	5	5	4	5		4.71
Site Preparation	III.C.4	5	5	4	5	5	4	5		4.71
Forest Management Average Score										4.75

Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.D.1.a	4	5	4	5	5	5	5		4.71
prevention - animals	III.D.1.b	4	4	4	4	5	4	5		4.29
prevention - pests/pathogens	III.D.1.c	4	5	5	5	x	4	5		4.67
Control										
control - plants	III.D.2.a	5	5	4	5	5	5	5		4.86
control - animals	III.D.2.b	5	4	4	4	4	4	5		4.29
control - pest/pathogens	III.D.2.c	5	5	4	5	4	4	5		4.57
Non-Native, Invasive & Problem Species Average Score										4.56
Hydrologic/Geologic function Hydro-Alteration (III.E.1)										
Roads/culverts	III.E.1.a	5	4	5	5	4	5	5		4.71
Hydrologic/Geologic function, Hydro-Alteration Average Score										4.71
Ground Water Monitoring (III.E.2)										
Ground water quality	III.E.2.a	5	4	4	3	4	5	5		4.29
Ground Water Monitoring Average Score										4.29
Resource Protection (III.F)										
Boundary survey	III.F.1	5	5	5	5	4	5	5		4.86
Gates & fencing	III.F.2	5	5	5	5	5	5	5		5.00
Signage	III.F.3	5	5	5	4	5	4	5		4.71
Law enforcement presence	III.F.4	5	5	5	4	4	5	5		4.71
Resource Protection Average Score										4.82
Adjacent Property Concerns (III.G)										
Land Use										
Inholdings/additions	III.G.2	4	5	5	5	4		5		4.67
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	5	5	5	5	5	5	4		4.86
Parking	IV.1.b	5	5	5	5	5	5	4		4.86
Environmental Education & Outreach										
Wildlife	IV.2.a	4	4	3	5	4	5	5		4.29
Invasive Species	IV.2.b	4	4	3	5	4	4	5		4.14
Habitat Management Activities	IV.2.c	4	4	3	5	5	4	5		4.29
Interpretive facilities and signs	IV.3	2	3	3	3	3	5	5		3.43
Recreational Opportunities	IV.4	5	5	5	5	4	5	5		4.86
Management of Visitor Impacts	IV.5		5	4	5	4	5	5		4.67
Public Access & Education Average Score										4.42
Management Resources (V.1, V.2, V.3, V.4)										
Maintenance										
Waste disposal	V.1.a	5	5	4	5	4	5	5		4.71
Sanitary facilities	V.1.b	5	5	4	5	5	5	5		4.86
Infrastructure										
Buildings	V.2.a	5	5	4	5	5	5	5		4.86
Equipment	V.2.b	4	4	4	5	5	4	5		4.43

Staff	V.3	4	4	3	5	4	4	5		4.14
Funding	V.4	4	4	3	3	4	4	5		3.86
Management Resources Average Score										4.48

Color Code:

Excellent	Above Average	Below Average	Poor
	Missing Vote	Insufficient Information	

See Appendix A for detail

3. Land Management Plan Review Details

3.1 Items Requiring Improvements in the Management Plan

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

The review team scores did not identify items requiring improvement in the management plan.

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)										
Sandhill	I.A.1	4	5	5	5	5	5	5		4.86
Mesic Flatwoods	I.A.2	4	5	5	5	5	5	4		4.71
Wet Flatwoods	I.A.3	3	5	4	5	5	5	4		4.43
Blackwater Stream	I.A.4	3	5	5	5	5	5	4		4.57
Basin Swamp	I.A.5	4	5	5	5	5	5	5		4.86
Bottomland Forest/Floodplain Swamp	I.A.6	4	5	5	5	5	5	5		4.86
Sandhill Upland Lake	I.A.7	3	5	5	5	5	5	5		4.71
Dome Swamp	I.A.8	4	5	5	5	5	5	5		4.86
Wet Prairie	I.A.9	3	5	5	5	5	5	5		4.71
Natural Communities Average Score										4.73
Listed species: Protection & Preservation (I.B)										
Animals	I.B.1	3	5	5	3	4	5	4		4.14
Gopher Tortoise	I.B.1.c	3	3	5	3	5	5	5		4.14
Plants	I.B.2	3	5	5	5	4	5	4		4.43
Listed Species Average Score										4.24
Natural Resources Survey/Monitoring Resources (I.C)										
Sport fish or their habitat monitoring	I.C.1	3	3	4	1	4	3	4		3.14
Listed species or their habitat monitoring	I.C.2	4	5	4	5	4	3	4		4.14

Other non-game species or their habitat monitoring	I.C.3	3	4	4	3	4	3	4		3.57
Fire effects monitoring	I.C.4	5	5	4	3	5	4	5		4.43
Other habitat management effects monitoring	I.C.5	3	5	4	3	4	4	4		3.86
Invasive species survey / monitoring	I.C.6	4	5	4	5	4	4	5		4.43
Cultural Resources (Archeological & Historic sites) (II.A,II.B)										
Cultural Res. Survey	II.A	3	5	3	5	4	5	5		4.29
Protection and preservation	II.B	3	5	3	5	4	4	5		4.14
Cultural Resources Average Score										4.21
Resource Management, Prescribed Fire (III.A)										
Area Being Burned (no. acres)	III.A.1	4	5	4	5	4	5	5		4.57
Frequency	III.A.2	5	5	4	5	4	5	5		4.71
Quality	III.A.3	4	5	4	5	4	4	5		4.43
Resource Management, Prescribed Fire Average Score										4.57
Restoration (III.B)										
Sand Pine to Sandhill Restoration	III.B.1	4	5	4	5	5	4	5		4.57
Pine Plantation to Wet Prairie	III.B.2	4	5	4	5	5	4	5		4.57
Restoration Average Score										4.57
Forest Management (III.C)										
Timber Inventory	III.C.1	5	5	5	5	5	5	5		5.00
Timber Harvesting	III.C.2	5	5	4	5	5	4	5		4.71
Reforestation/Afforestation	III.C.3	5	5	4	5	5	4	5		4.71
Site Preparation	III.C.4	5	5	4	5	5	4	5		4.71
Forest Management Average Score										4.79
Non-Native, Invasive & Problem Species (III.D)										
Prevention										
prevention - plants	III.E.1.a	3	5	4	5	4	3	5		4.14
prevention - animals	III.E.1.b	3	5	4	3	4	3	5		3.86
prevention - pests/pathogens	III.E.1.c	3	5	4	5	4	3	5		4.14
Control										
control - plants	III.E.2.a	4	5	4	5	5	3	5		4.43
control - animals	III.E.2.b	4	5	4	3	5	3	5		4.14
control - pest/pathogens	III.E.2.c	4	5	4	5	5	3	5		4.43
Non-Native, Invasive & Problem Species Average Score										4.19
Hydrologic/Geologic function, Hydro-Alteration (III.E.1)										
Roads/culverts	III.F.1.a	4	5	5	5	4	3	5		4.43
Hydrologic/Geologic function, Hydro-Alteration Average Score										4.43
Ground Water Monitoring (III.E.2)										
Ground water quality	III.F.2.a	4	4	4	4	4	3	5		4.00
Ground Water Monitoring Average Score										4.00
Resource Protection (III.F)										
Boundary survey	III.G.1	5	5	5	4	4	4	5		4.57
Gates & fencing	III.G.2	5	5	5	3	4	4	5		4.43
Signage	III.G.3	4	5	5	3	4	4	5		4.29

Law enforcement presence	III.G.4	4	5	5	5	4	4	5		4.57
Resource Protection Average Score										4.46
Adjacent Property Concerns (III.G)										
Land Use										
Inholdings/additions	III.H.2	4	3	5	5	5	5	5		4.57
Discussion of Potential Surplus Land Determination	III.H.3	3	3	2	2	3	3	5		3.00
Surplus Lands Identified?	III.H.4	5	3	4	5	5	5	5		4.57
Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)										
Public Access										
Roads	IV.1.a	4	5	4	5	4	4	5		4.43
Parking	IV.1.b	4	5	4	5	4	3	5		4.29
Environmental Education & Outreach										
Wildlife	IV.2.a	3	4	4	3	4	3	5		3.71
Invasive Species	IV.2.b	3	4	4	3	4	3	5		3.71
Habitat Management Activities	IV.2.c	3	4	4	3	4	3	5		3.71
Interpretive facilities and signs	IV.3	3	4	3	3	4	3	5		3.57
Recreational Opportunities	IV.4	4	5	4	5	4	3	5		4.29
Management of Visitor Impacts	IV.5	3	4	5	5	4	3	5		4.14
Public Access & Education Average Score										3.98
Managed Area Uses (VI.A, VI.B)										
Existing Uses										
Recreational Trails	VI.A.1	5	5	5	5	5	5	5		5.00
Camping	VI.A.2	5	5	5	5	5	5	5		5.00
Nature Appreciation	VI.A.3	5	5	5	5	5	5	5		5.00
Hunting	VI.A.4	5	5	4	5	4	5	5		4.71
Fishing	VI.A.5	5	5	4	5	4	5	5		4.71
Silviculture	VI.A.6	5	5	3	5	5	5	5		4.71

Color Code:

Excellent	Above Average	Below Average	Poor
	Missing Vote	Insufficient Information	

See Appendix A for detail

Appendix A: Scoring System Detail

Explanation of Consensus Commendations:

Often, the exceptional condition of some of the property's attributes impress review team members. In those instances, team members are encouraged to offer positive feedback to the managing agency in the form of a commendation. The teams develop commendations generally by standard consensus processes or by majority vote if they cannot obtain a true consensus.

Explanation of Consensus Recommendations:

Subsection 259.036(2), F.S., specifically states that the managing entity shall consider the findings and recommendations of the land management review. We ask team members to provide general recommendations for improving the management or public access and use of the property. The teams discuss these recommendations and develop consensus recommendations as described above. We provide these recommendations to the managing agency to consider when finalizing the required ten-year management plan update. We encourage the manager to respond directly to these recommendations and include their responses in the final report when received in a timely manner.

Explanation of Field Review Checklist and Scores, and Management Plan Review Checklist and Scores:

We provide team members with a checklist to fill out during the evaluation workshop phase of the Land Management Review. The checklist is the uniform tool used to evaluate both the management actions and condition of the managed area, and the sufficiency of the management plan elements. During the evaluation workshop, team members individually provide scores on each issue on the checklist, from their individual perspective. Team members also base their evaluations on information provided by the managing agency staff as well as other team member discussions. Staff averages these scores to evaluate the overall conditions on the ground, and how the management plan addresses the issues. Team members must score each management issue 1 to 5: 1 being the management practices are clearly insufficient, and 5 being that the management practices are excellent. Members may choose to abstain if they have inadequate expertise or information to make a cardinal numeric choice, as indicated by an "X" on the checklist scores, or they may not provide a vote for other unknown reasons, as indicated by a blank. If a majority of members failed to vote on any issue, that issue is determined to be irrelevant to management of that property or it was inadequately reviewed by the team to make an intelligent choice. In either case staff eliminated the issue from the report to the manager.

Average scores are interpreted as follows:

Scores 4.0 to 5.0 are *Excellent*

Scores 3.0 to 3.99 are *Above Average*

Scores 2.0 to 2.99 are *Below Average*

Scores 1.0 to 1.99 are considered *Poor*

Exhibit S

Compliance with Local Comprehensive Plans Bay and Washington Counties

FLORIDA FOREST SERVICE
(850) 681-5800



THE CONNER BUILDING
3125 CONNER BOULEVARD
TALLAHASSEE, FLORIDA 32399-1650

FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
COMMISSIONER NICOLE "NIKKI" FRIED

October 7, 2021

Mr. Tim Smith
Bay County Planning and Zoning
840 W 11th Street
Panama City, FL 32401
(850) 248-8250
planning@baycountyfl.gov

RE: Pine Log State Forest 10-Year Land Management Plan

Dear Mr. Smith,

Greetings from the Florida Forest Service (FFS). Attached is a copy of the Ten-Year Land Management Plan and Exhibits for Pine Log State Forest, prepared in accordance with 253.034, Florida Statutes. Please review the draft plan at your earliest convenience and reply as to whether the plan is consistent with Bay County's Comprehensive Plan.

Please address all correspondence concerning the Management Plan on official letterhead to the above Tallahassee mailing address or via e-mail. I can be reached by telephone at (850) 681-5889 or by email at Patricia.Anderson@FDACS.gov if you have any questions.

Thank you for assisting us in managing Pine Log State Forest resources through a stewardship ethic to ensure they are available for future generations.

Sincerely,

Patti Anderson
FFS Land Management Planner

cc: Daniel Young, FFS Forester



County Administrator
Allen J. Massey

WASHINGTON COUNTY BOARD OF COUNTY COMMISSIONERS

1331 South Boulevard
Chipley, Florida 32428
Phone (850)638-6200
Fax (850)638-6106

ALAN T BUSH
District One

CHARLES KENT
District Two

TRAY HAWKINS
District Three

TODD ABBOTT
District Four

STEVE JOYNER
District Five

FUQUA & MILTON
County Attorneys

04, November 2021

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

RE: Draft 2022 Pine Log State Forest Land Management Plan

Dear Ms. Anderson:

Thank you for the opportunity to review the draft 2022 Pine Log State Forest Land Management Plan.

With the assistance of the planning consultants from the Emerald Coast Regional Council and the East Central Florida Regional Planning Council, we are currently updating our Comprehensive Plan. Additionally, we are updating our Land Development Code. Although we have not adopted the documents, they should be approved within the next few months. Nevertheless, a review of the draft Management Plan appears to be consistent with the current 2020 Comprehensive Plan and the Goals, Objectives, and Policies of the draft Washington County Comprehensive Plan 2035.

If you require further information, please feel free to call me at (850) 415-5093 or email me at dmcdonald@washingtonfl.com. We look forward to working with you on future projects.

Thank you,

A handwritten signature in cursive script that reads "Dawn McDonald".

Dawn McDonald, AICP,
Senior Planner

Exhibit T

State Forest Management Plan Advisory Group Summary

Management Plan Advisory Group Public Hearing
Pine Log State Forest
10-Year Land Management Plan

September 29, 2021

10:30 A.M. CDT

Meeting Minutes

MPAG Members Present:

- | | |
|--------------------|--|
| • Mike Mathis | Chipola Forestry Center Manager, Florida Forest Service (FFS) |
| • Philip Schulte | Biologist III, FWC (Representing Fred Robinette) |
| • Eric Toole | Forestry Operations, Northwest Florida River Water Management District |
| • Matt Aresco | Private Property Owner |
| • Scott Therriault | Private Property Owner |
| • Doug Moore | Commissioner, Bay County Board of Commissioners, District 4 |

MPAG Members Not Present:

- | | |
|----------------|--|
| • Codie Boyett | District Conservationist, Soil and Water Conservation District |
| • Ricky Lackey | District Biologist, National Wild Turkey Federation |
| • Tray Hawkins | Commissioner, Washington County Board of Commissioners, District 3 |

Staff (FFS):

- Alan Davis, Land Planning Coordinator
- Brian Camposano, Forest Management Assistant Bureau Chief
- Daniel Young, Forester
- Mike Klassen, Forestry Operations Administrator
- Patti Anderson, Land Management Planner

Guests:

- Kelly Ann Kennedy

Virtual Public Meeting Start Time: 10:30 A.M. CDT

- Land Planning Coordinator, Alan Davis opened the meeting by introducing himself and explained the purpose and statutory framework for the Pine Log 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 Pine Log State Forest (PLSF) for the next 10-year period.
- Mr. Davis confirmed compliance with the Florida Sunshine Law reminding 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 both MPAG meetings are open to the public and proper notice was given. The meetings were advertised to the public in two local newspapers: The Washington County News, September 4, 2021 and the Panama City News Herald, September 4, 2021; Florida Administrative Register, FFS webpage, as well as posted at the kiosks on PLSF. The meetings were announced at the Washington County Board of County Commissioners meeting on September 9, 2021; and the Bay County Board of County Commissioners meeting on September 21, 2021. He noted that the draft goes through various approvals before and after the MPAG meetings but that the Florida Forest Service (FFS) Director is granted final authority on changes

- to the draft. 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 comments and to share their personal comments on the draft plan. The public is encouraged to attend the Workshop, but participation is limited to MPAG members.
- Member introductions were then requested, and attendance noted.
 - Mr. Davis then asked the advisory group to elect an MPAG chairperson. Mike Mathis was elected chairperson via negative response to serve at the impending workshop. Mr. Davis then introduced Brian Camposano, Forest Management Assistant Bureau Chief.
 - Mr. Camposano explained the technical logistics and how to use the webinar tools to share comments, then asked if there were any questions. An inquiring attendee was guided to the location of the question box. No further responses followed.
 - Mr. Davis reiterated the purpose of this meeting is to hear public input which would be discussed in the Workshop. He acknowledged the in-person location and asked the FFS administrators to apprise of any attendees. Mike Klassen stated that no attendees were present.
 - Mr. Davis then introduced Forester Daniel Young who presented a 15-minute PowerPoint presentation of the 2022 10-year plan.
 - Mr. Davis requested public comments on the presentation and Plan. None followed.
 - Mr. Davis then thanked everyone for participating and adjourned the public hearing portion of the meetings.

Public Meeting End Time: 11:03 A.M. CDT

Management Plan Advisory Group Workshop Meeting
Pine Log State Forest
10-Year Land Management Plan

September 29, 2021

1:00 P.M. CDT

Meeting Minutes

MPAG Members Present:

- | | |
|--------------------|--|
| • Mike Mathis | Chipola Forestry Center Manager, Florida Forest Service (FFS) |
| • Philip Schulte | Biologist, FWC (Representing Fred Robinette) |
| • Eric Toole | Forestry Operations, Northwest Florida River Water Management District |
| • Matt Aresco | Private Property Owner |
| • Scott Therriault | Private Property Owner |
| • Doug Moore | Commissioner, Bay County Board of Commissioners, District 4 |

MPAG Members Not Present:

- | | |
|----------------|--|
| • Codie Boyett | District Conservationist, Soil and Water Conservation District |
| • Ricky Lackey | District Biologist, National Wild Turkey Federation |
| • Tray Hawkins | Commissioner, Washington County Board of Commissioners, District 3 |

Staff (FFS):

- Alan Davis, Land Planning Coordinator
- Brian Camposano, Forest Management Assistant Bureau Chief
- Daniel Young, Forester
- Mike Klassen, Forestry Operations Administrator
- Patti Anderson, Land Management Planner

Virtual Workshop Meeting Start Time: 1:00 P.M. CDT

- Land Planning Coordinator, Alan Davis introduced himself and opened the meeting by conducting an MPAG member sound check. He then stated that minutes will be emailed to MPAG members in less than a week and will be approved via negative response review. He reminded the MPAG members to follow the Florida Sunshine Law guidelines. MPAG member appointment will terminate when the final draft is submitted to the Acquisition Restoration Council. The Workshop meeting will involve review of the draft and public comments through a page-by-page process.
- Mr. Davis noted that Mr. Young would be revising the draft with proposed changes made during the meeting and subsequently presented to the FFS Director for approval.
- Mr. Davis asked if any MPAG members had comments regarding the public hearing conducted earlier. None followed.
- Mr. Davis and Mr. Young proceeded with the page-by-page review:
 1. Page 23. Section II.C.4 4: Game Species and Other Wildlife: Philip Schulte noted that the 39 acres of permanent wildlife openings should be 49 acres. Mr. Young corrected the error.
 2. Page 55. Section VIII. References: Philip Schulte pointed out the WMA cite date should be updated from 2019 to 2021. The cite was updated.
 3. Page 32. Section VI.C.2. Silvicultural Operations: Matt Aresco asked that when thinning slash pine stands on PLSF, are the longleaf pines being excluded from the timber harvest if the goal is longleaf

pine restoration. Mike Mathis stated that FFS protects longleaf from the slash pine harvests. Mr. Aresco asked if a statement to that effect could be specified in the plan. Mr. Mathis noted that PLSF is mostly planted pine so that instance is rare. Mr. Aresco stated that a few years ago he had seen natural longleaf marked for harvest. Mr. Mathis said he had no issue adding language to the plan. Brian Camposano interjected that the FFS's policy is not to prohibit cutting longleaf pine though it is a preferred species for restoration, yet FFS is cautious about adding statements to the plan that should be a silviculture operations discussion for each timber sale on a case-by-case basis. Mr. Mathis said he was agreeable to adding a statement indicating that when cutting offsite species FFS would give preference to longleaf pines. Mr. Therriault asked if such language be better suited for the Five-Year Silviculture Plan. Mr. Camposano replied that yes, the Silviculture Plan details harvest activities and stand harvest prescription (including species restoration) which are public documents. Mr. Davis asked the group for proposed language; otherwise implementation of longleaf restoration plans would be pursued through the PLSF Silviculture Plan. Mr. Therriault stated that a detailed strategy in the Silviculture Plan on a site-by-site basis is appropriate. Mr. Aresco agreed with the understanding that longleaf restoration be considered in stand harvest plans including guidance for the individuals marking for harvest. No added language to the draft resulted.

- Mr. Davis asked if there were any questions or comments on the exhibits. No response resulted.
- Mr. Davis advised that the revisions will be shared with the FFS Director Erin Albury and upon approval will be presented at the Acquisition and Restoration Council's February 2022 meeting. Mr. Davis asked each member to comment on the draft plan. All attending members found the plan satisfactory. Mr. Therriault asked how he may obtain information on the Roads and Bridges Plan. Mr. Davis advised that he can contact either Daniel Young or Mike Mathis. Mr. Therriault also mentioned that he appreciates the invasive plant treatment information for Japanese climbing fern.
- Mr. Davis thanked everyone for their time and participation and adjourned the meeting.

Workshop Meeting End Time: 1:28 P.M. CDT

Exhibit U

State Forest Summary Budget

	PINE LOG STATE FOREST MGT. ONLY 20-21 EXPENDITURES	Percentages Based on Total Dollar Amount of Expenditures	Assessed Needed Funding Based Upon LMUAC Resource Management
Resource Management	\$ 12,278	25.50%	\$ 36,981.47
Exotic Species Control	\$ 1,091	3.46%	\$ 5,019.24
Prescribed Burning	\$ 5,411	3.73%	\$ 5,410.91
Cultural Resources Management	\$ 28	0.09%	\$ 130.56
Timber Management	\$ 2,558	8.11%	\$ 11,764.74
Hydrological Management	\$ 208	0.66%	\$ 957.43
	\$ -		\$ -
<i>OTHER RESOURCE MANAGEMENT</i>	\$ 2,981	9.45%	\$ 13,708.60
Listed Species Management	\$ -		\$ -
Forest Pest and Disease	\$ -		\$ -
Plant Conservation Program	\$ -		\$ -
State Forest Research Projects	\$ -		\$ -
Boundary Surveys for State Forests	\$ -		\$ -
<i>Other Activities Also Include:</i>	\$ -		\$ -
Liaison Community Meetings / Boundary Line Maintenance / Forest Inventories and Various Other Activities / Wildfire Suppression on State Forests			
			\$ -
Administration	\$ 1,943	6.16%	\$ 8,935.98
Central Office Headquarters	\$ 1,943	6.16%	\$ 8,935.98
District/Regions	\$ -		\$ -
Units/Projects	\$ -		\$ -
	\$ -		\$ -
Support	\$ 15,939	50.53%	\$ 73,301.14
Land Management Planning	\$ 666	2.11%	\$ 3,060.86
Land Management Reviews	\$ 5,047	16.00%	\$ 23,210.34
Training/Staff Development	\$ 2,836	8.99%	\$ 13,041.31
Vehicle Purchase	\$ 249	0.79%	\$ 1,146.01
Vehicle Operations and Maintenance	\$ 5,419	17.18%	\$ 24,922.10
	\$ -		\$ -
OTHER SUPPORT	\$ 1,722	5.46%	\$ 7,920.53
State Forest Land Acquisition Support			\$ -
<i>Other Support Activities Also Include:</i> Computer Maintenance / Radio Maintenance / Technical Support / Management of Apiary and Cattle Leases / State Forest Leases, Lease Amendments, Easements and Other Various Activities	\$ -		\$ -
	\$ -		\$ -
Capital Improvements	\$ 6,741	21.37%	\$ 31,000.31
New Facility Construction	\$ 1,666	5.28%	\$ 7,659.41
Facility Maintenance	\$ 5,076	16.09%	\$ 23,340.89
			\$ -
Visitor Services/Recreation	\$ 3,877	12.29%	\$ 17,828.44
Information/Education	\$ 1,101	3.49%	\$ 5,062.75
Operations	\$ 2,776	8.80%	\$ 12,765.68
			\$ -
Law Enforcement	\$ -	0.00%	\$ -
Total	\$ 31,544.46	100.00%	\$145,064.60

Exhibit V

Arthropod Control Plans Bay and Washington Counties



PUBLIC WORKS DEPARTMENT
Mosquito Control Division
4800 Fire Tower Road
Panama City, FL 32404
850-248-8720

BOARD OF COUNTY
COMMISSIONERS

September 20, 2019

WWW.BAYCOUNTYFL.GOV

Patti Anderson,

840 WEST 11TH STREET
PANAMA CITY, FL 32401

As per your request, the information you sent has been reviewed by the

Director of Bay County Mosquito Control, Mr. Fred T Wakefield. I have

verified our records, and our facilities do not perform an Arthropod

Control Plan on any State owned lands within Bay County including Pine

Log State Forest. At this time I have determined Pine Log State Forest

does not need an Arthropod Control Program. Thank you for your time.

COMMISSIONERS:

TOMMY HAMM
DISTRICT I

ROBERT CARROLL
DISTRICT II

WILLIAM T. DOZIER
DISTRICT III

KEITH BAKER
DISTRICT IV

PHILIP "GRIFF" GRIFFITHS
DISTRICT V

Sincerely,

A handwritten signature in black ink that reads "Fred T. Wakefield". The signature is written in a cursive, flowing style.

ROBERT J. MAJKA JR.
COUNTY MANAGER

Fred T Wakefield



County Administrator
Allen J. Massey

WASHINGTON COUNTY BOARD OF COUNTY COMMISSIONERS

1331 South Boulevard
Chipley, Florida 32428
Phone (850)638-6200
Fax (850)638-6106

ALAN T BUSH
District One

CHARLES KENT
District Two

TRAY HAWKINS
District Three

TODD ABBOTT
District Four

STEVE JOYNER
District Five

FUQUA & MILTON
County Attorneys

11-19-19

To whom it may concern:

Regarding Mosquito Control Activities in or on State owned lands, we at Washington County Mosquito Control has not or will not treat Pine Log State Forest within Washington County. For future practices we will not revisit this protocol unless we are approached by FDACS to do so. And then we will discuss any Adulticides and or Larvicides approved by FDACS and exact areas to be treated, and an Arthropod Control Plan be submitted.

Thank you,

Lee Duke

Director
Washington County Mosquito Control
1331 South Blvd. Chipley Fl. 32428
mosquitocontrol@washingtonfl.com

Exhibit W

Florida Forever Project

2021 Florida Forever Five-Year Plan

Seven Runs Creek Final Phase

Summary of Recommendations and Status
as of
December 2020



Division of State Lands
Florida Department of Environmental Protection



Seven Runs Creek Final Phase

Less-Than-Fee Project

Walton, Washington

Project-at-a-Glance

Year Added to Priority List	2017
Project Acres	7,441
Acquired Acres	4,615
Cost of Acquired Acres	\$1,013,400
Remaining Project Acres	2,826
2019 Assessed Value of Remaining Acres	\$3,855,611

Purpose for State Acquisition

The distributed parcels that make up this project are integral to completing the Northwest Florida Greenway, a state-federal-private cooperative effort (formalized by a Memorandum of Agreement) to establish a series of protected lands of hundreds of thousands of acres from Eglin Air Force Base to Apalachicola National Forest. The property is offered to the state for perpetual conservation easement, comparable to protection already secured for other lands within Nokuse Plantation. Seven Runs Creek Final Phase is proposed for the following public purposes: Enhance the coordination and completion of land acquisition projects; Increase the protection of Florida's biodiversity at the species, natural community, and landscape levels; Protect, restore, and maintain the quality and natural functions of land, water, and wetland systems of the state; Ensure that sufficient quantities of water are available to meet the current and future needs of natural systems and the citizens of the state; Increase natural resource-based public recreation or educational opportunities; Preserve significant archaeological or historic sites; and Increase the amount of forest land available for sustainable management of natural resources.



Manager(s)

This project is proposed to be a less-than-fee purchase, or conservation easement. As a result, this area would be managed by the landowner by a signed agreement to maintain the land for its natural assets. Periodic visits coordinated by the Division of State Lands of DEP would ensure that the conditions the landowner agreed to are being met.

General Description

Seven Runs Creek Final Phase covers 6,228 GIS acres in the upland part of Walton County and has a parcel in Washington County, east of the Choctawhatchee River. The southernmost parcel is adjacent to Black Creek for just over three river miles, and the southeastern parcels border the Choctawhatchee River and Pine Log Creek for about 1.4 and 0.3 miles, respectively. It is a series of disjunct parcels that fill in gaps in the existing 53,505-acre Nokuse Plantation conservation area, all of them contiguous with conservation easements or existing state lands.

Elevations on the site grade from approximately 150 feet in the north to as low as five feet along Black Creek. Although the canopy is introduced slash pine, the stand is of widely spaced trees and has not been disturbed for several decades. The vegetation composition remains natural – a mix of pines with an understory that includes turkey oak, wiregrass, and a mix of herbs such as dogtongue wild buckwheat and milkpea. Invasive exotic plants are relatively infrequent. Wildlife that has been documented on the site includes the Florida black bear, the gopher tortoise, the eastern diamondback rattlesnake and the pine snake.

About 68 percent of the project has been planted in slash pine plantations, and another 16 percent is bottomland forests. Other natural communities are successional hardwood forests, floodplain swamps, dome swamp, and mesic/wet flatwoods. About one-third of the project provides natural floodplain function. Non-natural areas include a few acres of artificial pond, improved pasture, and developed areas. Roads are generally small ORV trails. However, the largest parcel was slated for development before the 2008 recession, and wide roadways were cleared, but not paved.



FNAI Element Occurrence Summary

<u>FNAI Elements</u>	<u>Score</u>
Gopher tortoise	G3/S3
Florida black bear	G5T4/S4
<i>Ashe's magnolia</i>	G3/S2
<i>Florida flame azalea</i>	G3/S3
<i>wiregrass gentian</i>	G3/S3
Eastern diamondback rattlesnake	G3/S3
Pine snake	G4/S3
Pine barrens treefrog	G4/S3
Eastern river cooter	G5T5/S3

9 rare species are associated with the project

Public Use

As a less-than-fee acquisition proposal, public resource-based recreation potential is highly limited and, therefore, the overall recreation potential is considered low. The greatest recreational value of the proposal is the support it would provide to maintaining the ecological values of the region. Research by FNAI shows the site does have 7.7 miles of recreational trails.

Acquisition Planning

2017

On October 20, 2017, ARC voted to add this proposal to the Florida Forever project list in the Less- Than-Fee category. The parcel would most likely be acquired in one purchase, as a single conservation easement. The entire parcel would be designated as essential.

2018

At the April 20, 2018, meeting, ARC members added a 660.6-acre less-than-fee addition that abuts State Road 3280. The purpose is to provide long-term protection of land in the Stella Davis Trust from development. The land also augments to buffer area around the Eglin Air Force Base.

2019

On December 12, 2019, the ARC approved the addition of 619 acres (GIS) in Washington County to the Seven Runs Creek Final Phase Florida Forever project. The proposal had a 2019 tax assessed value of \$692,149. The addition was proposed by Washington Crossing LLC and is adjacent to Pine Log State Forest. If acquired the proposal would be managed by Florida Forestry Service and would expand opportunities for public access and recreation. The land within the approved boundary was designated essential. It would be managed by the Florida Forest Service if acquired.



2020

In 2020, multiple parcels (Dever parcels, Stella Davis 2015 Plantation Trust parcels, Nokuse Education, Inc. parcels) were acquired less-than-fee containing a total of 2,029.71 acres at a cost of \$1,013,400. The conservation easement will be monitored by the Office of Environmental Services as part of the larger Seven Runs Creek/Nokuse conservation easement monitoring schedule.

Coordination

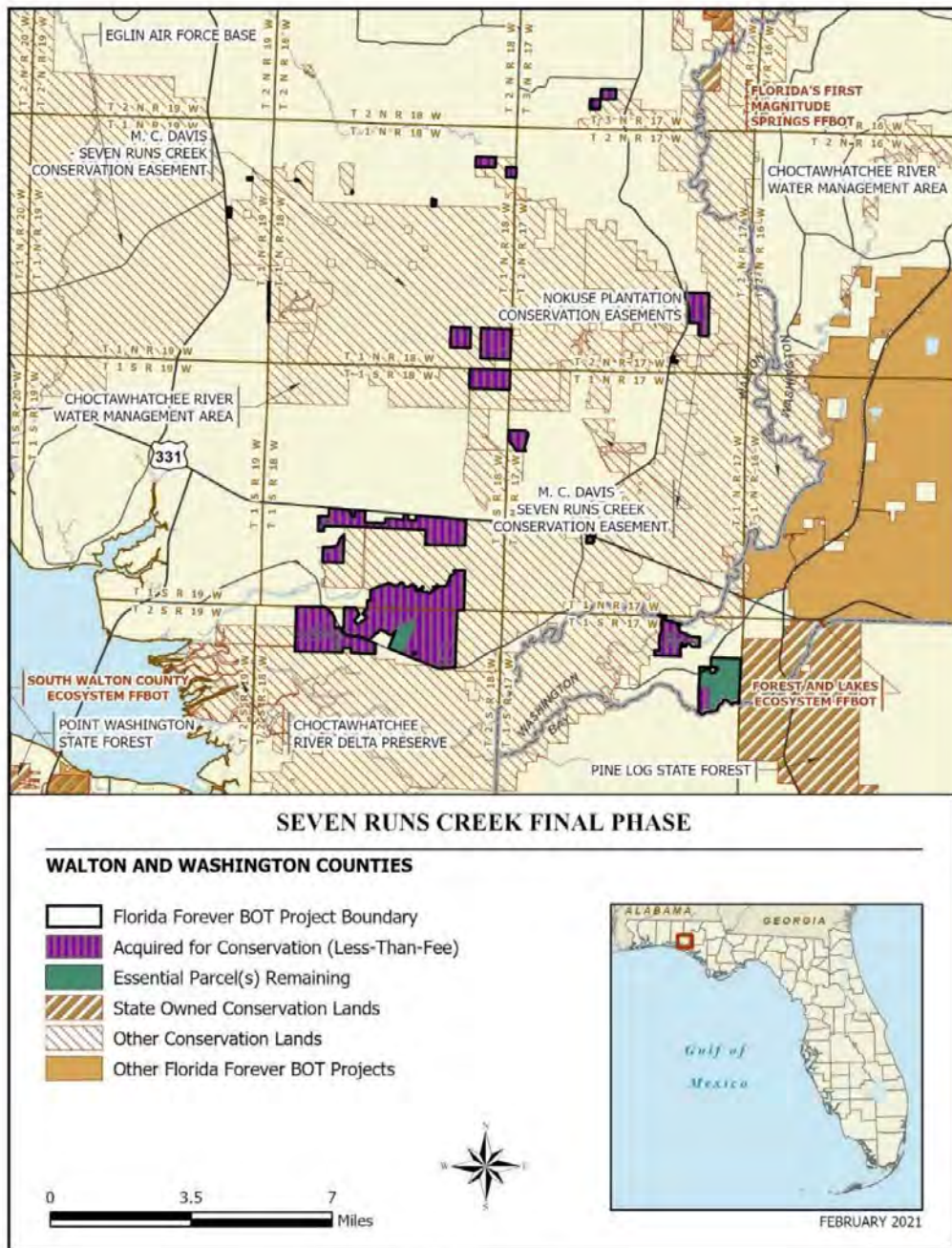
The parcels in the Seven Runs Creek Final Phase project juxtapose and/or are contiguous with both the North Nokuse Plantation and Seven Runs Creek Florida Forever projects. These would enhance this wildlife connectivity across this portion of the Panhandle landscape. This is in keeping with the greatest recreational value of the proposal, the support it would provide to maintaining the ecological values of the region.

Management Policy Statement

Because the Seven Runs Creek Final Phase project is a less-than-fee project, the land would continue to be managed by its owner under a conservation easement, in compliance with the terms and management conditions in the agreement. The likely elements of such an agreement could include purchasing the development rights, prohibiting turning more natural areas into intensive use areas, and managing the property for wildlife habitat.

Management Prospectus

The Office of Environmental Services of the Division of State Lands would coordinate monitoring of management compliance with the conservation easement of this project.



Map 1: FNAI, January 2021