

2026-2036

CYPRESS CREEK WILDLIFE MANAGEMENT AREA

10-YEAR MANAGEMENT PLAN
COLUMBIA COUNTY



**FLORIDA FISH AND WILDLIFE
CONSERVATION COMMISSION**

620 SOUTH MERIDIAN STREET
TALLAHASSEE, FL 32399-1600



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PENDING APPROVAL LETTER

Cypress Creek Wildlife Management Area Management Plan

Columbia County

Owned by the Board of Trustees of the Internal Improvement Trust Fund
Managed by the Florida Fish and Wildlife Conservation Commission



August 2026

Approved

**Melissa
Tucker**

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Melissa Tucker
Date: 2026.08.25
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Melissa Tucker, Director
Division of Habitat and Species Conservation

LAND MANAGEMENT PLAN EXECUTIVE SUMMARY

Lead Agency: Florida Fish and Wildlife Conservation Commission (FWC)

Common Name of Property: Cypress Creek Wildlife Management Area

Location: Columbia County, Florida

Acreage Total: 1,621 acres

Acreage Breakdown:

<u>Landcover Classification</u>	<u>Acres*</u>	<u>Percent of Total Area</u>
Basin Swamp	185.92	11.47%
Baygall	599.31	36.98%
Clearing	44.03	2.72%
Dome Swamp	50.45	3.11%
Pine Plantation	380.37	23.47%
Road	6.88	0.42%
Shrub Bog	353.58	21.82%

*GIS-calculated acreage for landcover classification varies slightly from actual total acreage.

Lease/Management Agreement No.: 4899

Use: Single _____ Management Responsibilities:

Multiple X Agency FWC

Responsibilities

LEAD, LESSEE (Wildlife Management Area, resource protection, law enforcement)

Designated Land Use: Wildlife Management Area

Sublease (s): None

Encumbrances: One access easement

Type Acquisition: Florida Forever program

Unique Features: Natural communities include basin swamp, baygall, dome swamp, and shrub bog

Archaeological/Historical: None

Management Needs: Habitat restoration and improvement; public access and recreational opportunities; hydrological preservation and restoration; invasive species maintenance and control; imperiled species habitat maintenance, enhancement, and restoration

Acquisition Needs/Acreage: 4,609 acres on the FWC Additions and Inholdings list (Figure 11)

Surplus Lands/Acreage: None

Public Involvement: Management Advisory Group consensus building meeting and Public Hearing (Appendix 11.3)

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

ARC Approval Date _____ BTIITF Approval Date: _____

Comments: _____

Land Management Plan Compliance Checklist

Required for State-owned conservation lands over 160 acres

Section A: Acquisition Information Items

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
1	The common name of the property.	18-2.018 & 18-2.021	1
2	The land acquisition program, if any, under which the property was acquired.	18-2.018 & 18-2.021	8
3	Degree of title interest held by the Board, including reservations and encumbrances such as leases.	18-2.021	8
4	The legal description and acreage of the property.	18-2.018 & 18-2.021	1
5	A map showing the approximate location and boundaries of the property, and the location of any structures or improvements to the property.	18-2.018 & 18-2.021	4-7
6	An assessment as to whether the property, or any portion, should be declared surplus. <i>Provide Information regarding assessment and analysis in the plan, and provide corresponding map.</i>	18-2.021	23
7	Identification of other parcels of land within or immediately adjacent to the property that should be purchased because they are essential to management of the property. <i>Please clearly indicate parcels on a map.</i>	18-2.021	36-40
8	Identification of adjacent land uses that conflict with the planned use of the property, if any.	18-2.021	21
9	A statement of the purpose for which the lands were acquired, the projected use or uses as defined in 253.034 and the statutory authority for such use or uses.	259.032(10)	8
10	Proximity of property to other significant State, local or federal land or water resources.	18-2.021	2, 3, 17, 18

Section B: Use Items

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
11	The designated single use or multiple use management for the property, including use by other managing entities.	18-2.018 & 18-2.021	22, 23
12	A description of past and existing uses, including any unauthorized uses of the property.	18-2.018 & 18-2.021	19, 20
13	A description of alternative or multiple uses of the property considered by the lessee and a statement detailing why such uses were not adopted.	18-2.018	22, 23
14	A description of the management responsibilities of each entity involved in the property's management and how such responsibilities will be coordinated.	18-2.018	8
15	Include a provision that requires that the managing agency consult with the Division of Historical Resources, Department of State before taking actions that may adversely affect archeological or historical resources.	18-2.021	19, 34, 44
16	Analysis/description of other managing agencies and private land managers, if any, which could facilitate the restoration or management of the land.	18-2.021	35, 41, 45, 49
17	A determination of the public uses and public access that would be consistent with the purposes for which the lands were acquired.	259.032(10)	20, 21

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
18	A finding regarding whether each planned use complies with the 1981 State Lands Management Plan, particularly whether such uses represent "balanced public utilization," specific agency statutory authority and any other legislative or executive directives that constrain the use of such property.	18-2.021	49
19	Letter of compliance from the local government stating that the LMP is in compliance with the Local Government Comprehensive Plan.	BOT requirement	Appendix 11.18
20	An assessment of the impact of planned uses on the renewable and non-renewable resources of the property, including soil and water resources, and a detailed description of the specific actions that will be taken to protect, enhance and conserve these resources and to compensate/mitigate damage caused by such uses, including a description of how the manager plans to control and prevent soil erosion and soil or water contamination.	18-2.018 & 18-2.021	22, 23
21	*For managed areas larger than 1,000 acres, an analysis of the multiple-use potential of the property which shall include the potential of the property to generate revenues to enhance the management of the property provided that no lease, easement, or license for such revenue-generating use shall be entered into if the granting of such lease, easement or license would adversely affect the tax exemption of the interest on any revenue bonds issued to fund the acquisition of the affected lands from gross income for federal income tax purposes, pursuant to Internal Revenue Service regulations.	18-2.021 & 253.036	22, 23
22	If the lead managing agency determines that timber resource management is not in conflict with the primary management objectives of the managed area, a component or section, prepared by a qualified professional forester, that assesses the feasibility of managing timber resources pursuant to section 253.036, F.S.	18-021	Appendix 11.12
23	A statement regarding incompatible use in reference to Ch. 253.034(10).	253.034(10)	23

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

Section C: Public Involvement Items

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
24	A statement concerning the extent of public involvement and local government participation in the development of the plan, if any.	18-2.021	9
25	The management prospectus required pursuant to paragraph (9)(d) shall be available to the public for a period of 30 days prior to the public hearing.	259.032(10)	9, Appendix 11.4
26	LMPs and LMP updates for parcels over 160 acres shall be developed with input from an advisory group who must conduct at least one public hearing within the county in which the parcel or project is located. <i>Include the advisory group members and their affiliations, as well as the date and location of the advisory group meeting.</i>	259.032(10)	9, Appendix 11.3.1
27	Summary of comments and concerns expressed by the advisory group for parcels over 160 acres	18-2.021	Appendix 11.3.1

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
28	During plan development, at least one public hearing shall be held in each affected county. Notice of such public hearing shall be posted on the parcel or project designated for management, advertised in a paper of general circulation, and announced at a scheduled meeting of the local governing body before the actual public hearing. <i>Include a copy of each County's advertisements and announcements (meeting minutes will suffice to indicate an announcement) in the management plan.</i>	253.034(5) & 259.032(10)	Appendix 11.4
29	The manager shall consider the findings and recommendations of the land management review team in finalizing the required 10-year update of its management plan. <i>Include manager's replies to the team's findings and recommendations.</i>	259.036	24
30	Summary of comments and concerns expressed by the management review team, if required by Section 259.036, F.S.	18-2.021	24
31	If manager is not in agreement with the management review team's findings and recommendations in finalizing the required 10-year update of its management plan, the managing agency should explain why they disagree with the findings or recommendations.	259.036	24

Section D: Natural Resources

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
32	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding soil types. <i>Use brief descriptions and include USDA maps when available.</i>	18-2.021	9-11
33	Insert FNAI based natural community maps when available.	ARC consensus	13, 14
34	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding outstanding native landscapes containing relatively unaltered flora, fauna and geological conditions.	18-2.021	9, 15, 16
35	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding unique natural features and/or resources including but not limited to virgin timber stands, scenic vistas, natural rivers and streams, coral reefs, natural springs, caverns and large sinkholes.	18-2.018 & 18-2.021	17-19
36	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding beaches and dunes.	18-2.021	19
37	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding mineral resources, such as oil, gas and phosphate, etc.	18-2.018 & 18-2.021	19
38	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding fish and wildlife, both game and non-game, and their habitat.	18-2.018 & 18-2.021	15, 16, Appendix 11.7.2
39	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding State and Federally listed endangered or threatened species and their habitat.	18-2.021	15, 16, Appendix 11.8
40	The identification or resources on the property that are listed in the Natural Areas Inventory. <i>Include letter from FNAI or consultant where appropriate.</i>	18-2.021	15-18, Appendix 11.9
41	Specific description of how the managing agency plans to identify, locate, protect and preserve or otherwise use fragile, nonrenewable natural and cultural resources.	259.032(10)	19, 34, 44

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
42	Habitat Restoration and Improvement	259.032(10) & 253.034(5)	
42-A.	Describe management needs, problems and a desired outcome and the key management activities necessary to achieve the enhancement, protection and preservation of restored habitats and enhance the natural, historical, and archeological resources and their values for which the lands were acquired.	↓	42-46
42-B.	Provide a detailed description of both short (2-year planning period) and long-term (10-year planning period) management goals, and a priority schedule based on the purposes for which the lands were acquired and include a timeline for completion.	↓	42, 43
42-C.	The associated measurable objectives to achieve the goals.	↓	42, 43
42-D.	The related activities that are to be performed to meet the land management objectives and their associated measures. <i>Include fire management plans - they can be in plan body or an appendix.</i>	↓	23-28, Appendices 11.6 and 11.11
42-E.	A detailed expense and manpower budget in order to provide a management tool that facilitates development of performance measures, including recommendations for cost-effective methods of accomplishing those activities.		46-48
43	***Quantitative data description of the land regarding an inventory of forest and other natural resources and associated acreage. <i>See footnote.</i>	253.034(5)	19, 34, 44, 46, Appendices 11.11 and 11.12
44	Sustainable Forest Management, including implementation of prescribed fire management	18-2.021, 253.034(5) & 259.032(10) ↓	
44-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).	↓	44-46
44-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).	↓	44
44-C.	Measurable objectives (see requirement for #42-C).	↓	44
44-D.	Related activities (see requirement for #42-D).	↓	19, 34, 46, Appendices 11.11 and 11.12
44-E.	Budgets (see requirement for #42-E).		46-48
45	Imperiled species, habitat maintenance, enhancement, restoration, or population restoration	259.032(10) & 253.034(5)	
45-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).	↓	15-17, 28, 29, 42, 45, 46, Appendices 11.6 and 11.8
45-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).	↓	42
45-C.	Measurable objectives (see requirement for #42-C).	↓	42
45-D.	Related activities (see requirement for #42-D).	↓	15-17, 28, 29, 45, 46, Appendices 11.6 and 11.8
45-E.	Budgets (see requirement for #42-E).		46-48
45-F.	Assess the feasibility of managing the lands > 40 contiguous acres as a recipient site for gopher tortoises consistent with rules of the Fish and Wildlife Conservation Commission, as prepared by the agency or cooperatively with a Fish and Wildlife Conservation Commission wildlife biologist.	259.105	16
45-G.	Economic feasibility of establishing a gopher tortoise recipient site, including the initial cost, recurring management costs and the revenue projections.	259.105	16

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
46	***Quantitative data description of the land regarding an inventory of exotic and invasive plants and associated acreage. <i>See footnote.</i>	253.034(5)	30-32, 43, Appendix 11.6
47	Place the Arthropod Control Plan in an appendix. If one does not exist, provide a statement as to what arrangement exists between the local mosquito control district and the management unit.	BOT requirement via lease language	Appendix 11.17
48	Exotic and invasive species maintenance and control	259.032(10) & 253.034(5)	
48-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).	↓	15, 16, 30-32, 43, Appendix 11.6
48-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).	↓	43
48-C.	Measurable objectives (see requirement for #42-C).	↓	43
48-D.	Related activities (see requirement for #42-D).	↓	15, 16, 30-32, Appendix 11.6
48-E.	Budgets (see requirement for #42-E).		46-48

Section E: Water Resources

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
49	A statement as to whether the property is within and/or adjacent to an aquatic preserve or a designated area of critical state concern or an area under study for such designation. <i>If yes, provide a list of the appropriate managing agencies that have been notified of the proposed plan.</i>	18-2.018 & 18-2.021	17, 18, 33, 34, 43, 44
50	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding water resources, including water classification for each water body and the identification of any such water body that is designated as an Outstanding Florida Water under Rule 62-302.700, F.A.C.	18-2.021	17, 18
51	Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding swamps, marshes and other wetlands.	18-2.021	12, 13, 17, 18, Appendix 11.6
52	***Quantitative description of the land regarding an inventory of hydrological features and associated acreage. <i>See footnote.</i>	253.034(5)	12, 13, 17, 18, Appendix 11.6
53	Hydrological Preservation and Restoration	259.032(10) & 253.034(5)	
53-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).	↓	17, 18, 33, 34, 43, 44
53-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).	↓	43, 44
53-C.	Measurable objectives (see requirement for #42-C).	↓	43, 44
53-D.	Related activities (see requirement for #42-D).	↓	17, 18, 33, 34
53-E.	Budgets (see requirement for #42-E).		46-48

Section F: Historical, Archeological and Cultural Resources

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
54	**Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding archeological and historical resources. <i>Include maps of all cultural resources except Native American sites, unless such sites are major points of interest that are open to public visitation.</i>	18-2.018, 18-2.021 & per DHR's request	19, 34, 44
55	***Quantitative data description of the land regarding an inventory of significant land, cultural or historical features and associated acreage.	253.034(5)	19, 34, 44
56	A description of actions the agency plans to take to locate and identify unknown resources such as surveys of unknown archeological and historical resources.	18-2.021	19, 34, 44
57	Cultural and Historical Resources	259.032(10) & 253.034(5)	
57-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).	↓	19, 34, 44, Appendix 11.13
57-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).	↓	44
57-C.	Measurable objectives (see requirement for #42-C).	↓	44
57-D.	Related activities (see requirement for #42-D).	↓	19, 34, Appendix 11.13
57-E.	Budgets (see requirement for #42-E).		46-48

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

Section G: Facilities (Infrastructure, Access, Recreation)

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
58	***Quantitative data description of the land regarding an inventory of infrastructure and associated acreage. See <i>footnote</i> .	253.034(5)	20, 21, 32-35, 44-46
59	Capital Facilities and Infrastructure	259.032(10) & 253.034(5)	
59-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).	↓	20, 21, 32-35, 44-46
59-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).	↓	44
59-C.	Measurable objectives (see requirement for #42-C).	↓	44
59-D.	Related activities (see requirement for #42-D).	↓	20, 21, 32-35, 45, 45
59-E.	Budgets (see requirement for #42-E).		46-48
60	*** Quantitative data description of the land regarding an inventory of recreational facilities and associated acreage.	253.034(5)	20, 21, 32, 33, 43, 44
61	Public Access and Recreational Opportunities	259.032(10) & 253.034(5)	
61-A.	Management needs, problems and a desired outcome (see requirement for # 42-A).	↓	20, 21, 32, 33, 43, 44
61-B.	Detailed description of both short and long-term management goals (see requirement for # 42-B).	↓	43
61-C.	Measurable objectives (see requirement for #42-C).	↓	43
61-D.	Related activities (see requirement for #42-D).	↓	20, 21, 32, 33, 44
61-E.	Budgets (see requirement for #42-E).		46-48

Section H: Other/ Managing Agency Tools

Item #	Requirement	Statute/Rule	Page Numbers and/or Appendix
62	Place this LMP Compliance Checklist at the front of the plan.	ARC and managing agency consensus	ii-viii
63	Place the Executive Summary at the front of the LMP. Include a physical description of the land.	ARC and 253.034(5)	i
64	If this LMP is a 10-year update, note the accomplishments since the drafting of the last LMP set forth in an organized (categories or bullets) format.	ARC consensus	23-41
65	Key management activities necessary to achieve the desired outcomes regarding other appropriate resource management.	259.032(10)	42-45
66	Summary budget for the scheduled land management activities of the LMP including any potential fees anticipated from public or private entities for projects to offset adverse impacts to imperiled species or such habitat, which fees shall be used to restore, manage, enhance, repopulate, or acquire imperiled species habitat for lands that have or are anticipated to have imperiled species or such habitat onsite. The summary budget shall be prepared in such a manner that it facilitates computing an aggregate of land management costs for all state-managed lands using the categories described in s. 259.037(3) which are resource management, administration, support, capital improvements, recreation visitor services, law enforcement activities.	253.034(5)	46-48
67	Cost estimate for conducting other management activities which would enhance the natural resource value or public recreation value for which the lands were acquired, include recommendations for cost-effective methods in accomplishing those activities.	259.032(10)	46-48
68	A statement of gross income generated, net income and expenses.	18-2.018	21, 46-48

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

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Acronym Key

ADA	Americans with Disabilities Act
ARC	Acquisition and Restoration Council
ARM	Archaeological Resource Management
CCT	Current Control Technologies
CCWMA	Cypress Creek Wildlife Management Area
CLC	Cooperative Landcover
DEP	Florida Department of Environmental Protection
DFC	Desired Future Conditions
DHR	Division of Historical Resources
DSL	Division of State Lands
F.A.C.	Florida Administrative Code
F.S.	Florida Statutes
FDACS	Florida Department of Agriculture and Consumer Services
FISC	Florida Invasive Species Council
FLAM	Florida Landscape Assessment Model
FMSF	Florida Master Site File
FNAI	Florida Natural Areas Inventory
FWC	Florida Fish and Wildlife Conservation Commission
GIS	Geographic Information Systems
LAP	Landowners Assistance Program
MAG	Management Advisory Group Meeting
NRCS	Natural Resources Conservation Service
OBVM	Objective Based Vegetation Management
SRWMD	Suwannee River Water Management District
USFWS	United States Fish and Wildlife Service
WCPR	Wildlife Conservation Prioritization and Recovery
WMA	Wildlife Management Area

1 Introduction and General Information

The Florida Fish and Wildlife Conservation Commission (FWC) lead-managed portion of the Cypress Creek Wildlife Management Area (CCWMA) consists of 1,621 acres in northwest Columbia County. The CCWMA is surrounded by conservation easements and is just west of the Osceola National Forest.

The CCWMA is owned by the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees) and managed by the FWC. There are other lands owned and managed by the Suwannee River Water Management District (SRWMD) within the established CCWMA; however, only those lands where the FWC has lead management authority are described here (Figures 1 and 2).

This Management Plan has been developed in conformance with the requirements of Section 259.032, Florida Statutes (F.S.) and is proposed for submittal to the Board of Trustees and the Acquisition and Restoration Council (ARC) through the Florida Department of Environmental Protection's (DEP) Division of State Lands (DSL) pursuant to the requirements of Chapters 253 and 259, F.S., and Chapters 18-2 and 18-4, Florida Administrative Code (F.A.C.). The format and content were drafted in accordance with ARC requirements for management plans and the model plan outline was provided by the staff of the DSL.

1.1 Location

The CCWMA is in north Florida, in northwestern Columbia County, and encompasses approximately 1,621 acres (Figures 1 and 2). The CCWMA lies in all or parts of (Figure 3):

- Sections 13, 23, 24, 25, 26, 35, & 36, Township 2 North, Range 16 East, and
- Sections 19 & 30, Township 2 North, Range 17 East.

The CCWMA is located approximately 20 miles east of Jasper, 27 miles north of Lake City, and 13 miles southwest of Fargo, Georgia. Other municipalities near the CCWMA include White Springs (20 miles southwest) in Hamilton County; Live Oak (35 miles southwest) in Suwannee County; and Macclenny (45 miles southeast) in Baker County. The CCWMA is not located within a designated Area of Critical State Concern.

1.1.1 Proximity to other Public Conservation Lands

The CCWMA is in the vicinity of an extensive network of conservation lands, including lands managed by the SRWMD, the DEP, and the North Florida Land Trust. Federally owned properties in the vicinity include the Osceola National Forest, which is east adjacent to the CCWMA. Several Florida Forever projects are also located in the vicinity (Figure 4).

Tables 1 and 2 list the Florida Forever projects and conservation lands within a 15-mile radius of the CCWMA, including lands managed by public and private entities that conserve cultural and natural resources within this region of Florida.

Many of the conservation lands listed in Table 2 are owned by a public entity. However, some of these areas fall within a less-than-fee ownership classification where the land is owned and

managed by a private landowner, while a public agency or not-for-profit organization holds a conservation easement on the land.

Table 1. Florida Forever Projects within a 15-mile Vicinity

Project Name	GIS Acres
Pinhook Swamp	189,631
Strategic Managed Areas Lands List - OGT-11	302

Table 2. Conservation Lands within a 15-mile Vicinity

Federal Government	Managing Agency
Florida National Scenic Trail – Latus Tract	USFS
Florida National Scenic Trail – Vass Tract	USFS
Okefenokee National Wildlife Refuge	USFWS
Osceola National Forest	USFS
State of Florida	
Big Shoals State Forest	FFS
Big Shoals State Park	DEP
PCS Phosphate SWOLF South Gopher Tortoise Longterm Recipient Site	FWC
Pinhook Swamp/Espenship Conservation Easement	DEP
Pinhook Swamp/Griffin Conservation Easement	DEP
Pinhook Swamp/Keen Conservation Easement	DEP
Pinhook Swamp/Levings Conservation Easement	DEP
Pinhook Swamp/Michael Carter, Jr. Conservation Easement	DEP
Pinhook Swamp/Sara and Rebecca Carter Conservation Easement	DEP
Water Management District	
Bay Creek Conservation Area	SRWMD
Big Shoals Conservation Area	SRWMD
Belmont Conservation Area	SRWMD
Benton Conservation Area	SRWMD
Cypress Creek Conservation Area	SRWMD
Deep Creek Conservation Area	SRWMD
Deep Creek Plantation Conservation Easement	SRWMD
Russell Carter Conservation Easement	SRWMD
Suwannee Valley Conservation Area	SRWMD
Swift Creek Conservation Area	SRWMD
Private/Public Conservation Organization	
Bayfield Mitigation Bank	Bayfield Mitigation, LLC
John Michael Carter Preserve	North Florida Land Trust
Nayfield Acres Conservation Easement	Conservation FL

Acronym Key	Agency Name
DEP	Florida Department of Environmental Protection
FWC	Florida Fish and Wildlife Conservation Commission
SRWMD	Suwannee River Water Management District
USFS	U.S. Department of Agriculture, Forest Service
USFWS	U.S. Fish and Wildlife Service

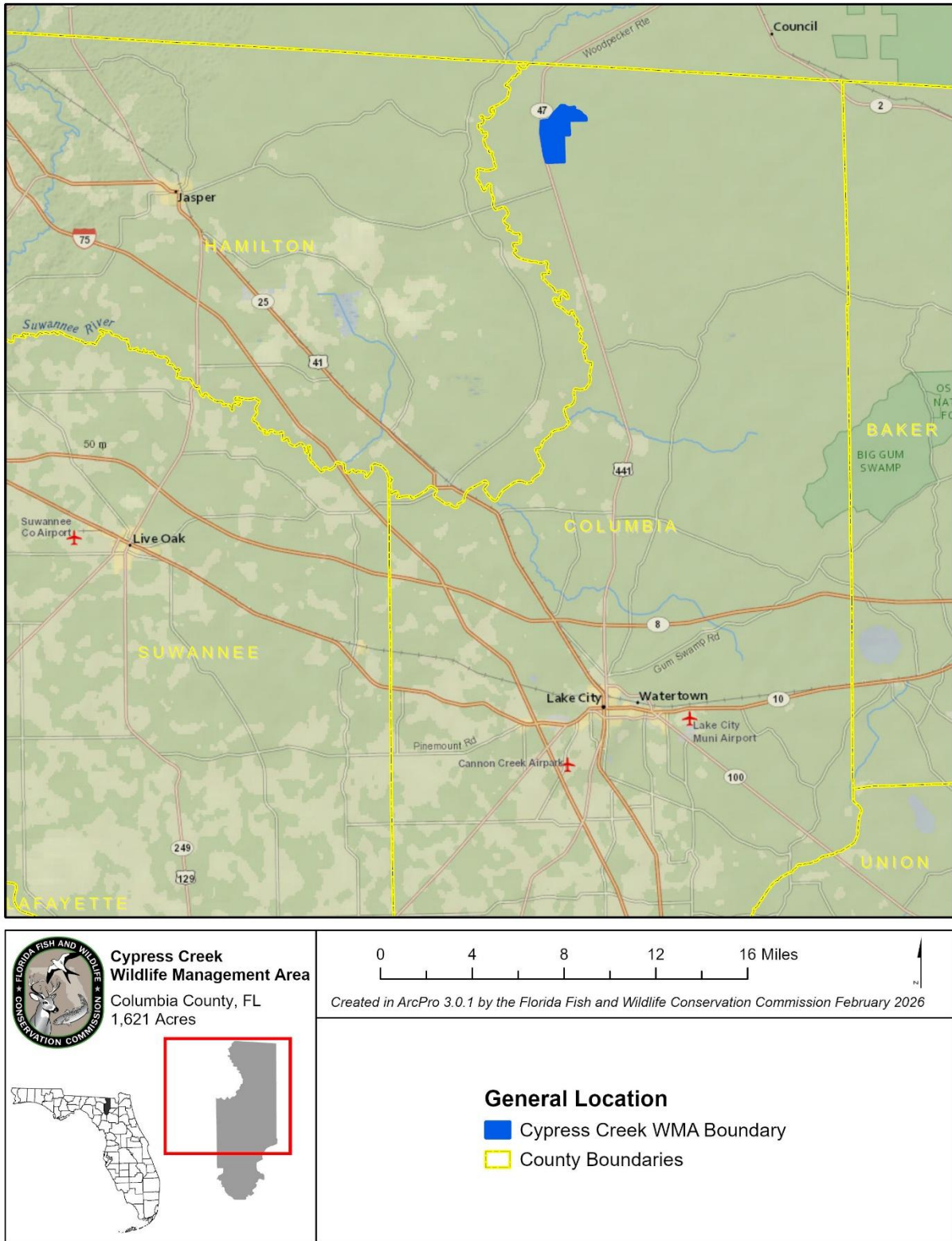


Figure 1. General Location

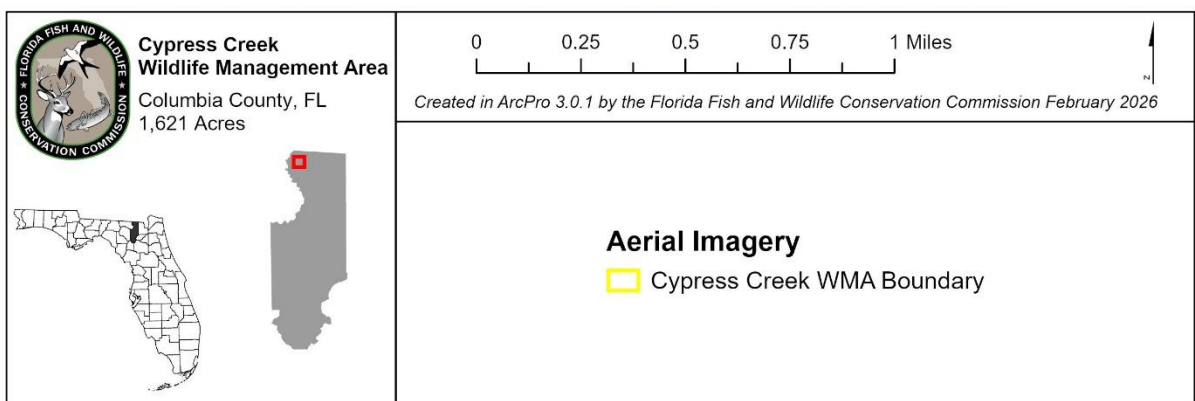
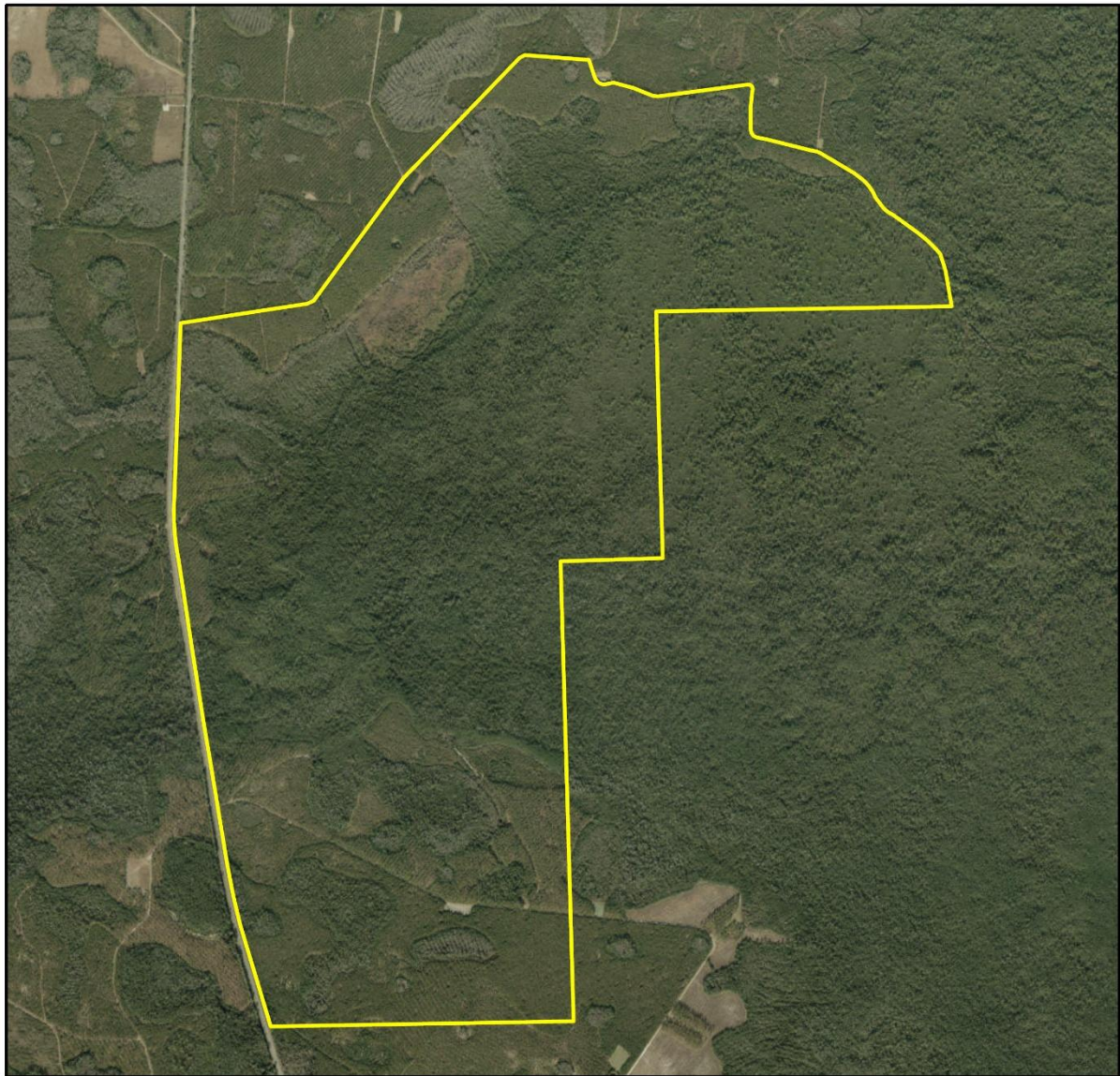


Figure 2. Aerial Imagery

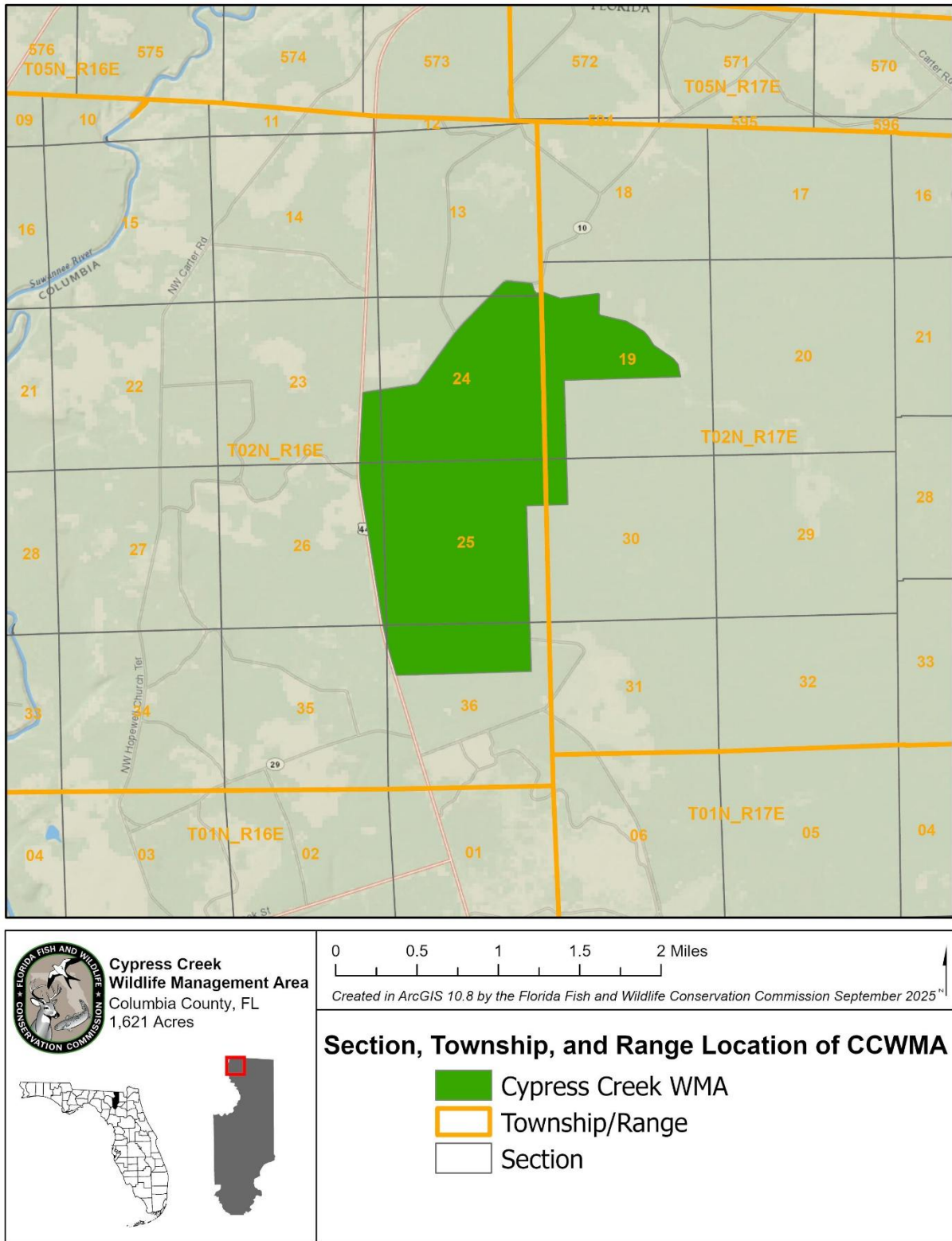


Figure 3. Section, Township, and Range Location

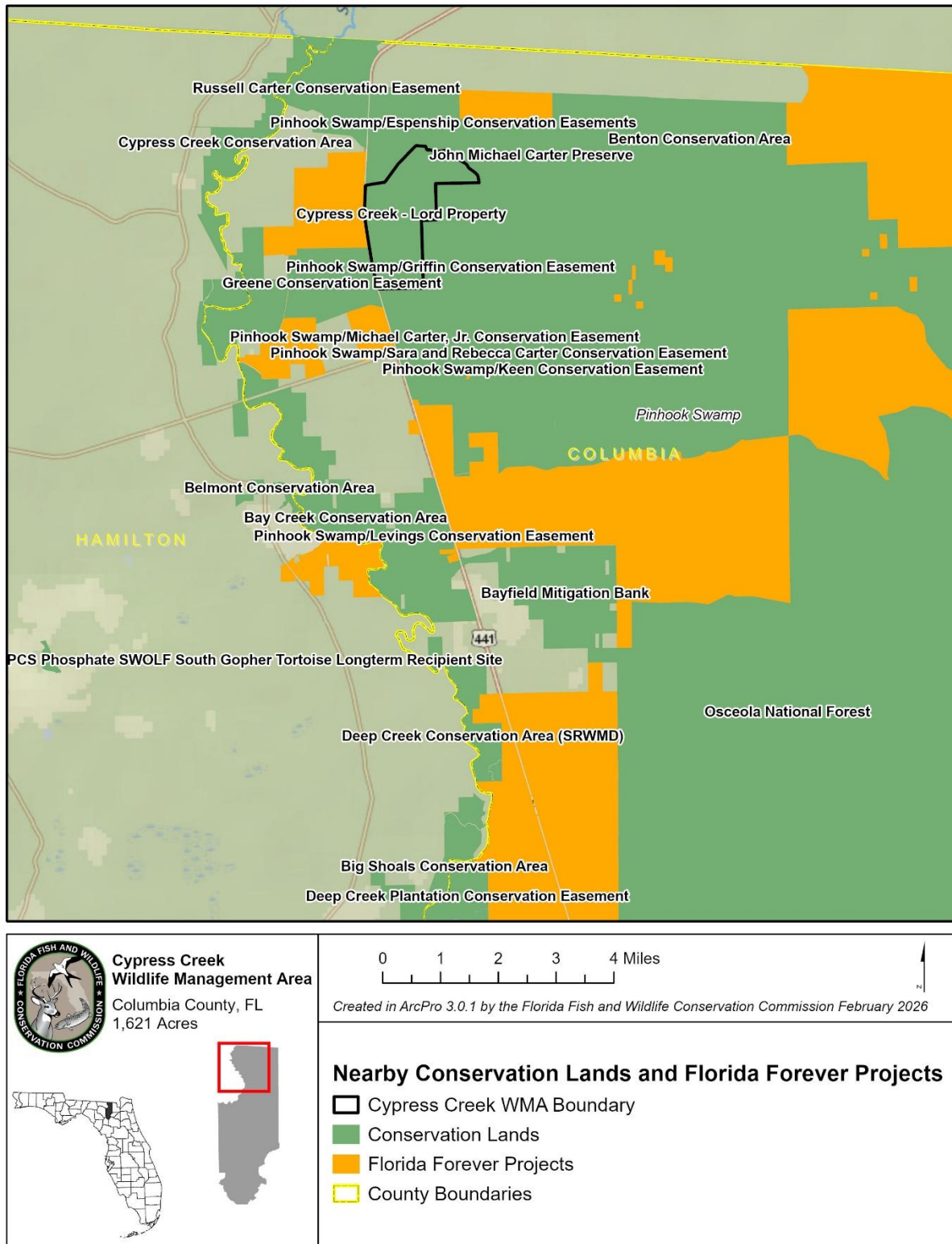


Figure 4. Nearby Conservation Lands and Florida Forever Project

1.2 Title Interest and Management Authority

Title to the CCWMA is vested in the Board of Trustees. In November 2025, the DSL entered a 50-year lease agreement (Lease Agreement Number 4899) granting the FWC management authority for the CCWMA (Appendix 11.2). The FWC is responsible for the operation of the CCWMA as a Wildlife Management Area (WMA) in addition to several other responsibilities. Management guidance and directives are captured within Chapters 253, 259, 327, 370, 373, 375, 378, 379, 403, 487, 597, and 870 of the F.S. Further management authority derives from Article IV, Section 9 of the Florida Constitution. These constitutional provisions and laws provide the FWC with the authority to protect, conserve, and manage the State's fish and wildlife resources.

The Board of Trustees' Lease Agreement Number 4899 with the FWC also directs the FWC to "manage the leased premises only for the conservation and protection of natural and historical resources and resource-based, public outdoor recreation which is compatible with the conservation and protection of these public lands, as set forth in subsection 253.023(11), F.S...." The lease agreement further directs the FWC to "implement applicable Best Management Practices for all activities under this lease in compliance with paragraph 18-2.018(2)(h), F.A.C., which have been selected, developed, or approved by lessor, lessee, or other land managing agencies for the protection and enhancement of the leased premises."

1.3 Acquisition

1.3.1 Acquisition History

In February 2025, the Board of Trustees acquired 1,621 acres under the Florida Forever program from Sidney Jackson Lord, Jr, and is now under Lease No. 4899 from the DEP to the FWC.

1.3.2 Purpose for Acquisition of the Property

The CCWMA was acquired to protect and restore a natural area of pine flatwoods and swamps linking the Osceola National Forest, Okefenokee National Wildlife Refuge, and the Suwannee River. The CCWMA is managed by the FWC for the purpose of operating a WMA, providing ecological diversity, providing managed habitat for both common and imperiled wildlife, and providing the public with fish and wildlife-focused outdoor recreational opportunities.

1.3.3 Encumbrances

There is one access easement located on the CCWMA. This encumbrance does not pose any significant impediments to the overall management of the area.

1.4 Planning Philosophy

The FWC emphasizes consensus-building to engage, understand, and incorporate the ideas of the various interests, user groups, and communities that it serves. To achieve this, the FWC convenes a Management Advisory Group (MAG) meeting, to engage stakeholders from various user groups at the beginning of the FWC's planning process, and a public hearing in which the public can provide formal testimony.

The FWC maintains transparency and accountability throughout the development and implementation of the Management Plan by following a “living document” concept, which links each plan with the previous plan by reporting on the objectives, management activities, and projects accomplished over the last planning timeframe. The Management Plan serves as the guiding framework to implement an adaptive management process, and content will be evaluated throughout the planning period to achieve comprehensive conservation goals (Section 4.2). Due to its recent acquisition, this is the CCWMA’s first management plan; therefore, there is no previous planning timeframe. As needed, amendments to Management Plans are presented to the DSL and ARC for review and consideration.

1.5 Public Involvement

The FWC conducted a MAG meeting in White Springs, Florida, on January 21, 2026, to obtain input from both public and private stakeholders regarding management of the CCWMA. Results of this meeting were used by the FWC to develop management goals and objectives and to identify opportunities and strategies for management to include in this Management Plan (Appendix 11.3.1). Further, a public hearing, as required by Chapter 259.032(10), F.S., was held in Lake City, Florida, on April 28, 2026, to solicit input and comments from the public regarding this Management Plan. A Management Prospectus was made available to the public 30 days prior to the hearing (Appendix 11.4). A report of that hearing can be found in Appendix 11.3.2. The public may provide input on Management Plans in development by visiting the FWC [website](#). Further testimony and input are received at a public meeting held by ARC. Input received from all public involvement efforts are considered in the development of the Management Plan.

2 Natural and Cultural Resources

2.1 Physiography

2.1.1 Topography and Geologic Formations

The State of Florida is part of the Florida platform that extends into the Atlantic Ocean and extends over 100 miles into the Gulf of America. Florida has a mosaic of geologic formations and soil types and is part of the Coastal Plain physiographic province, which stretches from Cape Cod to the Mexican border. The Coastal Plain is divided into six physiographic sections, and Florida lies between two of these sections: the Floridian section, which encompasses most of peninsular Florida, and the East Gulf Plain section, which encompasses the panhandle of Florida. Additionally, there are a total of 10 physiographic divisions within Florida. The CCWMA is located in the Ocean Pond Plain Province of the Okefenokee Basin District. The entire area is on the Hawthorn Group’s Statenville Formation.¹ These formations are characterized by abundant phosphate grains within interbedded sands, clays, and dolostones. Silicified fossils and opalized claystones are also found in the Statenville Formation.¹ Specifically, on the CCWMA, the maximum elevation is 125 feet above mean sea level.

2.1.2 Soils

The U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) data were used to identify the CCWMA soil series. The map units described in the soil survey of the CCWMA are distributed as shown in Figure 5. The NRCS defines a soil map unit as “a collection of soil areas or non-soil areas (miscellaneous areas) delineated in a soil survey.”² Soil map units may contain multiple soil components, which are given names that are unique identifiers. Appendix 11.5 lists the names and official map unit descriptions as determined by the NRCS.

Specific soils found on the CCWMA are generally associated with marine terraces on coastal plains and consist primarily of sandy and loamy marine deposits. Plummer complex makes up 63% of the CCWMA, with Mascotte fine sand making up 20% and Surrency fine sand making up 11%. Plummer muck and Sapelo fine sand make up less than 10% of the area.²

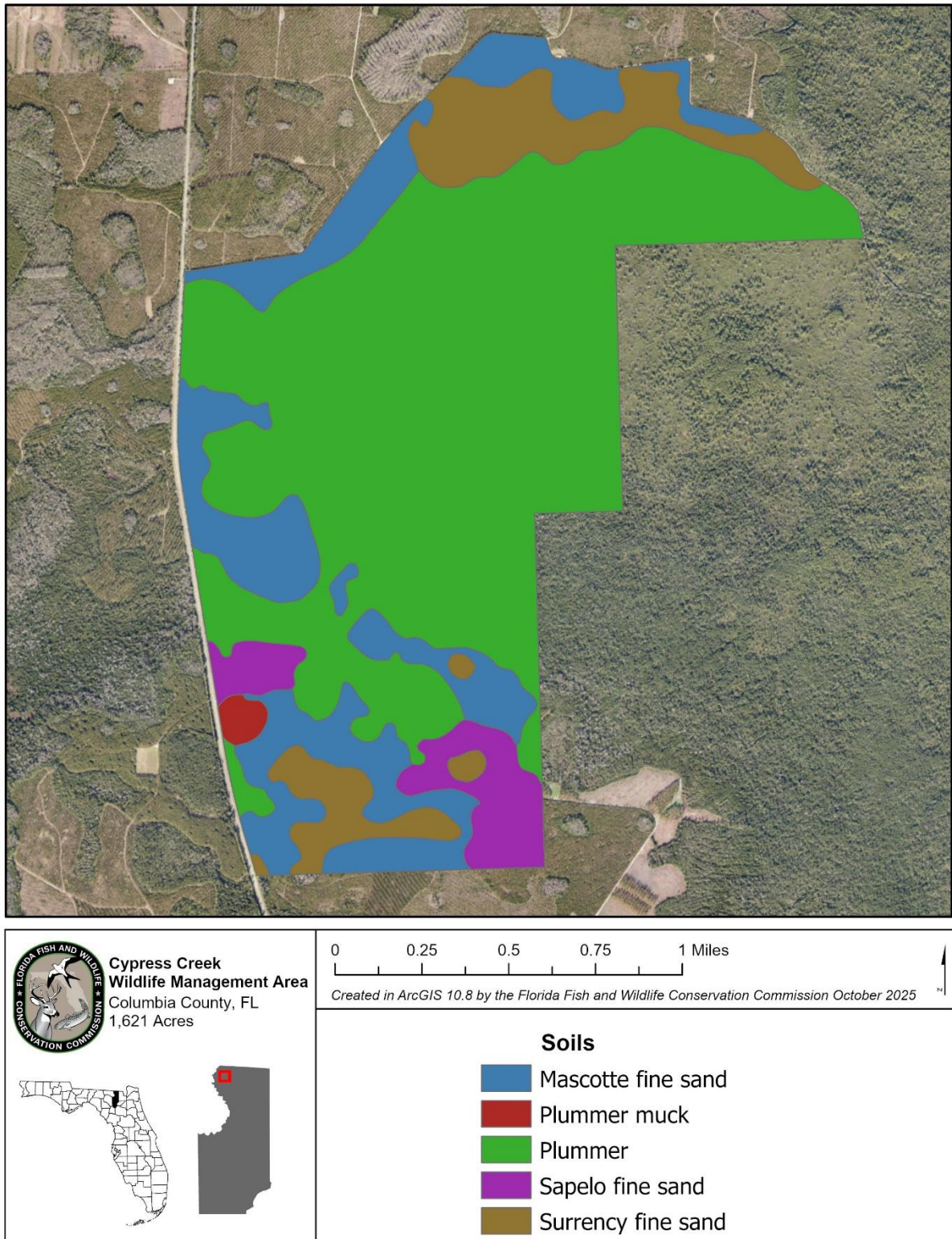


Figure 5. Soil Types

2.2 Vegetation

Through the services of the Florida Natural Areas Inventory (FNAI), the FWC has mapped the current and historic natural communities and altered landcover types of the CCWMA and documented seven natural communities and altered landcover types (Table 3, Figures 6 and 7).

Additionally, native plant species found on the CCWMA have been documented and recorded by either FWC staff or contractors (Appendix 11.7). Currently, one Commercially Exploited plant species and one non-native plant species have been documented on the area (Sections 2.2.1-2.2.2).

Table 3. Current Natural Communities and Altered Landcover Types

Community Type	GIS Acres	Percentage
Basin Swamp	185.92	11.47%
Baygall	599.31	36.98%
Clearing	44.03	2.72%
Dome Swamp	50.45	3.11%
Pine Plantation	380.37	23.47%
Road	6.88	0.42%
Shrub Bog	353.58	21.82%

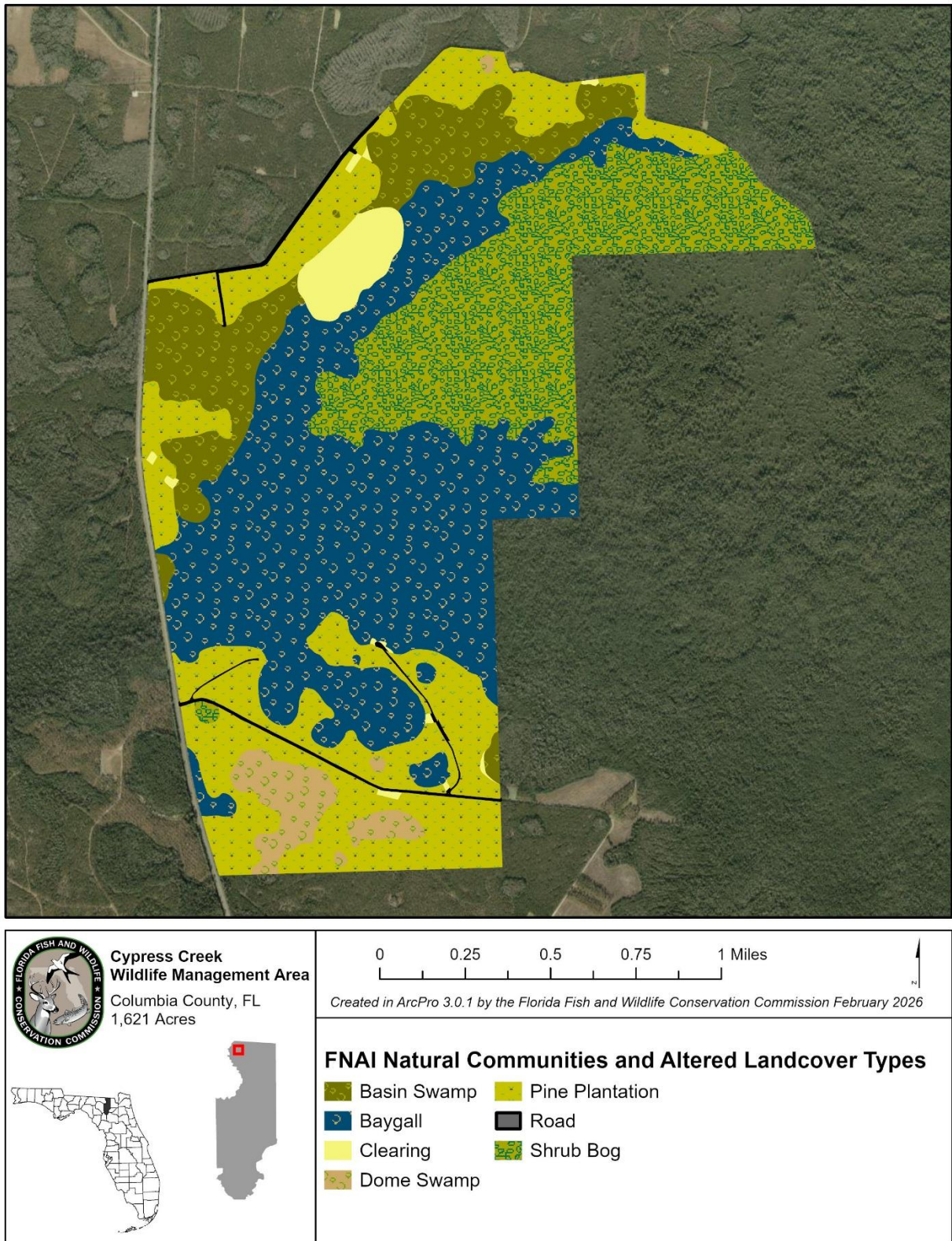


Figure 6. FNAI Natural Communities and Altered Landcover Types

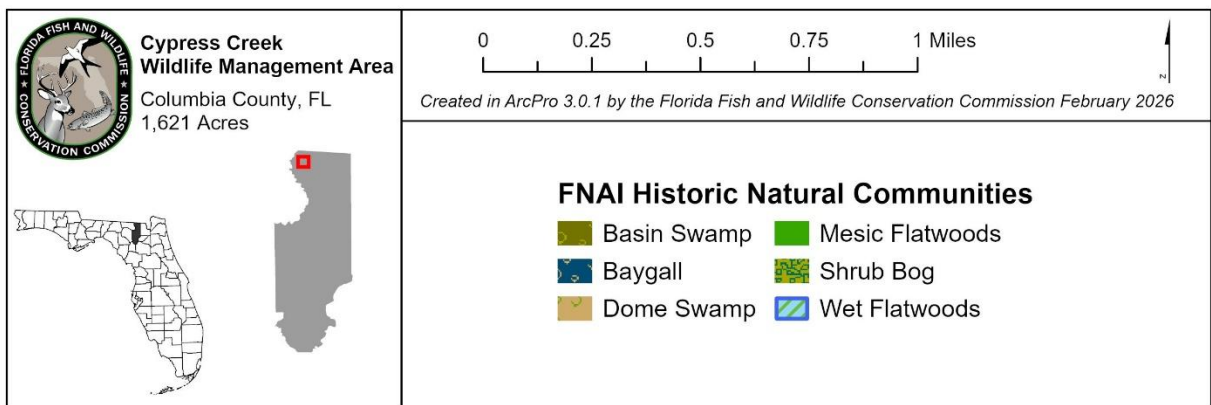
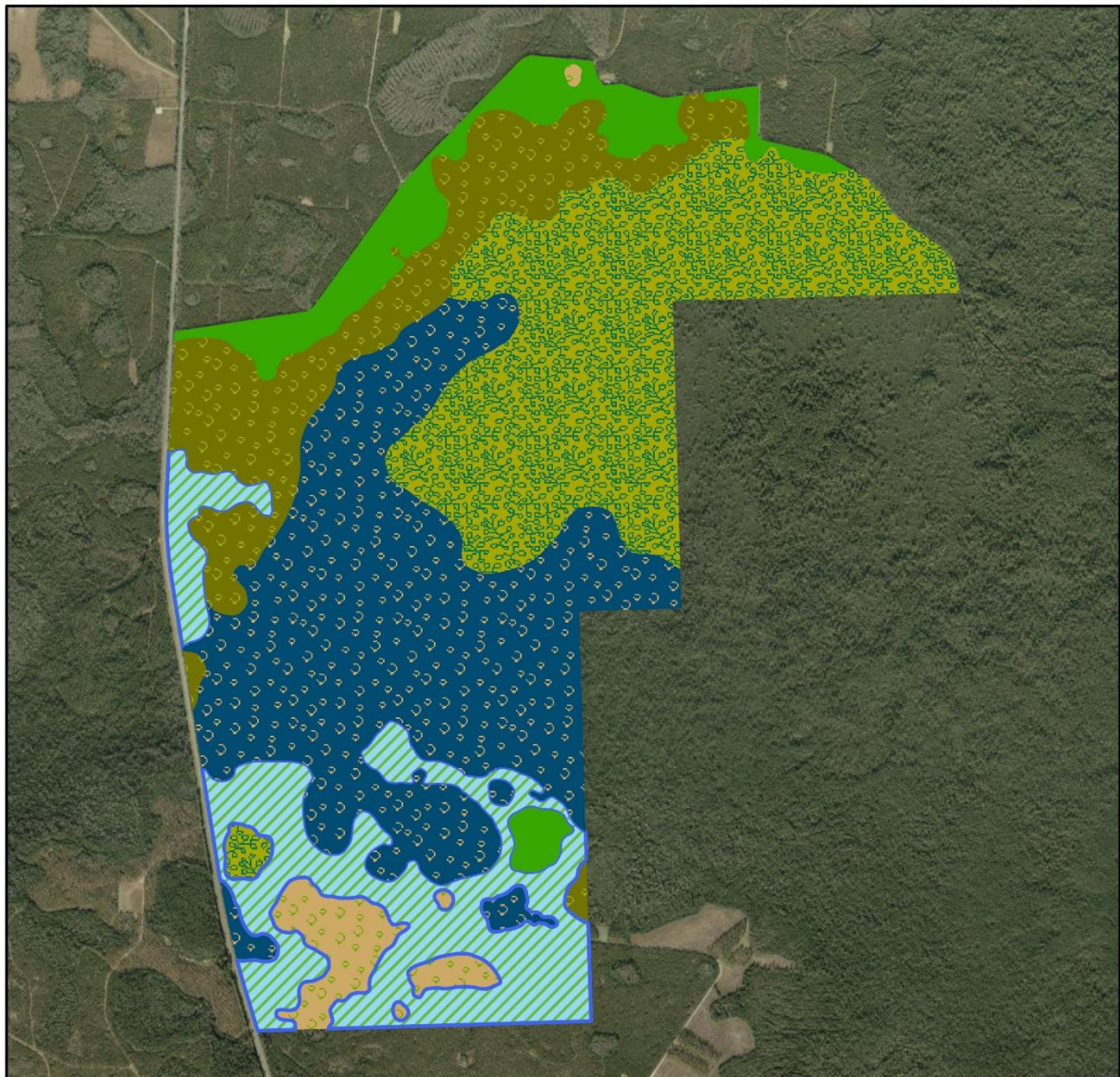


Figure 7. Historic Natural Communities

2.2.1 Imperiled Plants

For the purposes of this Management Plan, the term “imperiled species” as it relates to plants refers to plant species that Florida Department of Agriculture and Consumer Services (FDACS) or the United States Fish and Wildlife Service (USFWS) has designated as Endangered or Threatened. This designation is commonly known as “listed species”, and all names and status determinations were derived from Florida’s Regulated Plant Index rule (5B-40.0055, F.A.C.) that is maintained by FDACS.

While there has been no formal rare plant inventory on the CCWMA, the FWC aims to conduct one within this planning cycle (Section 5.2). The protections afforded plants that occur on conservation lands, in conjunction with management actions that include invasive plant removal and prescribed fire, will continue to maintain and enhance habitat for these and other imperiled plants. As such, these species should persist under planned management on the CCWMA.

One plant species that is state-designated as Commercially Exploited, saw palmetto (*Serenoa repens*), is known to occur on the CCWMA. Saw palmetto has an FNAI Rank of G4G5, S4S5. The FWC will continue to monitor the known occurrences of this species and report any illegal collection to the appropriate authorities.

It is possible that imperiled species occur on the CCWMA; if encountered, staff will document them. Florida’s imperiled species are adapted to natural communities and should continue to benefit from the FWC’s ongoing and planned management to maintain and enhance natural community structure and function. Under the FWC’s management, these species have a higher probability of persistence than in the absence of this management. However, while habitat management provides overall benefits to a host of species reliant upon these natural communities, imperiled species sometimes require specific attention.

2.2.2 Non-native Plants

FWC biologists and contractors have documented Japanese climbing fern (*Lygodium japonicum*), a non-native and invasive plant species, on the CCWMA. Species that are considered invasive are species that (a) are non-native to a specified geographic area; (b) were introduced by humans (intentionally or unintentionally); and (c) do or can cause environmental, economic, or human harm. The FWC relies on the Florida Invasive Species Council (FISC) for the categorization of invasive plant species. Japanese climbing fern is under the FISC II category.

2.3 Fish and Wildlife Resources

As described above, the CCWMA has a variety of natural communities and habitat types that likely support a wide array of imperiled and more common wildlife species. Active wildlife management practices make the CCWMA an excellent place to observe wildlife. The CCWMA’s basin swamp, baygall, shrub bog, and other natural communities provide critical habitat for resident and migratory wildlife.

2.3.1 Imperiled Fish and Wildlife

For the purposes of this Management Plan, the term “imperiled fish and wildlife” refers to animal species that are currently federally-designated as Threatened or Endangered by the USFWS or state Threatened by the FWC. This designation is also commonly known as “listed species.” Currently, there are no imperiled fish and wildlife species found on the CCWMA. A full list of native species found on the CCWMA can be found in Appendix 11.7.

At its November 2016 Commission meeting, the FWC approved Florida’s [Imperiled Species Management Plan](#), which included changes to the listing status for many wildlife species. Subsequent rule changes (68A-27.003 and 68A-27.005, F.A.C.) have come into effect since the Imperiled Species Management Plan was approved and those changes have been incorporated into this Management Plan. All federally listed species that occur in Florida are included in [Florida’s Endangered and Threatened Species list](#) as federally-designated Endangered or Threatened. Species that are not federally listed, but which have been identified by the FWC as being at some level of risk of extinction, are state-designated as Threatened.

Gopher Tortoise Recipient Site Eligibility

Based on a GIS analysis conducted by the FWC, the CCWMA does not meet the criteria outlined in the [Gopher Tortoise Permitting Guidelines](#) (April 2023) and therefore would not qualify as a permitted gopher tortoise recipient site. This determination is primarily due to the area’s soil composition, which consists of wet, poorly drained soils that are unsuitable for supporting viable gopher tortoise (*Gopherus polyphemus*) populations and do not meet recipient site requirements.

2.3.2 Non-native Wildlife Species

Currently, no known non-native wildlife species have been documented on the CCWMA. The FWC will document any occurrences of non-native species found. More information on monitoring and management of non-native wildlife can be found in Section 4.5 and Section 5.4.

2.3.3 FNAI Element Occurrences

A diversity of wildlife species is found on the CCWMA. The FWC uses the FNAI Natural Heritage Database to assist in identifying and recording sensitive resources on FWC-managed areas. This database also supplemented the development of the species listed in Sections 2.2.1-2.3.2. FNAI’s Natural Heritage Database is a comprehensive compilation of records documenting the location and ecological status of rare plant and animal species in the state. The database consists of “element occurrences”, where an “element” is any exemplary or rare component of the natural environment, such as a species, natural community, or other ecological feature; and an “element occurrence” is an area of land and/or water where an element is, or was, present. FNAI scientists “track” (collect information on) approximately 233 vertebrates, 562 invertebrates, and 492 plants representing approximately 13% of the state’s vertebrate species, less than 5% of the invertebrates, and about 12% of the plants. The status of each tracked element is assessed using standardized methodology; each tracked element is assigned ranks that reflect its rarity and degree of imperilment at the global and state level. These ranks are applied using a standardized methodology that incorporates many factors, including geographic range; number, size, and

condition of known occurrences; population size and trends; life history characteristics; and threats. An explanation of Natural Heritage rank and definitions are in Appendix 11.10 and may be found [online](#).

The FNAI element occurrence records show one occurrence of wildlife species in the vicinity of the CCWMA. Several of the imperiled species discussed in Section 2.2.1 and Section 2.3.1 in this report are tracked by FNAI. Appendix 11.9 contains a letter from FNAI authorizing the FWC to utilize their database for the purpose of identifying known plant and animal resources.

2.4 Water Resources

All surface waters of the State are classified by the DEP according to designated uses as described in Chapter 62-302.400, F.A.C. The surface waters of the CCWMA are designated as Class III and classified for fish consumption and recreation or limited recreation; as well as propagation and maintenance of a healthy, well-balanced population of fish and wildlife. Additionally, it is the policy of the DEP to afford the highest protection to Outstanding Florida Waters (OFW) and Outstanding National Resource Waters (Chapter 62-302.700 F.A.C.). No degradation of water quality, other than that allowed in subsections Chapter 62-4.242(2) and (3), F.A.C., is permitted in these OFW, notwithstanding any other DEP rules that may allow water quality lowering. None of the CCWMA is designated as OFW. There are no water resources on the CCWMA, and the area is not located within and/or adjacent to an aquatic preserve (Figure 8).

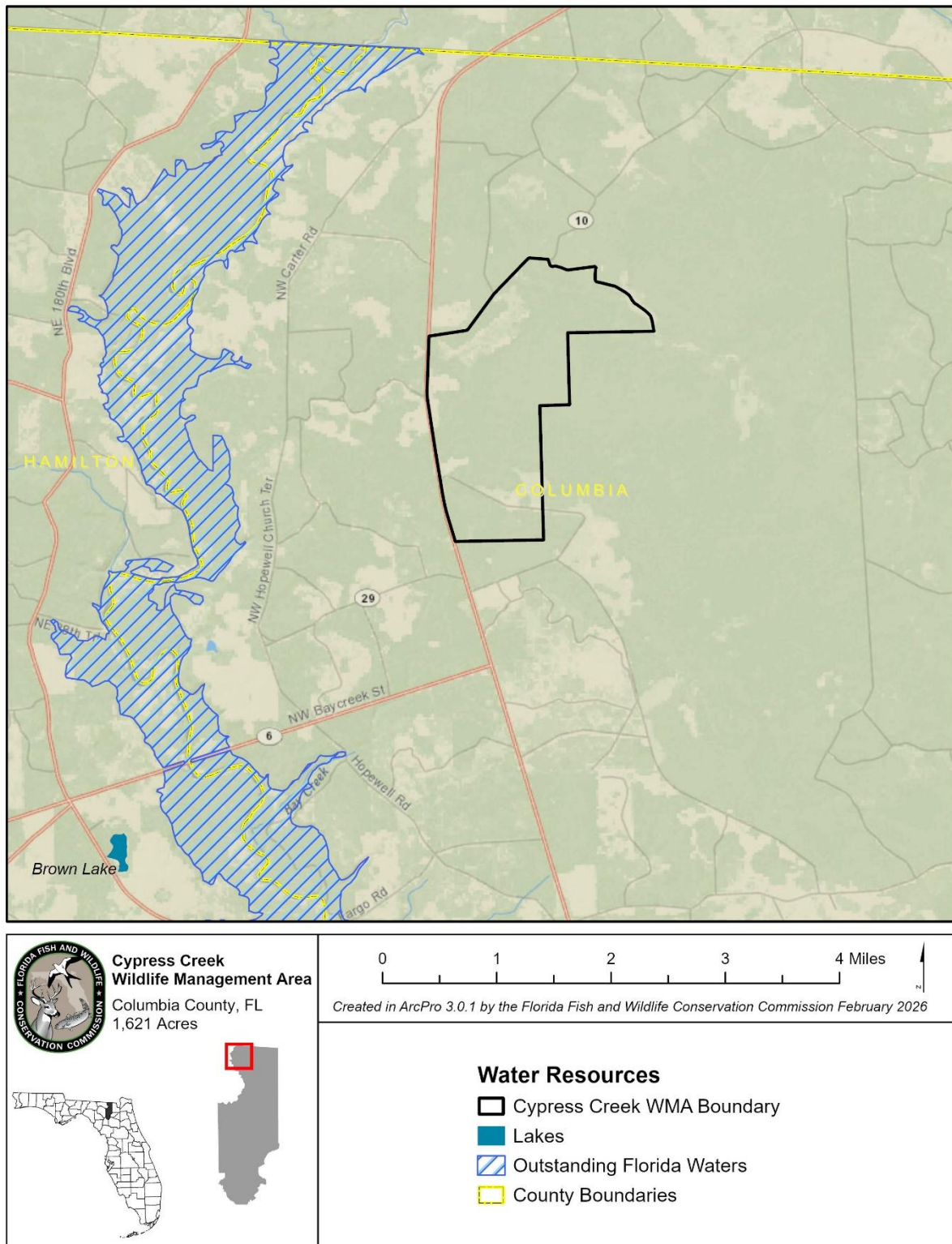


Figure 8. Water Resources

2.5 Forest Resources

Timber resources include pine plantations in need of thinning for habitat improvement. Thinning of the forest overstory, hydrological restoration, and reintroduction of prescribed burning are the most important factors in the re-establishment of natural communities and the enhancement of wildlife habitats in these areas. Upland pine forest planted with off-site pines will be reforested with longleaf pine (*Pinus palustris*) or other on-site species as appropriate. Degraded or disturbed bottomland hardwood sites will be encouraged to reforest naturally with native wetland oaks, hardwoods, and other appropriate native plant species.

2.6 Beaches and Dunes

There are no beaches or dunes located at the CCWMA.

2.7 Mineral Resources

Currently, there are no known outstanding mineral interests within the CCWMA.

2.8 Cultural Resources

The Florida Master Site File (FMSF), maintained by the Florida Department of State's Division of Historical Resources (DHR), is the State of Florida's official inventory of cultural resources, archaeological and historical survey reports, and other manuscripts relevant to historic preservation in Florida. Categories of resources recorded at the FMSF include archaeological sites, historical structures, historical cemeteries, historical bridges, and historical resource groups (comprised of historic districts, landscapes, and linear features).

Currently, there are no cultural resources recorded on the CCWMA; however, the FWC will consult with the DHR to determine the necessary actions for resource inventory and preservation. All identification, assessment, and preservation strategies will be developed in consultation with the DHR.

3 Uses of the Property

3.1 Previous Use and Development

The first Paleoindian inhabitants of Florida arrived at least 13,000 years ago. While these and subsequent native inhabitants of Florida were largely fisher-gatherer-hunters, subsequent cultures began to produce domesticated crops, such as maize, beans, squash, and other crops for a growing and increasingly sedentary population. By the time Europeans arrived, the landscape of Florida had been shaped and modified by Native Americans for thousands of years. Along with novel agricultural practices, the Spanish, and later the British and other settlers, brought cattle, hogs, horses, and other livestock to Florida. Social programs such as British agricultural land grants led to the proliferation of intensive agriculture throughout the state.

Agricultural practices, such as rangeland cattle grazing, quickly became crucial to the economy of the state from the 16th through the 20th century. The influx of settlers and resulting intensification of agricultural practices led to additional landscape alteration, continuing a trend

that had been occurring for centuries. This alteration was quickly outpaced by Florida's boom-and-bust economies of the 19th and 20th centuries. The ensuing widespread environmental modification and commercial and residential development would permanently transform the cultural and ecological landscape of the state.

The forest products industry has historically been of major importance to this area of Florida. The greatest exploitation of forest resources occurred after the turn of the 20th century. In addition to extensive logging of longleaf pine, loggers moved into the hydric hammocks to begin harvesting old-growth bald cypress (*Taxodium distichum*). To remove the bald cypress, railroad trams were constructed in the swamps. Many of these trams provide raised roadways for the vehicles of today's visitors, while others have grown over and are barely recognizable. Many longleaf pine stands were converted to slash (*Pinus elliottii*), loblolly (*Pinus taeda*), or sand pine (*Pinus clausa*) plantations for pulpwood production.

The upland areas of the CCWMA were primarily used for timber production with slash pine plantations.

3.2 Current Use

Currently, the CCWMA is zoned as Agriculture-1, and the future land use maps indicate that the CCWMA will continue to be designated and zoned as Agricultural. The CCWMA is managed as multiple-use conservation land, incorporating uses related to the conservation and protection of wildlife, fisheries, forest management, and fish and wildlife-focused public outdoor recreation. Annual management actions include prescribed burning; wildlife habitat restoration and improvement; invasive species maintenance and control; road maintenance; imperiled and locally important species management, monitoring, and protection; facilities and infrastructure maintenance; conservation acquisition and stewardship activities; cultural resources monitoring and protection; and research related activities.

Resource uses are diverse and consistent with the purposes for which the area was acquired. The property will provide opportunities for hunting, nature study, and hiking; the area hosts a wide array of bird, mammal, and other wildlife species, offering excellent conditions for wildlife watching. Due to the proximity of population centers in Columbia County, public use can be expected to increase as public awareness of opportunities increases.

3.2.1 Hunting

The CCWMA will offer several hunting opportunities. For more information on hunting opportunities at the CCWMA, visit the following link: MyFWC.com/Hunting.

3.2.2 Trails and Roads

Currently, the CCWMA offers three miles of roads. Hiking and bicycling are available on all roads within the CCWMA. Roads are not open to public vehicular traffic and are used by staff to access the CCWMA for management.

3.2.3 Camping

Camping is not permitted on the CCWMA; however, camping opportunities are available on nearby public lands.

3.2.4 Geocaching

Geocaching, also known as Global Positioning System (GPS) Stash Hunt and GeoStash, is a contemporary combination of orienteering and scavenger hunting generally utilizing a GPS receiver unit. Geocache websites routinely promote good stewardship. However, the potential exists for resource damage, user conflicts, or safety issues caused by inappropriately placed caches and/or links that do not provide adequate information about the area.

It is the policy of the FWC to allow placement of geocaches only in those locations that do not present the potential for resource damage, user conflicts, or threats to the safety of the participants. The placement of geocaches on FWC-managed lands is governed by specific guidelines. These guidelines may be found on the FWC [website](#).

3.3 Adjacent Land Uses

The CCWMA is in northwest Columbia County, east of the City of Jasper. The population of nearby urban areas of Jasper, Live Oak, and Lake City has been growing. Lands immediately adjacent to the CCWMA are classified as Agriculture-1, Environmentally Sensitive Areas-1, and Conservation.

3.4 Visitation, Economic Benefits, and Revenue-generating Potential

Visitation and public use of the area for fish and wildlife-focused public outdoor recreational opportunities is the primary source of economic benefits from the CCWMA, which will contribute to the overall economy for the northcentral region of Florida. The 2021 U.S. Census estimates that there are 69,809 people living in Columbia County. The Department of Economic Affairs, Bureau of Economic and Business Research's medium-range population projection indicates that in the year 2040, there will be 77,500 people living in Columbia County. The FWC does not currently have an estimate of the number of people who visit the CCWMA. However, if the current maximum visitation level of 40 visitors per day were achieved, a total of 14,600 visitors per year could be expected. If the area were at carrying capacity, the FWC economic analysis estimates indicate that the CCWMA will generate an estimated annual economic impact of \$1,521,320 for the State and the north Florida region. This estimated annual economic impact would aid in the support or creation of an estimated 10 jobs*.

Further revenue-generating potential of the CCWMA will depend upon future uses described in the Management Plan and may include sales of various permits, recreational user fees, or other ecotourism activities, if such projects are feasible. The annual area regulations can be consulted to clarify the necessary and required permits, fees, and regulations. Additionally, the long-term value of ecosystem services, including the protection of air and water quality functions, are significant to local and regional land and water resources, as well as human health.

**The above figures are based on based on data from "Participation in and Expenditures on Outdoor Recreation in Florida" (2023) by Responsive Management and Southwick Associates)*

3.5 Single- or Multiple-use Management

The CCWMA will be managed under the multiple-use concept as a WMA. The CCWMA will provide fish and wildlife-focused public outdoor recreation and educational opportunities, while protecting the natural and cultural resources found on the area. Any natural and cultural resources on the CCWMA will be managed under the guidance of the ARC, the Conceptual State Lands Management Plan, and as outlined in the original purposes for acquisition. A detailed assessment of the benefits and potential impacts of planned uses and activities on natural and cultural resources was an integral part of the development of the management activities and intent, goals, objectives, challenges, and strategies sections of this Management Plan.

3.5.1 Analysis of Multiple-use Potential

The following actions or activities have been considered under the multiple-use concept as possible uses to be allowed on the CCWMA. Uses classified as "Approved" are in accordance with the purposes for acquisition; the Conceptual State Lands Management Plan; and the FWC agency mission, goals, and objectives. Uses classified as "Conditional" indicate that the use may be acceptable but will be allowed only if approved through a process other than the management plan development and approval process (e.g., special-use permitting, managed-area regulation, rule development). Uses classified as "Rejected" are not considered to be in accordance with the original purpose of acquisition or one or more of the various forms of guidance available for planning and management.

	Approved	Conditional	Rejected
Apiaries		✓	
Archery		✓	
Astronomy	✓		
Bicycling	✓		
Cattle grazing			✓
Citrus or other agriculture			✓
Ecosystem services and maintenance	✓		
Ecotourism		✓	
Environmental education	✓		
First-responder training		✓	
Fishing		✓	
Geocaching		✓	
Hiking	✓		
Horseback riding		✓	
Hunting		✓	
Linear facilities			✓
Military training		✓	
Preservation of cultural resources	✓		
Primitive camping			✓
Protection of imperiled species	✓		
Off-road vehicle use			✓

Shooting sports park		✓	
Soil and water conservation	✓		
Timber harvest	✓		
Wildlife observation	✓		

3.5.2 Incompatible Uses and Linear Facilities

Consideration of incompatible uses and linear facilities on the CCWMA are made in accordance with the requirements of Section 253.034(10), F.S.; various applicable Florida Constitution, statute, rule, and policy requirements; and other provisions governing applications for proposed incompatible uses or linear facilities on state-owned conservation lands. Upon approval and implementation of the CCWMA Management Plan, any proposed future uses that have been classified herein as Rejected, or other proposed future uses that are determined to be incompatible with the purposes of acquisition or other management authorizations and guidance, will be forwarded for review and approval consideration to the DEP-DSL, ARC, and the Board of Trustees prior to any incompatible use or linear facility being authorized on the CCWMA.

3.6 Potential Surplus Review

On conservation lands where the FWC is the lead manager, the FWC evaluates and identifies recommended areas for a potential surplus designation by the DSL, ARC, and the Board of Trustees. This evaluation consists of GIS modeling and analysis, aerial photography interpretation, analysis of fish and wildlife resources, a review of resource and operational management needs, and a review of public access and recreational use of the area. Also, the FWC considers recommendations for surplus lands as they relate to Florida's "No Net Loss of Hunting Lands" legislation (Ch. 379.3001, F.S.), as well as surplus restrictions for lands acquired through the Federal Aid in Wildlife Restoration Act (Pittman-Robertson) or through other federal grant programs.

The evaluation of the CCWMA by the FWC has determined that all portions of the area are being managed and operated for the original purposes of acquisition, remain integral to the continued conservation of important fish and wildlife resources, and continue to provide good fish and wildlife-focused public outdoor recreational opportunities. Therefore, no portion of the CCWMA is recommended for potential surplus review.

4 Management Activities and Intent

The following section provides a description of agency plans to locate, identify, protect, preserve, or otherwise use fragile natural resources and non-renewable cultural resources. In general, the FWC management intent for the CCWMA is to restore and maintain natural communities in a condition that sustains ecological processes and conserves biological diversity, especially fish and wildlife resources. In conjunction with this primary emphasis, it is the FWC's intent to provide quality fish and wildlife-focused public outdoor recreational opportunities on the CCWMA. The FWC will utilize the best available data, guidelines, natural resource management practices, and recreational management practices to achieve these outcomes in accordance with the original

purposes for acquisition. Furthermore, as noted previously, the management activities described in this section comply with those of the Conceptual State Lands Management Plan.

4.1 Land Management Review

On-site reviews of conservation and recreation lands that exceed 1,000 acres and are titled in the name of the Board of Trustees are required every five years by Section 259.036, F.S. These reviews determine whether the lands are being managed for the purposes for which they were acquired, the degree to which actual management practices, including public access, are in accordance with their management plan adopted pursuant to Section 259.032, F.S. Due to its recent acquisition, an Land Management Review has not yet been conducted for the CCWMA.

4.2 Adaptive Management

Proposed adaptive management, monitoring, and performance measures are developed through literature reviews and FWC staff meetings. Overall, a results-based approach is incorporated into the Management Plan, for which effective monitoring is an integral component. The FWC will monitor conservation actions, species, habitats, and major threats to the conservation of the natural and cultural resources of the CCWMA.

4.2.1 Florida Landscape Assessment Model

The FWC has developed the Florida Landscape Assessment Model (FLAM) as a Geographic Information Systems (GIS)-based assessment tool that incorporates a wide variety of landscape and wildlife species data. The FLAM evaluates the Florida landscape based upon important natural resources and habitat needs of wildlife to identify ecologically significant lands in the state and to assess the potential impacts of management and land-use changes. The FLAM was developed to provide technical assistance to various local, regional, state, and federal agencies and entities interested in wildlife needs and conservation to: (1) determine ways to avoid or minimize project impacts by evaluating alternative placements, alignments, and transportation corridors during early planning stages, (2) assess direct, secondary, and cumulative impacts to habitat and wildlife resources, and (3) identify appropriate parcels for public land acquisition for wetland and upland habitat mitigation purposes. The FLAM ranks habitat from 0-10; a rank of 10 being of greatest value. The FLAM (2025) indicates that the CCWMA has a high mean wildlife value of 7.5 (Figure 9).

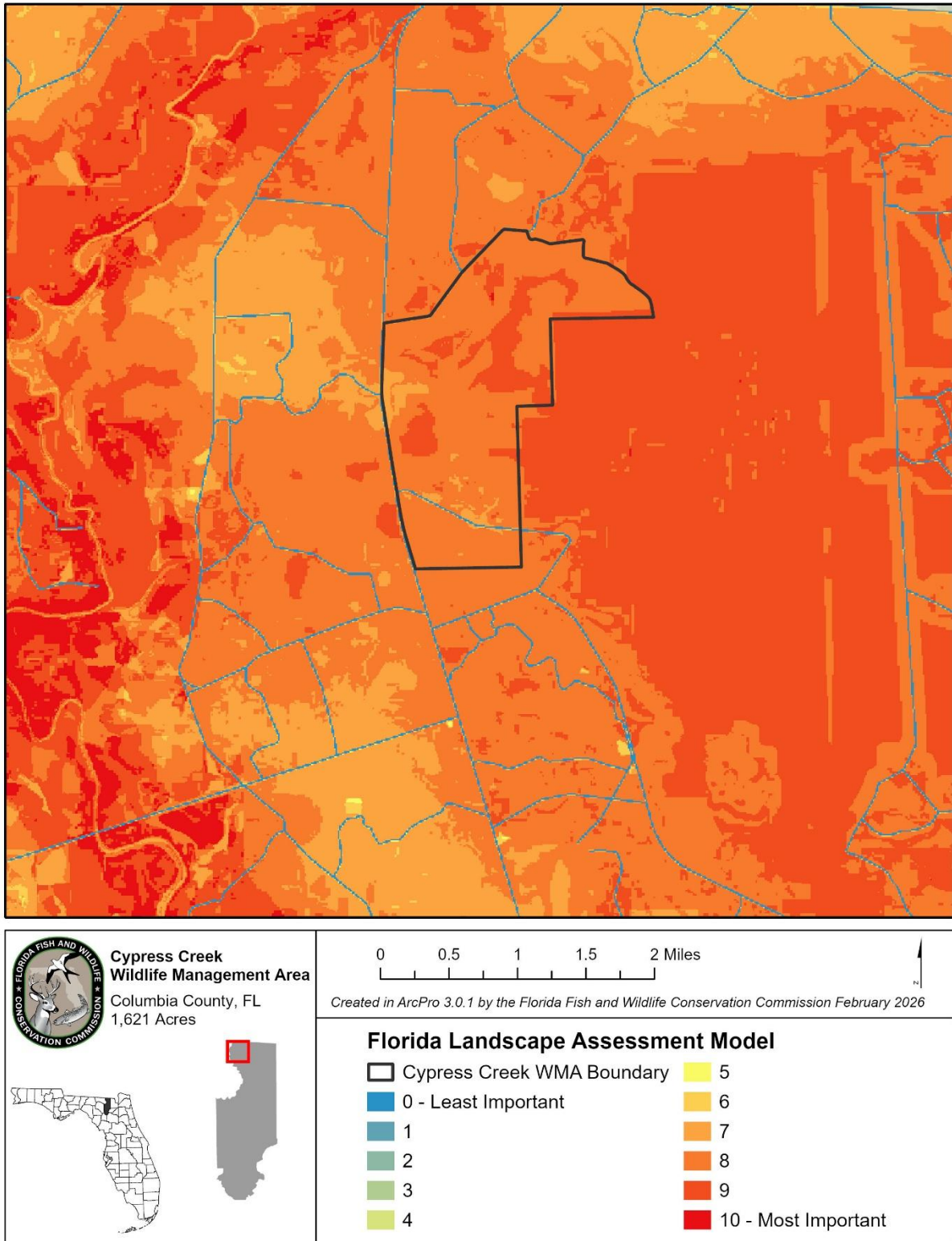


Figure 9. Florida Landscape Assessment Model

4.2.2 Performance Measures

Performance measures include qualitative or quantitative measures used to provide an estimate or index of the characteristic of interest and to chart the overall progress of conservation actions towards specific goals. Successful monitoring programs and their associated performance measures provide natural resource professionals with valuable feedback on the effectiveness of conservation actions and make it possible to implement a more flexible adaptive management approach. An adaptive management approach ultimately will be more efficient and effective when it tracks inputs, incorporates an effective monitoring program that integrates performance measures, and evaluates results against desired goals.

4.2.3 Implementation

The CCWMA Management Plan serves as the guiding framework to implement this adaptive management process. It serves as the underpinning for the integration of management programs (OBVM, WCPR, Public Access Assessments, etc.) underway to accomplish needed conservation actions that are planned to manage the natural resources of the CCWMA and resolve conservation threats to fish and wildlife and the habitats they occupy. Based on evaluations of project results, the conservation actions are revised as necessary, and the adaptive management process is repeated.

4.3 Habitat Restoration and Improvement

On the CCWMA, the FWC will focus on land management activities and projects that support or restore native habitat diversity, emphasizing maintenance of natural communities and restoration of disturbed areas. The CCWMA has functioning natural communities, including basin swamp, baygall, shrub bog, and others that the FWC will continue to manage and protect. On any disturbed upland sites, the FWC intends to continue natural community restoration. Restoration may be achieved on disturbed areas by the reintroduction of fire, the restoration of historic hydrological conditions, the planting of species appropriate to the natural community being restored, and/or the use of mechanical or chemical management techniques as appropriate.

4.3.1 Objective-Based Vegetation Management

The FWC uses a comprehensive resource management approach to improving FWC-managed areas. OBVM is a monitoring tool used by the FWC to monitor how specific structural vegetative attributes that characterize a natural community are responding to management.

The first step in implementing OBVM is to map the current, and in most cases the historic, natural communities on the managed area using the FNAI Guide to the Natural Communities of Florida. The FWC contracts with FNAI to provide these mapping services and will recertify natural community maps for most areas on a five-year basis.

FNAI has mapped the current and historic natural communities on the CCWMA. New acquisitions that occur will be mapped for natural communities and altered landcover types during this planning period.

After natural communities have been mapped, FWC land managers identify those natural communities that will influence and guide management decisions, known as the actively managed

natural communities. Currently, no natural communities are being monitored at the WMA. Through OBVM monitoring, the FWC collects data on 12 specific structural attributes that are then compared to FNAI established desired future conditions (DFC) for each natural community. The DFCs are generally based on structural vegetation attributes collected from reference sites that were deemed to be a high-quality and functioning example of the natural community being monitored and used for comparison purposes.

Overall, natural community mapping, OBVM structural sampling, and plant species lists provide FWC staff with data indicating natural community structure, distribution, and condition. Comparing the monitoring results to DFCs provides important information on the structural condition and composition of a natural community at a given point in time. OBVM sampling is repeated every five years, and comparisons with past OBVM monitoring data allow changes over time to be evaluated against the management actions taken by staff. This information is then used to guide and prioritize future management efforts.

4.3.2 Prescribed Fire and Fire Management

The FWC employs a fire management regime to maintain or increase both species and habitat diversity and will continue a prescribed burning program on the CCWMA in accordance with natural community management objectives. Applying prescribed fires within the natural range of variation in frequency, intensity, and seasonality for each natural community provides appropriate habitat for fire-dependent species, while still allowing the persistence of less fire-tolerant species.

Whenever possible, existing firebreaks such as roads and trails, as well as natural breaks such as creeks and wetlands, will be used to define management units. Disk harrows, mowing, and foam lines will be used when safe and appropriate to minimize disturbance to native groundcover.

Except for wildfire suppression, mechanical soil disturbance in wetland ecotones will be avoided to protect habitats for important rare species that often occur between upland and wetland margins. Creation of firebreaks will be avoided in wetland margins unless it is necessary to defend the boundary of a managed area. When safe, fires are allowed to burn into the edges of marshes, swamps, and other wetlands to maintain these habitats. With some exceptions, such as scrub and scrubby flatwoods, most fire-managed natural communities are best maintained, or improved, with fire returns of two to three years, preferably during the spring and early summer months when appropriate.

In addition to the general prescribed fire management guidelines described above, an area-specific Prescribed Burn Plan has been developed. This plan includes, but is not limited to, delineation of burn management units, descriptions of prescribed fire methodology, safety, and smoke management guidelines. As further outlined in the area's Prescribed Burn Plan, the FWC plans to continue to conduct prescribed burning on the area's fire-adapted communities, with a goal to bring 100% of the area being maintained within the recommended fire return intervals. Challenges that continue to impact the implementation of prescribed fire are described further in Section 6.

4.3.3 Habitat Restoration and Improvement Activities and Accomplishments

Habitat management activities will focus on enhancing natural communities, reestablishing and maintaining recommended fire return intervals for fire-adapted communities, treating and removing invasive plant species, and mechanical control of vegetation as needed. Invasive species control is more extensively discussed in Section 5.4. Further specific habitat management and improvement objectives planned for the CCWMA are described in Section 5.

4.4 Fish and Wildlife Management, Enhancement, and Population Restoration

Across the CCWMA, the natural communities create a mosaic that supports a wide variety of fish and wildlife species, including imperiled, game, and non-game species. The FWC uses the term “locally important species” to encompass imperiled species, as well as a select group of common species, that occur on the area and can help guide management activities. By managing the area’s natural communities for locally important species, the area will benefit a host of other species that use these natural communities. To support this goal, the FWC emphasizes conservation, protection, and management of natural communities to protect and enhance populations of fish and wildlife found on the CCWMA. Natural communities vital to locally important species include basin swamp, baygall, shrub bog, and others. Restoration and improvement of any altered communities, to expand habitat on the CCWMA, is also emphasized.

To guide species management on FWC-managed lands, the FWC takes a proactive, science-based approach in conjunction with input from species experts and individuals with knowledge of the area. Management practices are designed to restore, enhance, or maintain natural communities with an emphasis on the needs of locally important species. Locally important species (resident and migratory) will be managed for optimum richness, diversity, and abundance. This will be further augmented by following approved Federal and FWC Species Recovery Plans, guidelines, and other scientific recommendations for these species. Guided by these recommendations, land management activities, including prescribed burning and timber stand improvements, will further address locally important species requirements and habitat needs.

For locally important species population monitoring, the FWC takes a tiered approach. Using taxa inventory monitoring and opportunistic observations, staff identify which species occur on the CCWMA and track diversity through time. In addition, when appropriate, staff monitor specific species to track population status. Wildlife experts help to identify the best monitoring approach for the area to inform how the management is influencing the populations. Using this tiered monitoring approach, the FWC will gather information about the species using the area and how select species are responding to management. Section 4.4.1 provides further information on FWC’s comprehensive species management strategy for all locally important wildlife and their respective habitats.

4.4.1 Locally Important Species: Wildlife Conservation Prioritization and Recovery

The FWC has identified the need to: 1) demonstrate optimal wildlife habitat conservation on FWC-managed lands; 2) develop science-based performance measures to evaluate management; 3) recover imperiled species; and 4) prevent future imperilment of declining wildlife species. To help

meet these needs, the FWC uses a comprehensive resource management approach to maintain FWC-managed areas. Restoring the form and function of Florida's natural communities is the foundation of this management philosophy. The FWC uses OBVM to monitor how specific vegetative parameters are responding to management and uses the WCPR program to ensure management is having the desired effect on wildlife.

The WCPR program helps assess locally important wildlife species' needs and opportunities, prioritize what the FWC does for locally important species, prescribe management actions to aid in species recovery, prescribe monitoring to allow evaluation of the species' response to management, and ensure the information is shared with others. To determine specific management and monitoring actions needed for each species, the FWC considers the species' status on the area; the current condition of the area's natural communities; the amount and spatial arrangement of the species' potential habitat on the area and adjacent lands; the species' response to management; and any local overriding factors (e.g., status of species in the region, local declines, or extirpations). Staff then combine these assessments with area-specific management considerations to develop a WCPR Strategy for the area. Due to its recent acquisition, the CCWMA does not currently have a WCPR Strategy. Each area-specific Strategy prescribes management actions to achieve and identifies monitoring to verify progress towards meeting desired outcomes. By providing FWC managers with information on actions they should undertake, the FWC intends for the Strategy to assure the presence and persistence of Florida's native wildlife.

Through the actions of this program, the FWC facilitates fulfilling the needs of locally important wildlife species. In the long-term, by implementing the WCPR Strategies on FWC-managed lands and continuing to assess wildlife species' needs, the FWC will continue to play an integral role in aiding the recovery of locally important species and preventing the future imperilment of declining wildlife species.

4.4.2 Game Populations

The FWC intends to manage game populations on a sustained-yield basis to assure healthy game populations and a high-quality recreational experience. In general, game populations will be managed to provide continued recreational sport hunting and wildlife watching opportunities. However, some of the hunting opportunities may be regulated through a limited-entry hunt program to ensure the persistence of viable game species populations, as well as hunter safety and satisfaction. The potential for conflicts among recreational activities and user groups will also be considered and continually monitored.

4.4.3 Fish and Wildlife Management Activities and Accomplishments

Monitoring activities for locally important species projects will be implemented in accordance with the WCPR Strategy once created. In addition to locally important species activities, the FWC will monitor and manage game and nuisance animal species.

4.5 Non-native Species Maintenance and Control

With invasive species populations continuing to grow in Florida, the FWC takes a proactive and comprehensive approach to the monitoring and management of non-native plants and animals, as well as pests and pathogens, on FWC-managed areas. Non-native species are those species that do not occur naturally in Florida. These species are often introduced because of human activities and are closely monitored by the FWC for potential future impacts. If a non-native species is found to cause or is likely to cause environmental or economic harm to humans, it is classified as an invasive; as such, the Plan uses the term “invasive” where appropriate. On the CCWMA, the FWC will establish a variety of control measures for the management of any non-native plant and animal species found, as further outlined in Section 5.4 of this Management Plan.

4.5.1 Non-native Plant Species

The FWC will continue efforts to control the establishment and spread of FISC Category I and II plants while using the most current control technologies (CCT), which may include mechanical, herbicide, and biological control. Treatments utilizing herbicides will comply with instructions found on the herbicide label and employ Best Management Practices and CCT for their application. More information regarding herbicides used on FWC’s lead managed areas can be found [here](#).

FWC staff strive to either eradicate infestations or achieve maintenance rotation. Maintenance rotation is defined as having a given area/acreage with invasive species infestations reduced to a level where no ecological harm will occur by skipping any treatment for a period of one- to several-years, depending on the species. Maintenance rotation is not necessarily synonymous with eradication, which is usually impractical to achieve.

Maintenance rotation intervals for invasive plants vary greatly by species. Generally, woody species that form canopies will need a thorough initial treatment and a follow-up treatment the next growing season. Thereafter, the maintenance rotation treatment will need to follow seed germination and seedling/sapling regrowth patterns, with subsequent treatments being necessary every two- to 10-years, depending on initial infestation level, seed bank presence, and likely new dispersal into the area from neighboring populations of these species. Woody species that dominate the midstory will need a treatment regimen like those that form canopies, except the subsequent retreatment rotation would be every two- to five-years.

Herbaceous species that can affect the midstory and canopy, including vines, weak lianas, and climbing ferns, need to be detected and treated as early as possible. These need to have an aggressive initial treatment, followed by yearly treatments, until the populations no longer affect the midstory. At this point, a two- to three-year rotation, with treatment as necessary, will keep these infestations in maintenance rotation.

Herbaceous and small woody species that only dominate the groundcover can be particularly challenging. The rotation intervals can vary from treatments once every two- to three-years, to annual treatments, to as many as four treatments in a growing season, depending on the species. For this reason, rotation intervals for these species will be developed in coordination with the

FWC's Invasive Plant Management Section. Infestations requiring multiple treatments in a growing season should also be mapped individually, because their treatment plans may differ from the rest of the invasive plants in any given unit.

The FWC will continue to focus control and maintenance activities on areas identified as having invasive plant occurrences, as well as treating any new occurrences as they are identified through continued monitoring activities. Natural disasters such as tropical cyclones, flooding, wildfire, and drought can both negatively and positively impact maintenance rotation of an area, and affected acreage should be re-surveyed following any of these events to reassess the maintenance state of the area.

The degree of maintenance effort for invasive plant occurrences often varies substantially by species, level of disturbance, environmental conditions, and other land management activities such as timber harvesting, groundcover restoration, etc., and can also be affected by the status of ongoing eradication and control efforts. FWC staff will make special efforts to treat invasive species in coordination with mechanical treatments and prescribed fire, so optimal results are achieved. Treatment strategies for invasive plants will be adjusted over time as conditions change on the CCWMA. Changes may include hydrological restoration, wildfire, and reintroduction of endangered plant/animal species.

Additionally, the FWC will continue efforts to control the introduction of non-native species, as well as pests and pathogens, on the CCWMA by requiring all personnel, both contracted and internal, to follow standard field cleaning and decontamination procedures. The CCWMA will have a designated site, which can be used for decontamination of both equipment and personnel to allow for a proactive approach to controlling new introductions.

FWC area staff will continue to work closely with FWC's Invasive Plant Management Section for guidance and assistance on treatments and management of invasive species on the area.

4.5.2 Non-native Fish and Wildlife Species

The FWC continues to work towards minimizing the adverse impacts of non-native fish and wildlife species in Florida. A non-native species may be considered invasive if it causes or is likely to cause adverse impacts to Florida's ecology, economy, or human health and safety. Minimizing adverse impacts is accomplished through prevention, early detection, rapid response, control and management, and education and outreach. Early detection and rapid response are a critical defense against the establishment of non-native fish and wildlife. The FWC monitors and removes these species, responds to new invasions, and continues to assess the risk of species not yet present in our state. Rule 68-5, F.A.C., Federal Lacey Act, and certain F.S. govern the importation, possession, and use of invasive fish and wildlife. Rule 68-5, F.A.C., identifies Conditional and Prohibited invasive species in Florida. More information on these regulations can be found [here](#) and the rule may be found [here](#). Conditional species (formerly referred to as restricted species) and Prohibited species are dangerous to Florida's native species and habitats and could pose threats to health and welfare of the people of Florida or the economy.

The FWC relies on monitoring efforts and current science, including risk determination, supplemental documentation, and research to identify possible invasive species. To further assist the FWC's effort on non-native fish and wildlife identification and removal, the FWC encourages the public to utilize the FWC's Invasive Species Hotline at 888-Ive-Got1 (483-4681) or report observations of non-native species [here](#). More information on these public reporting options and other components of the Wildlife Impact Management Section's Nonnative Fish and Wildlife Program can be found [here](#).

FWC area staff will continue to work closely with FWC's Wildlife Impact Management Section for guidance and assistance on any non-native fish and wildlife found on the CCWMA. The FWC also relies on public assistance and participation in the control of non-native fish and wildlife species. Executive Order 23-16 authorizes the lethal take and removal of non-native reptiles on 32 FWC-managed lands. Trappers and nuisance wildlife control operators can also apply for an eradication and control permit to assist in the capture of Prohibited species on private and public lands, including wildlife management areas. More information on this permit process can be found [here](#). Due to the growing concern related to the impacts of several invasive species, the FWC and partners take a proactive and coordinated approach towards the removal of these harmful non-native species.

4.6 Public Access and Recreational Opportunities

To facilitate fish and wildlife-focused outdoor recreational opportunities on the area, the FWC will establish and maintain hiking trails and a kiosk.

In addition to recreational opportunities on the CCWMA, the FWC offers a variety of recreation and environmental education programs throughout the state. The FWC has several summer camp locations that provide programming on the theme of conservation-centered recreation. The FWC also hosts events that encourage Florida residents and visitors to get outdoors and enjoy the Wildlife Management Area system. For more information on the numerous recreation opportunities the FWC offers on all areas, visit MyFWC.com/Recreation.

Further planned public access, recreational, and educational opportunities on the area are detailed in Section 5. Ongoing public access and recreational opportunity management challenges are addressed in Section 6.

4.6.1 Americans with Disabilities Act

When public facilities are developed on areas managed by the FWC, every effort is made to comply with the Americans with Disabilities Act (ADA) (Public Law 101-336). As new facilities are developed, the universal access requirements of this law are followed in all cases except where the law allows reasonable exceptions. Recreation facilities in semi-primitive or primitive zones will be planned to be universally accessible to the degree possible, except as allowed by the ADA³ where:

1. Compliance will cause harm to historical resources or significant natural features and their characteristics.

2. Compliance will substantially alter the nature of the setting and, therefore, the purpose of the facility.
3. Compliance would not be feasible due to terrain or prevailing construction practices.
4. Compliance would require construction methods or materials prohibited by federal or state statutes or local regulations.

4.6.2 Public Access Assessments

The FWC has adopted a comprehensive approach to the planning and administration of fish and wildlife-focused public outdoor recreational opportunities for the CCWMA. To accomplish this, the FWC will develop a Public Access Assessment for the CCWMA that will be used to further guide the design and development of appropriate infrastructure and interpretive materials that will support the recreational use of the area by the public. This Public Access Assessment will include information on local area demographics, natural features, and wildlife characteristics of the CCWMA that contribute to high-quality sustainable outdoor recreation experiences, assessment of current infrastructure, volunteer program opportunities, and interpretive themes.

4.6.3 Public Access Carrying Capacity

Baseline carrying capacities for users on the FWC-managed lands are established by conducting a site-specific sensitivity analysis using available data for the site. The intent of the carrying capacity analysis is to minimize wildlife and habitat disturbance and provide the experience of being “immersed in nature” that visitors to the FWC-managed areas desire. Carrying capacities are just a first step; management of recreational use requires a means of monitoring visitor impacts. Responding to these impacts may require adjusting the carrying capacities as necessary. The carrying capacities generated through this process are used as a tool to help plan fish and wildlife-focused public outdoor recreation opportunities. Based on an analysis of the overall approved uses and supported public access user opportunities and the anticipated proportional visitation levels of the various user groups, the FWC has determined that the CCWMA can currently support 40 visitors per day. However, an objective to increase the public access carrying capacity to 51 visitors per day has been proposed in Section 5.5 of this Management Plan. It is important to note that public access carrying capacities are not developed to serve as a goal for expanding the public use of a particular area to match the established carrying capacity. Rather, they are developed to establish maximum thresholds for public use of the respective area to protect the natural and cultural resources and to ensure that visitors will have a high-quality visitor experience while minimizing impacts to environmentally sensitive communities. The public access carrying capacity will be periodically reevaluated, and revisions to the carrying capacity may be contemplated.

4.7 Hydrological Preservation and Restoration

FWC staff will work towards implementing hydrological restoration and improvement activities as recommended by the area’s assessment. Some recommendations may not be feasible during this planning period due to funding and potential adjacent land impacts. However, during this planning period, staff will work to improve and repair existing culverts and low water crossings, as well as install new culverts or low water crossings, as appropriate.

Staff will communicate and collaborate as needed with the SRWMD and the DEP on any ground or surface water quality or quantity monitoring and any needed monitoring protocols. In this capacity, the FWC will primarily rely on the expertise of the SRWMD and the DEP to facilitate these monitoring activities as needed. If necessary, the FWC may independently conduct or contract for water resource monitoring on the CCWMA, as guided by the DEP and the SRWMD.

4.8 Forest Resource Management

A Timber Assessment of the timber resources of the CCWMA was conducted by the Florida Forest Service (FFS) in 2025 (Appendix 11.12). The management of timber resources will be considered in the context of the Timber Assessment and the overall land management goals and activities.

The FWC will manage timber resources for wildlife benefits and natural community restoration. Management activities, including timber thinning and harvesting, may be utilized. The primary management technique for encouraging reforestation is the protection of young trees and seedlings on these sites from damage. However, where natural regeneration is lacking, artificial reforestation may be implemented. Planting trees on these selected sites is used to increase the rate of reforestation and to ensure diversity. Forested wetlands are managed for stands with old-growth characteristics. Snags, when possible, will be protected to benefit cavity-nesting species.

4.9 Cultural Resources

A review of the FMSF indicates that no cultural resources have been recorded on the CCWMA (Section 2.8). However, a cultural resource survey will be conducted on the area. In cooperation with the DHR, the FWC will monitor and report on all recorded sites annually.

The FWC will consult with the DHR to determine the procedures necessary to identify, assess, and preserve any unrecorded or unevaluated cultural resources that may be present within the CCWMA. The FWC will ensure area management staff have the latest DHR Archaeological Resource Management (ARM) training. The FWC will follow the DHR's *Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Properties* found in Appendix 11.13, and, in accordance with Sections 267.061(2)(a,b), F.S., will consult with and allow the DHR a reasonable opportunity to comment prior to any undertaking that may impact historic properties. Furthermore, should any previously unidentified resources be located on the CCWMA, the FWC will prepare and submit all necessary documentation to the FMSF.

4.10 Capital Facilities and Infrastructure

The FWC's land management philosophy is designed to conserve the maximum amount of wildlife habitat while providing the minimal number of capital facilities and infrastructure necessary to effectively conduct operational and resource management activities and provide ample opportunities for fish and wildlife-focused public outdoor recreation. For these reasons, planned capital facilities and infrastructure will focus on improving access, recreational potential, hydrology, or other resource and operational management objectives.

Currently, there are no capital facilities and infrastructure on the CCWMA. As described in Section 4.6.1 of this Management Plan, for any public facilities that are developed on areas managed by the FWC, every effort is made to comply with the ADA Act (Public Law 101-336). Maintenance and improvement activities of current and future capital facilities are further outlined in Section 5.9.

4.11 Land Conservation and Stewardship Partnerships

Land conservation and stewardship partnerships can create a resilient and adaptive landscape and economy that can support future generations of Florida. Thriving landscapes and habitats produce a range of benefits, such as protecting our water and air and providing habitat for fish, wildlife, and plants. In addition, productive landscapes power local and regional economies by supporting sustainable activities, including fishing, farming, ranching, forestry, recreation, and tourism. Maintaining these benefits as Florida is facing ever-increasing significant land and water issues is paramount. Population growth, habitat loss and fragmentation, land use changes, invasive species, water crises, and climate variability can threaten Florida's future. To successfully manage these challenges for the long term, there is a growing need for conservation work to be done at a larger scale and with multiple partners that can pool their resources and incorporate best scientific practices.

4.11.1 Decision Support Tools

Florida Conservation Blueprint

The Florida Conservation Blueprint (Blueprint) is a spatial plan that identifies shared conservation priorities across Florida. The Blueprint was developed by the Peninsular Florida Landscape Conservation Cooperative for the cooperative incorporation of strategies from a suite of partners. The Blueprint supports spatial conservation planning to inform conservation actions and investment. The Blueprint provides planners and managers across organizations the opportunity to align their efforts to protect fish and wildlife habitat, improve quality of life for people, and develop strong economies. The Blueprint can be accessed from the Florida Conservation Planning Atlas. The FWC uses the Blueprint to help guide and prioritize landscape conservation actions and acquisition opportunities (Figure 10).

Other Decision Support Tools

There are additional data and tools that have been developed as decision support tools for identifying and prioritizing areas for conservation action, as well as to guide resource (i.e., time, staff, and funding) allocation. These tools include, but are not limited to, FLAM (Section 4.2.2), Critical Lands and Water Identification Project, the Florida Ecological Greenways Network, FNAI element occurrences database, Simple Map Viewer, Fire Map Viewer, Florida Springs Dashboard, Climate Adaptation Explorer, and the Florida Ecological Report Cards. Tools and supporting data can be found at www.FNAI.org or on the Florida Conservation Planning Atlas.

4.11.2 Conservation Stewardship and Partnership Opportunities

Private Lands Partnerships

The FWC recognizes the interconnected needs of protecting and enhancing private property values and rights, as well as creating new markets and economies that support the conservation

value of private working lands. Private landowners seeking assistance with habitat management will likely find it offered within the FWC Landowner Assistance Program (LAP). The FWC LAP program provides many opportunities for conservation-minded landowners to obtain assistance and advice from FWC staff and programs for improving land conservation practices on their lands. The LAP routinely conducts workshops for interested landowners to interact with FWC staff and learn how they may participate in the program. The FWC employs biologists who are available to provide wildlife-related assistance with land use planning and habitat management. In addition, the LAP works with landowners to enroll in NRCS conservation cost-share programs to assist with the implementation of fish and wildlife-friendly land management practices. There are many forms of assistance that include technical, financial, and educational, as well as various forms of recognition that seek to award landowners who manage their wildlife habitat responsibly. At the time of the plan development, no specific land stewardship workshops had been conducted for landowners adjacent to the CCWMA. The FWC will continue to evaluate the level of interest and efficacy of providing technical assistance to adjacent private landowners to enhance the conservation management of their lands. More information on the FWC's LAP program and online habitat management tools is available [online](#).

Landscape Conservation Partnerships

The FWC will continue to work with partners including government entities, private organizations, and academic institutions on collaborative landscape conservation efforts and acquisition opportunities. Potential partners for the CCWMA and surrounding areas include SRWMD, FDACS-FFS, USFWS, Columbia County, DEP, Alachua Conservation Trust, North Florida Land Trust, and other organizations and potential grant program opportunities. The FWC will continue to commit staff time and other resources to regularly providing information to partners regarding landscape conservation science, opportunities, and progress.

4.11.3 Land Acquisition

Using identified tools outlined previously, the FWC works to identify lands within or adjacent to FWC-managed areas that are important for the conservation of fish and wildlife, serve as a link or corridor to other publicly owned property, enhance the protection or management of the property, create a more manageable boundary configuration, or have a high resource value that would otherwise be unprotected. Preservation of these lands can be accomplished through fee-simple or less-than-fee acquisition. The FWC works to pursue these opportunities through the FWC Additions and Inholdings Acquisition program, supporting Board of Trustees acquisition and addition of lands within the Florida Forever program and continued partnership with other agencies and private organizations on the acquisition of identified lands.

Less-Than-Fee Acquisition

Less-than-fee acquisitions, also known as conservation easements, are voluntary agreements between a landowner and a government agency or a conservation organization that have acquired certain rights to a landowner's property for long-term conservation of the land, while the landowner still retains ownership of their property. The agreement is designed for landowners to continue to manage their land to maintain a working landscape in a manner that also enhances the conservation benefits provided by their land. These voluntary agreements to conserve land

support the goals of landscape conservation. Less-than-fee acquisition is not only a means of conserving land but is also a cost-effective means for governmental and non-governmental organizations to protect land, while also providing economic and tax benefits to the landowner and local economy.

Fee-Simple Acquisition

Fee-simple acquisition is the process of acquiring complete ownership of the land. Fee-simple acquisition can be accomplished through the Florida Forever program or through grant programs and acquisition partnerships. The Florida Forever program is a land acquisition program with the purpose of conserving natural and cultural resources throughout the State. The DEP, as staff to the Board of Trustees, oversees the program. The Florida Forever program replaced the Preservation 2000 program, and since these programs' inception, nearly three million acres have been conserved throughout the State.

FWC's Additions and Inholdings Acquisition Program

Per 18-2.021, F.A.C., the FWC identifies parcels located directly in or adjacent to the subject area, which can be recommended for acquisition through the FWC Additions and Inholdings Acquisition program. Properties totaling approximately 4,609 acres have been identified for recommended acquisition under the auspices of the FWC's Additions and Inholdings Acquisition program for the CCWMA (Figure 11). Consistent with Florida Forever program criteria, parcels on the list have been ranked High, Medium, or Low priority based on a score generated by a GIS-based resource evaluation model, along with technical input from FWC staff. The order of acquisition priority may be changed as necessary based on factors including available funding necessary to complete a particular acquisition project, changing development pressures, landowner willingness, funding partnerships, unique acquisition opportunities like bargain sales (less than 80% of appraised value), and donations.

The FWC Additions and Inholdings Acquisition List is updated through time, thus staying up to date for land ownerships, County parcel records, land conservation opportunities, and evolving management challenges. The FWC frequently analyzes, evaluates, and prioritizes its recommended conservation actions in a systematic, comprehensive, and consistent manner over time. Currently, the FWC often recommends fee-simple acquisition of the lands on the FWC Additions and Inholdings Acquisition List for the CCWMA to optimize the conservation of fish and wildlife, public access and use, and overall resource and operational management of the area. However, as mentioned previously, the FWC may also pursue less-than-fee acquisition with adjacent landowners; though it should be noted that landowner preference is often the key element in determining whether to pursue a fee-simple or less-than-fee acquisition.

Parcels on the FWC Additions and Inholdings Acquisition List will be acquired if possible, according to their priority ranking for acquisition, as funding availability allows, and based on the landowner's willingness to sell their lands. Participation in any FWC acquisition is entirely voluntary and at the sole discretion of willing landowners. The FWC also continues to assist and support the DEP/Board of Trustees in the acquisition of the remaining lands within the nearby

Florida Forever projects, as essential to the long-term conservation of wildlife and other elements important to the ecosystem functions.

Alternative Options

Along with the several land acquisition options described previously, alternative land protection methods are also available. The state accepts donations of land, life estate, and first-right-of-refusal. Life estate is an alternative that allows a landowner to reside on their property during their lifetime; however, ensures state ownership after passing. Additionally, there is also the option that a landowner could offer the state a first-right-of-refusal. After a first offer is denied by a landowner, the first-right-of-refusal option provides the state with a chance to purchase the land in the future. The state offers several alternative possibilities to obtaining the rights and/or ownership to land for conservation purposes, which furthers conversation-based goals and objectives for Florida's future.

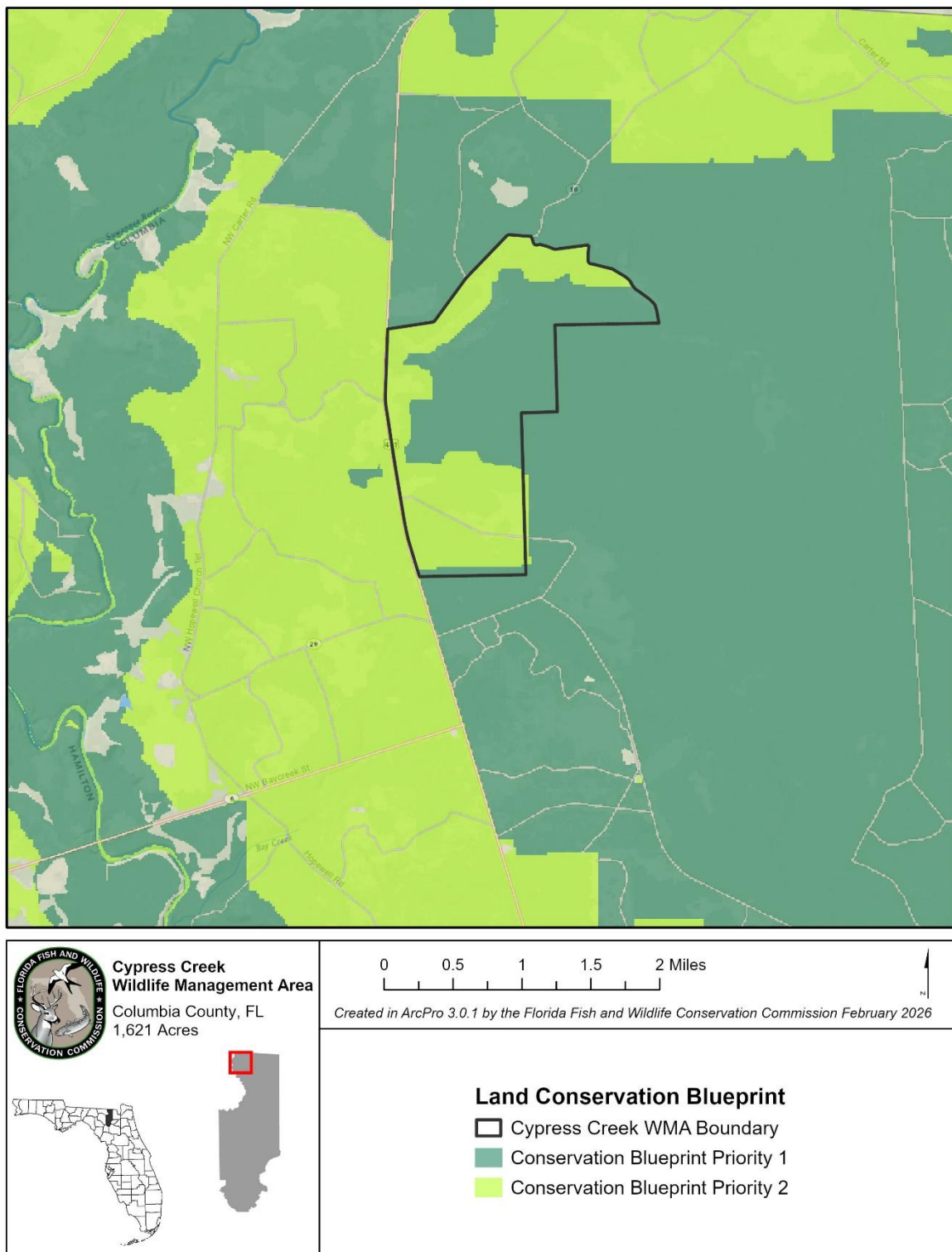


Figure 10. Landscape Conservation Blueprint

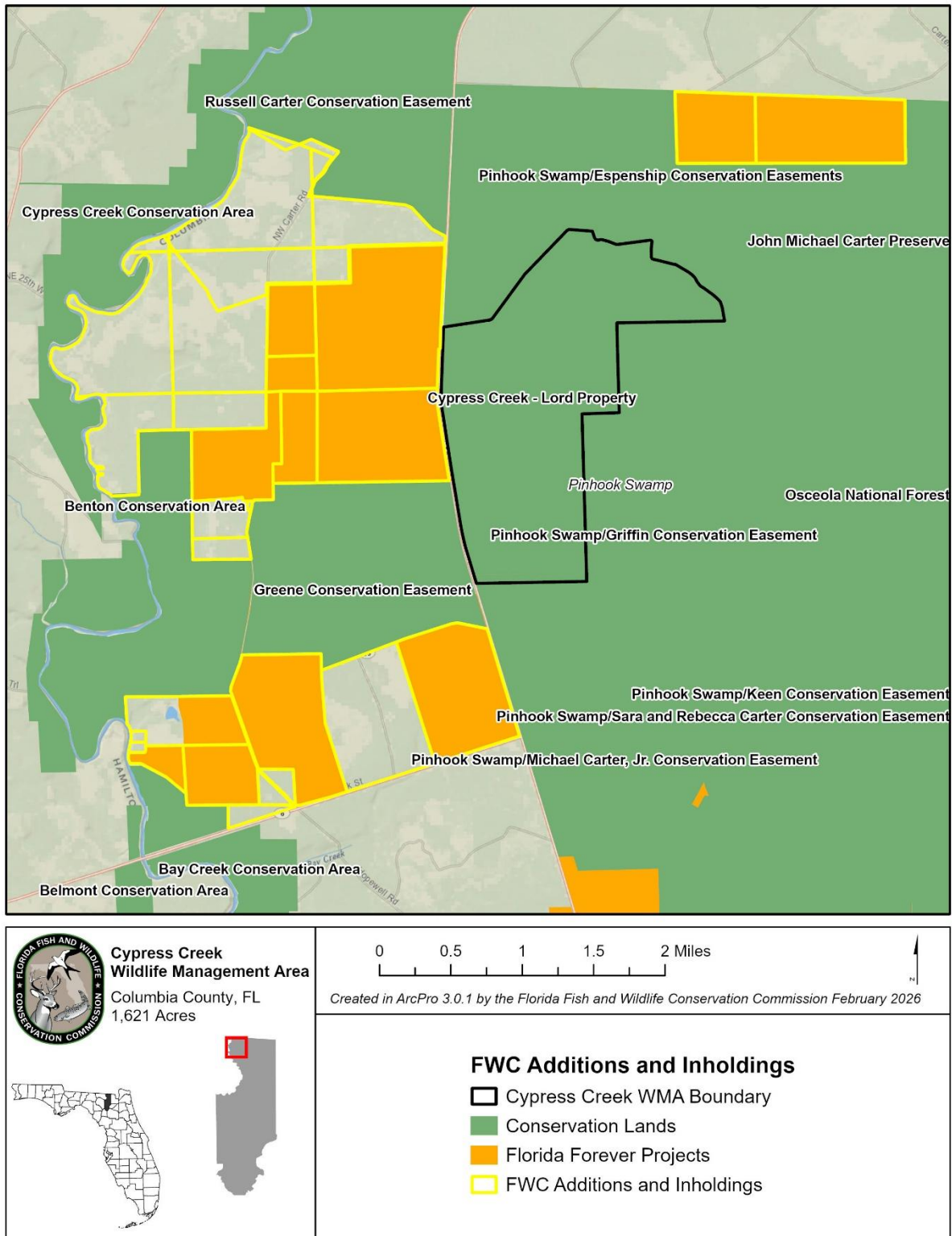


Figure 11. FWC Additions and Inholdings

4.12 Research Opportunities

The FWC intends to cooperate with researchers, universities, and others as feasible and appropriate. For the CCWMA, the FWC will continue to assess and identify research and environmental education partnership opportunities as appropriate. All research activities must have prior approval from the FWC.

4.13 Cooperative Management and Special Uses

4.13.1 Cooperative Management

The FWC is responsible for the overall management and operation of the CCWMA as set forth in the lease agreements with the Board of Trustees. In keeping with the lease agreements and conducting its management operations in the most effective and efficient manner, the FWC cooperates with other agencies to achieve management goals and objectives described in this Management Plan. These include cooperating with the DHR to ensure the requirements of the *Management Procedures Guidelines - Management of Archaeological and Historical Resources* document (Appendix 11.13) are followed regarding any ground-disturbing activities. In addition, the FFS assists the FWC by providing technical assistance on forest resource management. Also, the FWC cooperates and consults with the SRWMD and DEP for the monitoring and management of both ground and surface water resources and the overall management of the CCWMA.

4.13.2 First Responder and Military Training

First-responder and military training are conditionally allowed on the CCWMA. Such activities are considered allowable uses only when undertaken intermittently for short periods of time and in a manner that does not impede the management and public use of the CCWMA and cause no measurable long-term impact to the natural resources of the area. Additionally, FWC staff must be notified and approve of the training through the issuance of a permit prior to any such training taking place on the CCWMA.

4.13.3 Apiaries

Currently, there are no apiaries operating on the CCWMA. However, use of apiaries is conditionally approved for the CCWMA, is deemed to be consistent with purposes for acquisition, follows the Conceptual State Lands Management Plan, and is consistent with the FWC agency mission, goals, and objectives. Location, management, and administration of apiaries on the CCWMA will be guided by the FWC Division of Habitat and Species Conservation's Apiary Policy (Appendix 11.14).

4.14 Soil Conservation

Soil disturbing activities will be confined to areas that have the least likelihood of experiencing erosion challenges. On areas that have been disturbed prior to acquisition, an assessment will be made to determine if soil erosion is occurring, and if so, appropriate measures will be implemented to stop or control the effects of this erosion.

5 Resource Management Goals and Objectives

The management goals and objectives described in this section are broad, enduring statements designed to guide the general direction of management actions aimed at achieving an overall desired future outcome for the CCWMA. The objectives listed within each management goal offer more specific management guidance and measures and are considered the necessary steps to be completed to accomplish the management goals. The objectives are classified as having either short-term (less than two years) or long-term (up to 10 years) timelines for completion.

5.1 Habitat Restoration and Improvement

Goal: Improve extant habitat and restore disturbed areas.

Long-term

1. Contract for recertification of current natural community mapping.
2. Depending on FNAI community mapping, utilize OBVM monitoring to evaluate actively managed natural communities and adjust management efforts to meet desired future conditions.
3. Implement the Prescribed Burn Plan.
4. Conduct habitat/natural community improvement including chemical and mechanical treatments, prescribed burning, and timber thinning, as necessary.

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

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

Long-term

1. Develop and implement a WCPR Strategy.
2. Collect and record opportunistic wildlife species occurrence data.
3. Contract for a rare plant survey.

5.3 Other Wildlife (Game and Non-game) Habitat Maintenance, Enhancement, Restoration, and Population Restoration.

Goal: Monitor, maintain, improve, or restore game and non-game species populations and habitats.

Long-term

1. Monitor locally important wildlife species, as identified in the WCPR Strategy when developed.
2. Collect and record opportunistic wildlife species occurrence data.
3. Maintain wildlife openings.
4. Conduct taxa inventory surveys to produce a current species list, as feasible.

5.4 Non-native Species Maintenance and Control

Goal: Remove non-native plants and animals and conduct needed maintenance and/or control.

Long-term

1. Monitor the CCWMA for FISC Category I and Category II invasive plant species and treat as needed.
2. Ensure that staff are familiar with the identification, reporting procedures, and control measures of high-priority, non-native plant and wildlife species.
3. Evaluate permit applications for research opportunities for non-native fish and wildlife species, as needed.

5.5 Public Access and Recreational Opportunities

Goal: Provide public access and recreational opportunities.

Long-term

1. Develop a Public Access Assessment.
2. Design/develop at least 0.5 miles of marked trails.
3. Monitor trails and infrastructure for visitor impacts.
4. Develop additional public access and recreational opportunities in accordance with the applicable public access and land use rules and laws, resulting in a recreational carrying capacity of 51 visitors per day.
5. Provide at least one interpretive or educational program for conservation.
6. Develop a trail guide, webpage, eBird list, iNaturalist project, and welcome signage.
7. Assess ADA accessibility for recreation and conservation education programming.
8. Work with the Florida Department of Transportation to install directional signage along adjacent paved roads.
9. Evaluate additional trail mileage as restoration and management progress and construct if feasible.

5.6 Hydrological Preservation and Restoration

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

Long-term

1. Gather data on existing hydraulic/hydrological infrastructure for future hydrological restoration efforts.
2. Conduct or obtain a site hydraulic/hydrological assessment to identify potential hydrological restoration needs, if feasible and deemed necessary.
3. Implement a hydrological restoration plan as appropriate, including installing/replacing low-water crossings, bridges, and culverts.
4. Maintain/replace existing hydrologic infrastructure, as needed.

5. If necessary, cooperate with the SRWMD and the DEP for the monitoring of surface and ground water quality and quantity.

5.7 Forest Resource Management

Goal: Manage timber resources to improve or restore natural communities for the benefit of wildlife.

Long-term

1. Prepare and implement a Timber Management Plan including reforestation, harvesting, and prescribed burning activities, based on restoration and maintenance needs of the natural communities and other goals established for management of the CCWMA.
2. Consult with the FFS or a professional forestry consultant regarding forest management activities as appropriate.

5.8 Cultural Resources

Goal: Protect, preserve, and maintain cultural resources.

Short-term

1. Coordinate with the DHR to determine the need for a historical resource survey.

Long-term

1. Conduct a historical resource survey if needed.
2. Consult with the DHR when designing site plans for development of infrastructure.
3. Follow the DHR's *Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Properties* for the management of cultural and historic resources.
4. Monitor, protect, preserve, and report any changes if any sites are identified on the CCWMA.
5. Ensure any newly identified sites are reported to the DHR for inclusion in the FMSF.
6. Coordinate with the DHR to ensure that staff have received updated Archaeological Resource Management training.

5.9 Capital Facilities and Infrastructure

Goal: Develop the capital facilities and infrastructure necessary to meet the goals and objectives of this Management Plan.

Long-term

1. Install a posting kiosk.
2. Install entrance signs.
3. Monitor and maintain public access infrastructure, as required.
4. Maintain three miles of roads.
5. If feasible, construct and maintain four facilities: three parking areas and one equipment yard.
6. Evaluate the need for an entrance package (kiosk and paved parking spot) and construct if warranted.

5.10 Land Conservation and Stewardship Partnerships

Goal: Enhance fish and wildlife conservation, resource, and operational management through internal and external partnerships and programs.

Long-term

1. Identify and evaluate potential important wildlife habitat, landscape-scale linkages, wildlife corridors, and operational management needs for the CCWMA.
2. Contact and inform adjoining private landowners about the FWC LAP and coordinate with public entities to pursue conservation stewardship partnerships.
3. Staff will create and maintain relationships with adjoining private landowners for nomination for the LAP Wildlife Habitat Recognition Program.
4. Continue to evaluate and identify FWC inholdings and additions priority parcels for potential conservation acquisition and pursue acquisitions as funding allows.
5. Continue to maintain a GIS shapefile and other necessary data to facilitate nominations for the FWC landowner assistance and conservation acquisition programs.
6. Continue to identify potential non-governmental land stewardship organization partnerships and grant program opportunities.
7. Evaluate and determine if any portions of the CCWMA are no longer needed for conservation purposes and therefore may be designated as surplus lands.

5.11 Cooperative Management, Special Uses, and Research Opportunities

Goal: Provide access and use of the CCWMA to current cooperative managers and continue collaborative management and research efforts.

Long-term

1. Assess the need for and cooperate with researchers, universities, and others on research and environmental education partnership opportunities.
2. Collaborate with non-governmental organizations, community groups, stakeholders, and other private entities to advance common goals.
3. Evaluate permit applications for research opportunities for fish and wildlife species, as needed.

6 Resource Management Challenges and Strategies

The following section identifies and describes further management needs and challenges associated with the CCWMA and provides solution strategies that will address these challenges. These specific challenges may not be fully addressed in the broader goals and objectives section above and are thereby provided here.

Challenge 1: Meeting FWC law enforcement and management staff standards and needs can be challenging.

Strategy: Agency staff levels will continue to be evaluated to determine if increased staffing or other alternatives can improve management needs.

Strategy: Explore potential volunteer resources for assisting with management.

Challenge 2: The CCWMA's proximity to US Highway 441 presents smoke management challenges during prescribed burning.

Strategy: Use available tools and resources to minimize smoke impact and increase outreach for areas of potential impact.

Strategy: Coordinate with the Division of Law Enforcement, Florida Highway Patrol, Florida Department of Transportation, FFS, and the Columbia County Sheriffs' Offices and Fire Departments.

Challenge 3: The CCWMA is not a well-known public outdoor recreation destination.

Strategy: Work with the Columbia County tourism board to promote the CCWMA and cross-promote the CCWMA with other regional public conservation lands.

Strategy: Engage the local community in designing and delivering conservation education programs and recreational opportunities.

Strategy: Evaluate the impact that increased visitation and recreational use would have on wildlife and natural resources and adapt management activities, as necessary.

7 Cost Estimates and Funding Sources

The following represents the actual and unmet budgetary needs for managing the lands and resources of the CCWMA. This cost estimate was developed using data developed by the FWC and other cooperating entities and is based on actual costs for land management activities, equipment purchase and maintenance, and development of fixed capital facilities. Funds needed to protect and manage the property and to fully implement the recommended program are derived primarily from the Land Acquisition Trust Fund and from State Legislative appropriations. However, private conservation organizations may be cooperators with the agency for funding of specific projects. Alternative funding sources, such as monies available through grants and potential project-specific mitigation, may be sought to supplement existing funding as needed.

The following cost estimate, although exceeding what the FWC typically receives through the appropriations process, is estimated to be what is necessary for optimal management and is consistent with the current and planned resource management and operation of the CCWMA. Cost estimate categories are those currently recognized by the FWC and the Land Management Uniform Accounting Council (Appendix 11.15). More information on these categories, as well as the Fiscal Year 2026/2027 operational plan showing detailed cost estimates by activity and categories of expenditures, may be found in Appendix 11.16.

CCWMA Management Plan Cost Estimate*Maximum expected one-year
expenditure*

<u>Resource Management</u>	<u>Expenditure</u>
Prescribed Burning	\$39,570
Invasive Species Control	\$581
Cultural Resource Management	\$7,711
Timber Management	\$1,993
Hydrological Management	\$0
Vegetation Monitoring/Management	\$20,439
Wildlife Monitoring/Management	\$10,118
Subtotal	\$80,412
<u>Administration</u>	
General Administration	\$2,800
<u>Support</u>	
Land Management Planning	\$7,484
Management Reviews	\$994
Training/Staff Development	\$523
Vehicle Purchase	\$17,839
Vehicle Operation and Maintenance	\$6,818
Other (Technical Reports, Data Management, etc.)	\$4,183
Internal Program Review	\$0
Technology and Data Management	\$3,224
Subtotal	\$41,065
<u>Capital Improvements</u>	
New Facility Construction	\$18,461
Facility Maintenance	\$30,895
Subtotal	\$49,356
<u>Visitor Services/Recreation</u>	
Info./Education/Operations	\$6,420
<u>Law Enforcement</u>	
Resource protection	\$1,310
Total	\$181,363

* Based on the characteristics and requirements of this area, 1 FTE position would be optimal to fully manage this area. All land management funding is dependent upon annual legislative appropriations.

CCWMA Management Plan
Cost Estimate

			<i>10-year projection</i>
<u>Resource Management</u>	<u>Expenditure</u>	<u>Priority</u>	<u>Priority schedule:</u>
Prescribed Burning	\$447,411	(1)	(1) Immediate (annual)
Invasive Species Control	\$6,565	(1)	
Cultural Resource Management	\$87,186	(1)	(2) Other (5+ years)
Timber Management	\$22,535	(1)	
Hydrological Management	\$0	(1)	
Vegetation Monitoring/Management	\$231,101	(1)	
Wildlife Monitoring/Management	\$114,405	(1)	
Subtotal	\$909,203		
<u>Administration</u>			
General Administration	\$31,654	(1)	
<u>Support</u>			
Land Management Planning	\$84,616	(1)	
Management Reviews	\$11,234	(2)	
Training/Staff Development	\$5,912	(1)	
Vehicle Purchase	\$201,705	(2)	
Vehicle Operation and Maintenance	\$77,089	(1)	
Other (Technical Reports, Data Management, etc.)	\$47,299	(1)	
Internal Program Review	\$0	(1)	
Technology and Data Management	\$36,457	(1)	
Subtotal	\$464,311		
<u>Capital Improvements</u>			
New Facility Construction	\$208,737	(2)	
Facility Maintenance	\$349,320	(1)	
Subtotal	\$558,057		
<u>Visitor Services/Recreation</u>			
Info./Education/Operations	\$72,591	(1)	
<u>Law Enforcement</u>			
Resource protection	\$14,811	(1)	
Total	\$2,050,628	*	

* Based on the characteristics and requirements of this area, 1 FTE position would be optimal to fully manage this area. All land management funding is dependent upon annual legislative appropriations.

8 Analysis of Potential for Contracting Private Vendors for Restoration and Management Activities

The following management and restoration activities have been considered for outsourcing to private entities. It has been determined that items selected as “approved” are those that the FWC either does not have in-house expertise to accomplish or which can be done at less cost by an outside provider of services. Those items selected as “conditional” items are those that could be done either by an outside provider or by the agency at virtually the same cost or with the same level of competence. Items selected as “rejected” represent those for which the FWC has in-house expertise and/or which the agency has found it can accomplish at less expense than through contracting with outside sources:

	Approved	Conditional	Rejected
Dike and levee maintenance		✓	
Invasive species control		✓	
Mechanical vegetation treatment		✓	
Public contact and educational facilities development		✓	
Prescribed burning		✓	
Timber harvest activities	✓		
Vegetation inventories		✓	

9 Compliance with Federal, State, and Local Governmental Requirements

The operational functions of FWC personnel are governed by the agency's Internal Management Policies and Procedures (IMPP) Manual. The IMPP Manual provides internal guidance regarding many subjects affecting the responsibilities of agency personnel including personnel management, safety issues, uniforms and personal appearance, training, as well as accounting, purchasing, and budgetary procedures.

When public facilities are developed on areas managed by the FWC, every effort is made to comply with Public Law 101 - 336, the ADA 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 access accommodation is structurally impractical or where providing such access would change the fundamental character of the facility being provided).

Uses planned for the CCWMA are in compliance with the Conceptual State Lands Management Plan and its requirement for “balanced public utilization,” and are in compliance with the mission of the FWC. Such uses also comply with the authorities of the FWC as derived from Article IV, Section 9 of the Florida Constitution as well as the guidance and directives of Chapters 253, 259, 327, 370, 373, 375, 378, 379, 403, 487, 597, and 870, F.S.

The FWC has developed and utilizes an Arthropod Control Plan for the CCWMA in compliance with Chapter 388.4111, F.S. (Appendix 11.17). This plan was developed in cooperation with the

Florida Fish and Wildlife Conservation Commission | CCWMA Management Plan

local Columbia County arthropod control agency. This plan is also in conformance with the Local Government Comprehensive Plan as approved and adopted for Columbia County, Florida (Appendix 11.18).

10 Endnotes

1. Florida Geological Survey, Florida Department of Environmental Protection. Available [online](#). Accessed [2026].
2. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Official Soil Series Descriptions. Available online. Accessed [2019].
3. Architectural and Transportation Barriers Compliance Board on Final Accessibility Guidelines for Outdoor Developed Areas, Final Report (2013).

11 Appendices

11.1 Management Plan Terms

Management Plan Goals and Objectives

Terms and Definitions

Assessment: Assessment—when a historic resource professional determines the possible effects—positive or negative—that an action or inaction may have on a historical resource (e.g., site, building, object or structures) by analyzing its current condition and documenting any modifications and changes to its original state as well as identifying any potential human or natural threats to its existence.

Capital Improvement: Capital improvement" or "capital project expenditure" means those activities relating to the acquisition, restoration, public access, and recreational uses of such lands, water areas, and related resources deemed necessary to accomplish the purposes of this chapter. Eligible activities include, but are not limited to: the initial removal of invasive plants; the construction, improvement, enlargement or extension of facilities' signs, firelanes, access roads, and trails; or any other activities that serve to restore, conserve, protect, or provide public access, recreational opportunities, or necessary services for land or water areas. Such activities shall be identified prior to the acquisition of a parcel or the approval of a project. The continued expenditures necessary for a capital improvement approved under this subsection shall not be eligible for funding provided in this chapter.

Desired future condition: Desired Future Condition is a description of the land or resource conditions that are believed necessary if management goals and objectives are fully achieved. Desired Future Condition varies by specific habitat and ecosystem. It can also vary, based upon a specific agency's management goals.

Evaluation: Review by a professional in archaeology, history or architecture as to the integrity and significance of the site, building or structure. The criteria of the National Register of Historic Places will be applied.

Facility: all developed structures and improvements provided for a specific purpose or contained within a clearly defined area.

Fire management plan: An element of the land management plan or an independent document that outlines the goals and objectives of a fire management program (prescribed and wildfire) for a predetermined period of time.

Historic: An object, site or structure that is 50 years or older.

Hydrological assessment: A documented, systematic evaluation by a qualified professional of the existing and historical quantity, quality, movement and function of water resources (e.g., computer modeling).

Imperiled species: A species or subspecies that is listed by the U.S. Fish and Wildlife Service as Endangered or Threatened; Florida Fish and Wildlife Conservation Commission (FWC) as Endangered, Threatened, or Special Concern; Florida Department of Agriculture and Consumer Services (FDACS) as Endangered or Threatened; or is tracked by Florida Natural Areas Inventory (FNAI) as globally or state Critically Imperiled or Imperiled. Imperiled Species does NOT refer to species that are on the FDACS list of commercially exploited plants that are not Endangered or Threatened

Improve: the enhancement or expansion of facilities, roads and trails.

Maintenance: the daily or regular work of keeping facilities, roads and trails in proper condition.

Monitoring: Periodic examination of the site, building or structure to determine the current condition and threats such as erosion, structural deterioration, vegetation intrusion, poaching or vandalism. An updated Florida Master Site File form is used to complete this assessment.

Natural community/habitat/ecological improvement: Similar to restoration but on a smaller less intense scale. Typically includes small scale vegetation management activities, spot treatments of exotic plants, or minor habitat manipulations. Any habitat alteration that increases the diversity of a habitat or increases the population of a particular species.

Natural community/habitat/ecological restoration: The process of assisting the recovery and natural functioning of degraded natural communities to desired future condition, including the re-establishment of biodiversity, ecological processes, vegetation structure, and physical characters. Activities may include vegetative treatments (e.g., hardwood removal, mechanical treatment, pine tree thinning, etc.), groundcover establishment, non-commercial tree plantings, erosion control, hydrological manipulation (filling ditches), and beach management.

Not in maintenance condition: Species composition and/or structure is outside the targeted range. The natural community is in need of more frequent or recurring management treatments that are beyond maintenance activities. Examples include natural communities with exotic plant or animal infestations that are at levels requiring significant treatment, natural communities that have exceeded maximum targeted fire return intervals, and natural communities in need of restoration treatments.

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

Population survey: Using broadly accepted methodologies to detect changes in population trends over time.

Public access: access by the general public to state lands and water, including vessel access made possible by boat ramps, docks, and associated support facilities, where compatible with conservation and recreation objectives.

Recorded: A Florida Master Site File form has been completed and filed with the Florida Department of State, Division of Historical Resources.

Recreational/visitor opportunity: measure of potential number of users based on existing resource conditions and developed facilities.

Repair (major): the restoration of facilities, road and trails to proper condition after damage or failure.

Restoration underway: restoration planning/design, executing, evaluating and reporting.

Restored/Maintenance condition: (refers to natural community) - within the range of target species composition and structure such that no significant, non-recurring alterations to structure or species composition are needed for ecological restoration. Invasive exotic plants or animals are absent or at levels requiring minimal recurring treatments, and prescribed fire rotations are within target intervals. Refers to Natural Communities. Includes NCs that meet DFC, and NCs that have received restoration action (such as thinning, clear-cut and native species planting) and only require time and recurring maintenance actions such as prescribed fire, maintenance level exotics control, or sustainable forestry practices if applicable.

Road: a paved or unpaved motor vehicle route unless identified and managed as a trail.

Significant: Listed in or determined eligible for listing in the National Register of Historic Places as an individual property, element of a multiple listing or in an historic district. Cultural resource professionals are able to make the determination, but final determination rests with the Director of the Division of Historical Resources.

Sustainable forestry: The stewardship and harvest of forest products in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality, and potential to fulfill, now and in the future, relevant ecological, economic, and social functions at local, national and global levels, and that does not cause damage to other ecosystems.

Systematic survey: A sampling protocol designed to assess the occurrence or population status of a species or a suite of species (e.g., presence/absence, mark and recapture, transect survey, etc.).

Trail: a linear route or path which has been specifically prepared or designed for one or more recreational functions such as hiking, biking, horseback riding or multiple use. In many cases, unimproved service roads are also designated as trails.

Treatment: A mechanical, chemical, biological or manual action that changes the structure or composition of an area in order to facilitate restoration or improvement.

Visitor carrying capacity: An estimate of the number of users a recreation resource or facility can accommodate and still provide a high-quality recreational experience and preserve the natural values of the site.

Wildlife activities: wildlife-associated recreation such as birdwatching, fishing, hunting, etc.

11.2 Lease Agreement 4899

This Instrument was prepared by:
Mandi Siegfried
Bureau of Public Land Administration
Division of State Lands
Department of Environmental Protection, MS 130
3800 Commonwealth Boulevard,
Tallahassee, Florida 32399-3000
Action No. 51184

SAL2
[+/- 1,620.46 acres]

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

LEASE AGREEMENT

Lease Number 4899

This lease is made and entered into this 4th day of November, 2025, between the **BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA**, hereinafter referred to as "LESSOR", and the **FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION**, hereinafter referred to as "LESSEE".

WITNESSETH:

WHEREAS, the **BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA** holds title to certain lands and property being utilized by the State of Florida for public purposes, and

WHEREAS, the **BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA** is authorized in Section 253.03, Florida Statutes, to enter into leases for the use, benefit and possession of public lands by state agencies that may properly use and possess them for the benefit of the people of the State of Florida.

NOW, THEREFORE, for and in consideration of the mutual covenants and agreements hereinafter contained, LESSOR leases the below described premises to LESSEE subject to the following terms and conditions:

1. **DELEGATIONS OF AUTHORITY**: LESSOR'S responsibilities and obligations herein shall be exercised by the Division of State Lands, State of Florida Department of Environmental Protection.
2. **DESCRIPTION OF PREMISES**: The property subject to this lease is situated in the County of **Columbia**, State of Florida and is more particularly described in Exhibit "A" attached hereto and hereinafter called the "leased premises".

3. **TERM:** The term of this lease shall be for a period of **50** years commencing on **November 4, 2025** and ending on **November 3, 2075**, unless sooner terminated pursuant to the provisions of this lease.
4. **PURPOSE:** LESSEE shall manage the leased premises only for the conservation and protection of natural and historical resources and resource based public outdoor recreation which is compatible with the conservation and protection of these public lands, as set forth in subsection 259.032(7), Florida Statutes, along with other related uses necessary for the accomplishment of this purpose as designated in the Management Plan required by paragraph 7 of this lease.
5. **QUIET ENJOYMENT AND RIGHT OF USE:** LESSEE shall have the right of ingress and egress to, from and upon the leased premises for all purposes necessary to the full quiet enjoyment by said LESSEE of the rights conveyed herein.
6. **UNAUTHORIZED USE:** LESSEE shall, through its agents and employees, prevent the unauthorized use of the leased premises or any use thereof not in conformance with this lease.
7. **MANAGEMENT PLAN:** LESSEE shall prepare and submit a Management Plan for the leased premises in accordance with Section 253.034, Florida Statutes, within twelve months of the effective date of this lease. The Management Plan shall be submitted for approval to the State of Florida Department of Environmental Protection, Division of State Lands, Office of Environmental Services, Mail Station 140, 3800 Commonwealth Boulevard, Tallahassee, Florida 32399-3000. The leased premises shall not be developed or physically altered in any way other than what is necessary for security and maintenance of the leased premises without the prior written approval of LESSOR until the Management Plan is approved. The Management Plan shall emphasize the original management concept as approved by LESSOR at the time of acquisition, which established the primary public purpose for which the leased premises were acquired. The approved Management Plan shall provide the basic guidance for all management activities and shall be reviewed jointly by LESSEE and LESSOR. LESSEE shall not use or alter the leased premises except as provided for in the approved Management Plan without the prior written approval of LESSOR. The Management Plan prepared under this lease shall identify management strategies for exotic species, if present. The introduction of exotic species is prohibited, except when specifically authorized by the approved Management Plan.
8. **RIGHT OF INSPECTION:** LESSOR or its duly authorized agents shall have the right at any and all times to inspect the leased premises and the works and operations thereon of LESSEE, in any matter pertaining to this lease.
9. **INSURANCE REQUIREMENTS:** LESSEE shall procure and maintain fire and extended risk insurance coverage, in accordance with Chapter 284, F.S., for any buildings and improvements located on the leased premises by preparing and delivering to the Division of Risk Management, State of Florida Department of Financial Services, a completed Florida Fire

Insurance Trust Fund Coverage Request Form and a copy of this lease immediately upon erection of any structures as allowed by paragraph 4 of this lease. A copy of said form and immediate notification in writing of any erection or removal of structures or other improvements on the leased premises and any changes affecting the value of the improvements shall be submitted to the following: Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, Mail Station 130, 3800 Commonwealth Boulevard, Tallahassee, Florida 32399-3000.

10. LIABILITY: LESSEE shall assist in the investigation of injury or damage claims either for or against LESSOR or the State of Florida pertaining to LESSEE'S respective areas of responsibility under this lease or arising out of LESSEE'S respective management programs or activities and shall contact LESSOR regarding the legal action deemed appropriate to remedy such damage or claims. LESSEE is responsible for all personal injury and property damage attributable to the negligent acts or omissions of LESSEE, and its officers, employees, and agents. Nothing herein shall be construed as an indemnity or a waiver of sovereign immunity enjoyed by any party hereto, as provided in Section 768.28, Florida Statutes, as amended from time to time, or any other law providing limitations on claims.

11. ARCHAEOLOGICAL AND HISTORIC SITES: Execution of this lease in no way affects any of the parties' obligations pursuant to Chapter 267, Florida Statutes. The collection of artifacts or the disturbance of archaeological and historic sites on state-owned lands is prohibited unless prior authorization has been obtained from the State of Florida Department of State, Division of Historical Resources. The Management Plan prepared pursuant to Section 253.034, Florida Statutes, shall be reviewed by the Division of Historical Resources to ensure that adequate measures have been planned to locate, identify, protect and preserve the archaeological and historic sites and properties on the leased premises.

12. EASEMENTS: All easements of any nature including, but not limited to, utility easements are required to be granted by LESSOR. LESSEE is not authorized to grant any easements of any nature and any easement granted by LESSEE shall be void and without legal effect.

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

14. POST CLOSING RESPONSIBILITIES: In an effort to define responsibilities of LESSOR and LESSEE with regard to resolving post-closing management issues, the parties agree to the following:

- a. After consultation with LESSEE, LESSOR agrees to provide the LESSEE with the title, survey and environmental products procured by LESSOR, prior to closing.

- b. LESSOR will initiate surveying services to locate and mark boundary lines of specific parcels when necessary for immediate agency management and will provide a boundary survey of the entire acquisition project at the conclusion of all acquisitions within the project boundary. Provided, however, LESSEE may request individual parcel boundary surveys, if necessary, prior to the conclusion of acquisition activities within the project boundaries.
 - c. Unless otherwise agreed to by LESSEE, LESSOR shall at its sole cost and expense, make a diligent effort to resolve all issues pertaining to all title defects, survey matters or environmental contamination associated with the leased premises, including but not limited to trash and debris, which were either known or should have been reasonably known by LESSOR at the time LESSOR acquired the leased premises. Notwithstanding the foregoing, LESSOR will not be responsible for any of LESSEE'S attorney's fees, costs, or liability or damages incurred by LESSEE in resolving any issue in which LESSEE is named as a party in any litigation or other legal or administrative proceeding.
 - d. With regard to all title defects, survey matters, or environmental contamination associated with the leased premises which were not known or could not have been reasonably known by LESSOR at the time LESSOR acquired the leased premises, LESSOR and LESSEE agree to cooperate in developing an appropriate strategy for jointly resolving these matters. LESSOR acknowledges and understands that LESSEE is unable to commit any substantial amount of their routine operating funds for the resolution of any title defect, survey matter, or environmental contamination associated with the lease premises. Notwithstanding the foregoing, LESSOR will not be responsible for any of LESSEE'S attorney's fees, costs, or liability or damages incurred by LESSEE in resolving any issue in which LESSEE is named as a party in any litigation or other legal or administrative proceeding.
15. **SURRENDER OF PREMISES:** Upon termination or expiration of this lease LESSEE shall surrender the leased premises to LESSOR. In the event no further use of the leased premises or any part thereof is needed, written notification shall be made to the Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, Mail Station 130, 3800 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, at least six months prior to the release of all or any part of the leased premises. Notification shall include a legal description, this lease number and an explanation of the release. The release shall only be valid if approved by LESSOR through execution of a release of lease instrument with the same formality as this lease. Upon release of all or any part of the leased premises or upon expiration or termination of this lease, all permanent improvements, including both physical structures and modifications to the leased premises, shall become the property of LESSOR, unless LESSOR gives written notice to LESSEE to remove any or all such improvements at the expense of LESSEE. The decision to retain any improvements upon termination of this lease shall be at

LESSOR'S sole discretion. Prior to surrender of all or any part of the leased premises, a representative of the Division of State Lands shall perform an on-site inspection and the keys to any buildings on the leased premises shall be turned over to the Division. If the leased premises and improvements located thereon do not meet all conditions set forth in paragraphs 18 and 21 herein, LESSEE shall pay all costs necessary to meet the prescribed conditions.

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

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

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

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

20. **PLACEMENT AND REMOVAL OF IMPROVEMENTS:** All buildings, structures, improvements, and signs shall be constructed at the expense of LESSEE in accordance with plans prepared by professional designers and shall require the prior written approval of LESSOR as to purpose location, and design. Further, no trees, other than non-native species, shall be removed or major land alterations done without the prior written approval of LESSOR. Removable equipment placed on the leased premises by LESSEE which do not become a permanent part of the leased premises will remain the property of LESSEE and may be removed by LESSEE upon termination of this lease.

21. **MAINTENANCE OF IMPROVEMENTS:** LESSEE shall maintain the real property contained within the leased premises and any improvements located thereon, in a state of good condition, working order and repair including, but not limited to, removing all trash or litter, maintaining all planned improvements as set forth in the approved Management Plan,

meeting all building and safety codes. LESSEE shall maintain any and all existing roads, canal, ditches, culverts, risers and the like in as good condition as the same may be on the effective date of this lease.

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

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

24. **NO WAIVER OF BREACH**: The failure of LESSOR to insist in any one or more instances upon strict performance of any one or more of the covenants, terms and conditions of this lease shall not be construed as a waiver of such covenants, terms and conditions, but the same shall continue in full force and effect, and no waiver of LESSOR of any one of the provisions hereof shall in any event be deemed to have been made unless the waiver is set forth in writing, signed by LESSOR.

25. **PROHIBITIONS AGAINST LIENS OR OTHER ENCUMBRANCES**: Fee title to the leased premises is held by LESSOR. LESSEE shall not do or permit anything which purports to create a lien or encumbrance of any nature against the real property contained in the leased premises including, but not limited to, mortgages or construction liens against the leased premises or against any interest of LESSOR therein.

26. **CONDITIONS AND COVENANTS**: All of the provisions of this lease shall be deemed covenants running with the land included in the leased premises and construed to be "conditions" as well as "covenants" as though the words specifically expressing or imparting covenants and conditions were used in each separate provision.

27. **NOTICES**: All notices given under this lease shall be in writing and shall be served by certified mail including, but not limited to, notice of any violation served pursuant to Section 253.04, Florida Statutes, to the last address of the party to whom notice is to be given, as designated by such party in writing. LESSOR and LESSEE hereby designate their address as follows:

LESSOR: State of Florida Department of
Environmental Protection
Division of State Lands
Bureau of Public Land Administration, MS 130
3800 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

LESSEE: Florida Fish and Wildlife Conservation Commission
Division of Habitat and Species Conservation
620 South Meridian Street
Tallahassee, FL 32399-1600

28. DAMAGE TO THE PREMISES: (a) LESSEE shall not do, or suffer to be done, in, on or upon the leased premises or as affecting said leased premises or adjacent properties, any act which may result in damage or depreciation of value to the leased premises or adjacent properties, or any part thereof. (b) LESSEE shall not generate, store, produce, place, treat, release or discharge any contaminants, pollutants or pollution, including, but not limited to, hazardous or toxic substances, chemicals or other agents on, into, or from the leased premises or any adjacent lands or waters in any manner not permitted by law. For the purposes of this lease, "hazardous substances" shall mean and include those elements or compounds defined in 42 USC Section 9601 or which are contained in the list of hazardous substances adopted by the United States Environmental Protection Agency (EPA) and the list of toxic pollutants designated by the United States Congress or the EPA or defined by any other federal, state or local statute, law, ordinance, code, rule, regulation, order or decree regulating, relating to, or imposing liability or standards of conduct concerning any hazardous, toxic or dangerous waste, substance, material, pollutant or contaminant. "Pollutants" and "pollution" shall mean those products or substances defined in Chapters 376 and 403, Florida Statutes, and the rules promulgated thereunder, all as amended or updated from time to time. In the event of LESSEE'S failure to comply with this paragraph, LESSEE shall, at its sole cost and expense, promptly commence and diligently pursue any legally required closure, investigation, assessment, cleanup, decontamination, remediation, restoration and monitoring of (1) the leased premises, and (2) all off-site ground and surface waters and lands affected by LESSEE'S such failure to comply, as may be necessary to bring the leased premises and affected off-site waters and lands into full compliance with all applicable federal, state or local statutes, laws, ordinances, codes, rules, regulations, orders and decrees, and to restore the damaged property to the condition existing immediately prior to the occurrence which caused the damage. LESSEE'S obligations set forth in this paragraph shall survive the termination or expiration of this lease. Nothing herein shall relieve LESSEE of any responsibility or liability prescribed by law for fines, penalties and damages levied by governmental agencies, and the cost of cleaning up any contamination caused directly or indirectly by LESSEE'S activities or facilities. Upon discovery of a release of a hazardous substance or pollutant, or any other violation of local, state or federal law, ordinance, code, rule, regulation, order or decree relating to the generation, storage, production, placement, treatment, release or discharge of any contaminant, LESSEE shall

report such violation to all applicable governmental agencies having jurisdiction, and to LESSOR, all within the reporting periods of the applicable governmental agencies.

29. **PAYMENT OF TAXES AND ASSESSMENTS:** LESSEE shall assume full responsibility for and shall pay all liabilities that accrue to the leased premises or to the improvements thereon, including any and all drainage and special assessments or taxes of every kind and all mechanic's or materialman's liens which may be hereafter lawfully assessed and levied against the leased premises.

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

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

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

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

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

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

36. **ADMINISTRATIVE FEE:** LESSEE shall pay LESSOR an annual administrative fee of \$300 pursuant to subsection 18-2.020(8), Florida Administrative Code. The initial annual administrative fee shall be payable within thirty days from the date of execution of this lease agreement and shall be prorated based on the number of months or fraction thereof remaining in the fiscal year of execution. For purposes of this lease agreement, the fiscal year shall be the period extending from July 1 to June 30. Each annual payment thereafter shall be due and payable on July 1 of each subsequent year.

37. **RIGHT OF TERMINATION**: Anything contained in this lease to the contrary notwithstanding, LESSOR shall have the right and option to terminate this lease, at will, for any reason whatsoever, by giving the LESSEE written notice of such election to terminate at least six (6) months prior to the effective date of such termination. LESSEE shall continue to honor its obligations under the lease until the effective date of the termination, including LESSEE's obligations concerning surrender of the leased premises.

38. **ELECTRONIC SIGNATURES**: This lease may be executed by electronic signature, which shall be considered as an original signature for all purposes and shall have the same force and effect as an original signature. Without limitation, "electronic signature" shall include faxed versions of an original signature or electronically scanned and transmitted versions (e.g., via pdf) of an original signature.

[Remainder of page intentionally left blank; Signature page follows]

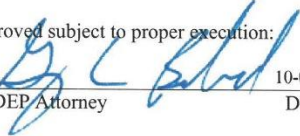
IN WITNESS WHEREOF, the parties have caused this Lease to be executed on the day and year first above written.

"LESSOR"

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

BY:  (SEAL)

Brad Richardson, Chief, Bureau of Public Land
Administration, Division of State Lands, State of
Florida Department of Environmental Protection, as
agent for and on behalf of the Board of Trustees of the
Internal Improvement Trust Fund of the State of
Florida

Approved subject to proper execution:
BY:  10-03-2025

DEP Attorney Date

"LESSEE"

**FLORIDA FISH AND WILDLIFE
CONSERVATION COMMISSION**

BY:  (SEAL)

Jessica Crawford, Chief of Staff

11.3 Public Input

11.3.1 Management Advisory Group Meeting Results

**Cypress Creek Wildlife Management Area (CCWMA)
Management Advisory Group (MAG)
Consensus Meeting Results**

January 21, 2026, in White Springs, Florida

The intent of convening a consensus meeting is to involve a diverse group of stakeholders in assisting the Florida Fish and Wildlife Conservation Commission (FWC) in development of a rational management concept for lands within the agency's managed area system. FWC does this by asking spokespersons for these stakeholders to participate in a half-day meeting to provide ideas about how FWC-managed lands should be protected and managed.

The MAG consensus meeting was held on the morning of January 21, 2026, at The Stephen Foster Folk Culture Center, in White Springs, Florida in Columbia County. The ideas found below were provided by stakeholders for consideration in the 2016 - 2036 Management Plan (MP) with priority determined by vote. These ideas represent a valuable source of information to be used by biologists, planners, administrators, and others during the development of the MP. Upon approval by FWC, the Acquisition and Restoration Council (ARC), and the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees), the MP will guide the activities of FWC personnel over the ten-year duration of the management plan and will help meet agency, state, and federal planning requirements.

Numbers to the left of **bold-faced ideas** listed below represent the total number of votes and the score of each idea. Rank is first determined by the number of votes (vote cards received for each idea) and then by score. Score is used to break ties when two or more ideas have the same number of votes. A lower score indicates higher importance because each voter's most important idea (recorded on card #1) received a score of 1, and their fifth most important idea (recorded on card #5) received a score of 5. Ideas not receiving any votes are listed, and were considered during the development of the MP, but carry no judgment with regard to priority.

Statements following the bold-faced ideas represent a synopsis of the clarifying discussion of ideas as transcribed and interpreted by the FWC recorder at the meeting. As indicated above, the following ideas are presented in priority order:

<u>Rank</u>	<u># of Votes</u>	<u>Score</u>	<u>Idea</u>
1.	[12]	[36]	1. Implement prescribed fire program: Establish burn units and rotations of those burn units. Staff should have a plan to have the property in three-year rotation, and use mosaic burn and mixture of burns in growing and dormant season. A two-to-four-year interval burn rotation needs to be restored on historic pine flatwoods. Wetland ecotones are important, especially where there is cypress, so there should be an emphasis on burns to prevent them from converting to pine and bays. Wildfire prevention plans and the management of high fuels are crucial; establishing and maintaining firelines, reducing high fuel levels, and cooperating with adjacent landowners would be helpful. Ensure that the property is safe for prescribed fires.
2.	[7]	[23]	15. Restore natural historic communities: Current and historic natural communities need to be identified, and staff should work towards restoring the area's historic natural communities. Identify where longleaf pines used to grow, as well as where they can currently grow. Manage the land for rare wildlife species, including the red-cockaded woodpecker.
3.	[6]	[13]	4. Timber Management Plan and defining its goals: Define the goals of timber thinning and reduction of basal area, and if the purpose for it is for wildlife and/or timber production. Collaborate with the Forest Service for guidance on thinning strategies. Create a more open canopy to allow light into the understory. Desired Future Conditions and fire management should be mentioned. Determine if it would be better to thin and keep slash pines or plan longleaf pines instead.
4.	[5]	[14]	22. Recreation Plan: Maximize public access and user enjoyment while also ensuring people stay on the CCWMA. Potentially develop trails that are compatible with bicycling.
5.	[5]	[15]	17. Conduct a Hydrological Assessment and develop a Restoration Plan: Adjacent landowners can collaborate on restoration activities by sharing contractors. Unnatural structures should be removed if they prevent natural flow. Hydrological structures should be constructed to maintain the flow, so long as they do not have adverse effects to wetlands. Follow best management practices for silviculture and continue using public roads.

<u>Rank</u>	<u># of Votes</u>	<u>Score</u>	<u>Idea</u>
6.	[5]	[16]	18. Access points with sufficient parking and easiest path for minimal impact to the CCWMA and the adjacent properties: Access areas should be maintained and have sufficient, established parking. Parking should be easy for both the public and FWC staff, including FWC law enforcement.
7.	[4]	[15]	3. Management of game species: Start with base understanding of what there is and make management decisions based on the population(s). Maintain a healthy population of game species.
8.	[3]	[10]	20. Treating and managing invasives: Manage invasive plants so that native plants are not wiped out. Work cooperatively with adjacent landowners to prevent boundary encroachment. With current levels of invasive species being low, it allows more opportunity for early detection. FWC staff should utilize this to proactively manage through spot spraying and regularly checking.
9.	[2]	[4]	23. Maintain boundary lines: Clearly delineate boundaries by mentioning adjacent private lands. Develop firelines to provide a clear boundary and to prevent trespassing.
10.	[2]	[6]	30. Work collaboratively with adjacent landowners on management activities: Collaborate with adjacent landowners for larger management activities, such as shared contractors.
11.	[2]	[7]	14. Establish plant and wildlife species lists: The public can help develop species lists through surveys and reviews of findings. Rare species need to be documented, and baseline surveys should be conducted for rare species on the area.

Two items of equal rank:

12.	[1]	[3]	11. Manage habitats for non-game wildlife: Manage the CCWMA for greatest game- and non-game wildlife species.
	[1]	[3]	29. Consider groundcover with timber, invasives, and restoration treatments: Maintain the existing native groundcover as a method of restoration. Thinning timber to provide light to the groundcover and developing seedbanks may be helpful. Ensure conditions for invasives

<u>Rank</u>	<u># of</u> <u>Votes</u>	<u>Score</u>	<u>Idea</u>
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are not being created to prevent introduction of more issues.

The following item received no votes. All ideas represent valuable input, and are considered in development of the MP, but carry no rank regarding the priority perceptions of the MAG.

- | | | | |
|-----|--------------------------|--------------------------|---|
| 13. | ☐ | ☐ | 24. Identify disturbed sites and managing accordingly to their community: Identifying places where we know there's anthropogenic disturbance and clearly state whether goal is to maintain disturbance or to try for restoration. For areas restoring, continue to check for invasive species which are more prone in those areas. |
| | ☐ | ☐ | 25. Mapping vegetation and community types and monitoring historic food plots for invasives: Self explanatory. |
| | ☐ | ☐ | 27. Vegetation management in terms of prescribed fire: If unable to use prescribed fire, utilize mechanical and chemical treatments. |

**Cypress Creek Wildlife Management Area
MAG Meeting Participants**

<u>Name</u>	<u>Affiliation</u>
<u>Active Participants</u>	
Jade Shankle	FWC Area Biologist
Clay Hoff	FWC Law Enforcement
Lorna Radcliff	Suwannee River Water Management District
Amber Anderson	Natural Resources Conservation Service
Elizabeth Bland	American Daughters of Conservation
Jason Navstovski	Florida Forest Service
Valerie Thomas	Four Rivers Audubon Society
Kim Alexander	Florida Natural Areas Inventory
Susan Carr	Florida Native Plant Society
Mick Shea	Suwannee Bicycling Association
Steve Norman	Adjacent Private Landowner
<u>Supportive Participants</u>	
Matt Pollock	FWC Habitat and Species Conservation (HSC), Regional Biologist
Sharon Hester	FWC HSC, Assistant Regional Biologist
Scotland Talley	FWC HSC, District Biologist
Rebecca Doane	FWC HSC, Conservation Biologist
Tom M. Matthews	FWC Public Access Services Office (PASO), Public Access Planner
Catalina Weaver	FWC PASO, Construction Planning and Design Manager
Ben Rangel	FWC PASO, Outreach and Interpretive Planning Representative
Holli Nichols	FWC Division of Hunting and Game Management
Patrick Pridgen	FWC Law Enforcement
<u>Invited but Unable to Attend</u>	
Jason O'donoghue	Division of Historical Resources
Debra Walker	Florida Department of Environmental Protection
Tom Kay	Alachua Conservation Trust
Christa Rogers	Conservation Florida**
Kevin Parnell	Columbia County Commissioner
Seth Lane	Columbia County Planning Department
Anna Tomlinson	University of Florida's Institute of Food and Agricultural Sciences, Columbia County Extension
<u>FWC Planning Personnel</u>	
Cedar Spirk	Land Conservation Planner, Facilitator
Laramie Ferry	Land Conservation and Planning Administrator, Recorder
Shelby Hendrix	Senior Land Conservation Planner, Recorder
Will Hansen	Land Conservation Planner, Recorder

11.3.2 Public Hearing Report

**PUBLIC HEARING REPORT
FOR
CYPRESS CREEK WMA
MANAGEMENT PLAN
HELD BY THE
CYPRESS CREEK WILDLIFE MANAGEMENT AREA MANAGEMENT ADVISORY GROUP
AND THE
FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION**

APRIL 28, 2026 – COLUMBIA COUNTY

The following report documents the public input that was received at the Cypress Creek Wildlife Management Area (CCWMA) Management Advisory Group's (MAG) public hearing for the update to the Management Plan for the CCWMA that was held at 6:00-8:00 PM, on April 28, 2026, at the Columbia County Richardson Sixth Grade Academy in Lake City, Florida.

CCWMA Management Advisory Group Introduction:

The meeting was introduced by Lorna Radcliff, a WEA/WMA Management Advisory Group participant, who represented the CCWMA MAG. Lorna indicated that she was one of 11 stakeholders that attended the Florida Fish and Wildlife Conservation Commission (FWC) facilitated the CCWMA MAG meeting held on Wednesday, January 21st, 2026. Lorna stated that the elements of the Draft Management Plan were being presented tonight by FWC staff, and that hardcopies of the overview, management prospectus and the CCWMA MAG meeting report were available at the front door for the public's review. Lorna thanked everyone for attending and then introduced Cedar Spirk, Land Conservation Planner, FWC, to facilitate and coordinate the presentation of an overview of the CCWMA, FWC's planning process, and the draft components of the CCWMA Draft Management Plan.

Presentation on an Overview of the CCWMA and the FWC Planning Process:

Cedar welcomed everyone and thanked the public for their attendance. Cedar then went over an orientation of the material and explained that the purpose of the public hearing was to solicit public input regarding the Draft Management Plan for the CCWMA, and not hunting and fishing regulations, indicating there is a separate public input process for FWC rule and regulation development. Cedar then described the materials that were available at the door for public review, including the CCWMA Management Prospectus and the MAG Meeting Report. Cedar then presented the agenda for the public hearing and facilitated the introduction of all FWC staff in attendance to the audience. Cedar then presented an overview and orientation of the CCWMA,

including a description of the natural communities, data about the CCWMA visitation, revenue and economic benefits generated for the state and region by the area, wildlife species, recreational opportunities found on the area, surrounding conservation lands, surrounding Florida Forever Program Land Acquisition Projects, acquisition history, etc. They also explained FWC's planning process for the management of the public conservation land and asked if there were any questions regarding that process.

Questions, Answers and Discussion on the CCWMA Overview and FWC's Planning Process:

Cedar facilitated an informal question and answers session where members of the public in attendance, without necessarily identifying themselves, could ask questions of the FWC staff, and discuss the answers. Cedar again emphasized that the exclusive purpose for the public hearing was to collect public input regarding the elements of the Draft Management Plan for the CCWMA, and not to discuss area hunting, fishing and use regulations since, as was noted earlier, FWC has a separate process for input on hunting and fishing regulations.

No questions or comments were received at this stage of the CCWMA public hearing meeting.

Presentation of the CCWMA Draft Management Plan:

At this point, Cedar began the presentation of the CCWMA Draft Management Plan. Cedar then completed and concluded the presentation of the CCWMA Draft Management Plan.

Questions and Comments on the CCWMA Draft Management Plan Presentation:

Cedar asked if there were any comments or questions from the public regarding the Draft Management Plan and encouraged everyone to fill out a speaker card for public testimony. They informed them that all comments, questions, and public testimony will be duly considered equally by FWC.

No questions or comments were received at this stage of the CCWMA public hearing meeting.

Public Testimony on the CCWMA Draft Management Plan:

No member(s) of the public audience submitted speaker card(s) indicating their intention to provide formal public testimony. Cedar again emphasized that the public hearing was for taking input regarding the CCWMA Draft Management Plan and called the first speaker to the podium.

No speakers offered comments.

Then Cedar declared the public hearing adjourned.

11.4 Public Hearing Notice, Advertisements, and Press Release

11.4.1 Public Hearing Notice

NOTICE

Florida Fish and Wildlife Conservation Commission
Announces a

PUBLIC HEARING

for the

Cypress Creek Wildlife Management Area Management Plan

Columbia County, Florida

6:00 P.M. Tuesday, April 28th, 2026

Richardson Sixth Grade Academy
646 SE Pennsylvania St.
Lake City, FL 32025

PURPOSE: To receive public comment regarding considerations for the FWC ten-year Land Management Plan for the Cypress Creek Wildlife Management Area (CCWMA). This hearing is being held **EXCLUSIVELY** for discussion of the CCWMA Management Plan, which outlines environmental and recreation management on the area. This Management Plan will not address hunting or fishing regulations, which are handled through a separate rule and regulation development process. For more information about the rule and regulation development process, go online to: <http://myfwc.com/about/rules-regulations/>

For a copy of the draft Management Plan, please contact the Land Conservation Planning program via email at FWCMgmtPlans@MyFWC.com, or via mail at Florida Fish and Wildlife Conservation Commission, Land Conservation and Planning, 620 South Meridian Street, Tallahassee, Florida 32399-1600.

Pursuant to the provisions of the Americans with Disabilities Act, any person requiring special accommodations to participate in this meeting should notify the agency at least five calendar days before the meeting by calling 850-488-6411 or contact the agency using the Florida Relay Service at 800-955-8771 (TDD) or 800-955-8770 (Voice), if you are hearing or speech impaired. If you believe that you have been discriminated against in any program, activity, or facility, or if you need more information, contact the Florida Fish and Wildlife Conservation Commission at: FWC, Office of Human Resources, 620 S Meridian Street, Tallahassee, FL 32399, 850-488-6411. Or write to: Office of Diversity, Inclusion & Civil Rights, Department of the Interior, 1849 C Street, NW, Washington, D.C. 20240.

11.4.2 Regional FWC Press Release



Help plan the future of Cypress Creek WMA



Media contact: FWC Press Office,
850-488-4676,
Media@MyFWC.com

Release Date: 03-24-2026

[< All Articles](#)

Tags:

Cypress Creek WMA

Public Hearing

Conservation

The Florida Fish and Wildlife Conservation Commission (FWC) will present the draft materials for the Cypress Creek Wildlife Management Area 10-year Land Management Plan at a public hearing in Columbia County on Tuesday, April 28.

The public hearing will be held at 6 p.m. at 646 SE Pennsylvania St., Lake City, FL 32025. The public is encouraged to attend and will have the opportunity to comment and ask questions regarding the Land Management Plan for the FWC-managed WMA.

The Cypress Creek WMA encompasses approximately 1,621 acres in Columbia County and is an important piece of the conservation lands that buffer the Osceola National Forest in north Florida. While there are other lands owned and managed by the Suwannee River Water Management District within the area's established boundary, this Management Plan only pertains to the portions of the Cypress Creek WMA in which the FWC has lead management authority. Cypress Creek WMA will offer many opportunities for public recreation, including hunting, hiking, wildlife watching, and other fish and wildlife-focused public recreation.

"The Cypress Creek WMA was purchased to protect and restore a natural area of pine flatwoods and swamps linking the Osceola National Forest, Okefenokee National Wildlife Refuge and the Suwannee River, as well as to provide fish and wildlife-focused outdoor recreation opportunities to the public," said **Cedar Spirk, FWC Land Conservation Planner**. "This management plan will specify how we intend to accomplish that goal."

For more information regarding this and other [upcoming public hearings](#), visit [MyFWC.com/Conservation](#), then click "Terrestrial Conservation" and "Management."

Hunting and fishing regulations are not included in this plan or public hearing; they are addressed through a separate public process. To learn more about hunting and fishing regulations visit [MyFWC.com/Hunting](#) and click on the [Hunting Handbook](#) under "Regulations" or [MyFWC.com/Fishing](#) and select either [Saltwater Recreational Regulations](#) or [Freshwater Recreational Regulations](#)

For more information about [Land Management Plans](#), visit [MyFWC.com/Conservation](#), click "Terrestrial Conservation," then scroll to "Management Plans (WMA)."

To obtain a copy of the [draft elements](#) of the management plan for the Cypress Creek WMA contact FWCMgmtPlans@MyFWC.com.

Pursuant to Chapters 253 and 259, Florida Statutes, all lands purchased with public funds must have a Land Management Plan that ensures the property will be managed in a manner that is consistent with the intended purposes of the purchase.

Pursuant to the provisions of the Americans with Disabilities Act, any person requiring special accommodations to participate in this meeting should notify the agency at least five calendar days before the meeting by calling 850-488-6411 or contacting the agency using the Florida Relay Service at 800-955-8771 (TDD) or 800-955-8770 (Voice), if you are hearing or speech impaired. If you believe that you have been discriminated against in any program, activity or facility, or if you need more information, contact the Florida Fish and Wildlife Conservation Commission at:

FWC, Office of Human Resources

620 S Meridian Street,

Tallahassee, FL 32399

Or write to:

Office of Diversity, Inclusion & Civil Rights

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1849 C Street, NW

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Pursuant to section 120.74, Florida Statutes, the Fish and Wildlife Conservation Commission has published its **2025 Agency Regulatory Plan**.

11.4.3 Newspaper Advertisement

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The Florida Fish and Wildlife Conservation Commission will present the draft materials for the Cypress Creek Wildlife Management Area 10-year Land Management Plan at a public hearing in Lake City on Tuesday, April 28.
Courtesy of FWC

The Florida Fish and Wildlife Conservation Commission (FWC) will present the draft materials for the Cypress Creek Wildlife Management Area 10-year Land Management Plan at a public hearing in Columbia County on Tuesday, April 28.

The public hearing will be held at 6 p.m. at 646 SE Pennsylvania St. in Lake City. The public is encouraged to attend and will have the opportunity to comment and ask questions regarding the Land Management Plan for the FWC-managed WMA.



The Cypress Creek WMA encompasses approximately 1,621 acres in Columbia County and is an important piece of the conservation lands that buffer the Osceola National Forest in north Florida. While there are other lands owned and managed by the Suwannee River Water Management District within the area's established boundary, this Management Plan only pertains to the portions of the Cypress Creek WMA in which the FWC has lead management authority. Cypress Creek WMA will offer many opportunities for public recreation, including hunting, hiking, wildlife watching, and other fish and wildlife-focused public recreation.

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"The Cypress Creek WMA was purchased to protect and restore a natural area of pine flatwoods and swamps linking the Osceola National Forest, Okefenokee National Wildlife Refuge and the Suwannee River, as well as to provide fish and wildlife-focused outdoor recreation opportunities to the public," said Cedar Spirk, FWC Land Conservation Planner, in the press release. "This management plan will specify how we intend to accomplish that goal."

For more information regarding this and other [upcoming public hearings](#), visit [MyFWC.com/Conservation](#), then click “Terrestrial Conservation” and “Management.”

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11.4.4 Florida Administrative Register Post

Notice of Meeting/Workshop Hearing

FISH AND WILDLIFE CONSERVATION COMMISSION

The Florida Fish and Wildlife Conservation Commission (FWC) announces a hearing to which all persons are invited.

DATE AND TIME: Tuesday, April 28, 2026, 6:00 p.m.

PLACE: Richardson Sixth Grade Academy, 646 SE Pennsylvania St., Lake City, FL 32025

GENERAL SUBJECT MATTER TO BE CONSIDERED: To receive public comment regarding considerations for the FWC's ten-year Management Plan for the FWC Lead Managed Portions of the Cypress Creek Wildlife Management Area (WMA).

This hearing is being held EXCLUSIVELY for discussion of the DRAFT Cypress Creek WMA Management Plan, otherwise referred to as the Management Prospectus. This meeting will not address area hunting or fishing regulations. For more information on the process for FWC rule and regulation development visit our Proposed Rules Changes webpage at <https://myfwc.com/about/rules-regulations/proposed-rule-changes/>.

The Management Prospectus for the Cypress Creek WMA is available on our Land Management Plans in Development webpage at <https://myfwc.com/conservation/management-plans/develop-mps/>. Questions can be directed to (386)754-1660, or by email at FWCMgmtPlans@MyFWC.com

A copy of the agenda may be obtained by contacting: (386)754-1660 or by email at FWCMgmtPlans@MyFWC.com

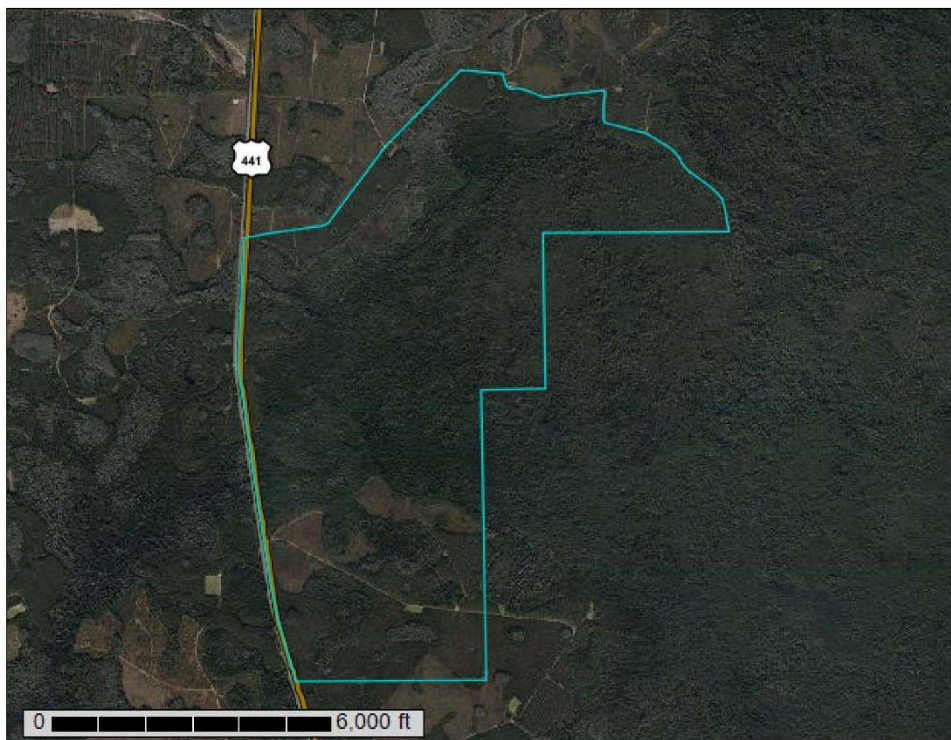
Pursuant to the provisions of the Americans with Disabilities Act, any person requiring special accommodations to participate in this workshop/meeting is asked to advise the agency at least 5 days before the workshop/meeting by contacting: the ADA Coordinator at (850)488-6411. If you are hearing or speech impaired, please contact the agency using the Florida Relay Service, 1(800)955-8771 (TDD) or 1(800)955-8770 (Voice).

11.5 Soil Series Descriptions



A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Columbia County, Florida



August 12, 2026

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Map Unit Descriptions

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, along with the maps, can be used to determine the composition and properties of a unit.

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.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

Custom Soil Resource Report

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Columbia County, Florida

37—Mascotte fine sand

Map Unit Setting

National map unit symbol: vrtg
Landscape: Coastal plains
Elevation: 230 to 660 feet
Mean annual precipitation: 50 to 58 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 258 to 288 days
Farmland classification: Not prime farmland

Map Unit Composition

Mascotte and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mascotte

Setting

Landscape: Coastal plains
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 15 inches: fine sand
Bh - 15 to 25 inches: fine sand
E' - 25 to 37 inches: fine sand
Btg - 37 to 67 inches: fine sandy loam
Cg - 67 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Ecological site: F138XY110AL - Sandy Over Loamy Lowland Flats

Custom Soil Resource Report

Forage suitability group: Sandy over loamy soils on flats of hydric or mesic lowlands (G138XA241FL)
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G138XA241FL)
Hydric soil rating: No

Minor Components

Sapelo

Percent of map unit: 4 percent
Landscape: Coastal plains
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F138XY100AL - Sandy Lowland Flats
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G138XA141FL)
Hydric soil rating: No

Leon, non-hydric

Percent of map unit: 4 percent
Landscape: Coastal plains
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F138XY100AL - Sandy Lowland Flats
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G138XA141FL)
Hydric soil rating: No

Ocilla

Percent of map unit: 4 percent
Landscape: Coastal plains
Landform: Rises on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F138XY140AL - Moist Sandy Over Loamy Upland Pine
Other vegetative classification: Sandy over loamy soils on rises and knolls of mesic uplands (G138XA231FL)
Hydric soil rating: No

Pelham, hydric

Percent of map unit: 4 percent
Landscape: Coastal plains
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F138XY110AL - Sandy Over Loamy Lowland Flats
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G138XA241FL)
Hydric soil rating: Yes

Olustee, non-hydric

Percent of map unit: 4 percent
Landscape: Coastal plains
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F138XY100AL - Sandy Lowland Flats
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G138XA141FL)
Hydric soil rating: No

54—Plummer muck, depressional

Map Unit Setting

National map unit symbol: vrv2
Landscape: Coastal plains
Elevation: 130 to 560 feet
Mean annual precipitation: 50 to 58 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 258 to 288 days
Farmland classification: Not prime farmland

Map Unit Composition

Plummer, depressional, and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Plummer, Depressional

Setting

Landscape: Coastal plains
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy and loamy marine deposits

Typical profile

Oa - 0 to 8 inches: muck
E - 8 to 55 inches: fine sand
Btg - 55 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Custom Soil Resource Report

Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Forage suitability group: Organic soils in depressions and on flood plains
(G138XA645FL)
Other vegetative classification: Organic soils in depressions and on flood plains
(G138XA645FL)
Hydric soil rating: Yes

Minor Components

Pamlico, loamy substratum

Percent of map unit: 9 percent
Landscape: Coastal plains
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Organic soils in depressions and on flood plains
(G138XA645FL)
Hydric soil rating: Yes

Pelham, hydric

Percent of map unit: 8 percent
Landscape: Coastal plains
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G138XA241FL)
Hydric soil rating: Yes

Surrency

Percent of map unit: 8 percent
Landscape: Coastal plains
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G138XA245FL)
Hydric soil rating: Yes

55—Plummer, depressional-Pamlico, loamy substratum complex

Map Unit Setting

National map unit symbol: vrv3
Landscape: Coastal plains
Elevation: 200 to 660 feet
Mean annual precipitation: 50 to 58 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 258 to 288 days
Farmland classification: Not prime farmland

Map Unit Composition

Plummer, depressional, and similar soils: 40 percent
Pamlico, loamy substratum, and similar soils: 25 percent
Minor components: 35 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Plummer, Depressional

Setting

Landscape: Coastal plains
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy and loamy marine deposits

Typical profile

Oa - 0 to 8 inches: muck
E - 8 to 55 inches: fine sand
Btg - 55 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D

Custom Soil Resource Report

Forage suitability group: Organic soils in depressions and on flood plains
(G138XA645FL)
Other vegetative classification: Organic soils in depressions and on flood plains
(G138XA645FL)
Hydric soil rating: Yes

Description of Pamlico, Loamy Substratum

Setting

Landscape: Coastal plains
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Herbaceous organic material over sandy and loamy marine deposits

Typical profile

Oa - 0 to 24 inches: muck
C1 - 24 to 48 inches: fine sand
C2 - 48 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Rare
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Forage suitability group: Organic soils in depressions and on flood plains
(G138XA645FL)
Other vegetative classification: Organic soils in depressions and on flood plains
(G138XA645FL)
Hydric soil rating: Yes

Minor Components

Mascotte, hydric

Percent of map unit: 10 percent
Landscape: Coastal plains
Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G138XA245FL)

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Hydric soil rating: Yes

Dorovan

Percent of map unit: 7 percent

Landscape: Coastal plains

Landform: Depressions on drainageways on marine terraces

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Other vegetative classification: Organic soils in depressions and on flood plains
(G138XA645FL)

Hydric soil rating: Yes

Surrency

Percent of map unit: 6 percent

Landscape: Coastal plains

Landform: Depressions on marine terraces

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Other vegetative classification: Sandy over loamy soils on stream terraces, flood
plains, or in depressions (G138XA245FL)

Hydric soil rating: Yes

Pelham, hydric

Percent of map unit: 6 percent

Landscape: Coastal plains

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic
lowlands (G138XA241FL)

Hydric soil rating: Yes

Pantego

Percent of map unit: 6 percent

Landscape: Coastal plains

Landform: Depressions on marine terraces

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic
lowlands (G138XA341FL)

Hydric soil rating: Yes

56—Sapelo fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2t1r

Custom Soil Resource Report

Landscape: Coastal plains
Elevation: 10 to 190 feet
Mean annual precipitation: 54 to 62 inches
Mean annual air temperature: 66 to 73 degrees F
Frost-free period: 230 to 260 days
Farmland classification: Not prime farmland

Map Unit Composition

Sapelo and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sapelo

Setting

Landscape: Coastal plains
Landform: Flatwoods, Marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 6 inches: fine sand
E - 6 to 28 inches: fine sand
Bh - 28 to 45 inches: fine sand
E' - 45 to 60 inches: fine sand
Btg - 60 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Ecological site: F152AY500FL - Eastern Karst Flat
Forage suitability group: Sandy soils on flats of mesic or hydric lowlands (G152AA141FL)
Other vegetative classification: North Florida Flatwoods (R152AY004FL), Sandy soils on flats of mesic or hydric lowlands (G152AA141FL)
Hydric soil rating: No

Minor Components

Leon

Percent of map unit: 5 percent
Landscape: Coastal plains
Landform: Flatwoods
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F152AY500FL - Eastern Karst Flat
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G152AA141FL)
Hydric soil rating: No

Meadowbrook

Percent of map unit: 5 percent
Landscape: Coastal plains
Landform: Marine terraces, Flats
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F152AY500FL - Eastern Karst Flat
Other vegetative classification: Sandy soils on flats of mesic or hydric lowlands (G152AA141FL)
Hydric soil rating: No

Albany

Percent of map unit: 5 percent
Landscape: Coastal plains
Landform: Marine terraces, Flats
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F152AY500FL - Eastern Karst Flat
Other vegetative classification: North Florida Flatwoods (R138XY004FL), Sandy soils on rises and knolls of mesic uplands (G138XA131FL)
Hydric soil rating: No

57—Surrency fine sand

Map Unit Setting

National map unit symbol: vrv5
Landscape: Coastal plains
Elevation: 130 to 560 feet
Mean annual precipitation: 50 to 58 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 258 to 288 days
Farmland classification: Not prime farmland

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Map Unit Composition

Surrency and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Surrency

Setting

Landscape: Coastal plains

Landform: Depressions on marine terraces

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 16 inches: fine sand

E - 16 to 38 inches: fine sand

Btg - 38 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: About 0 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 4.0

Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6w

Hydrologic Soil Group: B/D

Ecological site: F138XY080AL - Sandy Over Loamy Depression Basin and Dome Swamps

Forage suitability group: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G138XA245FL)

Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G138XA245FL)

Hydric soil rating: Yes

Minor Components

Pantego

Percent of map unit: 4 percent

Landscape: Coastal plains

Landform: Depressions on marine terraces

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

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Ecological site: F138XY090AL - Loamy and Clayey Depression Bottomland Forests

Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic lowlands (G138XA341FL)

Hydric soil rating: Yes

Pelham, non-hydric

Percent of map unit: 3 percent

Landscape: Coastal plains

Landform: Flats on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Ecological site: F138XY110AL - Sandy Over Loamy Lowland Flats

Other vegetative classification: Sandy over loamy soils on flats of hydric or mesic lowlands (G138XA241FL)

Hydric soil rating: No

Plummer, depressional

Percent of map unit: 3 percent

Landscape: Coastal plains

Landform: Depressions on marine terraces

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Ecological site: F138XY070AL - Sandy Depression Basin and Dome Swamps

Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G138XA145FL)

Hydric soil rating: Yes

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Custom Soil Resource Report

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11.6 FNAI Natural Community and Altered Landcover Types

Natural Community Descriptions

Basin Swamp (185.92 acres, 11.47%)

Basin swamps are forested, hydric depressions that are usually isolated and not associated with rivers, although they may provide drainage into floodplains. They are dominated by cypress (*Taxodium* spp.) and/or swamp tupelo (*Nyssa sylvatica* var. *biflora*) along with other hydrophytic trees and shrubs that can withstand extended hydroperiods and thrive in nutrient poor, usually acidic, peat soils overlying an impervious soil layer. Basin marshes may be present in a mosaic within swamps, and herbaceous components of both communities frequently correspond. Due to their large size or landscape position, basin swamps are not exposed to frequent fires. The primary source of water in basin swamps is local rainfall, with input from runoff and seepage from the surrounding uplands.

The majority of the Cypress Creek Wildlife Management Area (CCWMA) is occupied by the western extent of Sandlin Bay, a large, seepage-driven, forested wetland complex of baygall, swamp, and shrub bog. Lower areas, mostly around the perimeter of Sandlin Bay, are occupied by basin swamp intermixed with baygall. Likely, these swamps were historically dominated by a canopy of cypress and swamp tupelo, and pockets of these trees do persist. But past timber harvest has altered the canopy makeup, and the basin swamps on the CCWMA frequently have a young canopy of mostly red maple (*Acer rubrum*) and sweetbay (*Magnolia virginiana*) with some swamp tupelo. Shrubs of fatterbush (*Lyonia lucida*) are abundant, and peatmoss (*Sphagnum* sp.), Virginia chain fern (*Woodwardia virginica*), and netted chain fern (*Woodwardia areolata*) are common in the herb layer.

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

Baygall (599.31 acres, 36.98%)

Baygall is an evergreen forested wetland of bay species situated at the base of a slope or in a depression. The canopy and understory of baygall are generally similar strata and are typically quite dense with bay species, as well as a variety of other woody species that differ by region and hydrology. Vines are generally abundant and contribute to the often-impenetrable understory, while herbaceous species are quite sparse.

The western extent of Sandlin Bay on the CCWMA is primarily a large baygall and shrub bog complex with smaller extents of basin swamp. The exact extent of baygall versus shrub bog is difficult to determine on both the historic and current natural community maps, as these communities intergrade and boundaries shift over time depending on fire and organic accumulation. The baygall community is mostly dominated by loblolly bay (*Gordonia lasianthus*) but with slash pine (*Pinus elliotii*) frequently found as a canopy or overstory tree. Other frequent trees include red maple, dahoon (*Ilex cassine* var. *cassine*), and sweetbay. The understory is often an impenetrable tangle of tall fatterbush, coastal sweet pepperbush (*Clethra alnifolia*), wax

myrtle (*Morella cerifera*), and swamp bay (*Persea palustris*), with abundant vines of muscadine (*Vitis rotundifolia*), cat greenbrier (*Smilax glauca*), and laurel greenbrier (*Smilax laurifolia*).

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

Dome Swamp (50.45 acres, 3.11%)

Dome swamp is an isolated, forested, depressional wetland occurring within a fire-maintained community. These swamps are generally small with a rounded shape but can also be large and shallow. The characteristic dome shape is created by smaller trees that grow in the shallower outer edge, while the deeper interior of the swamp has larger trees. Typically, this community is dominated by pond cypress (*Taxodium ascendens*), although swamp tupelo or ogeechee tupelo (*Nyssa ogechee*) may also form the canopy.

Dome swamps typically form in sandy depressions in pyrogenic upland communities. The soils are variable and often include a layer of peat that is thin or absent along the edges but thicker towards the center of the dome. This peat layer is underlain by acidic sands or marl and then limestone or clay. The normal hydroperiod for dome swamps is 180 to 270 days per year, often with considerable variation from year to year dependent on rainfall. The water at the center may be semi-permanent.

The CCWMA has at least five forested, isolated depressions occupied by a dome swamp community. While these are embedded in a former pine flatwoods landscape and likely were exposed to frequent fire, the swamps are somewhat similar to basin swamp in composition with a significant bay component. However, the larger two swamps are heavily impacted by past logging, most recently between 1995 and 1999, which has likely reduced the importance of cypress and tupelo and promoted more bay in the canopy. Currently, the swamp canopy is dominated by a mix of pond cypress, loblolly bay, sweetbay, swamp tupelo, and slash pine. Many of these trees are mature, and although the canopy is somewhat open, it appears to be in good condition. The non-pine basal area is around 100 ft²/acre. The subcanopy contains scattered red maple, loblolly bay, and sweetbay. Shrubs are common on hummocks. Tall shrubs cover around 25% of the community, while short shrubs are more scattered. Species include loblolly bay, wax myrtle, swamp bay, swamp doghobble (*Eubotrys racemosus*), fetterbush, Virginia willow (*Itea virginica*), and climbing fetterbush (*Pieris phillyreifolia*). Herbs are very sparse and are mostly peatmoss, Virginia chain fern, and netted chain fern. Vines of laurel greenbrier and muscadine are occasional to abundant. Spanish moss (*Tillandsia usneoides*) is common on cypress trees.

The swamp edges are heavily impacted by bedding from the adjacent planted pine stand. These are like baygall, with heavy organic accumulation that would limit fire in all but the driest conditions.

Fire is essential for maintaining the structure of dome swamps. The normal fire cycle may be as short as three to five years on the periphery, burning with the surrounding pyrogenic communities, but the deep center of the swamps may rarely burn.

Shrub Bog (353.58 acres, 21.82%)

Shrub bogs are dense stands of broadleaved evergreen shrubs, vines, and short trees. A canopy of pine or scattered bays may, but does not always, occur in shrub bogs. Characteristic species include titi (*Cyrilla racemiflora*), black titi (*Cliftonia monophylla*), fetterbush, large gallberry (*Ilex coriacea*), gallberry (*Ilex glabra*), wax myrtle, and coastal sweet pepperbush. Often the shrubs are laced together with laurel greenbrier creating a very dense, nearly impenetrable midstory. Herbs are sparse and patchy due to the dense midstory.

Shrub bogs occur on organic muck layers underlain by sand or loamy sands, typically on the border of swamps, drainages, and in flat poorly drained areas. The western extent of Sandlin Bay on the CCWMA is primarily a large baygall and shrub bog complex with smaller extents of basin swamp and wet flatwoods. The exact extent of baygall versus shrub bog is difficult to determine on both the historic and current natural community maps as these communities intergrade and the boundaries shift over time depending on fire and organic accumulation. Shrub bog in this area occupies a large portion toward the center of the complex where the baygall canopy gives way to an open canopy of scattered slash pines and pond pine (*Pinus serotina*) with occasional loblolly bays and sweetbays over a dense shrub layer of fetterbush and large gallberry growing with abundant laurel greenbrier. On the 2011 LiDAR digital elevation model of the area, the shrub bog appears as higher elevation than the surrounding baygall, but it is unclear if this is due to excessive organic accumulation or dense vegetation limiting penetration of light pulses to the ground.

A smaller, isolated shrub bog is located on the south side of the property. Again, this is primarily a fetterbush thicket, but titi and large gallberry are also occasional. Shrubs are six to eight feet tall. This bog is surrounded by a bedded, planted pine stand, and a portion of the historic bog appears to have been converted to plantation that is wetter than the surrounding historic wet flatwoods with peatmoss and Carolina redroot (*Lachnanthes caroliniana*).

Shrub bogs may burn with the surrounding pinelands, but only during dry periods that are typically every 10 years. Shrub bogs can expand into surrounding pinelands when fire is excluded for long periods of time.

Altered Landcover Types

Clearing (44.03 acres, 2.72%)

The CCWMA has several clearings. Some are associated with past timber operations and at least two are used as wildlife food plots. A large, 39-acre area on the north side of the property is difficult to classify but is currently mapped as a clearing. This area was historically part of the Sandlin Bay swamp/baygall complex and was mechanically cleared sometime between 1999 and 2004. There may have been some shallow excavation, but the 2011 LiDAR Digital Elevation Model does not indicate a deeper pond. The area functions as a basin marsh with scattered, small

red maples and pond cypress, scattered tall shrubs of wax myrtle and swamp bay, and a mostly herbaceous groundcover that includes bluestem (*Andropogon* sp.), Walter's sedge (*Carex striata*), spadeleaf (*Centella asiatica*), rush (*Juncus* sp.), hairy primrosewillow (*Ludwigia pilosa*), combleaf mermaidweed (*Proserpinaca pectinata*), woolgrass (*Scirpus cyperinus*), pinebarren goldenrod (*Solidago fistulosa*), peatmoss, and fringed yellow-eyed grass (*Xyris fimbriata*).

Pine Plantation (380.37 acres, 23.47%)

Pine plantations are areas altered by silvicultural activities. These 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 groundcover 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. Pine plantations in Florida are often dominated by even-aged loblolly pine (*Pinus taeda*), sand pine (*Pinus clausa*), or slash pine. Dense pine plantations typically have sparse to absent herbaceous vegetation because of shading or a cover of deep pine needle duff. These plantations may be very shrubby, vine-dominated, or open at ground level. The groundcover in most cases has been severely impacted by mechanical site preparation, such as roller chopping and bedding. However, while perennial grasses such as Southern wiregrass (*Aristida stricta*) may be greatly reduced, many components of the native groundcover persist even though the relative abundance is altered. Groundcover can be partially restored by thinning and/or frequent burning, although some planting of perennial grasses such as wiregrass may be required. With activities such as thinning and burning, plantations with intact native groundcover can be restored to the former natural community.

Former pine flatwoods on the CCWMA are currently planted pine stands of either slash pine or loblolly pine. These generally have a species depauperate understory with some remnant native vegetation and a dense layer of pine litter.

Road (6.88 acres, 0.42%)

Currently, the CCWMA offers three miles of roads. Hiking and bicycling are available on all roads within the CCWMA. Roads are not open to public vehicular traffic and are used by staff to access the CCWMA for management

11.7 Native Species Lists

11.7.1 Native Plant Species

Scientific Name	Common Name
<i>Acer rubrum</i>	Red maple
<i>Andropogon glomeratus</i> var. <i>glaucopsis</i>	Purple bluestem
<i>Andropogon</i> sp.	Bluestem
<i>Carex striata</i>	Walter's sedge
<i>Centella asiatica</i>	Spadeleaf
<i>Clethra alnifolia</i>	Coastal sweet pepperbush
<i>Cyperus</i> sp.	Flatsedge
<i>Cyrilla racemiflora</i>	Titi
<i>Dichanthelium</i> sp.	Witchgrass
<i>Erigeron</i> sp.	Fleabane
<i>Eubotrys racemosus</i>	Swamp doghobble
<i>Eupatorium capillifolium</i>	Dogfennel
<i>Gelsemium sempervirens</i>	Yellow jessamine
<i>Geranium carolinianum</i>	Carolina cranesbill
<i>Gordonia lasianthus</i>	Loblolly bay
<i>Ilex cassine</i> var. <i>cassine</i>	Dahoon
<i>Ilex coriacea</i>	Large gallberry
<i>Ilex glabra</i>	Gallberry
<i>Itea virginica</i>	Virginia willow
<i>Juncus</i> sp.	Rush
<i>Lachnanthes caroliniana</i>	Carolina redroot
<i>Ludwigia pilosa</i>	Hairy primrosewillow
<i>Lyonia fruticosa</i>	Coastalplain staggerbush
<i>Lyonia lucida</i>	Fetterbush
<i>Magnolia virginiana</i>	Sweetbay
<i>Morella cerifera</i>	Wax myrtle
<i>Nyssa sylvatica</i> var. <i>biflora</i>	Swamp tupelo
<i>Persea palustris</i>	Swamp bay
<i>Pieris phyllireifolia</i>	Climbing fetterbush
<i>Pinus elliotii</i>	Slash pine
<i>Pinus serotina</i>	Pond pine
<i>Pinus taeda</i>	Loblolly pine
<i>Proserpinaca pectinata</i>	Combleaf mermaidweed
<i>Pteridium aquilinum</i> var. <i>pseudocaudatum</i>	Tailed bracken
<i>Quercus virginiana</i>	Live oak
<i>Rhynchospora fascicularis</i>	Fascicled beaksedge

Scientific Name	Common Name
<i>Rubus cuneifolius</i>	Sand blackberry
<i>Rubus pensilvanicus</i>	Sawtooth blackberry
<i>Scirpus cyperinus</i>	Woolgrass
<i>Serenoa repens</i>	Saw palmetto
<i>Smilax auriculata</i>	Earleaf greenbrier
<i>Smilax glauca</i>	Cat greenbrier
<i>Smilax laurifolia</i>	Laurel greenbrier
<i>Smilax</i> sp.	Greenbrier
<i>Solidago fistulosa</i>	Pinebarren goldenrod
<i>Sphagnum</i> sp.	Peatmoss
<i>Syngonanthus flavidulus</i>	Yellow hatpins
<i>Taxodium ascendens</i>	Pond cypress
<i>Tillandsia usneoides</i>	Spanish moss
<i>Vaccinium corymbosum</i>	Highbush blueberry
<i>Vaccinium myrsinites</i>	Shiny blueberry
<i>Vitis rotundifolia</i>	Muscadine
<i>Woodwardia areolata</i>	Netted chain fern
<i>Woodwardia virginica</i>	Virginia chain fern
<i>Xyris brevifolia</i>	Shortleaf yellow-eyed grass
<i>Xyris fimbriata</i>	Fringed yellow-eyed grass

11.7.2 Native Wildlife Species

Amphibians

Scientific Name	Common Name
<i>Hyla squirella</i>	Squirrel treefrog
<i>Pseudacris ocularis</i>	Little grass frog

Birds

Scientific Name	Common Name
<i>Ardea ibis</i>	Cattle egret
<i>Baeolophus bicolor</i>	Tufted titmouse
<i>Buteo lineatus</i>	Red-shouldered hawk
<i>Cardinalis cardinalis</i>	Northern cardinal
<i>Dryobates pubescens</i>	Downy woodpecker
<i>Dryocopus pileatus</i>	Pileated woodpecker
<i>Dumetella carolinensis</i>	Gray catbird
<i>Elanoides forficatus</i>	Swallow-tailed kite
<i>Geothlypis trichas</i>	Common yellowthroat
<i>Melanerpes carolinus</i>	Red-bellied woodpecker
<i>Meleagris gallopavo</i>	Wild turkey
<i>Mimus polyglottos</i>	Northern mockingbird
<i>Poecile carolinensis</i>	Carolina chickadee
<i>Protonotaria citrea</i>	Prothonotary warbler
<i>Sayornis phoebe</i>	Eastern phoebe
<i>Setophaga coronata</i>	Yellow-rumped warbler
<i>Setophaga pinus</i>	Pine warbler
<i>Sphyrapicus varius</i>	Yellow-bellied sapsucker
<i>Thryothorus ludovicianus</i>	Carolina wren
<i>Troglodytes aedon</i>	House wren
<i>Vireo griseus</i>	White-eyed vireo

Mammals

Scientific Name	Common Name
<i>Dasypus novemcinctus</i>	Nine-banded armadillo
<i>Odocoileus virginianus</i>	White-tailed deer
<i>Procyon lotor</i>	Raccoon
<i>Sigmodon hispidus</i>	Hispid cotton rat
<i>Ursus americanus floridanus</i>	Florida black bear

Reptiles

Scientific Name**Common Name**

Anolis carolinensis

Green anole

Coluber constrictor priapus

Southern black racer

Kinosternon subrubrum

Eastern mud turtle

*Sistrurus miliarius*Pygmy rattlesnake

11.8 Imperiled Plant Description

Saw Palmetto (*Serenoa repens*) - Saw palmetto is a small fan palm that grows in clumps or dense thickets in many natural communities in Florida, both wet and dry. This species does not require fire for its survival. However, many of its preferred communities require periodic or frequent fire. Most fires defoliate and top kill saw palmetto, but it resprouts soon after a fire. Illegal collecting of saw palmetto berries negatively affects this species; therefore, take precautions to protect berries from harvest. Saw palmetto is identifiable throughout the year.

11.9 FNAI Elemental Occurrence Data Usage Letter



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

November 15, 2021

Dylan Hasse, Senior Conservation Planner
Land Conservation and Planning Subsection
Florida Fish and Wildlife Conservation Commission
Tallahassee, FL

Dear Dylan,

By virtue of this letter, we are updating and continuing our agreement that it is unnecessary for your office to request FNAI Element Occurrence data for each land management plan you prepare, under the following conditions:

- FNAI will continue to provide our Florida Element Occurrence Map Package to FWC on a quarterly basis
- The FNAI GIS data will be available to FWC staff for reference and incorporation as required in management plan review and preparation with the following restrictions.
- FWC will limit spatial reference to Element Occurrence locations in public documents to the Management Area level (i.e., EOs will not be displayed on public maps to protect sensitive resources, habitats, and data sources)
- For Management Areas less than 160 acres in size, FWC will not list occurrences of resources (i.e., species and natural communities) coded as Data Sensitive. If desired, these sensitive resources can be included in a table as a count of occurrences and resource (e.g., three additional occurrences of two species/resources are coded as sensitive)
- When possible, FWC should use the FNAI provided Element Occurrence polygons, and consider the Representational Accuracy and Locational Uncertainty of each record, when determining which species occur on a Management Area

The FNAI Data Manager currently provides this update to FWC staff on a quarterly basis. Current FWC contacts are Rene Baumstark, Christi Santi, Steven Nicholl, Kristal Walsh, Kristen Sella, and yourself. We are pleased to continue this beneficial collaboration with the Florida Fish and Wildlife Conservation Commission.



Florida Resources
and Environmental
Analysis Center

Institute of Science
and Public Affairs

The Florida State University

Sincerely,

Frank Price
Assistant Director
Florida Natural Areas Inventory

Tracking Florida's Biodiversity

11.10 FNAI Natural Inventory Ranking System and Definitions

Elements and Element Occurrences

An **element** is any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature.

An **element occurrence (EO)** is an area of land and/or water in which a species or natural community is, or was, present. An EO should have practical conservation value for the Element as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location.

Element Ranking and Legal Status

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

FNAI GLOBAL ELEMENT RANK

- G1** = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- G2** = Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3** = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- G4** = Apparently secure globally (may be rare in parts of range).
- G5** = Demonstrably secure globally.
- GH** = Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker).
- GX** = Believed to be extinct throughout range.
- GXC** = Extirpated from the wild but still known from captivity or cultivation.
- G#?** = Tentative rank (e.g., G2?).
- G#G#** = Range of rank; insufficient data to assign specific global rank (e.g., G2G3).
- G#T#** = Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1).
- G#Q** = Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q).
- G#T#Q** = Same as above, but validity as subspecies or variety is questioned.
- GU** = Unrankable; due to a lack of information no rank or range can be assigned (e.g., GUT2).
- GNA** = Ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- GNR** = Element not yet ranked (temporary).
- GNRTR** = Neither the element nor the taxonomic subgroup has yet been ranked.

FNAI STATE ELEMENT RANK

- S1** = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- S2** = Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- S3** = Either very rare and local in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- S4** = Apparently secure in Florida (may be rare in parts of range).
- S5** = Demonstrably secure in Florida.
- SH** = Of historical occurrence in Florida, possibly extirpated, but may be rediscovered (e.g., ivory-billed woodpecker).
- SX** = Believed to be extirpated throughout Florida.
- SU** = Unrankable; due to a lack of information no rank or range can be assigned.
- SNA** = State ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- SNR** = Element not yet ranked (temporary).

FEDERAL LEGAL STATUS

Legal status information provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant federal agency.

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

C = Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.

E = Endangered: species in danger of extinction throughout all or a significant portion of its range.

E, T = Species currently listed endangered in a portion of its range but only listed as threatened in other areas

E, PDL = Species currently listed endangered but has been proposed for delisting.

E, PT = Species currently listed endangered but has been proposed for listing as threatened.

E, XN = Species currently listed endangered but tracked population is a non-essential experimental population.

T = Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.

PE = Species proposed for listing as endangered.

PS = - An infraspecific taxon or population has federal status but the entire species does not - status is in only a portion of the species range.

PT = Species proposed for listing as threatened.

SAT = Treated as threatened due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.

SC = Not currently listed, but considered a "species of concern" to USFWS.

DL = Delisted.

UR = Under review.

STATE LEGAL STATUS

Provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant state agency.

Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

C = Candidate for listing at the Federal level by the U. S. Fish and Wildlife Service

FE = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service

FT = Listed as Threatened Species at the Federal level by the U. S. Fish and Wildlife Service

FXN = Federal listed as an experimental population in Florida

FT(S/A) = Federal Threatened due to similarity of appearance

ST = State population listed as Threatened by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.

SSC = Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. (SSC* for *Pandion haliaetus* (Osprey) indicates that this status applies in Monroe county only.)

N = Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011, 581.185 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or see: <https://www.flrules.org/gateway/ChapterHome.asp?Chapter=5B-40>.

E = Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act.

T = Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered.

CE = Commercially exploited: species native to the state which are subject to being removed in significant numbers from native habitats in the state and sold or transported for sale.

N = Not currently listed, nor currently being considered for listing.

Element Occurrence Ranking

FNAI ranks of quality of the element occurrence in terms of its viability (EORANK). Viability is estimated using a combination of factors that contribute to continued survival of the element at the location. Among these are the size of the EO, general condition of the EO at the site, and the conditions of the landscape surrounding the EO (e.g. an immediate threat to an EO by local development pressure could lower an EO rank).

A = Excellent estimated viability
A? = Possibly excellent estimated viability
AB = Excellent or good estimated viability
AC = Excellent, good, or fair estimated viability
B = Good estimated viability
B? = Possibly good estimated viability
BC = Good or fair estimated viability
BD = Good, fair, or poor estimated viability
C = Fair estimated viability
C? = Possibly fair estimated viability
CD = Fair or poor estimated viability
D = Poor estimated viability
D? = Possibly poor estimated viability
E = Verified extant (viability not assessed)
F = Failed to find
H = Historical
NR = Not ranked, a placeholder when an EO is not (yet) ranked.
U = Unrankable
X = Extirpated

*For additional detail on the above ranks see: <http://www.natureserve.org/explorer/eorankguide.htm>

FNAI also uses the following EO ranks:

H? = Possibly historical
F? = Possibly failed to find
X? = Possibly extirpated

The following offers further explanation of the H and X ranks as they are used by FNAI:

The rank of H is used when there is a lack of recent field information verifying the continued existence of an EO, such as (a) when an EO is based only on historical collections data; or (b) when an EO was ranked A, B, C, D, or E at one time and is later, without field survey work, considered to be possibly extirpated due to general habitat loss or degradation of the environment in the area. This definition of the H rank is dependent on an interpretation of what constitutes "recent" field information. Generally, if there is no known survey of an EO within the last 20 to 40 years, it should be assigned an H rank. While these time frames represent suggested maximum limits, the actual time period for historical EOs may vary according to the biology of the element and the specific landscape context of each occurrence (including anthropogenic alteration of the environment). Thus, an H rank may be assigned to an EO before the maximum time frames have lapsed. Occurrences that have not been surveyed for periods exceeding these time frames should not be ranked A, B, C, or D. The higher maximum limit for plants and communities (i.e., ranging from 20 to 40 years) is based upon the assumption that occurrences of these elements generally have the potential to persist at a given location for longer periods of time. This greater potential is a reflection of plant biology and community dynamics. However, landscape factors must also be considered. Thus, areas with more anthropogenic impacts on the environment (e.g., development) will be at the lower end of the range, and less-impacted areas will be at the higher end.

The rank of X is assigned to EOs for which there is documented destruction of habitat or environment, or persuasive evidence of eradication based on adequate survey (i.e., thorough or repeated survey efforts by one or more experienced observers at times and under conditions appropriate for the Element at that location).

11.11 Prescribed Burn Plan

Cypress Creek Wildlife Management Area

Prescribed Burning Plan

INTRODUCTION

Fire has been an important part of the composition of Florida's ecosystem for eons. Indigenous humans utilizing fire as a tool along with historical lightning strikes and minimal fire suppression, developed and maintained fire-dependent plant communities in the southeastern United States. Exclusion of fire leads to growth of dense brush and eventual succession into a climax hardwood community. This change results in undesirable conditions for species that rely on fire such as gopher tortoises (*Gopherus polyphemus*) and red-cockaded woodpeckers (*Leuconotopicus borealis*). (Gilliam and Platt 1999).

To maintain the overall effects of fire within dependent natural communities, prescribed fires are conducted. Intentionally started under favorable conditions, these fires mimic "natural" fires but are strategically planned and implemented.

Resource managers in Florida rely on prescribed burning as an important land management tool. Prescribed burning is used for habitat improvement and manipulation, fuel reduction, disease and invasive insect control, and site preparation. It is a recommended tool for management of game animals, such as white-tailed deer (*Odocoileus virginianus*), northern bobwhite (*Colinus virginianus*), mourning dove (*Zenadia macroura*), and wild turkey (*Meleagris gallopavo*) (U.S. Forest Service 1969, Stoddard 1971). The value of prescribed fire to these and other animals, such as raptors and some songbirds, is well documented (Engstrom 2002). Prescribed fire benefits wildlife by reducing underbrush density, thus improving access, promoting the growth of succulent vegetation and lowering browse to increase accessibility for deer. Aesthetic values are also enhanced by the growth and fruiting of important wildlife food plants, such as dewberries (*Rubus spp.*) and blueberries (*Vaccinium spp.*) (Smith 2000).

BURN OBJECTIVES

Prescribed fire will be used on Cypress Creek Wildlife Management Area (CCWMA) as a habitat management tool exclusively or in conjunction with other management techniques to accomplish a variety of objectives. The primary objective for using prescribed fire on CCWMA is to restore and maintain fire-dependent natural communities. This includes preserving native plant communities and restoring native groundcover while simultaneously improving wildlife habitat. Besides long-term preservation of native plant communities and improved wildlife habitat, the benefits of prescribed burning on CCWMA will also include:

- 1) Reduction of fuel loads, which will help to prevent or mitigate effects of wildfires.
- 2) Enhancement of aesthetics by controlling undesirable vegetation.
- 3) Control of nonnative plant species.
- 4) Improvement of public access.

DESCRIPTION OF AREA

CCWMA occupies 1,620 acres in northern Columbia County, east of Jasper and north of Lake City. The Suwannee River is located 2.5 miles west of the tract. Most of the surrounding private lands are used as commercial pine plantations and are protected by conservation easements. Most of CCWMA is wetland habitat, predominately baygall, shrub bog, dome swamp and basin swamp, and the uplands are in pine plantations.

CCWMA contains 384 acres of fire-maintained pine plantation communities. The dominant canopy species of the upland communities is slash pine (*Pinus elliotii*). Mid-story tree species include loblolly bay (*Gordonia lasianthus*). Remnant herbaceous groundcover species include broomsedge (*Andropogon spp.*). Shrubs range from sparse to dense, depending on fire history and canopy cover, and typically include saw palmetto (*Serenoa repens*), sweetgum (*Liquidambar styraciflua*), wax myrtle (*Myrica cerifera*), gallberry (*Ilex glabra*), sparkleberry (*Vaccinium arboreum*) and fetterbush (*Lyonia lucida*).

PRESCRIBED BURNING PROGRAM

Firelines

Existing roads are utilized as firelines to safely contain prescribed fires whenever feasible. These roads are evenly spaced throughout the property and delineate burn units of modest and manageable size. Many of the roads that are utilized as firebreaks require either disking or tilling to maintain functional mineral firebreaks before actual burning. Firelines will be maintained as roads by FWC personnel and maintained by mowing during non-burning intervals. There will be new firelines installed to separate larger burn units as needed.

Size and Arrangement of Management Units

CCWMA is divided into 5 management units that delineate different areas of the WMA into manageable sizes for habitat management. These management units may also function as burn units except for management unit 5 which is not a fire maintained community. Some burn units are irregular in shape because the existing road and trail network follows the meandering margins of wetland features. Burn units average 74 acres in size, with the largest unit at 182 acres and the smallest at 16 acres (Figure 1).

The preferred prescribed burn interval on CCWMA is approximately 2-4 years for pine plantations. Multiple burn units can be burned simultaneously to maintain fire-return intervals but preferably, they are burned individually across time to provide a patchwork of diverse habitat in varying stages of growth and to minimize impacts on wildlife. Ideally, all fire-maintained acreage should be on a two- to four-year burn interval with a two-year rotation being optimal. Burn units will be burned in a mosaic pattern, thus increasing habitat diversity and maintaining escape cover for wildlife.

Firing Techniques

Burns on CCWMA begin with a test fire to assess the fire behavior. Then a backing fire is used on the downwind side of the burn unit to establish a blackline. The remainder of the unit is burned using appropriate fire techniques for the burn objectives, weather conditions, fuel loads, and fire intensity. Spot, flank and strip head fires are the most common ignition patterns. Aerial ignition (including drones) may be used to burn large acreage if appropriate.

Season and Time of Day

Growing season burning is preferred, but dormant season burns are conducted as needed to maintain fire frequency on burn units that miss a growing season rotation, or to provide seasonal diversity to mimic natural fire regimes.

Dormant season burns will be used on CCWMA to reduce fuel loading and minimize stress on resident pine species as the area is thinned and restored. Growing season burns will occur more frequently as burn units experience multiple rotations of prescribed fire. Burning is conducted primarily during daylight hours; night burning is avoided due to problems associated with smoke dispersal. However, if favorable conditions exist and permits can be obtained, burning may be continued into the night, if necessary.

Optimal Weather Conditions

Prescribed burns are ideally conducted 2 to 5 days following a rain event and require a relative humidity of 30 to 60 % and air temperature of less than 95°F. Burning may occur with winds from the north, south, or west directions as long as wind speeds do not exceed 20 mph. Prescribed burns may occur outside of generally accepted weather parameters depending on local conditions, other contrasting weather parameters, and crew experience. Fine fuel moisture, Keech-Byram Drought Index and the Florida Forest Service (FFS) fire danger index are some additional weather parameters that are considered.

Fire Weather Monitoring

One person is assigned to monitor fire weather on each burn. This person monitors and records wind speed, wind direction, temperature and humidity at regular intervals or as requested during the burn. If conditions stray outside of the burn prescription, appropriate actions will be taken to modify fire strategies until conditions return to within prescription parameters.

Smoke Management

There is considerable flexibility when burning at CCWMA due to the absence of smoke sensitive areas nearby. Highway 441 is adjacent to the western boundary of CCWMA and requires additional precautions including smoke road signs, wind direction, dispersion index and smoke column monitoring. To minimize smoke problems, burning should be conducted when atmospheric conditions are slightly unstable, with a minimum mixing height of 1,600 feet and transport wind speeds of greater than 9 mph (Southern Forest Fire Laboratory 1976, Crow and Shilling 1983). Additionally, the use of backfires, as prescribed, will produce less smoke and

consume fuel more completely than a head fire. Residual smoke problems (such as stumps, snags or logs) are promptly mopped up and monitored to minimize smoke hazards.

Smoke management can be difficult during night burning because smoke often stays close to the ground, making it more difficult to predict actual smoke direction. Smoke tends to travel to lower elevated areas such as creeks and rivers. Night burning is approached with caution and in close association with the FFS to avoid these problems.

Additional parameters regarding smoke management, such as air quality index, may be incorporated into burn planning in the future as dictated by FFS and FWC standards.

Personnel

Under ideal conditions and depending on the composition and structure of the burn units, burning can be conducted with a minimum crew of five; however, a crew of six to eight is optimal. Depending on unit size and orientation, multiple units may be burned on the same day, and the minimum number of crew members needed is adjusted accordingly. Burn crew members are assigned tasks according to their training, equipment, and burn experience. Certified and experienced volunteers and personnel from other state and federal agencies (e.g., FFS, Department of Environmental Protection, The Nature Conservancy) may be used if needed. All those participating on CCWMA prescribed burns will meet training, certification, and experience requirements as outlined in the Division of Habitat and Species Conservation (HSC) Prescribed Burning and Wildland Fire Suppression Standards (Appendix A). Only FWC personnel who meet the requirements outlined in the Standards will serve as burn managers on CCWMA.

Equipment

All members of the fire crew wear all PPE required by HSC's Prescribed Burning and Wildland Fire Suppression Standards. Fire flaps, fire rakes, drip torches, a Type VI engine, tractor-plow, dozer, farm tractor, ATVs, UTVs and slip-in water units are usually available. Required equipment specific to each burn unit will be dependent on fire return interval, complexity, size and locality of the prescribed burn. Smoke caution signs will be deployed as necessary.

Permits and Notifications

An authorization is obtained from FFS for each burn in accordance with Chapter 590.125 Florida Statutes. Various contacts in the regional FWC office and Law Enforcement Dispatch are notified of each prescribed burn occurring on CCWMA. Other notifications will be made as needed to Florida Highway Patrol, Florida Department of Transportation, Columbia County Emergency Management, and adjacent landowners.

Burn Prescriptions:

All burns will be conducted in compliance with the Division of Habitat and Species Conservation, Prescribed Burning and Wildland Fire Suppression Standards (Appendix A). Prescriptions for

individual burn units will not be discussed in this plan. To ensure compliance with legal requirements and professional standards, all burn prescriptions prepared for CCWMA will include the following 17 elements. The CCWMA boundary burn unit analysis will be used while writing prescriptions. It will be used to ensure there are mitigation methods used to prevent escapes on boundary units.

Legally Required Elements:

1. Stand or site description
2. Map of the area being burned
3. Firebreaks (external and internal) to be constructed or re-worked
4. Number of personnel and equipment types to be used
5. Desired weather factors, including but not limited to:
 - a. surface wind speed and direction
 - b. transport wind speed and direction
 - c. minimum mixing height
 - d. minimum relative humidity
 - e. maximum temperature
 - f. minimum fine fuel moisture
6. Desired fire behavior factors such as:
 - a. type of burn technique
 - b. flame length
 - c. rate of spread
 - d. fuel conditions
7. Time and date the prescription was prepared
8. The authorization date and time and period of authorization
9. An evaluation of the anticipated impact of the proposed burn on related smoke sensitive areas
10. Signature and number of Certified Prescribed Burn Manager

Professional Standards:

11. Purpose and objectives
12. Safety
13. Description of fuel conditions
14. Season and time of day
15. Notifications
16. Ignition plan
17. Public relations
18. Contingencies, control and mop up, declaring fire out
19. Evaluation and monitoring

Mop-Up and Monitoring

After the initial ignition and suppression phase has been completed, standard mop-up standards are as follows: (1) extinguish all visible flame within 30 feet of perimeter fire lines and

access roads; (2) ensure that any smoldering fuel is within the black; (3) burn out or isolate unburned fuels within the unit to prevent spreading fire from occurring two hours after sunset; (4) inspect aerial fuels and snags on perimeter firelines, felling snags away from the line as necessary; and (5) re-inspect and mop-up all firelines as necessary to ensure containment. The day after and subsequent days, the burn unit is monitored by assigned personnel, prioritizing the peak fire activity period in the afternoon, until the fire is declared out. Monitoring will be conducted along both sides of perimeter firelines to ensure any visible flame is more than 30 feet inside the unit and no spotovers occurred overnight. Any visible, active flame greater than 30 feet within the unit is recorded and re-inspected on subsequent days. Any visible flame within 30 feet of the perimeter is extinguished until no longer smoking. Unburned fuels along the perimeter and grassy areas within the fireline are checked to ensure creeping has not occurred overnight or it does not pose a risk to escape.

Mop-up and monitoring standards may change depending on the burn unit, updates to agency requirements, burn manager's preference, or other factors.

Evaluation of Burn

Initial evaluations are conducted within one week and include percent crown scorch, bark char (height), fuel consumption, flame height, fire behavior, smoke dispersion, any escape, adverse publicity, objectives reached and any unusual observations. Follow-up evaluations are completed within one month and include crown scorch, understory kill, adverse insect activity and unusual observations. These observations are incorporated into future burn prescriptions.

SPECIAL CONSIDERATIONS

Wildland fire is an ecologically disruptive event in the immediate short term. However, the long-term benefits of properly timed and applied prescribed fire greatly exceed short-term disruptions. Care is taken to protect environmentally sensitive areas and to employ the best fire management actions that will provide the greatest long-term benefit to the largest number of species. Smoke screening directs special attention to certain areas to ensure burns do not adversely affect adjacent landowners, nearby roads, schools, hospitals and airports. Fire size and intensity are manipulated to minimize fast moving headfires during optimal burning conditions.

Burning is generally performed during the growing season to promote hardwood brush control and increased herbaceous vegetation growth. High air temperature reduces the amount of heat needed to raise plant temperatures to lethal levels. Actively growing plants are more easily killed by fire than dormant plants, which results in better hardwood brush control than dormant-season fires (Smith 2000). Growing season burns also promote an increase in herbaceous vegetation growth and species diversity, release planted longleaf pine seedlings from vegetative competition, help control brown-spot disease and mimic naturally occurring summer lightning fires.

Burning during the growing season may affect various wildlife species that are more active during the summer. Nesting reptiles, birds, and mammals can be adversely impacted by

summer burns. Growing season burns are conducted during April through September when wind speed and relative humidity are as prescribed.

Sensitive wildlife species, such as bald eagles (*Haliaeetus leucocephalus*), are given special consideration. Bald eagle nests have not been documented on CCWMA, but if they are, burn units with active nest trees will not be burned during the nesting season when active. Extra precautions will be used to prevent nest trees from fire induced mortality.

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Figure 1. Prescribed burn units on Cypress Creek Wildlife Management Area.

Appendix A

**Florida Fish and Wildlife Conservation Commission
Division of Habitat and Species Conservation
Policies and Procedures
Updated February 2025**

Subject: Prescribed Burning and Wildland Fire Suppression Standards

Policy:

The following policy shall apply to all Division of Habitat and Species Conservation (DHSC) employees, volunteers and contractors engaged in prescribed burning or wildland fire suppression activities. Unless otherwise stated, the policy also applies to all other Florida Fish and Wildlife Conservation Commission (FWC) employees and volunteers engaged in prescribed burning or wildland fire suppression activities conducted through the DHSC. Prescribed burning or wildland fire suppression efforts that DHSC funds through grants, cost-share agreements, or other methods not conducted on DHSC-managed lands are outside the scope of this policy; however, DHSC staff physically participating in these burns are required to comply with the policy and this policy should be used to guide minimum standards regarding training and experience when developing DHSC-funded agreements or contracts. This policy will be reviewed at least once every three years.

Background and General Guidelines:

Wildland fire has been a major force shaping Florida landscapes for thousands of years. Florida's plant communities are the result of surface water conditions and frequent lightning ignitions across its vast landscape. Many plant communities experienced fire every few years and wildlife species adapted to these fire-maintained habitats. Floridians have consistently used fire as a land management tool and the Florida legislature recognizes the importance of prescribed burning per Chapter 590.125 F.S.

Likewise, DHSC recognizes the importance of prescribed fire for Florida's diverse wildlife and the habitats that sustain them. As Florida continues to lose natural wildlife habitat, prescribed fire is more important than ever in maintaining and enhancing our remaining natural areas. As FWC is the lead managing agency on more than 1.5 million acres of the Wildlife Management Area (WMA) system, DHSC regularly conducts burns on these lands, and others, for wildlife management, hazardous fuel reduction, and ecological purposes. DHSC also provides financial support and technical assistance for conducting prescribed burns outside of the WMA system.

In addition to conducting prescribed burning, DHSC employees are periodically asked to assist the Florida Forest Service (FFS) with wildland fire suppression efforts, particularly during declared wildfire emergencies. Working on prescribed fires or wildfires is an inherently dangerous and risky activity that can result in significant property damage, personal injury, or loss of life. Therefore, it is necessary to establish standards for training and certification to ensure DHSC employees, volunteers and contractors have the appropriate skills and knowledge

to perform these activities safely and effectively. Employees are encouraged to obtain higher levels of training and certification as warranted and approved through supervisory channels.

The majority of DHSC wildland fire activities occur within the Wildlife and Habitat Management Section (WHM). However, other Sections within DHSC have employees that participate in wildland fire activities. To ensure efforts are not duplicated, this policy designates specific WHM staff positions as the point of contact or lead on coordination for prescribed fire and wildland fire suppression activities conducted through DHSC.

Employees are responsible for acquiring (with agency funds and supervisor approval) and maintaining all required personal protection equipment. Immediate supervisors are responsible for ensuring that direct reports have all the required training to participate in wildland fire activities. WHM Regional Wildlife Biologists will be responsible for coordinating applicable wildland fire training and incident reviews through the WHM Section Leader or their designee.

All prescribed burns shall be conducted in compliance with all laws regulating the use of prescribed fire; specifically Chapter 590.125(3), Florida Statutes and Chapter 5I-2, Florida Administrative Code. When a DHSC employee, volunteer or private contractor is the burn manager, burn prescriptions shall be prepared using the FWC Prescribed Burning Prescription form and contain all the required elements per Chapter 5I-2.006 Florida Administrative Code, as well as all other applicable information requested on the prescription form. Prescriptions shall be prepared with employee and public safety as the highest priority. All prescribed burns shall be conducted as a certified prescribed burn within prescription, and managed by a Certified Prescribed Burn Manager.

All prescribed fires conducted on FWC lead WMAs shall be documented within the WHM Land Management Information System according to the procedures and schedules determined by the WHM Section Leader.

Chapter 1 Prescribed Burning

Prescribed Burn Participation: This section establishes the training, certification, and experience standards required for members of a prescribed burn team. These standards apply to all DHSC burn crew members, regardless of the location of the burn, and for all non-DHSC crew members on burns managed by DHSC staff and/or conducted on DHSC-managed land unless otherwise noted.

- A. Crew Member Trainee: Those who do not meet the requirements for Crew Member shall be classified as a Crew Member Trainee. A Crew Member Trainee may participate in prescribed burning activities provided that they are under the direct supervision of a Crew Member. A Crew Member may supervise no more than one Crew Member Trainee. No more than 40% of the burn crew shall be Crew Member Trainees*. They shall have successfully completed the following level of training:

- 1) Successful completion of fire shelter or fire shelter refresher training within the past 13 months;

**For prescribed burns conducted during a DHSC-coordinated training course, Crew Members may supervise more than one Crew Member Trainee, and more than 40% of the burn crew may be Crew Member Trainees.*

- B. Crew Member: Crew members may participate independently in prescribed burning activities. They shall have successfully completed the following National Wildfire Coordinating Group (NWCG) courses and other training and testing requirements:

- 1) Introduction to the Incident Command System (I-100 or ICS-100);
- 2) Basic Wildland Firefighter Training (S-130);
- 3) Introduction to Wildland Fire Behavior (S-190);
- 4) Successfully completed fire shelter or fire shelter refresher training within the past 13 months;
- 5) At least once every 36 months, all **DHSC employees** shall successfully complete an agency-approved wildland fire refresher training course;
- 6) At least once every 36 months, all **DHSC employees and volunteers** shall successfully complete the DHSC [Physical Abilities Test \(PAT\)](#).*

**New DHSC employees may participate on prescribed burns as crew members during their first year of employment without taking the PAT, provided they meet all other requirements.*

- C. Prescribed Burn Manager Mentee: Prescribed burn manager mentees may serve as burn manager to fulfill the responsibilities of acquiring DHSC and Florida Certified Prescribed Burn Manager status. Mentee must be under the direct supervision of a DHSC Certified Prescribed Burn Manager on prescribed burns that will be used to qualify them for DHSC Certified Prescribed Burn Manager status. They shall have successfully completed the following level of training and have the specified level of experience:

- 1) Qualified at or above Crew Member level for prescribed burning;
- 2) The FFS Florida Certified Prescribed Burn Manager Training Course;
- 3) Participated on at least five prescribed burns;
- 4) Enrolled in or completed the [DHSC Prescribed Burn Manager Mentoring Program](#).

Note: The DHSC Director may approve staff to attend the Prescribed Fire Correspondence Course during times when the Florida Certified Prescribed Burn Manager Training Course has reduced or no availability.

- D. Certified Prescribed Burn Manager: A DHSC Certified Prescribed Burn Manager may request prescribed burn authorizations and serve as burn manager for acreage burns.

They shall have successfully completed the following level of training and have the specified certification and level of experience:

- 1) Qualified at or above Crew Member level for prescribed burning;
- 2) FFS Prescribed Burn Manager Certification (per section 590.125, Florida Statutes and 5I-2, Florida Administrative Code);
- 3) Participated on at least ten prescribed burns;
- 4) DHSC employees and volunteers must successfully complete the [DHSC Certified Prescribed Burn Manager Mentoring Program](#) to become a burn manager. Burn managers certified prior to the implementation of the mentoring program may be required to complete all or part of the mentoring program at the discretion of the WHM Regional Biologist, or DHSC Division Director or designee for all non-WHM employees;
- 5) Complete the [FFS requirements to maintain Florida Certified Prescribed Burn Manager status per 5I-2.006](#).

Note: Any employee aspiring to become a Certified Prescribed Burn Manager must obtain certification within three years of completing the Florida Certified Prescribed Burn Manager Training Course. Otherwise they must re-take the full course to become certified. If the certification lapses, the employee may re-certify by successfully completing the FFS Prescribed Fire Correspondence Course if they served as a burn manager on five or more burns. Otherwise they must re-take the full course to regain certification.

- E. Certified Pile Burner: A Certified Pile Burner may request pile burn authorizations. They shall have successfully completed the following level of training and have the specified certification and level of experience:
 - 1) Qualified as a Certified Prescribed Burn Manager;
 - 2) FFS Certified Pile Burner.
- F. Prescribed Burn Engine (Pumper Unit/Brush Truck) Operator: To independently operate a water-delivery engine in support of prescribed burns, crew members shall have successfully completed the following level of NWCG training and have the specified level of experience:
 - 1) Qualified at or above Crew Member level for prescribed burning;
 - 2) Demonstrated proficiency in operation of water-delivery engines to supervisor; *or* successful completion of Southern Area Engine Academy (S-211 and SA-214) or Engine Operator (PMS 419);
 - 3) Participated on at least five prescribed burns.

- G. Prescribed Burn Bulldozer Plow Unit Operator: To independently operate a dozer plow unit during prescribed burns, crew members shall have successfully completed the following level of training and have the specified level of experience:
- 1) Qualified at or above Crew Member level for prescribed burning;
 - 2) The wildland fire portion of FFS Basic Fire Control Training (or equivalent training);
 - 3) Participated on at least five prescribed burns;
 - 4) Experience and demonstrated proficiency to supervisor operating a dozer plow unit.
- H. Prescribed Burn Aerial Plastic Sphere Dispenser (PSD) Operator: To independently operate a PSD from an aircraft during a prescribed burn, crew members shall have successfully completed the following level of training and have the specified level of experience:
- 1) Qualified at or above Crew Member level for prescribed burning;
 - 2) Completed an aerial PSD training course;
 - 3) Participated on at least five prescribed burns;
 - 4) Complete aerial PSD refresher training once every three years.
- I. Prescribed Burn Unmanned Aircraft System (UAS) Aerial Ignition Operator: To independently operate a UAS for ignition missions during a prescribed burn, crew members shall have successfully completed the following level of training and have the specified level of experience:
- 1) Qualified at or above Crew Member level for prescribed burning;
 - 2) Participated on at least five prescribed burns;
 - 3) Be familiar with and follow [FWC IMPP 1.35](#) and the [Small Unmanned Aircraft Systems \(sUAS\) Use and Safety Manual](#) and any additional DHSC or WHM Section policy or guidance related to operation of UAS.
 - 4) Possess current FAA Remote Pilot Certification (Part 107);
 - 5) Complete FAA Part 107 Remote Pilot Certification recurrent training every two years;
 - 6) Complete appropriate manufacturer's drone ignition system training;
 - 7) Flown a minimum of one flight with an ignition drone in the last 90 days.

Chapter 2 Wildland Fire Suppression

Wildland Fire Suppression Participation: The leadership of FFS, or other entity, may request assistance from FWC during a wildland fire suppression incident. This request will usually be for a wildland fire strike team to conduct mop-up operations. A wildland fire strike team consists of one wildland fire strike team leader, and two wildland fire strike team members per Type V or VI engine. Occasionally there will be a request for a bulldozer operator to facilitate mop-up operations. Standards for strike team members and leaders are outlined below. In addition,

requests may be made for personnel to fill positions on a suppression incident that are not covered by the following standards. The decision to assist, and the level of assistance provided, on fire suppression incidents will be made by the DHSC Division Director or their designee. Coordination of all requests will be handled by the WHM Section Leader or their designee.

- A. Wildland Fire Strike Team Member: To participate on wildland fire strike teams in support of suppression efforts, strike team members shall have successfully completed the following level of training and have the specified level of experience:

- 1) Qualified at or above Crew Member level for prescribed burning;
- 2) Southern Area Engine Academy or PMS 419*;
- 3) Participated on at least ten prescribed burns and/or wildland fire suppression incidents.

**Employees who have not yet completed Southern Area Engine Academy or PMS 419 can be approved by the WHM Section Leader or their designee to serve on a wildland fire strike team. Exceptions can be granted when available strike team personnel are not sufficient to meet the requested need. Training and experience levels should be considered when approving exceptions.*

- B. Wildland Fire Strike Team Leader: To serve as team leader for wildland fire strike teams in support of suppression efforts, strike team members shall have completed the following level of training and have the specified level of experience:

- 1) Qualified at or above Wildland Fire Strike Team Member;
- 2) Basic Incident Command System (I-200 or ICS-200);
- 3) Experience as a Certified Prescribed Burn Manager on at least ten prescribed burns and experience as a Wildland Fire Strike Team Member on at least one incident.

- C. Wildland Fire Bulldozer Plow Unit Operator: To independently operate dozer fire-plow units in support of suppression efforts, strike team members shall have completed the following level of training and have the specified level of experience:

- 1) Qualified at or above Crew Member level for prescribed burning;
- 2) Dozer Operations on Florida Prescribed Burns, the wildland fire portion of FFS Basic Fire Control Training, or an equivalent course as approved by the DHSC Division Director;
- 3) Participated on at least ten prescribed burns or wildland fire suppression incidents;
- 4) Experience and demonstrated proficiency to supervisor operating a dozer plow unit.

Chapter 3 Safety

3.1 Personal Protective Equipment (PPE): Required Personal Protective Equipment for all wildland fire activities includes*:

- A. Flame Resistant Shirt and Pants, or Jumpsuit
- B. Wildland Fire Hard Hat
- C. Leather Gloves
- D. Leather Boots – ≥ 8 " Lace-up
- E. Eye Protection
- F. Hand-held Radio
- G. Fire Shelter

**Safety considerations and/or vegetation types may dictate that crew members wear additional equipment or deviate from the above required equipment. The burn manager/strike team leader shall determine what PPE will be worn by their crew to maximize safety, and shall document any deviations on their burn prescription or wildfire crew briefing report.*

3.2 Physical Standards: Prescribed burning and fire suppression are physically demanding activities. In addition to successfully completing the PAT, each prescribed burn crew/strike team member shall maintain a fitness level that will allow full participation in these activities. It is the burn crew/strike team member's responsibility to make the burn manager/strike team leader aware of any limitations that may restrict or prevent full participation.

3.3 Mobile Equipment: The following is a list of required items for mobile equipment used during wildland fire activities. Mobile equipment includes all-terrain vehicles, utility vehicles, airboats, swamp buggies, trucks, tractors, and bulldozers.

- A. An ABC fire extinguisher that has been inspected, serviced, and maintained in accordance with the manufacturer's maintenance procedures shall be in or on all mobile equipment. Below are minimum extinguisher sizes (net extinguishing agent weights):
 - 1) All-terrain and utility vehicles – 2.5 pound
 - 2) Trucks and tractors – 5 pound
 - 3) Bulldozers and Swamp Buggies – 10 pound (could be two 5 pound extinguishers)
 - 4) Vessels – 5 pound (could be two 2.5 pound extinguishers)
- B. All-terrain vehicles, utility vehicles, swamp buggies, and trucks used in the interior of a burn unit shall have an operational winch.
- C. All mobile equipment used in the interior of a burn unit shall have an operational water delivery system with at least five gallons of water.

3.4 Public Safety: All wildland fire operations shall be conducted in a manner that protects the public and minimizes the potential adverse impacts of both smoke and fire. Prescriptions shall be prepared with public safety as the highest priority.

Chapter 4 Incident Reviews

This chapter outlines the procedure for reviewing a prescribed fire whose results include negative consequences on DHSC managed lands or from a burn managed by a DHSC burn manager. The purpose of a fire-related incident review is to gather facts regarding the incident and, if possible, recommend actions that may help minimize the chance of reoccurrence.

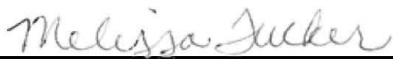
4.1 Fire-related Incident: A fire or smoke related incident that includes any of the following:

- A. FFS Notice of Violation;
- B. Conducting a burn outside of the prescription;
- C. Fire leaves the prescribed burn unit and resources in addition to the burn crew are utilized;
- D. Fire leaves the WMA system;
- E. Prescribed burn activities cause property damage or personal injury;
- F. Post-burn combustion poses a threat to public safety, property, or natural resources.

4.2 Reporting of Fire-related Incidents: The burn manager shall notify the appropriate WHM Regional Biologist about the incident as soon as possible, but no later than 8:30 am the day after the fire-related incident occurred. For extended post-burn combustion, the burn manager shall notify the Regional Biologist if the combustion and/or associated smoke may pose a threat to public safety, property, or natural resources. The Regional Biologist shall notify the WHM Section Leader or their designee of the incident as soon as possible. The notification should include the following:

- A. Date, time, and location of incident;
- B. Brief description of the incident and current status;
- C. Other agencies or entities assisting;
- D. Resources needed.

4.3 Fire-related Incident Review: The WHM Section Leader shall determine the need for and the scope of fire-related incident reviews. The WHM Section Leader or their designee will coordinate the incident review. Within 60 days of completing a fire-related incident review, the reviewer(s) shall submit a report to the DHSC Division Director for approval.

Approved:		April 29, 2025
	Division Director	Date

11.12 Timber Assessment



TIMBER ASSESSMENT

CYPRESS CREEK WILDLIFE MANAGEMENT AREA

Prepared By:

Eric Deprez and Tristan Ross

Columbia and Baker County Foresters

Florida Forest Service

December 18, 2025

PURPOSE

This document is intended to fulfill the timber assessment requirement Cypress Creek Wildlife Management Area (CCWMA) of the Florida Fish and Wildlife Conservation Commission (FWC), as required by Section 1. Section 253.036, Florida Statutes. The goal of this timber assessment is to evaluate the potential and feasibility of managing timber resources for conservation and revenue generation purposes.

BACKGROUND

LOCATION

The CCWMA is in Northcentral Florida in northern Columbia County and encompasses approximately 1,622 acres. The CCWMA lies in all or parts of Sections 13, 23, 24, 25, and 26 Township 2 North, Range 16 East, and Sections 19 and 30 Township 2 North, Range 29 East (Figure 3). The CCWMA is located approximately 1.75 miles south of the Florida-Georgia border, and 3.25 miles north of Benton. Other municipalities near the CCWMA include White Springs (15 miles southwest) in Hamilton County and Macclenny (37 miles southeast) in Baker County. CCWMA is 2 miles east of the Suwannee River and located in the vicinity of an extensive network of conservation lands, including lands managed by the United States Department of Agriculture (USDA), The Florida Fish and Wildlife Conservation Commission, Florida Department of Agriculture and Consumer Services (FDACS), Suwannee River Water Management District (SRWMD), and Columbia County. Federally owned properties in the vicinity include the Osceola National Forest and Wildlife Management Area that is southeast of the CCWMA.

ACCESS

There are three main entrances to CCWMA. All entrances to the CCWMA are on the western boundary via US 441. The roads have been maintained adequately under previous ownership. FWC will target improvements to the road network where needed to expand access for all management activities. Culverts and low water crossings should be installed to aid in the accessibility to stands during wet periods. Armoring of some eroded road areas where water sits during the wet season should be completed. Some of these roads may require reinforcement with

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rock or shell to support the heavy trucks used in timber operations. These road improvements will also benefit other activities including public access, wildfire control, and prescribed burning operations. Also, road improvements will reduce wear and tear on FWC vehicles and equipment, while reducing travel time across CRWMA.

PAST LAND MANAGEMENT

CCWMA was previously owned by a family that handed the land down through generations. It was leased out to Rayonier for timber production and used by the family for hunting. Various food plots remain, along with the planted timber discussed in this report.

ADJACENT LAND USE

Most of the adjacent land is privately owned non-industrial timberland. Sandlin Bay is a large swamp located directly to the east that connects to CCWMA.

GOALS and OBJECTIVES

Field visits and discussions with the FWC Area Biologist were conducted in November of 2025.

GOALS

Habitat Restoration Goal:

- Continue to conduct habitat/natural community improvement and restoration including native plantings, mowing, shredding, and prescribed fire.

Exotic and Invasive Species Maintenance and Control Goal:

- Remove exotic and invasive plants and animals and conduct needed maintenance and control.

Hydrological Preservation and Restoration Goal:

- Protect water quality and quantity, restore hydrology to the extent feasible, and maintain the restored condition.

Forest Resource Management Goal:

- Manage timber resources to improve or restore natural communities for the benefit of wildlife.

Imperiled Species Habitat Maintenance, Enhancement, and Restoration Goal:

- Maintain, improve, or restore imperiled species populations and habitats.

Other Wildlife (Game and Nongame) Habitat Maintenance, Enhancement, and Restoration Goal:

- Monitor, maintain, improve, or restore game and non-game species habitats.

Capital Facilities and Infrastructure Goal:

- Develop and maintain the capital facilities and infrastructure necessary to meet the goals and objectives of this management plan.

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OBJECTIVES

Habitat Restoration Objectives:

- Continue to conduct the prescribed burn program on the fire adapted communities each year.
- Continue to conduct habitat/natural community improvements as necessary.

Exotic and Invasive Species Maintenance and Control Objective:

- Annually monitor and treat infestation of Florida Invasive Species Council (FISC) Category I and Category II invasive plant species as needed.

Hydrological Preservation and Restoration Objective:

- To enhance natural hydrological functions, continue to install and maintain low-water crossings and culverts as appropriate.

Forest Resource Management Objectives:

- Cooperate with the FFS to complete an updated Timber Assessment.
- Prepare and implement a Timber Management Plan including reforestation, harvesting, and prescribed burning activities based on restoration and maintenance needs of the natural communities and other goals established for management of the CRWMA.
- Consult with the FFS or a professional forestry consultant regarding forest management activities as appropriate.

Imperiled Species Habitat Maintenance, Enhancement, and Restoration Objectives:

- Continue to implement Wildlife Conservation, Prioritization and Recovery (WCPR) strategy by managing identified habitats and monitoring imperiled and locally important species.

Other Wildlife (Game and Nongame) Habitat Maintenance, Enhancement, and Restoration Objective:

- Continue to monitor game and non-game wildlife species as identified in the WCPR strategy.

Capital Facilities and Infrastructure Objectives:

- Develop and maintain trails.
- Improve and maintain roads as necessary and appropriate.



EXISTING CONDITIONS

ECOLOGICAL COMMUNITIES

This report is based on data from the communities noted in site visits. For the purposes of this report, only the pine plantations will be discussed. CCWMA contains 3 main pine stands planted in mesic flatwoods communities. The type of flatwoods the plantations are formed from will determine the necessary management actions. The naming scheme for the stands is as follows.

Year established, species planted

Example: 2002 slash pine

Mesic flatwoods are primarily located on the northern, western, and southern borders of the property and consist of pine plantations. Current conditions of the mesic flatwoods are fairly standard of pine plantations- low density groundcover vegetation, thick duff layers consisting of pine straw, and patches of woody vegetation with various vines. Denser understory is prevalent along stand edges and skid trails. Foresters from the Florida Forest Service conducted a cruise of the flatwoods in late November-early December of 2025. The results showed there was a small amount of merchantable timber volume in older stands of the mesic flatwoods.

2013 SLASH PINE

The 2013 slash pine stand has a canopy of young-to-middle aged slash pine with 240 square feet of basal area per acre. This stand has the lowest average diameter at breast height (DBH) and the highest basal area of the stands, likely due to it remaining unthinned. The average DBH is around 5.9 inches. A high seedling survival rate may have also occurred due to nursery selection or climate factors at the time of planting. Average heights in this management unit are still low, at around 30 feet, as these trees are still young and have yet to have a first thinning. Due to the low heights, some mortality is likely if fire is applied, even under good conditions. Fuel reduction mowing would be needed to burn this stand without significant risk of pine mortality.

2003 SLASH PINE

The 2003 slash pine stand is comprised of mature slash pine with 156 square feet of basal area per acre. This stand was planted at a spacing to accommodate pine straw harvesting. The stand was never thinned, resulting in many trees remaining suppressed. The average DBH of the stand is 8.3 inches. The previous pine straw management of this stand reflects a bare-to-low density understory and a thick duff layer. This stand will require extensive groundcover restoration. Extra precautions must be taken in the event of a prescribed burn.



2002 SLASH PINE

The 2002 slash pine stand is the earliest established pine stand of CCWMA. It is the only stand that has been thinned, which released the trees to grow more sufficiently. It has a basal area of 132 square feet per acre and an average DBH of around 9.5 inches. The understory of this stand is denser along the cut rows. Fuel reduction mowing may be required before conducting a prescribed burn to prevent a crown fire or pine mortality.

SOILS AND PRODUCTIVITY

The U. S. Department of Agriculture Natural Resource Conservation Service (NRCS) publishes soil series profiles and site index for pines. The following is a generalized summary of the most prevalent soils.

Table 1. CCWMA soils

SOIL SERIES	
Soil Series	Slope/Drainage
2013 slash pine	
Sapelo fine sand	Slope 0-2% poorly drained
Mascotte fine sand	Slope 0-2% poorly drained
2003 slash pine	
Mascotte fine sand	Slope 0-2% poorly drained
2002 slash pine	
Sapelo fine sand	Slope 0-2% poorly drained
Mascotte fine sand	Slope 0-2% poorly drained

GENERAL TIMBER MANAGEMENT GUIDELINES

Note: Any timber harvest, site preparation, seedling planting, or other timber management activity will adhere to Florida's Silviculture Best Management Practices (BMP), available online. In addition, all known historical and archeological sites will also be protected.

A useful measurement of tree stocking and density is basal area (BA) per acre. BA is the total cross-sectional area (square feet) of all the trees at a certain point in the stand. The diameter of individual trees is measured at four and one-half feet above the ground. This height is referred to as the diameter breast height (DBH). A fully stocked pine stand has enough trees per acre of a size large enough to utilize the growing space without causing over-crowding. Slash pine and longleaf pine stands with 80 to 120 square feet of BA per acre are considered fully stocked. It requires more, smaller diameter trees than it does larger diameter trees to equal one square foot of BA. For example: It takes 357 evenly spaced, six-inch DBH trees to equal 70 square feet BA

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per acre. Whereas only 89 twelve-inch DBH trees per acre equal the same 70 square feet BA. BA can be roughly correlated to crown coverage and therefore needle-cast. About 40 to 60 square feet BA per acre should provide sufficient needle-cast to carry prescribed fire and adequate sunlight for native grasses to be maintained.

Natural communities are dynamic things. A stand of scattered mature trees has not looked exactly as it does today throughout its existence. In natural, pine dominated forest systems trees die because they become old and are less able to withstand insect and disease attack. South Florida slash pine has a life expectancy of about 100 years. Longleaf pine has a life expectancy of 250 years or more. Bark beetles might invade a weakened tree then multiply and kill some of its neighbors. Lightning strikes and windstorms do the same thing. Thus, holes of various sizes are continuously created in the canopy. These openings allow full sunlight to reach the forest floor. In addition, lightning caused fires to burn away leaf litter and expose bare mineral soil. The bare soil and canopy openings permit large numbers of sun loving pine seedlings to become established and grow straight and tall.

Where naturally occurring, fire has kept the understory open, pine seedlings become established in these canopy holes at very high densities. It is common to have ten to twenty thousand seedlings per acre in scattered openings. Recurrent wildfires and competition for sunlight, moisture, and nutrients favor the strongest, fastest growing pine saplings. The rest die off continually over the life of a stand of trees until the trees mature and another opening is created that replaces the survivors with young seedlings again. The result is an uneven aged stand where each group of trees created by a canopy opening is about the same age. However, the stand is a mosaic of clusters that have different ages and densities. The long-term BA will fluctuate around a constant figure depending on soil productivity (as low as 20 square feet per acre on extremely poor sites, up to 80 square feet per acre on highly productive sites). The goal of ecologically based timber management is to mimic these natural processes and still harvest trees that are destined to die. The challenge is to capture the value of the timber while minimizing any negative impact on the system.

Thinning type harvests in pine stands help maintain the health and vigor of the stand by removing weak, diseased, and deformed trees. Enough co-dominant trees are removed during thinning to insure crown retention and continued growth in the remaining trees. To create uneven aged pine stand, group selection openings are cut during thinning activities. These openings allow young trees to become established by seeds falling from nearby trees or by planting seedlings. Since pine seedlings require direct sunlight to grow, all trees within the opening must be removed. However, to minimize the visual impact, openings can be as small as one-half acre. For natural regeneration, the minimum width of the openings is about two to three chains (1 chain=66 feet). Lack of cover followed by dense stands of young pine trees created by large openings can become impediments to animal foraging and migration patterns. For example: to

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prevent saplings growing in these openings from becoming barriers to RCW flight patterns, group selections should not exceed five acres in size.

Combined acreage of all openings cut within a stand during each thinning is kept to no more than five to 10 percent of the total stand acreage. Since each stand only gets thinned every 10-plus years, overharvesting of old-growth trees is avoided, and a steady supply of young trees is ensured. For example: suppose that today there is a stand of 20-year-old pine trees. Every 10 years 95 percent of the stand gets thinned to keep the canopy open and five percent clearcut to allow regeneration of young pines. At the end of the 10th cutting cycle (100 years from now) 50 percent of the stand would have 120 plus year-old trees and 50 percent would range from seedlings to 100-year-old trees. If the cutting cycle is extended to 20 years (which is more likely on poorer soils) and 10 percent is cut for openings, the age distribution at the end of 100 years is the same as for the 10-year cycle.

Planting activities, group selection openings, hardwood control measures, and natural regeneration in thin stands will produce young tree stands of various sizes. A well-stocked stand of young pine trees will usually require the removal of weak, diseased, and some overcrowded trees beginning by the age of 15 to 20 years. By this time, the crowns have grown together, and ground cover begins to get shaded out and hardwoods can begin to compete with shade intolerant pine seedlings. Harvesting a portion of the timber maintains healthy pine growth and provides sunlight to the forest floor. Trees removed in the thinning process can be sold to generate revenue to be used in other land management projects. Likely markets for early thinnings from pine stands currently include pulpwood, fence posts and landscape mulch.

Due to shading effects, trees grown in tight spacing produce fewer and smaller lower limbs. The shedding of the lower limbs makes them more desirable for fence posts and later, more valuable products. Planting at least 500 seedlings per acre also helps ensure the marketability of the pine trees and increases future management options.

The need for second and later thinnings depend on how low the BA was taken in the first thinning and successive growth rate. If the BA is reduced to 50 to 70 square feet per acre in the first cut, another harvest will probably be needed in 10 to 15 years. Trees removed from the second and succeeding operations produce ever more valuable products and therefore more money. Current market conditions have some second-thinning products worth at least five times as much as the original wood that was cut. Third thinning trees can be worth twice as much as the second thin. All this revenue can be generated and still have a stand of pine trees and a healthy ecosystem.

TIMBER MANAGEMENT RECOMMENDATIONS

CCWMA is a large tract of land, mainly composed of stands that are too wet for pine plantations. A more detailed timber stand inventory and harvest plan will be required for formal harvesting.

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The following are general descriptions and management recommendations. One of the main objectives on this tract is to control exotic and invasive species in the understory and eventually establish and maintain a healthy ground cover of native grasses and forbs. Adequate sunlight must reach the ground to promote native ground cover species. From a timber management standpoint, this means that in general pine-stocking levels should be maintained at a BA range of 40 to 60 square foot per acre. This would be after any existing exotic, and invasive species in the understory are controlled. Opening the timber stand too much while the exotic and invasive species are present would promote additional growth and spread. The exact BA to control the exotic and invasive species will be determined through trial and error. Once problem species are controlled, thinning should be conducted to open the canopy and generate revenue. The stand of slash pine established 2013 should be given three years to grow undisturbed. After this period, the stand should be third-row thinned with selective removal of diseased, malformed, less healthy trees. The stand of slash pine established 2003 has not been previously thinned, even though it is well beyond sufficient age. It should be subjected to the same intensity of thinning, third-row with selective removal. The final timber stand was established in 2002 and has previously been fourth-row thinned. While this reduces the basal area, it has not reduced the amount low enough for new stand objectives. Further thinning, either in the form of row-thinning or seed tree/shelterwood harvests are advised.

SUMMARY

In rapidly urbanizing areas of the state, public lands are often the only refuges for native plant and animal communities. Restoring and maintaining these ecosystems is an important function of land managers. Merchantable timber is a byproduct of responsible ecosystem management. Carefully designed timber harvests: protect water quality, create openings in the tree canopy allowing sunlight to reach the forest floor, promote herbaceous growth and pine regeneration. The seedlings then grow to replace trees killed by lightning, wind damage and insects or disease. Mechanical equipment involved in timber harvests helps reduce dense understory vegetation such as saw palmetto and undesirable hardwoods. Thinning of dense timber stands can result in enough space between trees to allow a tractor pulled roller-drum chopper to be used, further reducing the understory vegetation. This fuels reduction results in easier, safer, and more effective prescribed fire application. The ability for FWC to maintain a frequent burn schedule is essential to maintaining a healthy ground cover. These clearings and their ecotones are favorite spots used by wildlife for feeding, resting, mating, nesting, and rearing of offspring. FWC land managers of CCWMA have expressed a desire to restore native grasses, and just as important to these natural communities is the re-establishment of vertical structure provided by trees and the reintroduction of periodic fires. Needle litter from growing pines helps carry these frequent, low intensity burns. In all restoration scenarios the exact methods and results will be guided by the best available ecological information to conserve biodiversity of the affected habitats. Also,

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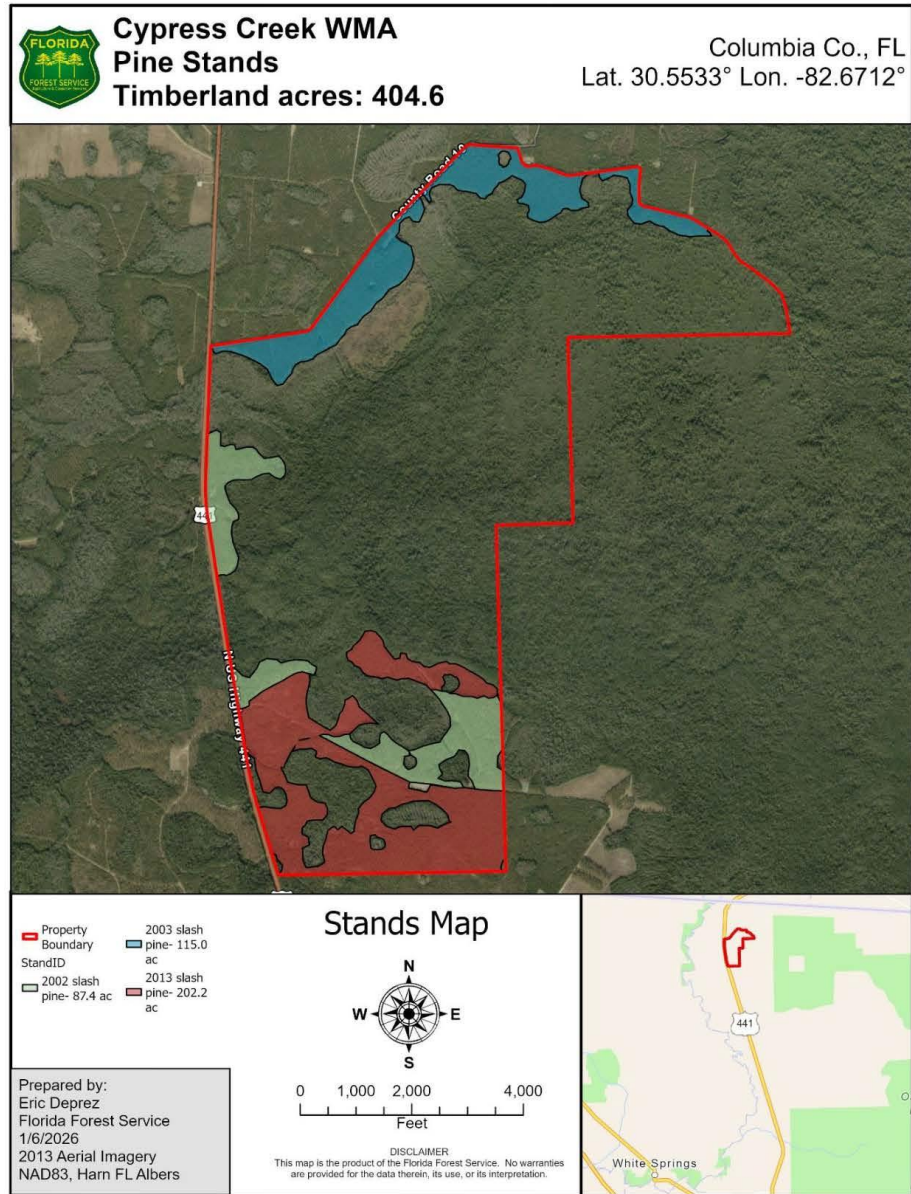
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timber sale revenues can relieve the long-term burden on taxpayers for much needed management activities. As general revenue funds become more difficult to secure, revenues generated from the sale of timber thinnings could be used to help pay for CCWMA Comprehensive Management Plan's projects like habitat restoration, reforestation, prescribed burning, and road repair. Clearly, managing trees for timber as part of the overall management strategy is worthwhile for many reasons.



STANDS MAP



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11.13 Management Procedures Guidelines – Management of Archaeological and Historical Resources

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

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

A. Historic Property Definition

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

B. Agency Responsibilities

Per Chapter 267, F.S. and state policy related to historic properties, state agencies of the executive branch must provide the Division of Historical Resources (Division) the opportunity to comment on any undertakings with the potential to affect historic properties that are listed, or eligible for listing, in the National Register of Historic Places, whether these undertakings directly involve the state agency, i.e., land management responsibilities, or the state agency has indirect jurisdiction, i.e. permitting authority, grants, etc. No state funds should be expended on the undertaking until the Division has the opportunity to review and comment on the undertaking. (267.061(2)(a))

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

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

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

C. Statutory Authority

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

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

D. Management Implementation

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

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

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

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

E. Archaeological Resource Management (ARM) Training

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

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

F. Matrix for Ground Disturbance on State Lands

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

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

G. Human Remains Treatment

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

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

H. Division of Historical Resources Review Procedure

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

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

* * *

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

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

StateLandsCompliance@dos.myflorida.com

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

11.14 FWC Apiary Policy

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

Apiary Policy

Division of Habitat and Species Conservation

Issued by:
Terrestrial Habitat Conservation and Restoration Section
9/1/2010

Enclosed is the HSC/THCR Apiary Policy for all Florida Fish and Wildlife Conservation Commission's Wildlife Management Areas and Wildlife and Environmental Areas.

1

DIVISION OF HABITAT AND SPECIES CONSERVATION POLICY

Issued September 2010

**SUBJECT: APIARY SITES ON FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION
 WILDLIFE MANAGEMENT AREAS AND WILDLIFE AND ENVIRONMENTAL AREAS**

STATEMENT OF PURPOSE: It is the intent of this policy to determine which Florida Fish and Wildlife Conservation Commission (FWC) Wildlife Management Areas or Wildlife and Environmental Areas (WMA/WEA) may have apiary sites, and provides direction on site location, management and administration of said apiaries.

Definitions

Apiary – A place where bees and beehives are kept, especially a place where bees are raised for their honey.

Apiary Site – An area set aside on a WMA/WEA for the purpose of allowing a beekeeper to locate beehives in exchange for a fee as established by contract between the beekeeper and FWC.

Apiary Wait List – An apiary wait list will be maintained by the Terrestrial Habitat Conservation and Restoration (THCR) Section Leader's Office based on applications received from interested beekeepers. Only qualified apiarists will be added to the list. To become qualified the new apiarist must submit an application form and meet the criteria below under the section titled "Apiary Wait List and Apiary Application."

Beekeeper/Apiarist – A person who keeps honey bees for the purposes of securing commodities such as honey, beeswax, pollen; pollinating fruits and vegetables; raising queens and bees for sale to other farmers and/or for purposes satisfying natural scientific curiosity.

Best Management Practices – The Florida Department of Agriculture & Consumer Services (FDACS; Division of Plant Industry (DPI), Apiary Inspection Section, P.O. Box 147100, Gainesville, FL 332614-1416) provides Best Management Practices (BMP) for maintaining European Honey Bee colonies and FWC expects apiarists to follow the BMP.

Hive/Colony – Means any Langstroth-type structure with movable frames intended for the housing of a bee colony. A hive typically consists of a high body hive box with cover, honey frames, brood chambers and a bottom board and may have smaller super hive boxes stacked on top for the excess honey storage. A hive/colony includes one queen, bees, combs, honey, pollen and brood and may have additional supers stacked on top of a high body hive box.

Establishment of Apiary Sites on WMA/WEA

During the development of an individual WMA/WEA Management Plan, apiaries will be considered under the multiple-use concept as a possible use to be allowed on the area. "Approved" uses are deemed to be in concert with the purposes for state acquisition, with the Conceptual State Lands Management Plan, and with the FWC agency mission, goals, and objectives as expressed in the agency strategic plan and priorities documents. Items to consider when making this determination can also include:

- Were apiaries present on the area prior to acquisition?
- Are there suitable available sites on the WMA/WEA?
- Will the apiary assist in pollination of an onsite FWC or offsite (adjacent landowner) citrus grove or other agricultural operation?

For those WMA/WEAs that have not considered apiaries in their Management Plan, upon approval of this policy Regional Staff will work with the Conservation Acquisition and Planning (CAP) staff and THCR Section leadership to determine if apiaries are an approved use on the area. If apiaries are considered an approved use then a request will be made to the Division of State Lands to allow this use as part of an amended Management Plan. This request will be made through the THCR's Section Leader's office and coordinated by the CAP.

Determination of apiary site locations on WMA/WEAs should be done using the following guidelines:

- Apiary sites should be situated so as to be at least one-half mile from WMA/WEA property boundary lines, and at least one mile from any other known apiary site. Exceptions to this requirement must be reviewed by the Area Biologist and presented to the THCR Section Leader for approval.
- Site should be relatively level, fairly dry, and not be prone to flooding when bees would normally be present.
- Site should be accessible by roads which allow reasonable transfer of hives to the site by vehicle.
- If a site is to be located near human activity, such as, an agricultural field, food plot, wildlife opening, campsites, etc., or if the site may be manipulated by machinery at a time when bees would be present, then the apiary site should be located at a minimum of 150 to 200 yards from the edge of that activity. This will ensure minimal disturbance to the bees and minimize incidents with anyone working in the area.

- It is preferable to have apiary sites located adjacent to or off roads whenever possible. If traditional apiary sites were located on roads and the Area Biologist determines that the site will not impact use of the road by visitors then it will be allowed.
- FWC Area Biologist shall select apiary site(s) and the site(s) selected should not require excessive vegetation clearing (numerous large trees, dense shrubs) or ground disturbance (including fill).

WMA/WEA Staff Responsibilities

Area Biologist on WMAs/WEAs with approved apiary sites will forward a GIS shapefile depicting all the apiary site polygon(s), including a name or number with coordinates for each apiary site, to the THCR Contract Manager.

Area Biologist will monitor each apiary site no less than once a year to determine if the beekeeper is abiding by the contract requirements. If violations are noted, staff should bring them to the attention of the beekeeper for correction. If violations continue staff should notify the THCR Contract Manager who will determine if or what additional action is warranted.

Area Biologist will establish and maintain firelines around the apiary site to ensure the apiary site is ready when a planned burn is scheduled.

Area Biologist will advise the beekeeper of burn plans, road work, gate closures, or other site conditions and management activities that may affect the beekeeper's ability to manage or access the apiary site.

Area Biologist is not responsible to ensure access roads are in condition suitable for beekeepers to access their hives with anything other than a four wheeled drive vehicle. (The site of the apiary may be high and dry, but the roads accessing them may be difficult to impossible to get a two wheeled drive vehicle into during extreme weather, e.g., heavy rainfall events.)

Apiary Wait List and Apiary Application

An electronic waiting list for apiary sites will be maintained by the THCR's Contract Manager for each WMA/WEA. To be placed on the waiting list an interested beekeeper must submit an apiary application form to the contract manager (See Enclosed Application Form). Each applicant will be considered based on the following criteria:

- Proof of a valid registration with the FDACS/DPI.
- Proof of payment of outstanding special inspection fees for existing sites.
- A validated history of being an apiary manager.
- Three references that can attest to the applicant's beekeeping experience.

If an apiary site becomes available on a WMA/WEA and there are beekeepers on the waiting list interested in that particular area, those individuals meeting the criteria above will be given preference. If there is more than one beekeeper meeting the criteria with their name on the list then a random drawing will be held by the THCR Contract Manager to determine who will receive the site. Beekeepers on the waiting list will be notified in writing of the random drawing's date/location and will be invited to attend. The individual's name selected during this drawing will be awarded the contract.

Apiary agreements are non-transferable. Each agreement serves as a contract between a specific individual or company and FWC, and the rights and responsibilities covered by an individual agreement cannot be transferred.

Contracts

Apiary contracts are for five (5) years and renewals are contingent upon a satisfactory performance evaluation by Area Biologist and concurrence of the THCR Section Leader. Approval is based on apiarist performance, adherence to rules and regulations and general cooperation. If an Area Biologist decides an apiarist whose contract is expiring is unacceptable he may recommend not approving the new contract. If this transpires then the wait list process using random selection will be used. If there is no apiarist on a current wait list then the apiarists who are in good standing with existing contracts will be notified to see if any want to be put on the wait list for the drawing. If none are interested then the site will be put on hold pending a valid request.

Pricing of Apiary Site(s)

Cost of each apiary site will be \$40 annually which will include up to 50 beehives. Additional beehives will be charged at the rate of \$40 per 50 beehives.

Pricing examples:

- A beekeeper is leasing 2 apiary sites with up to 100 beehives - the fee per year is \$80.
- A beekeeper is leasing 3 apiary sites with up to 200 beehives - the fee per year is \$160.

Note: The maximum number of hives/colonies allowed on an apiary site will be at the discretion of the apiarist. However, the apiarist is strongly recommended to follow the BMP as recommended by the FDACS/DPI. In addition to providing the BMP, FDACS/DPI's management has recommended 50 hives per site in pineland communities and no more than 100 hives per site in areas with bountiful resources. However, FWC will not dictate the number of hives on a site unless they create land management issues.

Bear Depredation Control at Apiary Site(s)

Beekeepers are required to consult with the WMA/WEA Area Biologist to see if electric fencing is required for their apiary sites. If the Area Biologist requires electric fencing then the

Beekeeper shall construct and maintain electric fences for each apiary site. Numerous electric fence designs have been used to varying success and FWC as a courtesy provides an electric fence technical information bulletin with each Agreement. This bulletin is attached in order to assist the Beekeeper and/or provide a design that has been proven to be reasonable effective.

SUBJECT MATTER REFERENCES

Apiary Inspection Law - Chapter 586, Florida Statutes (see <http://www.leg.state.fl.us/Statutes/>), Rule Chapter 5B-54, Florida Administrative Code (see www.flrules.org).

The Board of Trustees of the Internal Improvement Trust Fund – Recommended Apiary Agreement Guidelines For Apiaries & Revisions to an Agreement for Apiary Activities on State Lands on September 23, 1986
S:\HSC\THCR\APIARY.BACKUP.POLICY\dlissupport@dos.state.fl.us 20100903 111446.pdf

Senate Resolution 580, September 21, 2006: http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=109_cong_bills&docid=f:sr580ats.txt.pdf

Attachments

Sample Apiary Agreement W/Attachments (Map Placeholder & Electric Fence Bulletin)

Sample Apiary Site Application Form W/Mission Statement

Best Management Practices for Maintaining European Honey Bee Colonies

Sample of Random Selection Process Procedure

APPROVED:

Division Director or Designee

DATE: _____

APIARY AGREEMENT

AGREEMENT FOR APIARY ACTIVITIES ON STATE LANDS

THIS AGREEMENT is made by and between the Florida Fish and Wildlife Conservation Commission, 620 South Meridian Street, Tallahassee, FL 32399-1600, hereinafter known as "the COMMISSION," and (Insert Name and Address of Apiarist Here), telephone number (Insert Phone Number of Apiarist Here), hereinafter known as "the USER."

WITNESSETH

In consideration of the mutual promises to be kept by each and the payments to be made by the USER, the parties agree as follows:

1. TERM: This Agreement will begin (Insert date here) or the date signed by both parties, whichever is later, and will end five (5) years from the date of execution. Issuance of a new five (5) year Agreement is contingent upon satisfactory performance evaluation by the Area Biologist and approval of the THCR Section Leader.
2. The COMMISSION Agrees:
 - a. To provide apiary sites on state lands, which will be identified by the COMMISSION staff and located on the property identified in (4)(f) below.
 - b. To provide technical assistance for bear-proofing, if required by Area Biologist, of sites made available under this Agreement.
 - c. To allow the USER to place a total number of (insert number of hive boxes here) hive boxes on the COMMISSION-managed property at the apiary site(s).
3. The USER Agrees:
 - a. To pay (Insert Total Dollars Here) on or before the execution date of this Agreement and each year thereafter on or before anniversary date of the original contract execution date, with check or money order payable to the Florida Fish and Wildlife Conservation Commission. All payments shall be remitted to The Florida Fish and Wildlife Conservation Commission, Finance and Budgeting, Accounting Section, PO Box 6150, Tallahassee, FL 32399-6150, and a copy of the check to The Florida Fish and Wildlife Conservation Commission, Terrestrial Habit Conservation and Restoration Section, Attn: Section Leader, 620 South Meridian Street, Tallahassee, Florida 32399-1600.

- b. To have no more than (Insert Number of Hive boxes here) hive boxes on the property at one time.
- c. To comply with the Florida Honey Certification and Honeybee Law, Chapter 586, Florida Statutes, and Rule 5B-54, Florida Administrative Code, and all other applicable federal, state, or local laws, rules or ordinances.
- d. To not damage, cut or remove any trees in the course of preparing for or conducting operations under this Agreement.
- e. To repair within 30 days of occurrence any damage to roads, trails, fences, bridges, ditches, or other public property caused by USER'S operations under this Agreement based on discretion of the COMMISSION to ensure the WMA/WEA management goals are met. All repairs will be coordinated with the Area Biologist to ensure management goals are met. If USER does not comply within the 30 day requirement, then the COMMISSION may use a third party to perform the repairs and charge the USER accordingly.
- f. To report any forest fires observed and to prevent forest fires during the course of operations under this Agreement.
- g. To abide by all WMA/WEA rules and regulations in addition to items in this Agreement.
- h. To notify the Area Biologist within 24 hours when a bear depredation event occurs.
- i. To post their name in an agreed upon location at each site covered by this Agreement or otherwise use an identifying system that is approved by the Area Biologist.
- j. To furnish proof of general liability insurance prior to starting apiary activities on state property or within 30 days of execution of this Agreement, whichever is earlier, and proof of annual renewal of the general liability insurance policy prior to or upon expiration date of the policy. The USER shall maintain continuous general liability insurance throughout the term of this Agreement for no less than \$300,000 for bodily injury and \$100,000 for property damage for each occurrence. Such a policy shall name the COMMISSION as the Certificate Holder. The USER's current certificate of insurance shall contain a provision that the insurance will not be canceled for any reason during the term of this Agreement except after thirty (30) days written notice to the COMMISSION.

- k. To be liable for all damage to persons or property resulting from operations under this Agreement, and to release, acquit, indemnify, save and hold harmless the COMMISSION, its officers, agents, employees and representatives from any and all claims, losses, damages, injuries and liabilities whatsoever, whether for personal injury or otherwise, resulting from, arising out of or in any way connected with activities under this Agreement or activities occurring from any other source not under this Agreement and the USER further agrees to assume all risks of loss and liabilities incidental to any natural or artificial condition occurring on state lands cover by this Agreement.
 - l. To construct and maintain electric fences, if required by the Area Biologist at the Area Biologist's discretion, to provide protection of apiaries from black bear depredation consistent with the technical information bulletin attached to this agreement, and, if so required, to maintain an open buffer around the fencing of five (5) feet or more. (See Attachment 1)
 - m. To remove all personal property from the site within thirty (30) days of termination or expiration of this Agreement. The USER understands that after this time, all the USER'S personal property remaining on the WMA/WEA shall be deemed abandoned and become the property of the COMMISSION, which will be utilized or disposed of at the sole discretion of the COMMISSION, and that reasonable storage and/or disposal fees and/or costs may be charged to the USER.
4. The parties mutually agree:
- a. This Agreement is not transferable.
 - b. The USER's failure to submit payment by the due date established herein may result in cancellation of the Agreement by the COMMISSION.
 - c. The USER's failure to submit proof of general liability insurance or proof of annual renewal in compliance with (3) (j) above may result in cancellation of this Agreement by the COMMISSION.
 - d. This Agreement shall be in effect for a period of five (5) years and issuance of a new agreement will be contingent upon a satisfactory performance evaluation and approval of the Area Biologist and THCR Section Leader.
 - e. Each apiary site shall be situated so as to be at least one-half (1/2) mile inward from state property lines and there shall be at least one (1) mile separation between sites. Exceptions to this rule must be reviewed by Area Biologist

presented to and approved by the Terrestrial Habitat Conservation and Restoration Section Leader.

- f. The property covered by this Agreement is described as follows: That the property sites (Insert Area Name) Wildlife Management Area are represented by Attachment 2.
- g. In accordance with Section 287.134, Florida Statutes, an entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid, proposal or reply on a contract to provide goods or services to any public entity; may not submit a bid, proposal or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant with any public entity; and may not transact business with a public entity.
- h. As part of the consideration of this Agreement, the parties hereby waive trial by jury in action brought by either party pertaining to any matter whatsoever arising out of or in any way connected with this Agreement. Exclusive venue for all judicial actions pertaining to this Agreement is in Leon County, Florida.
- i. This Agreement may be terminated by the COMMISSION upon thirty (30) days written notice to the USER in the event the continuation of the apiary activities are found to be incompatible with the COMMISSION'S management plans or for any other reason at the sole discretion of the COMMISSION.

This Area Intentionally Left Blank

IN WITNESS WHEREOF, the parties have executed this Agreement on the day and year last below written.

USER SIGNATURE

Date: _____

Witness

Witness

FLORIDA FISH AND WILDLIFE
CONSERVATION COMMISSION

Mike Brooks, Section Leader
Terrestrial Habitat Conservation and
Restoration

Date: _____

Approved as to form and legality

Commission Attorney

Date: _____

AGREEMENT
ATTACHMENT 1

**Use of Electric Fencing to Exclude Bears
And Prevent Property Damage**

Florida Fish and Wildlife Conservation Commission
Technical Information Bulletin (2001)

Electric fencing has proven effective in deterring bears from entering landfills, apiaries (beehives), livestock pens, gardens, orchards, and other high-value properties. Numerous electrical fence designs have been used with varying degrees of success. Design, quality of construction, and proper maintenance determine the effectiveness of an electric fence. The purpose of this technical bulletin is to assist the property owner in understanding and implementing electrical fencing as a tool to exclude and prevent damage caused by black bears.

Understanding Electric Fencing

Electric fencing provides an electrical shock when an animal comes into contact with the electrically charged wires of the fence. People unfamiliar with electric fencing often are afraid that it will injure, permanently damage, or kill an individual or pet that contacts the fence. **This is not true!** A properly constructed electric fence is safe to people, pets, and bears.

Components of Electric Fencing

An electric fence is composed of four main elements: a charger, fence posts, wire, and the ground rod.

Fence Charger. On a small scale electric fence (like that typically needed for bear exclusion), the largest cost is normally the fence charger. A fence charger's job is to send an electrical pulse into the wire of the fence. Contrary to popular belief, there is not a continuous charge of electricity running through the fence. Instead the charger emits a short pulse or burst of electricity through the fence. The intensity and duration of the electrical pulse varies with the type of charger or controller unit. Chargers with a high-voltage, short duration burst capacity are the best because they are harder to ground out by tall grass and weeds. These types are also the safest, because, even though the voltage is high (5 kilovolts) the duration of the burst is very short (2/10,000 of a second) (FitzGerald, 1984).

Two basic energy sources for chargers are batteries (12-volt automotive type) and household current (110 volt). Battery-type chargers are typically cheaper to purchase but require more maintenance because of the necessity of charging the battery. The advantage of a battery powered charger is that it can be used in a remote location where 110-volt current is not available. Most units that are powered by a fully charged 12-volt deep-cycle batteries can last three weeks before needing a charge. Addition of a solar trickle charger will help prolong the duration of effective charge in 12-volt batteries.

Fence Posts. On small scale fences, the posts are normally the second largest expense involved in construction. Therefore, when planning an electric fence it is a good idea to utilize existing fencing in order to save money. If no existing fence is available, posts will need to be placed around the area needing protection. Posts may be wood, metal, plastic, or fiberglass. Wood and metal posts will need to have plastic insulators attached to them which prevent the electric wire from touching the post causing it to ground out. Plastic and fiberglass posts do not need insulators, the wire may be affixed directly to these posts. Wood and metal posts are typically more expensive and require the added expense of insulators, however, they are more durable and generally require less maintenance.

Wire. Fourteen to seventeen gauge wire is the most common size range used in electric fencing. Heavier wire (a lower gauge number) is more expensive but carries current with less resistance and is more durable (FitzGerald, 1984).

The two most common types of wire are galvanized and aluminum. Galvanized wire is simply a steel wire with a zinc coating to prevent rust, which makes the wire last longer. Some wire is more galvanized than others. The degree or amount of zinc coating that is around the core steel wire is measured in three classes. A class I galvanization means the wire has a thinner coating of zinc than a class II galvanization. Class III galvanized wire has the heaviest zinc coating and will last longer than the class I and class II wire (FitzGerald, 1984). In general, the cost of galvanized wire increases as the class or amount of galvanization increases.

Aluminum wire is typically more expensive than the galvanized wire. Some advantages of aluminum wire are: it will not rust, it conducts electricity four times better, and it weighs one-third less than steel wire.

The Ground Rod. The ground is an often overlooked, but critical part of an electric fence. Without a good ground, electricity will not flow through the wire. When an animal touches a charged wire, the body of the animal completes the electrical circuit and the animal feels the “shock”. The current must travel from the charger through the wire to the animal and then back through the ground to the charger if the animal is to feel the shock. The soil acts as the return “wire” (ground) in the circuit. However, if a

bird was to land on a charged wire without touching the soil the bird would not complete the circuit and would be unaffected (FitzGerald, 1984). Some fence configurations use actual grounded wires within the fence to enhance the grounding system. The ground may be a commercial ground rod or a copper tube or pipe driven six to eight feet in moist soil. Copper is expensive, so a copper coated steel pipe or any other good conducting metal pipe will work also. Very dry soil can effect the ability to create a good ground and has sometimes been a problem during drought conditions. Pipe may be a better choice than a solid rod during drought conditions, because water may be poured down the ground pipe to improve the ground. Some fence configurations use wires as the grounding system, rather than relying solely on the soil as a ground.

Recommended Electric Fence to Deter Black Bears

Conditions at fence sites will vary and will determine what the most effective fence configuration will be. Commission biologists welcome the opportunity to visit sites and provide custom tailored advice on constructing an effective electric fence. The following recommendation will cover most situations with low to moderate pressure from black bears. Use a five strand aluminum wire fence that is 40 inches high with wire spacing every eight inches apart using the previously mentioned wired grounding system (see Figure 1). The wire closest to the ground level (the lowest wire) should be a charged or "hot" wire. The second wire should be grounded. The third wire should be hot. The fourth wire should be grounded and the fifth wire should be hot. If using metal or wood posts, insulators must be used to keep the hot wires from grounding out. The cost of this type of electric fence utilizing fiberglass posts and a 110 volt fence charger is approximately \$200 for a 40' x 40' area (160 linear feet of fence).

Materials:

- 1 - 1, 312 foot roll (1/4 mile) 14 gauge aluminum electric fence wire
- 1 - 50 foot roll 12 gauge insulated wire
- 20 - 5 foot 5/8 inch dia fiberglass fence posts
- 5 - plastic gate handles
- 1 - 110 volt fence charger
- 1 - 10 foot ground pipe
- 4 - plastic electric fence signs

Installation. These instructions are for a square shape fence exclusion, but the process would be very similar for other applications. Drive 4 corner posts 1-foot deep into ground and stake with guy wires. Clip, rake, and keep clear any vegetation in a 15-inch wide strip under the fence and apply herbicide. Attach and stretch the aluminum wire at 8-inch increments starting 8 inches from ground level. A loop of wire should be left on each wire at the first corner post. Once the wire has been stretched around the outside of all the corner posts back to the first post a plastic gate handle should be attached to each wire and the gate handles should be attached to each

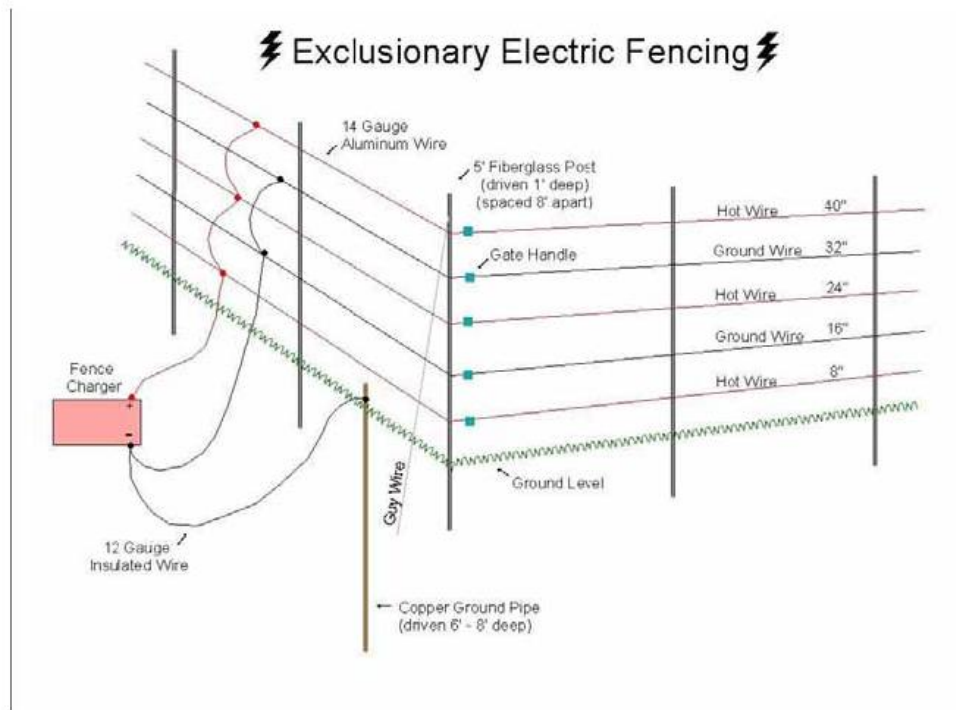
corresponding loop on the first corner post. Drive in the remaining 16 posts to the same depth at 8-foot intervals between corner posts. Secure each of the five wires to each of the posts with additional wire. Attach four plastic electric fence signs (one on each side) to the top wire of the fence. Attach a 12-gauge strand of insulated wire to the positive terminal of the fence charger and attach it to the first, third, and fifth wires of the fence. Attach another 12 gauge insulated wire to the negative terminal of the charger and attach this wire to the ground pipe which has been driven into the ground 6 to 8-feet deep. Attach another 12 gauge insulated wire from the negative terminal of the charger to the second and fourth wires on the fence. Plug the charger into a 110 volt power supply and the fence is in operation.

Tips to improve the effectiveness of your electric fence to deter black bears:

1. If using a 12-volt fence charger, ensure that the battery is charged; check every two weeks.
2. Make sure terminals on the charger and battery are free of corrosion.
3. Make sure hot wires are not being grounded out by tall weeds, fallen tree branches, broken insulators, etc.
4. If fence wires have been broken and repaired, make sure wires are corrosion free where they have been spliced together. Also, tighten the fence at each corner post as wires that have been spliced and are loose make poor connections.
5. Be sure to rake vegetation from under and around the outside of the fence as this may act as an insulator.
6. To improve the ground around the perimeter of the fence add a piece of 24 inch chicken wire laying on the ground around the outside of the fence. This should be connected to ground.
7. During periods of drought pour water down the ground pipe and around the ground pipe to improve the ground. Digging a 6 inch deep 6 inch diameter hole around the ground pipe and back filling with rock salt will also improve the ground. Additional ground pipes may also be added to portions of the fence farthest from the charger.
8. To ensure that the bear solidly contacts the charged portion of the fence, a bait like bacon strips, a can of sardines, or tin foil with peanut butter may be attached to one of the top hot wires. Make sure these do not contact the ground, thus shorting out the fence.
9. When protecting a specific structure (like a shed or rabbit hutch), the fence should be placed 3 to 5 feet away from the structure (rather than on it) so that the bear encounters the fence before reaching the attractant.
10. Protect the fence charger from the elements by covering it with a plastic bucket or a wooden box.
11. Place plastic electric fence signs around the perimeter of your fence to improve visibility and to warn other people.

LITERATURE CITED

FitzGerald, James (1984), *The Best Fences*. Storey Publishing Bulletin A-92, Pownal, Vermont. p. 14-16.



AGREEMENT
ATTACHMENT 2

Place Holder for Map

Of

Apiary Locations

At

WMA/WEA

APIARY SITE APPLICATION FORM

Florida Fish and Wildlife Conservation Commission

RETURN TO: The Florida Fish and Wildlife Conservation Commission, 620 South Meridian Street, Tallahassee, FL 32399-1600. Please print or type all information. Attach additional sheets if necessary.

Name _____ Telephone Number _____

Mailing Address _____

City or Town _____ County _____ Zip Code _____

Physical Address (If Different from Mailing Address) _____

Company Name: _____

Email Address _____

Requested Wildlife Management or Wildlife and Environmental Area(s) (see attached list of WMA/WEAs with apiary sites):

WMA/WEA _____ County _____ # of Sites _____

WMA/WEA _____ County _____ # of Sites _____

WMA /WEA _____ County _____ # of Sites _____

WMA /WEA _____ County _____ # of Sites _____

Planned Number of Hives Per Site: _____ Permanent: _____ Seasonal: _____

Member of Beekeepers Association: Yes _____ No _____

Number of Years a Member _____

Name of Beekeepers Association: _____

Are you registered with Florida Department of Agriculture and Consumer Services/Division of Plant Industry (FDACS/DPI): _____ Yes _____ No _____ N/A If yes, please provide proof.

Are you current with any and all special inspection fees: _____ Yes _____ No _____ N/A. If yes, please provide proof.

Do you follow all recommended Best Management Practices from FDACS/DPI?: _____ Yes _____ No

If no, then please explain on a separate piece of paper.

Please provide below a chronological history of your beekeeping experience. If you need more space, please provide additional sheets:

References: If a new apiary contractor, please provide on a separate piece of paper at least 3 references who can verify your apiary experience. Provide each reference's name, address, phone number and email address (if applicable). Please attach reference sheet to this document and submit.

MISSION STATEMENT

**Management
Of
Florida Fish and Wildlife Conservation Commission's
Wildlife Management Areas
And
Wildlife and Environmental Areas**

The mission of the Florida Fish and Wildlife Conservation Commission (FWC) is to manage fish and wildlife resources for their long-term well-being and the benefit of the people. To aid in accomplishing this mission, one of FWC's management goals is to manage fire-adapted natural communities on our Wildlife Management and Environmental Areas (WMA/WEA) to support healthy populations of the plants and animal's characteristic of each natural community. In order to achieve this goal various habitat management techniques are used. These include prescribed burning, applications of herbicides and mechanical treatment of vegetation. These management efforts will take place at various times and locations on each of the FWC's WMA/WEAs. Staff on each WMA/WEA will work with and make users aware of these activities when necessary. Users must be aware and accept that these activities are necessary for the proper management of the area.

Note: This document is included as an attachment with each Application and executed Contract.

FDACS/DPI's BMP

Florida Department of Agriculture & Consumer Services

BEST MANAGEMENT PRACTICES FOR

MAINTAINING EUROPEAN HONEY BEE COLONIES

1. Beekeepers will maintain a valid registration with the Florida Department of Agriculture and Consumer Services/Division of Plant Industry (FDACS/DPI), and be current with any and all special inspection fees.
2. A Florida apiary may be deemed as European Honey Bee with a minimum 10% random survey of colonies using the FABIS (Fast African Bee Identification System) and/or the computer-assisted morphometric procedure (i.e., Universal system for the detection of Africanized Honey Bees (AHB) (USDA-ID) or other approved methods by FDACS on a yearly basis or as requested.
3. Honey bee colony divisions or splits should be queened with production queens or queen cells from EHB breeder queens following Florida's Best Management Practices.
4. Florida beekeepers are discouraged from collecting swarms that cannot be immediately re-queened from EHB queen producers.
5. Florida Beekeepers should practice good swarm-prevention techniques to prevent an abundance of virgin queens and their ready mating with available AHB drones that carry the defensive trait.
6. Maintain all EHB colonies in a strong, healthy, populous condition to discourage usurpation (take over) swarms of AHB.
7. Do not allow any weak or empty colonies to exist in an Apiary, as they may be attractive to AHB swarms.
8. Recommend re-queening with European stock every six months unless using marked or clipped queens and having in possession a bill of sale from an EHB Queen Producer.
9. Immediately re-queen with a European Queen if previously installed clipped or marked queen is found missing.
10. Maintain one European drone source colony (250 square inches of drone comb) for every 10 colonies in order to reduce supercedure queens mating with AHB drones.
11. To protect public safety and reduce beekeeping liability, do not site apiaries in proximity of tethered or confined animals, students, the elderly, general public, drivers on public roadways, or visitors where this may have a higher likelihood of occurring.
12. Treat all honey bees with respect.

RANDOM
SELECTION PROCESS
FOR VACANT APIARY SITE

When an apiary site becomes available the following procedure is used to randomly select the next apiarist (beekeeper) for an available apiary site on a WMA or WEA. Only those who have been evaluated and deemed qualified to be an apiarist on a WMA/WEA through the Apiary Application process will be eligible for this selection process. The steps below will be followed by the THCR Contract Manager when a site becomes available to be filled by a qualified apiarist:

1. The THCR Contract Manager will maintain an "Apiary Wait List Folder" on the THCR SharePoint for each WMA/WEA with apiary sites.
2. A wait list is either created or updated when an Apiary Application(s) is received by the THCR Contract Manager from a qualified apiarist.
3. Upon receipt of an apiary site application, the THCR Contract Manager will review the WMA/WEA folder to see if there is an "Apiary Wait List".
4. If a list exists then the qualified applicant will be added to the list.
5. When an apiary site becomes available if there are more than one qualified apiarist then these apiarists will be contacted by certified letter to determine their interest.
6. The letter will request a response within 10 working days to make them eligible for the random drawing.
7. If there is no response or is negative then that apiarist will not be included in the random drawing and the name will be removed from the waiting list*.
8. If only one apiarist responds positively to the certified letter then the available site will be awarded to that interested apiarist.
9. If there are no apiarists on a wait list or all responses are negative then apiarists who currently have site(s) under Agreement and where not on the waiting list will be contacted to see if any have interest in the available site. If more than one responds then the random drawing process will be used to determine who will be awarded the site.

10. Steps to be performed by the THCR Contract Manager to execute the random selection for an available apiary site are listed below:

- a. The names of each interested apiarist will be noted on a 1" X 2" piece of paper and folded in half.
- b. The pieces of paper will be inserted into a "black film canister" which has a snap top and placed into a container and stirred up prior to the selection.
- c. A non-biased person will be selected to reach into the bowl (which will be held above the selection person's eyesight) and randomly select one of the canisters.
- d. The canister will be opened by the person performing the selection and the name is read aloud for those in attendance. Everyone in attendance will sign a witness sheet.
- e. The apiarist whose name is selected will be awarded the available site.
- f. A new Agreement will be developed by the THCR Contract Manager.

*A new apiary application must be submitted once requestor's name is removed from a waiting list.

11.15 Land Management Uniform Accounting Council Categories

Land Management Uniform Cost Accounting Council and FWC Activity Code Groupings

Resource Management

Invasive and Nuisance Species Control

- 210 Invasive and nuisance species control
- 211 Invasive and nuisance plant control (mechanical)
- 212 Invasive and nuisance plant control (chemical)

Prescribed Burning

- 205 Prescribed burning
- 206 Prescribed burning C growing season (April 1 to September 30)
- 207 Prescribed burning C dormant season (October 1 to March 31)
- 208 Firebreaks

Cultural Resource Management

- 201 Cultural resource management

Timber Management

- 202 Timber management

Hydrological Management

- 194 Lake restoration
- 215 Hydrology management
- 216 Dams, dikes, levees
- 217 Canals
- 218 Water level management

Other

- 185 GIS
- 200 RESOURCE MANAGEMENT
- 203 Tree and shrub planting
- 213 Wildlife management
- 214 Listed Species management
- 219 Upland restoration

221	Animal surveys
228	Inland aerial surveys
235	Vegetation and plant surveys
250	MONITORING AND ASSESSMENTS
252	Biomedical monitoring
253	Ecological monitoring
256	Habitat monitoring analysis
263	Nest box monitoring
264	Population demographics
275	Permits and authorizations
276	Commission rule development and review
281	Technical assistance
282	Herbaceous seeding
283	Clearings
284	Feeding/watering
285	Nest structures
286	Population control
287	Stocking enhancements/population augmentation
288	Nuisance animal complaints 282 Herbaceous seeding
289	Native vegetation management (mechanical)
290	Native vegetation management (chemical)
293	Mortality investigations
294	Program coordination and implementation C inter- and intra-agency coordination and program implementation at the section, bureau, or division level
295	Biological data collection, analysis, and reporting
296	Habitat protection technical assistance
750	URTD assessment
789	Site Preparation – GCR
790	Irrigation – GCR

- 791 Seed Collection – Hand
- 792 Seed Collection – Mechanical
- 793 Herbicide Maintenance Treatment

Administration

Central Office/Headquarters

100 ADMINISTRATION C administrative tasks, including preparation of forms, word processing, photocopying, filing, and other clerical/secretarial duties.

104 Budget/purchasing/accounting

Districts/Regions

See Location code

Units/Projects

See Location code

Support

Land Management Planning

103 Meetings C includes workshops, conferences, staff, and other meetings.

204 Resource Planning

Land Management Reviews

101 Project inspection C field inspections of projects.

209 Land Management Reviews

Training/Staff Development

150 PERSONNEL MANAGEMENT C recruitment, hiring, training, counseling, and supervising.

Vehicle Purchase

128 New Vehicle and Equipment Purchase

Vehicle Operation and Maintenance

923 FEM C vehicles/equipment

Other

140 REPORT WRITING/EDITING/MANUSCRIPT PREPARATION

141 Grant applications

180 SYSTEMS ADMINISTRATION AND MANAGEMENT

182 Data management

184 Metadata development and management

187 IT

188 Web development

226 Human dimensions surveys

721 Geospatial analysis techniques

Capital Improvements

New Facility Construction

910 New facility construction C buildings/structures

912 New construction C roads/bridges

913 New construction C trails

914 New construction C fences

Facility Maintenance

920 Facility and equipment maintenance (FEM) C buildings/structures

921 FEM C utilities

922 FEM C custodial functions

925 FEM C boating access

926 FEM C roads/bridges

927 FEM C trails

928 FEM C fences

Visitor Services/Recreation

Information/Education Programs

145 Technical bulletin

Operations

311 Boundary signs

312 Informational signs

320 Outreach and education C attending or developing educational or informational materials or events for the public

- 341 Public use administration (hunting)
- 342 Public use administration (non-hunting)
- 350 Customer service support C disseminating written or verbal information or assistance to the public
- 700 STUDIES
- 740 EVALUATIONS AND ASSESSMENTS

11.16 Operation Plan Fiscal Year 2026/2027

Activity	Description	Man Days	Salary	Fuel Cost	Other	Total
103	Meetings	15	\$3,595.20	\$297.60	\$0.00	\$3,892.80
140	Report writing/editing/manuscript preparation	2	\$479.36	\$39.68	\$200.00	\$719.04
185	GIS	2	\$479.36	\$39.68	\$400.00	\$919.04
204	Resource planning	5	\$1,198.40	\$99.20	\$0.00	\$1,297.60
207	Prescribed burning - dormant season	40	\$9,587.20	\$793.60	\$20,000.00	\$30,380.80
208	Firebreaks	5	\$1,198.40	\$99.20	\$0.00	\$1,297.60
212	Exotic plant control (chemical)	2	\$479.36	\$39.68	\$0.00	\$519.04
221	Animal surveys	26	\$6,231.68	\$515.84	\$1,000.00	\$7,747.52
289	Native vegetation management (mechanical)	3	\$719.04	\$59.52	\$30,000.00	\$30,778.56
311	Boundary signs	4	\$958.72	\$79.36	\$1,000.00	\$2,038.08
312	Informational signs	2	\$479.36	\$39.68	\$4,410.00	\$4,929.04
350	Customer service support	1	\$239.68	\$19.84	\$200.00	\$459.52
910	New facility construction -- buildings/structures	3	\$719.04	\$59.52	\$15,000.00	\$15,778.56
914	New construction -- fences	6	\$1,438.08	\$119.04	\$13,790.00	\$15,347.12
926	FEM -- roads/bridges	8	\$1,917.44	\$158.72	\$35,000.00	\$37,076.16
928	FEM -- fences	4	\$958.72	\$79.36	\$1,000.00	\$2,038.08
Total:		128	\$30,679.04	\$2,539.52	\$122,000.00	\$155,218.56

11.17 Arthropod Control Plan



WILTON SIMPSON
COMMISSIONER

Florida Department of Agriculture and Consumer Services
Division of Agricultural Environmental Services

ARTHROPOD MANAGEMENT PLAN - PUBLIC LANDS

Section 388.4111, F.S.
Telephone: (850) 617-7995

Return to:

Mosquito Control Program
3125 Conner Blvd., Bldg. 6,
Tallahassee, FL 32399-1650

For use in documenting an Arthropod Control Plan for lands designated by the State of Florida or any political subdivision thereof as being environmentally sensitive and biologically highly productive therein. Fill this form out if control work is necessary or planned.

Name of Designated Land: Cypress Creek Wildlife Management Area

Is Control Work Necessary: ☐ Yes ☒ No

Location: Columbia County, FL

Land Management Agency: Florida Fish and Wildlife Conservation Commission

Are Arthropod Surveillance Activities Necessary? ☐ Yes ☒ No
If "Yes", please explain:

Which Surveillance Techniques Are Proposed?
Please Check All That Apply:

- | | | |
|--|--------------------------------------|--|
| ☐ Landing Rate Counts | ☐ Light Traps | ☐ Sentinel Chickens |
| ☐ Citizen Complaints | ☐ Larval Dips | ☐ Other |

If "Other", please explain: N/A

Arthropod Species for Which Control is Proposed: N/A

Proposed Larval Control: N/A

Proposed larval monitoring procedure: N/A

Are post treatment counts being obtained: ☐ Yes ☒ No

Biological Control of Larvae: N/A

Might predacious fish be stocked: ☐ Yes ☒ No

Other biological controls that might be used: _____

Material to be Used for Larvaciding Applications:

(Please Check All That Apply:)

- ☐ Bti
- ☐ Bs
- ☐ Methoprene
- ☐ Non-Petroleum Surface Film
- ☐ Other, please specify: _____

Please specify the following for each larvacide:

Chemical or Common name: N/A

☐ Ground ☐ Aerial

Rate of application: N/A

Method of application: N/A

Proposed Adult Mosquito Control:

Aerial adulticiding ☐ Yes ☒ No

Ground adulticiding ☐ Yes ☒ No

Please specify the following for each adulticide:

Chemical or common name: N/A

Rate of application: N/A

Method of application: N/A

Proposed Modifications for Public Health Emergency Control: Arthropod control agency may request special exception to this plan during a threat to public or animal health declared by State Health Officer or Commissioner of Agriculture.

Proposed Notification Procedure for Control Activities: _____

Records:

Are records being kept in accordance with Chapter 388, F.S.:

☒ Yes ☐ No

Records Location: 1347 NW Oosterhoudt Lane Lake City, Florida, 32055

How long are records maintained: 10 years or longer.

Vegetation Modification:

What trimming or altering of vegetation to conduct surveillance or treatment is proposed? N/A

Proposed Land Modifications:

Is any land modification, i.e., rotary ditching, proposed: N/A

Include proposed operational schedules for water fluctuations: N/A

List any periodic restrictions, as applicable, for example peak fish spawning times.

Proposed Modification of Aquatic Vegetation: N/A

Land Manager Comments: _____

Arthropod Control Agency Comments: _____

James C Conner III

5/27/2026

Signature of Lands Manager or Representative Date

Paul E. Ely

5/21/26

Signature of Mosquito Control Director / Manager Date

11.18 County Compliance Letter

District No. 1 – Kevin Parnell
District No. 2 - Rocky Ford
District No. 3 - Robby Hollingsworth
District No. 4 – Everett Phillips
District No. 5 - Tim Murphy



May 20, 2026

VIA ELECTRONIC MAIL

Cedar Spirk, Land Conservation Planner
Florida Fish and Wildlife Conservation Commission
620 S Meridian Street
Tallahassee, FL 32399

Re: Review-Cypress Creek WMA Management Plan

Dear Cedar,

Thank you for allowing the Columbia County planning and zoning staff the opportunity to review the draft of the 10-year management plan for the Cypress Creek Wildlife Management Area. This plan is in full compliance with the goals, objectives and policies of the Columbia County Comprehensive Plan.

If you have any questions, please do not hesitate to contact me at via email or telephone at clane@columbiacountyfla.com or (386) 754-7119.

Sincerely,

Seth Lane
Columbia County Planner

BOARD MEETS FIRST AND THIRD THURSDAY AT 5:30 P.M.

P.O. BOX 1529 LAKE CITY, FLORIDA 32056-1529 PHONE (386) 755-4100