

Florida Fish and Wildlife Conservation Commission
Division of Habitat and Species Conservation
Land Conservation and Planning
Annutteliga Hammock 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 **Annutteliga Hammock** 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

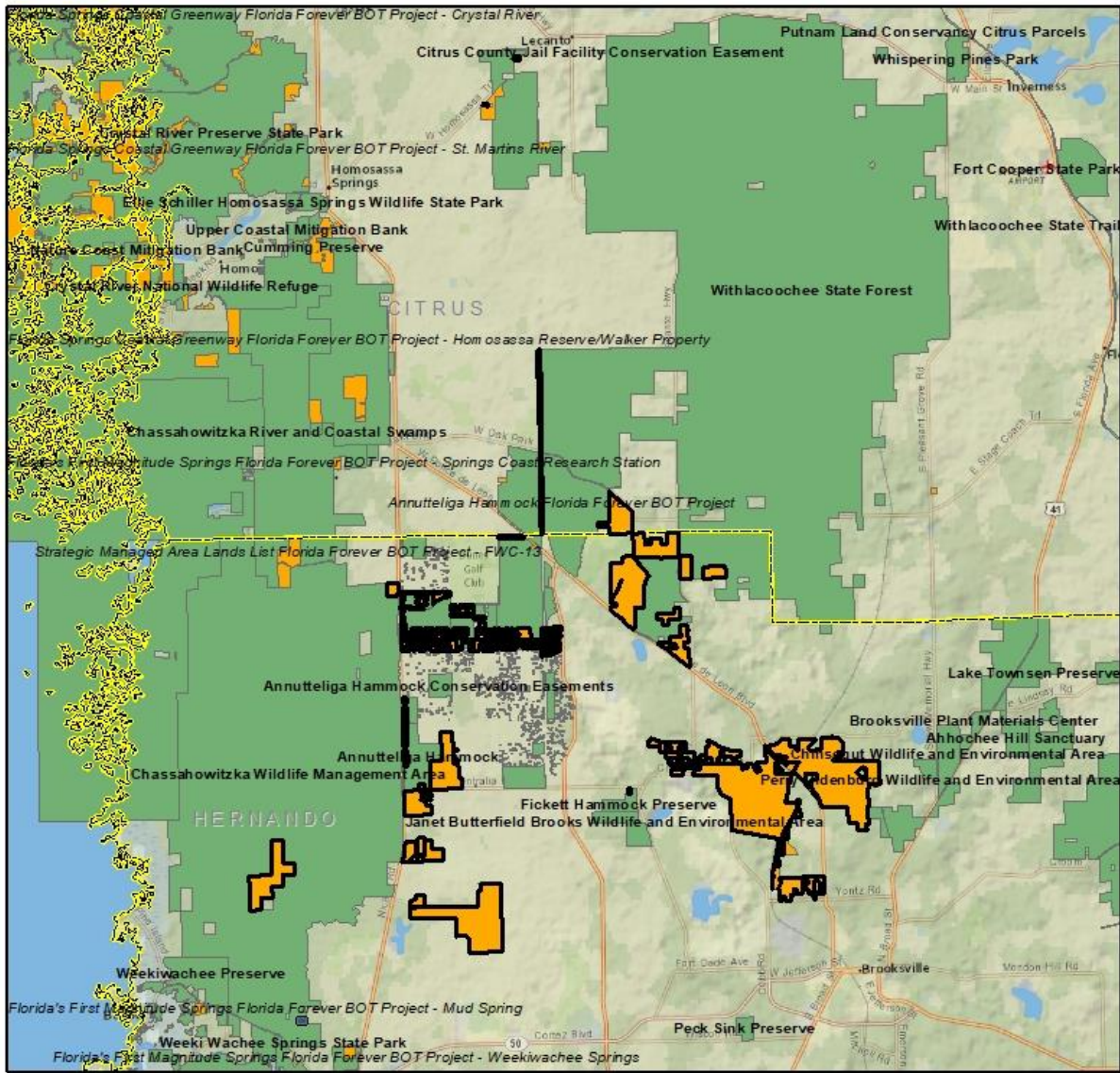
The FWC utilizes the Florida Cooperative Land Cover (CLC) GIS data layer for identification and mapping of land cover. The CLC is a cooperative effort between the FWC and the Florida Natural Areas Inventory (FNAI) to develop ecologically-based statewide land cover from existing sources and expert review 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



**Annutelliga Hammock
Florida Forever Project**
Citrus & Hernando Counties
8,060 Remaining Acres

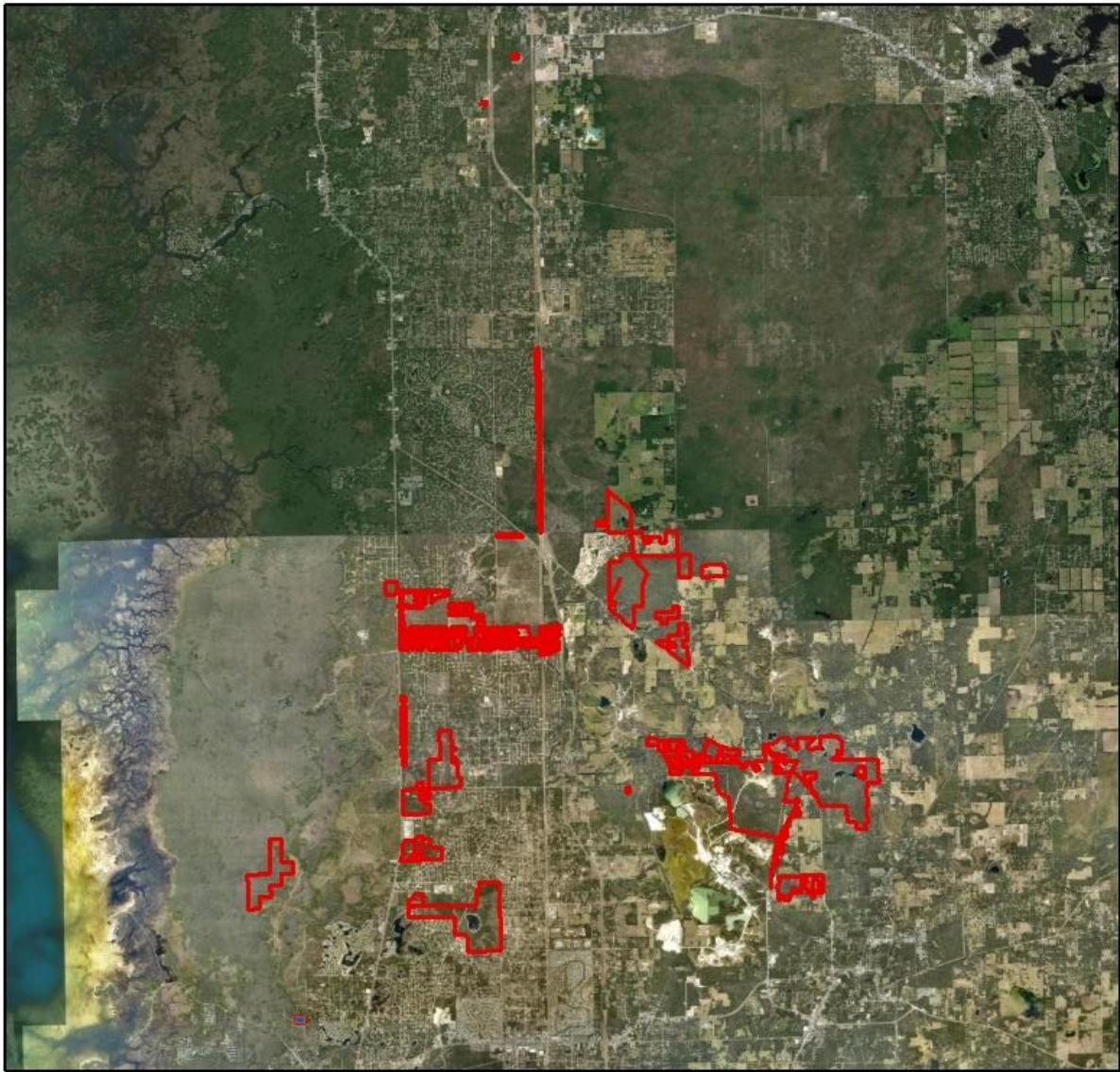


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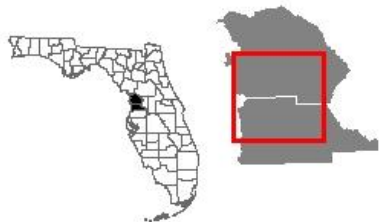
Created in ArcGIS 10.8 by the Florida Fish and Wildlife Conservation Commission December 2023

Vicinity Map

- Annutelliga Hammock Boundary
- County Boundaries
- Conservation Lands
- Florida Forever Projects



Annutteliga Hammock
Florida Forever Project
Citrus & Hernando Counties
8,060 Remaining Acres

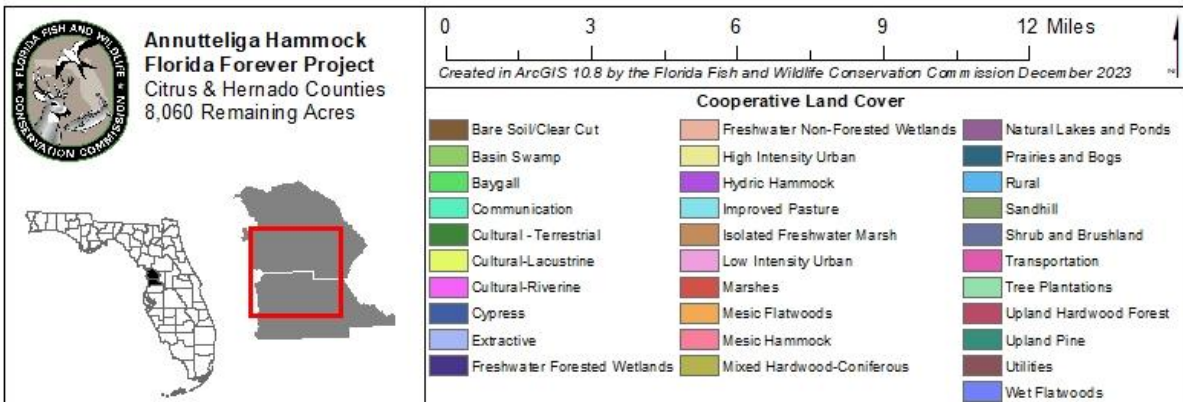
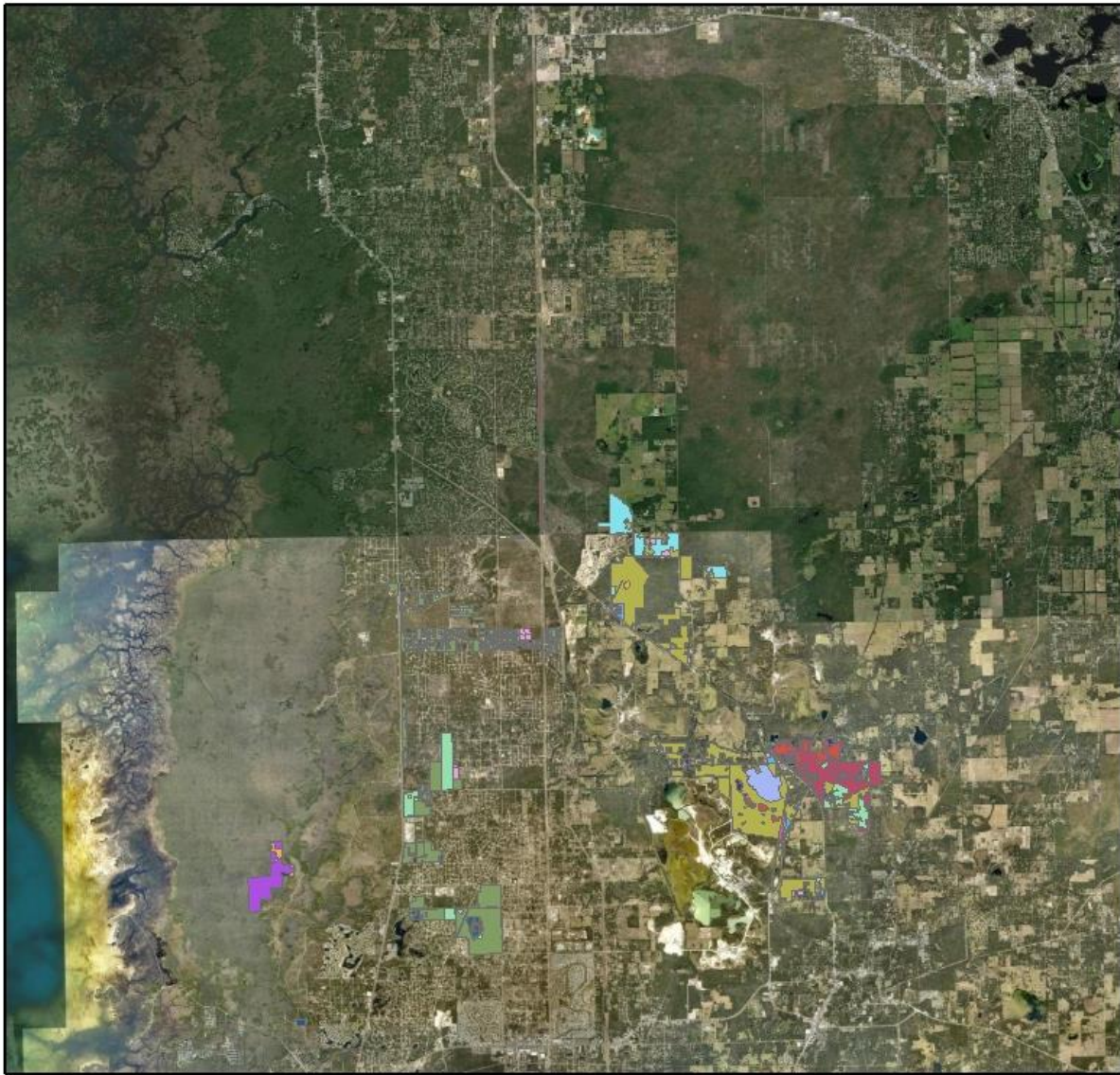


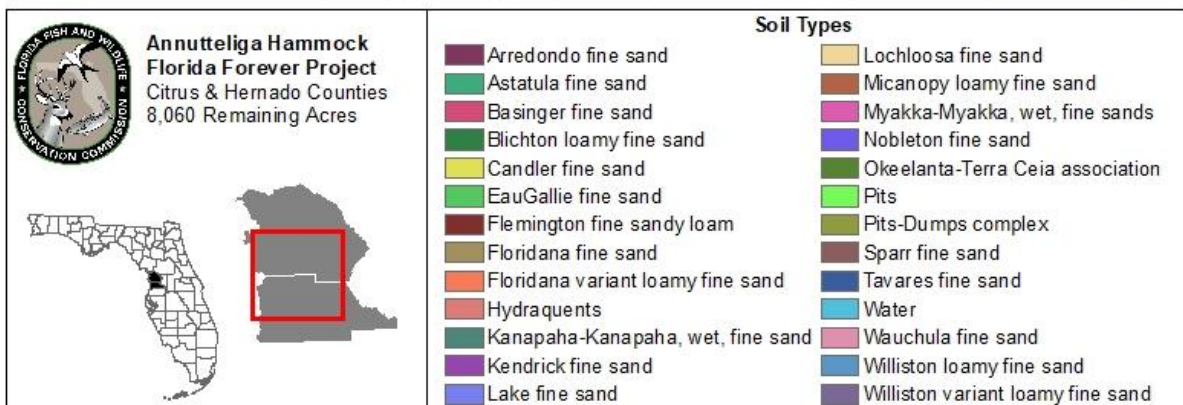
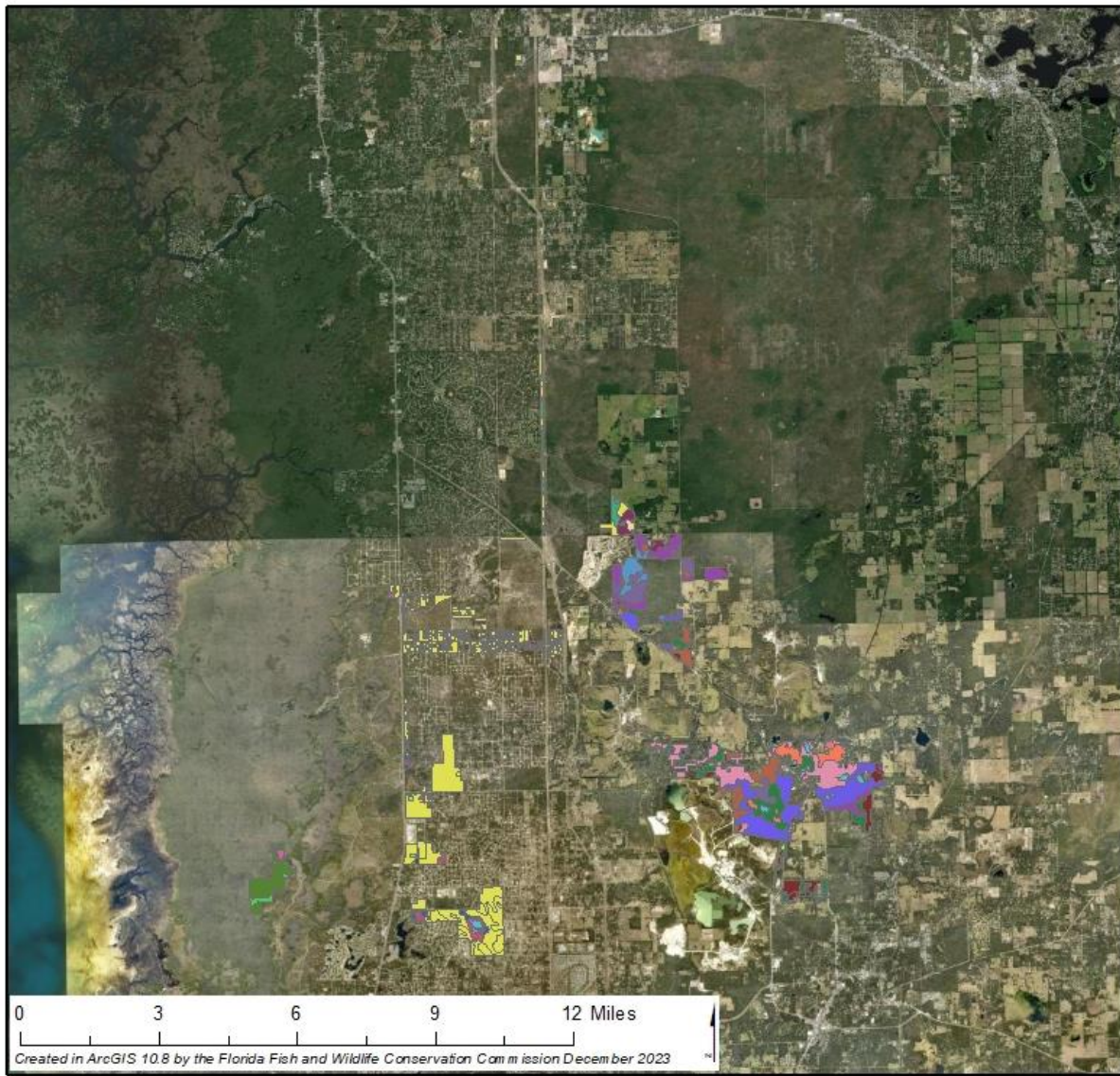
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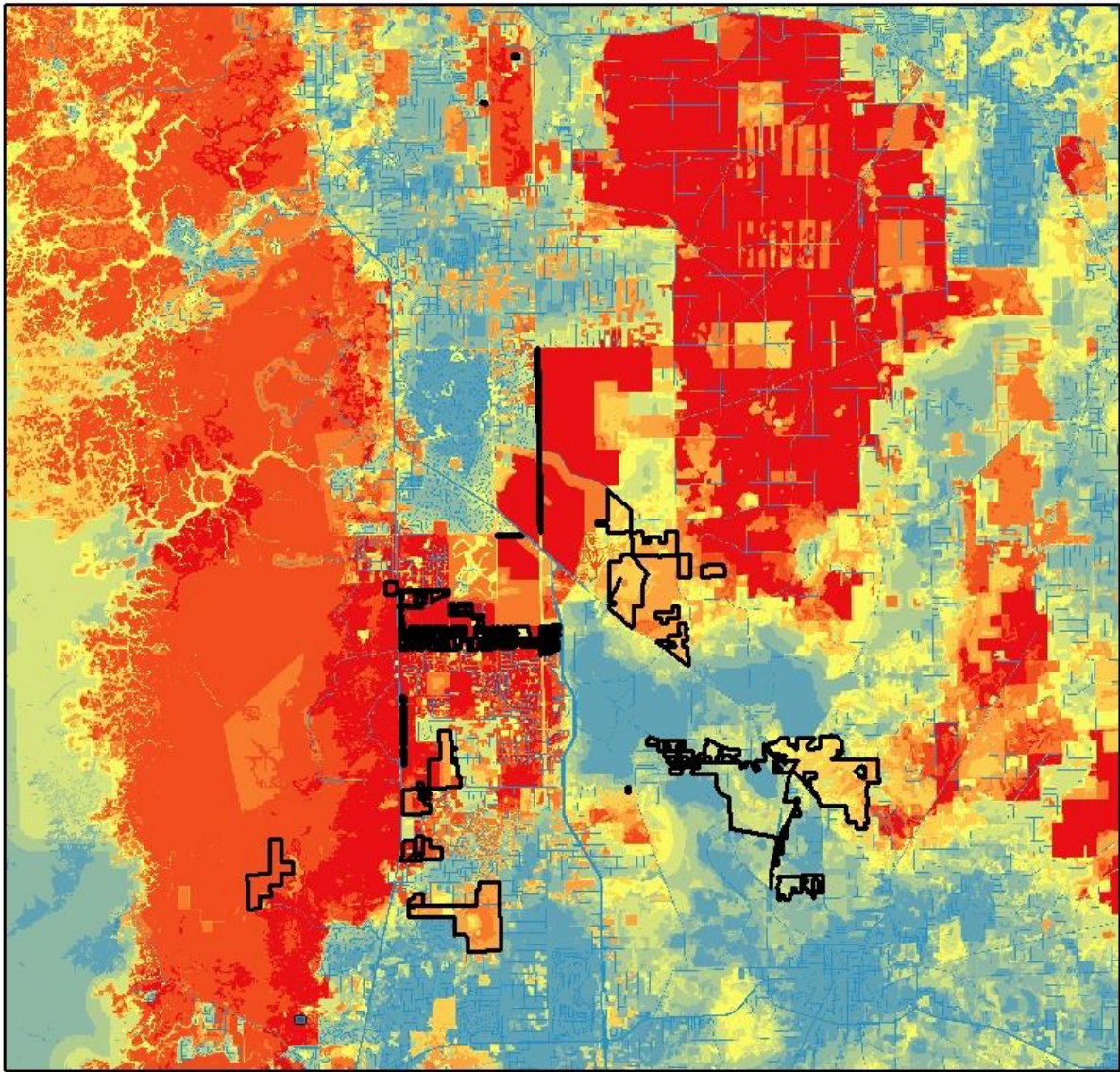
Created in ArcGIS 10.8 by the Florida Fish and Wildlife Conservation Commission December 2023

Aerial Imagery

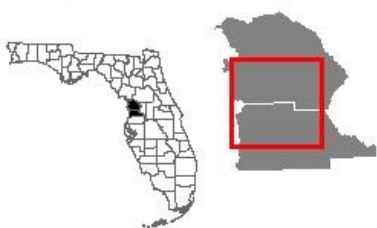
 Annutteliga Hammock Boundary







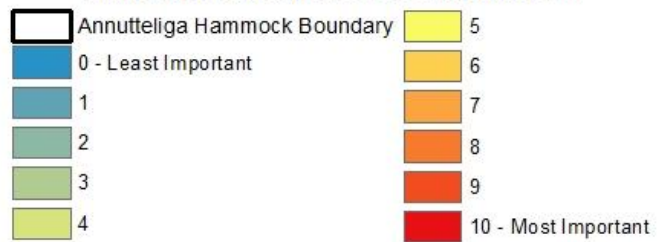
Annutelliga Hammock
Florida Forever Project
 Citrus & Hernando Counties
 8,060 Remaining Acres



0 3 6 9 12 Miles

Created in ArcGIS 10.8 by the Florida Fish and Wildlife Conservation Commission December 2023

Florida Landscape Assessment Model



FWC Florida Landscape Assessment Model 2023		
	Value	Acres
	0	131.5
	1	279.5
	2	113.1
	3	798.7
	4	824.0
	5	785.5
	6	1477.3
	7	1511.4
	8	641.7
	9	735.3
	10	758.8
Mean FLAM value =	6.1	

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: 10232023 09:56:38

Shape Name: Unnamed polygon centered at -82.492681 °, 28.692928 °

Boundary Area: 8060.37 acres

Buffer Area: 0 acres

Total Area: 8060.37 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
Low Intensity Urban	1821	Urban Open Land	18211	53.48	0.66 %
Cultural - Riverine	4200	Ditch/Artificial Intermittent Stream	4220	2.37	0.03 %
Low Intensity Urban	1821	Low Structure Density	18212	147.30	1.83 %
High Intensity Urban	1822	Commercial and Services	18223	2.21	0.03 %
High Intensity Urban	1822	Residential, Med. Density - 2-5 Dwelling Units/AC	18221	0.11	0 %
Freshwater Forested Wetlands	2200	Cypress/Hardwood Swamps	2241	8.93	0.11 %
Freshwater Forested Wetlands	2200	Mixed Wetland Hardwoods	2233	110.59	1.37 %
Natural Lakes and Ponds	3100	Natural Lakes and Ponds	3100	54.53	0.68 %
Cultural - Lacustrine	3200	Stormwater Treatment Areas	3250	13.39	0.17 %
Cultural - Lacustrine	3200	Artificial Impoundment/Reservoir	3220	6.10	0.08 %
High Intensity Urban	1822	Industrial	18224	9.24	0.11 %
Improved Pasture	183313	Improved Pasture	183313	498.62	6.19 %
Low Intensity Urban	1821	Community rec. facilities	182135	0.02	0 %
Tree Plantations	18333	Coniferous plantation	183332	521.57	6.47 %
Transportation	1840	Transportation	1840	127.01	1.58 %
High Intensity Urban	1822	Residential, High Density > 5 Dwelling Units/AC	18222	2.52	0.03 %
Rural	1830	Rural Open Forested	18311	20.02	0.25 %
High Intensity Urban	1822	Institutional	18225	0.37	0 %
Isolated Freshwater Marsh	2121	Depression Marsh	21211	2.48	0.03 %
Low Intensity Urban	1821	Golf courses	182132	0.02	0 %
Basin Swamp	22132	Basin Swamp	22132	3.01	0.04 %
Hydric Hammock	2232	Hydric Hammock	2232	352.12	4.37 %
Successional hardwood forest	1410	Successional hardwood forest	1410	82.46	1.02 %
Mixed Hardwood-Coniferous	1400	Mixed Hardwood-Coniferous	1400	2,450.77	30.41 %
Shrub and Brushland	1500	Shrub and Brushland	1500	0.43	0.01 %
Rural	1830	Rural Open	1831	53.66	0.67 %
Cultural - Terrestrial	1800	Mowed Grass	1810	2.09	0.03 %
Mesic Hammock	1120	Mesic Hammock	1120	4.49	0.06 %
Upland Hardwood Forest	1110	Upland Hardwood Forest	1110	656.44	8.14 %
Upland Pine	1231	Upland Pine	1231	2.98	0.04 %
Mesic Flatwoods	1311	Mesic Flatwoods	1311	68.07	0.84 %
Sandhill	1240	Sandhill	1240	1,929.40	23.94 %
Communication	1850	Communication	1850	0.13	0 %
Freshwater Non-Forested Wetlands	2100	Floating/Emergent Aquatic Vegetation	2140	4.95	0.06 %
Marshes	2120	Marshes	2120	301.14	3.74 %
Cypress	2211	Cypress	2211	27.09	0.34 %
Baygall	2231	Baygall	2231	0.45	0.01 %
Wet Flatwoods	2221	Wet Flatwoods	2221	1.71	0.02 %
Extractive	1870	Extractive	1870	264.24	3.28 %
Utilities	1860	Utilities	1860	163.08	2.02 %
Bare Soil/Clear Cut	1880	Bare Soil/Clear Cut	1880	0.21	0 %
Prairies and Bogs	2110	Mixed Scrub-Shrub Wetland	2112	0.27	0 %
Prairies and Bogs	2110	Wet Prairie	2111	110.27	1.37 %
TOTAL:				8,060.37	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	292.28	3.63 %
CLIP P1 in submerged lands/state waters	160.69	1.99 %
CLIP P1 in terrestrial	7,473.96	92.72 %
CLIP P2 in terrestrial	70.74	0.88 %
TOTAL:	7,997.67	99.22 %

CLIP- Landscape Category

Priority	Total Area (acres)	Percent of Area
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0	276.51	3.43 %						
1	13.55	0.17 %						
2	346.37	4.3 %						
3	2,597.95	32.23 %						
5	4,825.98	59.87 %						
TOTAL:	8,060.37	100 %						
CLIP- Biodiversity Category								
Priority	Total Area (acres)	Percent of Area						
0	543.21	6.74 %						
1	137.51	1.71 %						
2	1,206.72	14.97 %						
3	2,729.16	33.86 %						
4	1,508.30	18.71 %						
5	1,935.47	24.01 %						
TOTAL:	8,060.37	100 %						
Priority FWC Strategic Habitat Conservation Areas 2021								
Priority	Total Area (acres)	Percent of Area						
0	2,702.82	33.53 %						
2	1,204.83	14.95 %						
3	3,442.62	42.71 %						
4	0.49	0.01 %						
5	709.61	8.8 %						
TOTAL:	8,060.37	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	
American swallow-tailed kite						193.09	2.4 %	
Cooper's hawk						735.13	9.12 %	
Cooper's hawk	American swallow-tailed kite					2,143.97	26.6 %	
Cooper's hawk	Striped newt					2.31	0.03 %	
Cooper's hawk	Striped newt	American swallow-tailed kite				275.70	3.42 %	
Florida black bear						157.97	1.96 %	
Florida black bear	Cooper's hawk					85.99	1.07 %	
Florida black bear	Cooper's hawk	Short-tailed hawk				6.48	0.08 %	
Florida black bear	Cooper's hawk	Striped newt				0.22	0 %	
Florida black bear	Florida mouse					0.22	0 %	
Florida black bear	Florida mouse	Striped newt				15.65	0.19 %	
Florida black bear	Short-tailed hawk					107.30	1.33 %	
Florida black bear	Striped newt					36.92	0.46 %	
Florida mouse						1,308.12	16.23 %	
Florida mouse	Striped newt					489.38	6.07 %	
Striped newt						76.48	0.95 %	
Striped newt	American swallow-tailed kite					33.84	0.42 %	
						TOTAL: 5,668.78	70.33 %	
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		
Common	2,799.00					34.73 %		
Frequent	5,261.37					65.27 %		
TOTAL:	8,060.37					100 %		
Rare Fish								
No Records Found								
Rare Fish Imperiled Waters								
COMMON NAME	SCIENTIFIC NAME					Total Area (acres)		Percent of Area
Ironcolor shiner	Notropis chalybaeus					2,415.56		29.97 %
Mountain mullet	Agonostomus monticola					941.40		11.68 %
River goby	Awaous banana					941.40		11.68 %
					TOTAL:		4,298.36	53.33 %
Southern bald eagle nest								
No Records Found								
Imperiled Species Richness								
Number of Species		Total Area (acres)				Percent of Area		
0		1,101.37				13.66 %		

1	316.49	3.93 %
2	70.53	0.88 %
3	2,105.85	26.13 %
4	262.77	3.26 %
5	353.27	4.38 %
6	1,545.70	19.18 %
7	1,929.02	23.93 %
8	375.36	4.66 %
TOTAL:	8,060.37	100 %

Florida Natural Areas Inventory Data

Element Occurrences

COMMON NAME	SCIENTIFIC NAME	GLOBAL RANK	STATE RANK	FWC STATUS	FEDERAL STATUS	EO Rank	Last Observation	Total Area (acres)	Percent of Area
brittle maidenhair fern	Adiantum tenerum	G5	S3	E	N	H	1982-12-31	13.86	0.17 %
Cooley's water-willow	Justicia cooleyi	G2Q	S2	E	E	B?	2022-05-11	0.21	0 %
DATA SENSITIVE ELEMENT OCCURRENCE - contact FNAI for more information	DATA SENSITIVE ELEMENT OCCURRENCE - contact FNAI for more information	G5TNR	S1	E	N	E	1982-12-31	139.04	1.72 %
DATA SENSITIVE ELEMENT OCCURRENCE - contact FNAI for more information	DATA SENSITIVE ELEMENT OCCURRENCE - contact FNAI for more information	G2	S2	N	N	C	1983-02-17	0.47	0.01 %
DATA SENSITIVE ELEMENT OCCURRENCE - contact FNAI for more information	DATA SENSITIVE ELEMENT OCCURRENCE - contact FNAI for more information	G1	S1	N	N	E	1987-04-11	31.48	0.39 %
DATA SENSITIVE ELEMENT OCCURRENCE - contact FNAI for more information	DATA SENSITIVE ELEMENT OCCURRENCE - contact FNAI for more information	G3	S2	N	N	NR	1982 pre	9.62	0.12 %
Eastern Indigo Snake	Drymarchon couperi	G3	S2?	FT	T	BD	1983-02-17	0.47	0.01 %
Eastern Indigo Snake	Drymarchon couperi	G3	S2?	FT	T	BD	1991-11-14	16.74	0.21 %
Eastern Indigo Snake	Drymarchon couperi	G3	S2?	FT	T	E	2004-10-18	28.47	0.35 %
Florida fingergrass	Digitaria floridana	G1	S1	N	N	H	1960-09-30	2,168.58	26.9 %
Florida mountain-mint	Pycnanthemum floridanum	G3	S3	T	N	H	1959-09-13	209.99	2.61 %
Floyd's Sandhill Millipede	Floridobolus floydi	G1	S1	N	N	E	2015-01-22	34.78	0.43 %
Gopher Tortoise	Gopherus polyphemus	G3	S3	ST	N	A	2002 spring	11.10	0.14 %
Gopher Tortoise	Gopherus polyphemus	G3	S3	ST	N	A	2017-11	0.00	0 %
Gopher Tortoise	Gopherus polyphemus	G3	S3	ST	N	A?	2011-05-20	0.07	0 %
Little Blue Heron	Egretta caerulea	G5	S4	ST	N	E	1989-05-08	149.79	1.86 %
One-toed Amphiuma	Amphiuma pholeter	G3	S3	N	N	A?	1988-05-09	18.73	0.23 %
Snowy Egret	Egretta thula	G5	S3	N	N	E	1988-05-11	149.79	1.86 %
Southeastern American Kestrel	Falco sparverius paulus	G5T4	S3	ST	N	E	1986-07-16	28.41	0.35 %
Southeastern American Kestrel	Falco sparverius paulus	G5T4	S3	ST	N	E	1988-07	39.52	0.49 %
Southeastern Fox Squirrel	Sciurus niger niger	G5T5	S3	N	N	A	2002-03	74.33	0.92 %
White Ibis	Eudocimus albus	G5	S4	N	N	E	1988-05-11	149.79	1.86 %
Wood Stork	Mycteria americana	G4	S2	FT	DL	F?	2002	22.30	0.28 %
Yellow-banded Typocerus Long-horned Beetle	Typocerus fulvovinctus	G2G3	S2S3	N	N	E	1994 pre	0.00	0 %
ZZ	Sandhill	G3	S2	N	N	A	1997-03-12	3.37	0.04 %
ZZ	Sandhill	G3	S2	N	N	B	2008-05-14	9.62	0.12 %
TOTAL:								3,310.53	41.07 %

Suitable Habitat that Supports Species Known to Occur in the Vicinity

COMMON NAME	SCIENTIFIC NAME	Total Area (acres)	Percent of Area
Cooley's water-willow	Justicia cooleyi	852.20	10.57 %
Eastern Indigo Snake	Drymarchon couperi	6,358.82	78.89 %
Florida Long-tailed Weasel	Mustela frenata peninsulae	6,897.91	85.58 %
Florida Mouse	Podomys floridanus	882.64	10.95 %
Florida Sandhill Crane	Antigone canadensis pratensis	721.65	8.95 %
Florida spiny-pod	Matelea floridana	250.85	3.11 %
Floyd's Sandhill Millipede	Floridobolus floydi	1,028.35	12.76 %
giant orchid	Pteroglossaspis ecristata	902.37	11.2 %
Gopher Frog	Lithobates capito	2,436.97	30.23 %
nodding pinweed	Lechea cernua	24.87	0.31 %
pine pinweed	Lechea divaricata	9.72	0.12 %
pygmy pipes	Monotropis reynoldsiae	5.47	0.07 %
Red-cockaded Woodpecker	Dryobates borealis	0.41	0.01 %
Round-tailed Muskrat	Neofiber alleni	1.39	0.02 %
scrub stylisma	Stylisma abdita	443.13	5.5 %

Southern Hognose Snake	Heterodon simus	1,431.23	17.76 %
Wood Stork	Mycteria americana	320.59	3.98 %
	TOTAL:	22,568.58	279.99 %

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
1	1,942.69	24.1 %
2	1,576.09	19.55 %
5	4,278.98	53.09 %
TOTAL:	7,797.76	96.74 %

Water Resources

FDEP Surface Water Classification

Waterbody Name	Water Type	Water Basin	Classification	Total Area (acres)	Percent of Area
HOMOSASSA RIVER (BRACKISH PORTION)	ESTUARY	1345	3M	10.54	0.13 %
CHASSAHOWITZKA RIVER	ESTUARY	1361	2	3,009.57	37.34 %
LIZZIE HART SINK DRAIN	STREAM	1364A	3F	127.31	1.58 %
DIRECT RUNOFF TO GULF	ESTUARY	1373	3M	1,258.22	15.61 %
MUD RIVER - SALT CREEK	ESTUARY	1382A	3M	929.98	11.54 %
TOOKE LAKE	LAKE	1382C	3F	11.42	0.14 %
WITHLACOOCHEE RIVER	STREAM	1329E	3F	2,664.16	33.05 %
TANK LAKE	LAKE	1329L	3F	22.49	0.28 %
ROCK POND	LAKE	1329Q	3F	26.66	0.33 %
			TOTAL:	8,060.37	100 %