

Florida Fish and Wildlife Conservation Commission
Division of Habitat and Species Conservation
Land Conservation and Planning
Welles Ranch Florida Forever Project Analysis
December 2024



This document contains the Florida Fish and Wildlife Conservation Commission's (FWC) Geographic Information System (GIS) data analysis of the area yet to be acquired within the **Welles Ranch** Florida Forever project. This analysis was performed to provide FWC and others with important fish and wildlife resource information to be used in evaluating and ranking Florida Forever projects. The data selected for analysis are those considered by FWC to spatially reflect important fish and wildlife habitat and life history requirements.

In addition, FWC has completed a field review and associated assessment report for this project/proposal that is incorporated within the Acquisition and Restoration Council Florida Forever Project Evaluation Report. This report is available upon request.

GIS Data

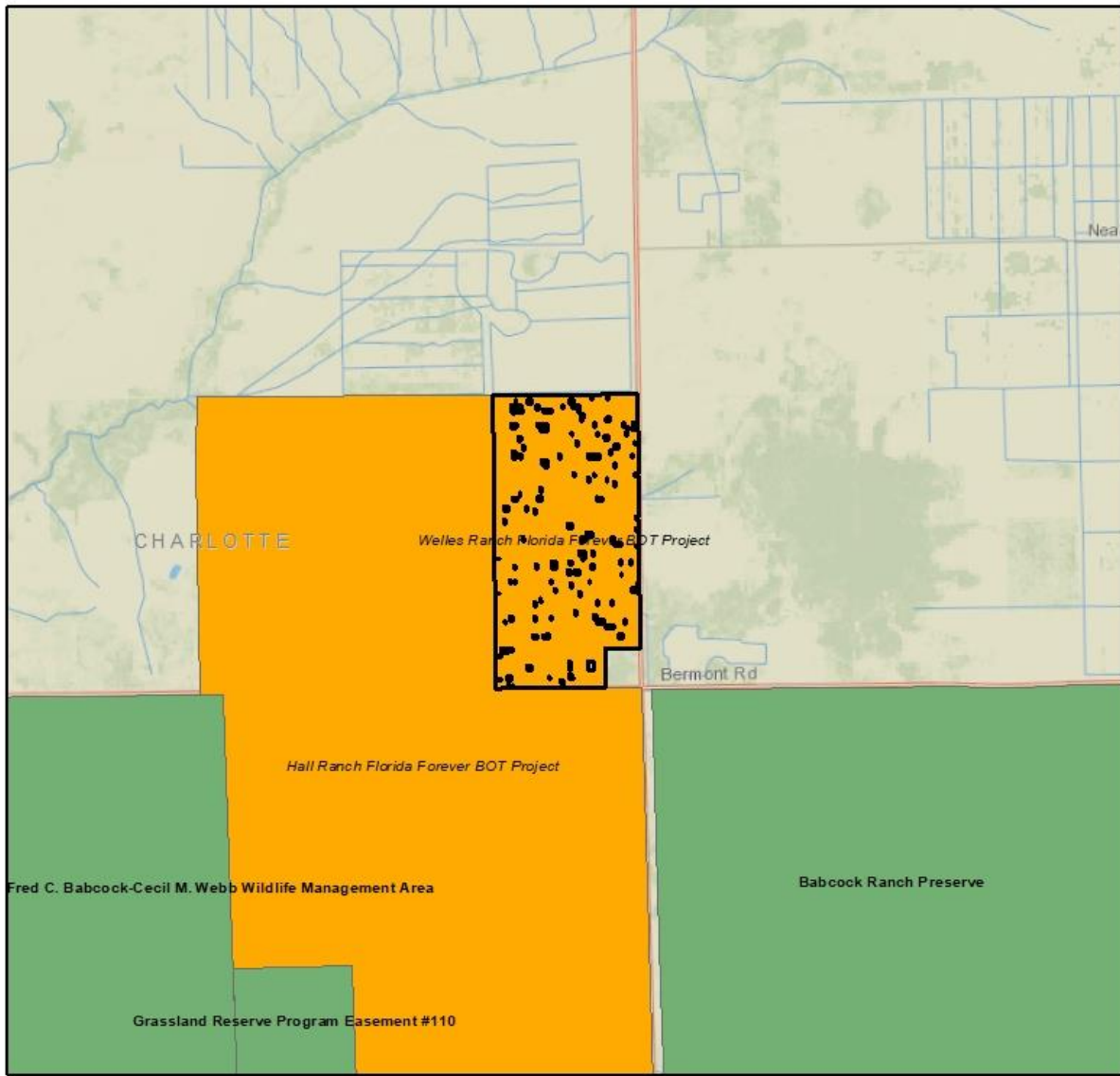
The FWC utilizes the Florida Cooperative Land Cover (CLC) GIS data layer for identification and mapping of land cover. The CLC is a cooperative effort between the FWC and the Florida Natural Areas Inventory (FNAI) to develop ecologically-based statewide land cover from existing sources and expert review of aerial photography. Land cover acreage estimates found in this document are based on GIS analysis of these data.

The FWC Florida Landscape Assessment Model (FLAM)¹ is a GIS model that determines the landscape value based on natural resources and fish and wildlife habitat. The FLAM ranks habitat from a 0-10; a rank of 10 being of greatest value.

Important fish and wildlife resource GIS data were queried using Environmental Resource Analysis GIS computer software. These data include the following GIS layers:

- FWC-FNAI Florida Cooperative Land Cover
- FWC Strategic Habitat Conservation Areas – Priority and Species
- Critical Lands and Waters Identification Project (CLIP) – Priority 1 and 2 – Terrestrial and Water
- CLIP – Landscape, Biodiversity, and Floodplain Resources
- Panther Location
- Panther Mortality
- Florida Panther Priority Habitat (Primary, Secondary, and Dispersal)
- Black Bear Range
- Rare Fish Locations/ Imperiled Waters
- Southern Bald Eagle Nest
- FWC Imperiled Species Richness

- FNAI Element Occurrences
- FNAI Suitable Habitat that Supports Species Known to Occur in the Vicinity
- Florida Department of Environmental Protection Surface Water Classification
- U.S. Fish and Wildlife Service (USFWS) - National Wetlands Inventory
- USFWS Critical Habitat
- Florida Geological Survey Springs
- Outstanding Florida Waters
- Areas of Critical State Concern



**Welles Ranch
Florida Forever Project**
Charlotte County
1,183 Remaining Acres

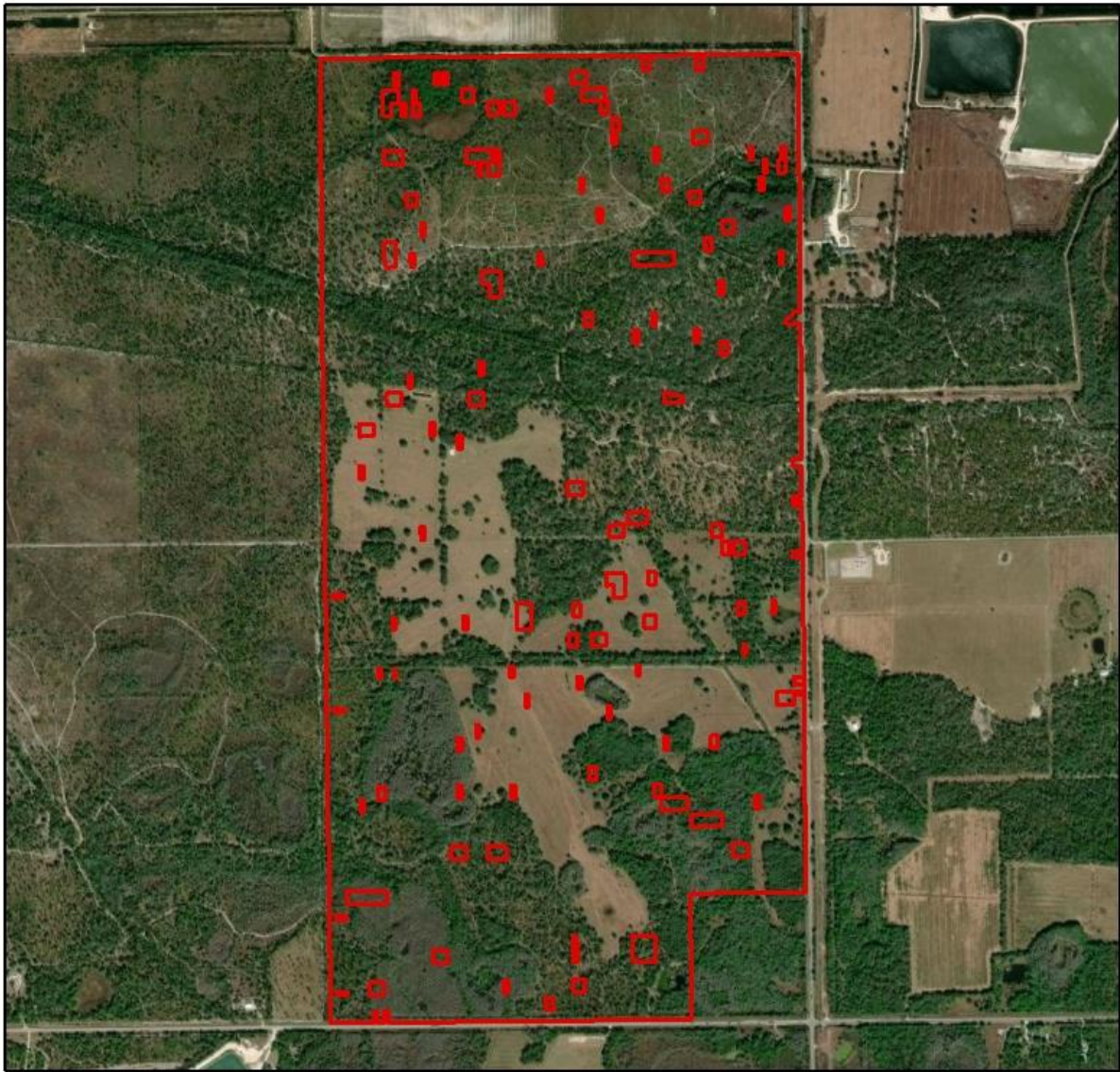


0 1 2 3 4 Miles

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Vicinity Map

-  Welles Ranch Boundary
-  County Boundaries
-  Conservation Lands
-  Florida Forever Projects



Welles Ranch
Florida Forever Project
 Charlotte County
 1,183 Remaining Acres



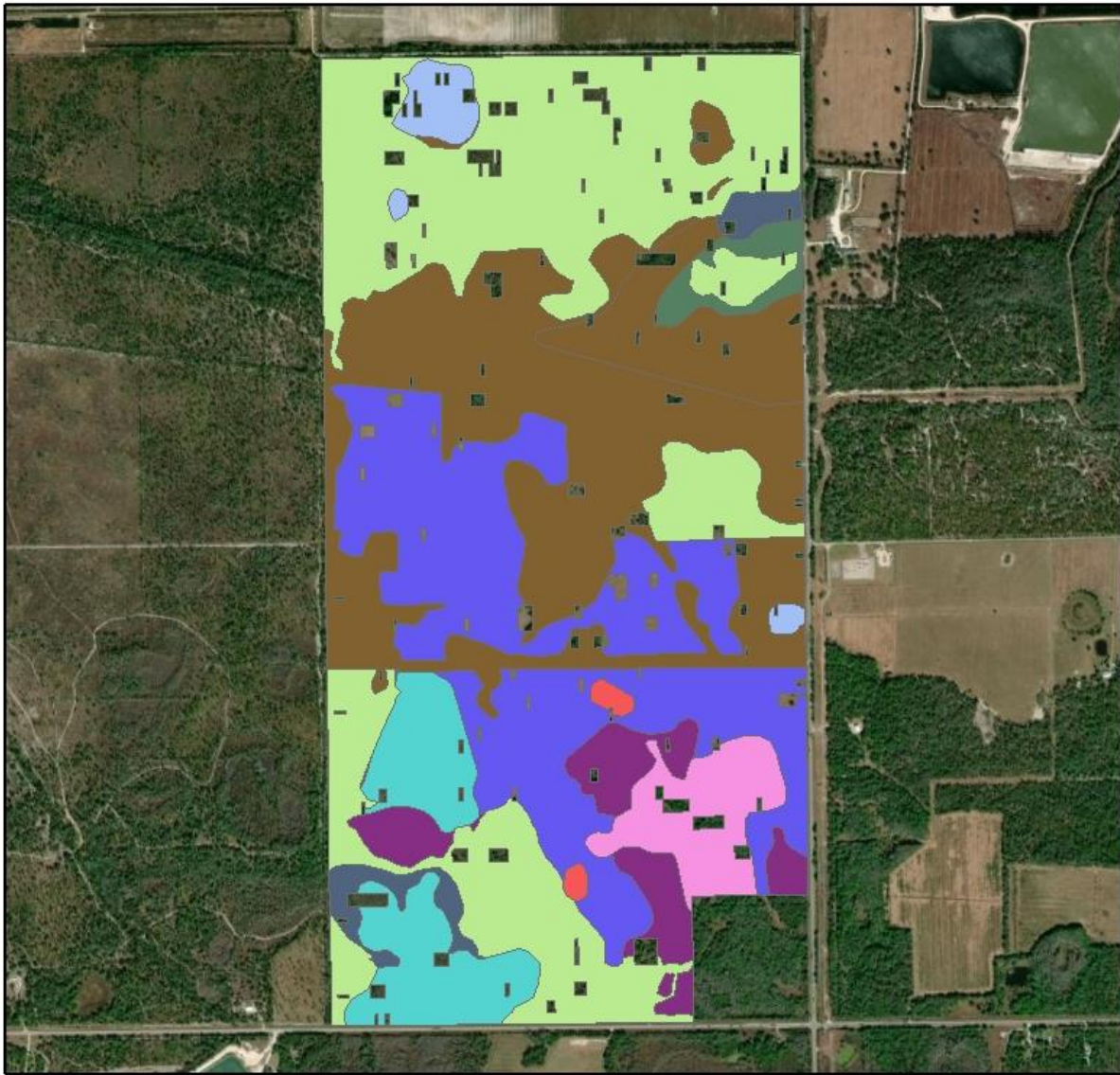
0 0.3 0.6 0.9 1.2 Miles

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Aerial Imagery



Welles Ranch Boundary



Welles Ranch
Florida Forever Project
 Charlotte County
 1,183 Remaining Acres

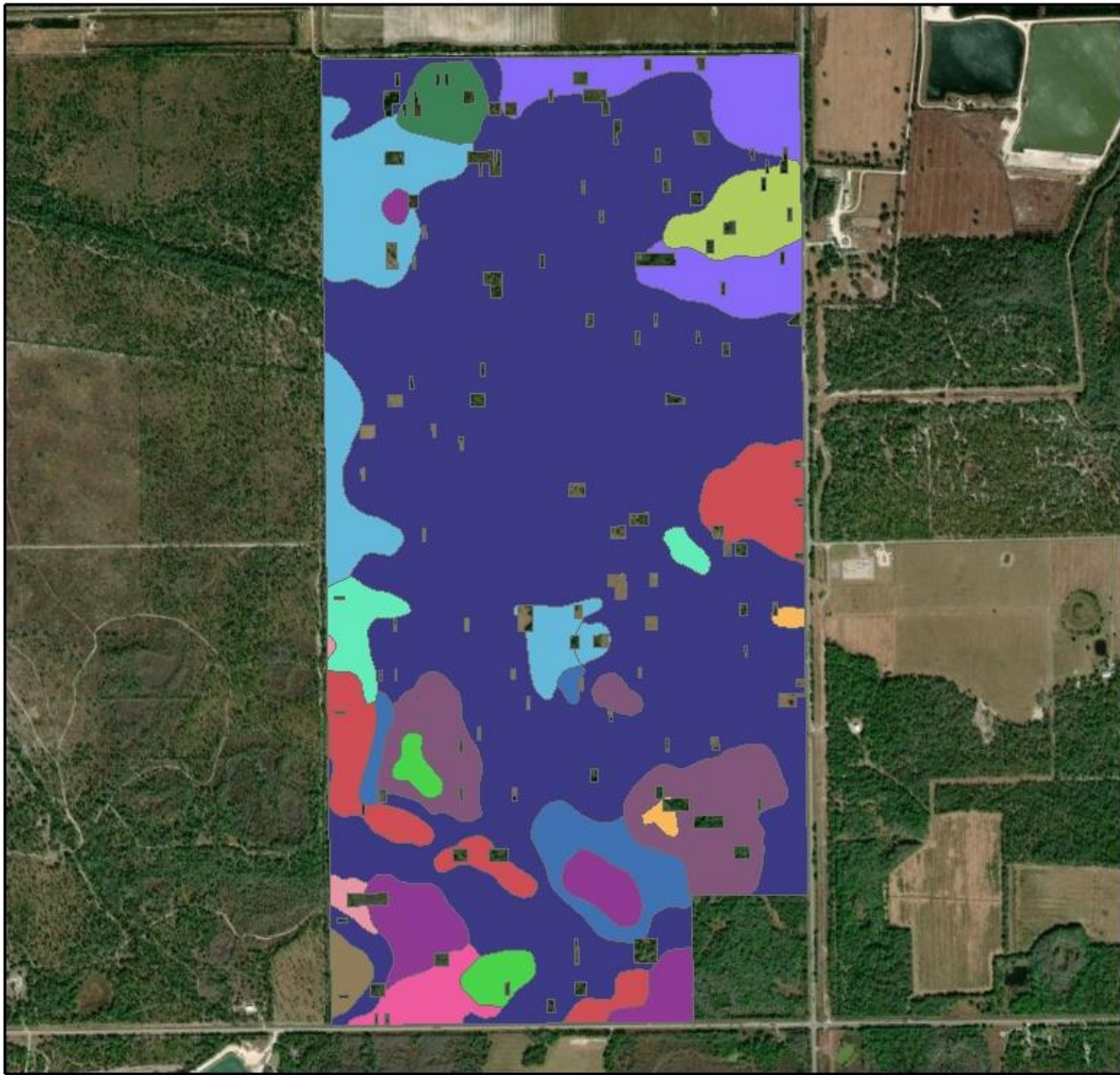


0 0.25 0.5 0.75 1 Miles

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Cooperative Land Cover

Cypress	Isolated Freshwater Swamp
Cypress/Tupelo (including mixed Cypress/Tupelo)	Mesic Flatwoods
Freshwater Forested Wetlands	Mesic Hammock
Improved Pasture	Mixed Hardwood-Coniferous
Isolated Freshwater Marsh	Rural



Welles Ranch
Florida Forever Project
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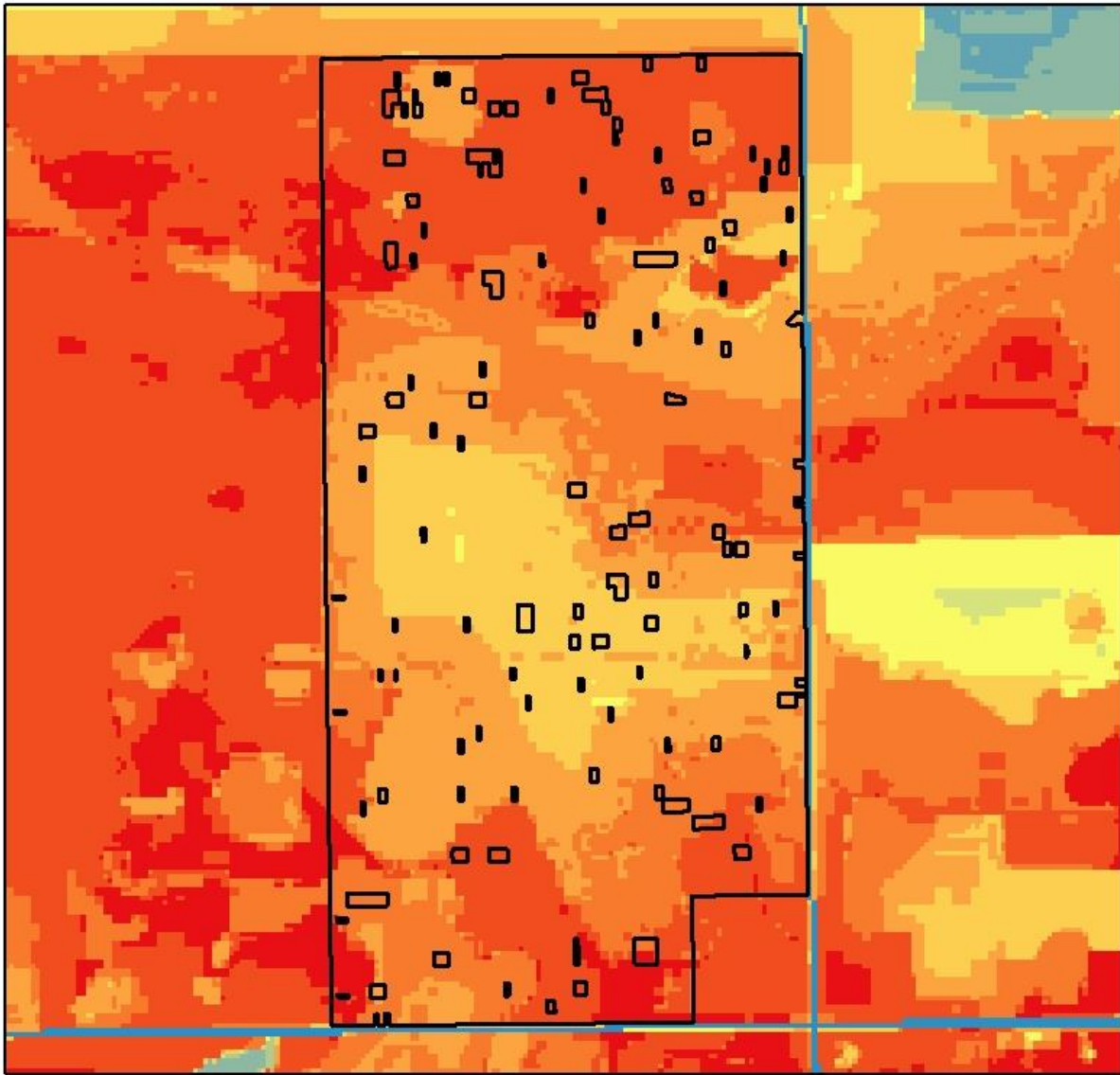


0 0.25 0.5 0.75 1 Miles

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Soil Types

Copeland fine sandy loam, frequently ponded	Pineda fine sand, frequently ponded
Felda fine sand	Pineda-Pineda, wet, fine sand
Felda fine sand, frequently ponded	Terra Ceia muck, frequently ponded
Floridana sand, frequently ponded	Valkaria fine sand
Gator muck, frequently ponded	Wabasso sand
Heights fine sand	Wabasso sand, limestone substratum
Malabar fine sand	Winder sand, frequently ponded
Oldsmar sand	



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0 0.25 0.5 0.75 1 Miles

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Florida Landscape Assessment Model



FWC Florida Landscape Assessment Model 2023		
	Value	Acres
	0	0.0
	1	0.0
	2	0.0
	3	0.0
	4	0.9
	5	3.9
	6	176.5
	7	389.3
	8	289.2
	9	304.8
	10	19.6
Mean FLAM value =	7.7	

Comments:

¹ FWC has developed a GIS-based assessment tool that incorporates a wide variety of land cover and wildlife species data. These wildlife species include imperiled species and locally important species. Application of this model assists in the identification and conservation of important wildlife habitats. The FLAM ranks the Florida landscape based upon important natural resources and habitat needs of wildlife as a way to identify ecologically significant lands in the state, and to assess the potential impacts of land development projects on wildlife populations. The FLAM is provided as part of the FWC's continuing technical assistance to various local, regional, state, and federal agencies, and entities interested in wildlife needs and conservation in order 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) help identify appropriate parcels for land conservation, and for wetland and upland habitat mitigation.

Environmental Resource Analysis

FWC Land Conservation and Planning

Analysis Shape Type: Polygon

Analysis Timestamp: 06092023 12:52:46

Shape Name: Unnamed polygon centered at -81.768926 °, 26.960552 °

Boundary Area: 1183.14 acres

Buffer Area: 0 acres

Total Area: 1183.14 acres

FWC Wildlife Data and Models

Cooperative Land Cover v3.6

Name - State	Code - State	Name - Site	Code - Site	Total Area (acres)	Percent of Area
Isolated Freshwater Swamp	2213	Isolated Freshwater Swamp	2213	4.75	0.4 %
Cypress	2211	Cypress	2211	78.80	6.66 %
Freshwater Forested Wetlands	2200	Cypress/Pine/Cabbage Palm	2242	20.51	1.73 %
Rural	1830	Unimproved/Woodland Pasture	183314	53.47	4.52 %
Improved Pasture	183313	Improved Pasture	183313	254.75	21.53 %
Cypress/Tupelo (Cypress/Tupelo mixed)	2210	Cypress/Tupelo (Cypress/Tupelo mixed)	2210	45.97	3.89 %
Mesic Hammock	1120	Pine - Mesic Oak	1124	272.55	23.04 %
Mesic Hammock	1120	Prairie Mesic Hammock	1122	55.96	4.73 %
Mesic Flatwoods	1311	Mesic Flatwoods	1311	363.93	30.76 %
Isolated Freshwater Marsh	2121	Isolated Freshwater Marsh	2121	17.49	1.48 %
Mixed Hardwood-Coniferous	1400	Mixed Hardwood-Coniferous	1400	14.96	1.26 %
TOTAL:				1,183.14	100 %

Critical Lands and Waters Identification Project (CLIP) Priority 1 and 2 - Terrestrial and Waters

CLIP Priority	Total Area (acres)	Percent of Area
All other cells	45.54	3.85 %
CLIP P1 in terrestrial	671.90	56.79 %
CLIP P2 in terrestrial	465.70	39.36 %
TOTAL:	1,183.14	100 %

CLIP- Landscape Category

Priority	Total Area (acres)	Percent of Area
3	1,183.14	100 %
TOTAL:	1,183.14	100 %

CLIP- Biodiversity Category

Priority	Total Area (acres)	Percent of Area
3	368.68	31.16 %
4	500.11	42.27 %
5	314.35	26.57 %
TOTAL:	1,183.14	100 %

Priority FWC Strategic Habitat Conservation Areas 2021

Priority	Total Area (acres)	Percent of Area
0	1,046.46	88.45 %
5	136.67	11.55 %
TOTAL:	1,183.14	100 %

FWC Strategic Habitat Conservation Areas 2009

Species 1	Species 2	Species 3	Species 4	Species 5	Species 6	Total Area (acres)	Percent of Area
Cooper's hawk						138.03	11.67 %
TOTAL:						138.03	11.67 %

Panther location

No Records Found

Panther mortality

No Records Found

Panther Priority Habitat

No Records Found

Bear Range

Bear Range	Total Area (acres)	Percent of Area
Occasional	1,183.14	100 %
TOTAL:	1,183.14	100 %

Rare Fish

No Records Found

Rare Fish Imperiled Waters

No Records Found

Southern bald eagle nest

No Records Found

Imperiled Species Richness

Number of Species	Total Area (acres)	Percent of Area
0	15.20	1.29 %
3	1.47	0.12 %
5	37.43	3.16 %
7	568.84	48.08 %
8	377.86	31.94 %
9	177.52	15 %
10	4.81	0.41 %
TOTAL:	1,183.14	100 %

Florida Natural Areas Inventory Data**Element Occurrences**

No Records Found

Suitable Habitat that Supports Species Known to Occur in the Vicinity

COMMON NAME	SCIENTIFIC NAME	Total Area (acres)	Percent of Area
Florida Sandhill Crane	Antigone canadensis pratensis	182.91	15.46 %
Tawny Sanddragon	Progomphus alachuensis	482.21	40.76 %
Crested Caracara	Caracara cheriway	651.61	55.08 %
Wood Stork	Mycteria americana	157.74	13.33 %
Eastern Indigo Snake	Drymarchon couperi	808.33	68.32 %
Florida Long-tailed Weasel	Mustela frenata peninsulae	686.44	58.02 %
Florida Panther	Puma concolor coryi	1,182.53	99.95 %
Red-cockaded Woodpecker	Dryobates borealis	326.70	27.61 %
Florida bonneted bat	Eumops floridanus	774.02	65.42 %
TOTAL:		5,252.48	443.94 %

USFWS**Critical Habitat**

No Records Found

Area of Critical State Concern**Apalachicola**

No Records Found

Big Cypress

No Records Found

Green Swamp

No Records Found

Key West

No Records Found

Lower Keys

No Records Found

Upper Keys

No Records Found

Florida Ecological Greenways Network**Wildlife Corridor Classification**

Priority Level	Total Area (acres)	Percent of Area
3	1,183.14	100 %
TOTAL:	1,183.14	100 %

Water Resources**FDEP Surface Water Classification**

Waterbody Name	Water Type	Water Basin	Classification	Total Area (acres)	Percent of Area
MYRTLE SLOUGH	STREAM	2040	1	70.86	5.99 %
SHELL CREEK	STREAM	2041	1	1,112.28	94.01 %
			TOTAL:	1,183.14	100 %