

**Florida Fish and Wildlife Conservation Commission
Division of Habitat and Species Conservation
Land Conservation and Planning
Pal-Mar 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 **Pal-Mar** 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

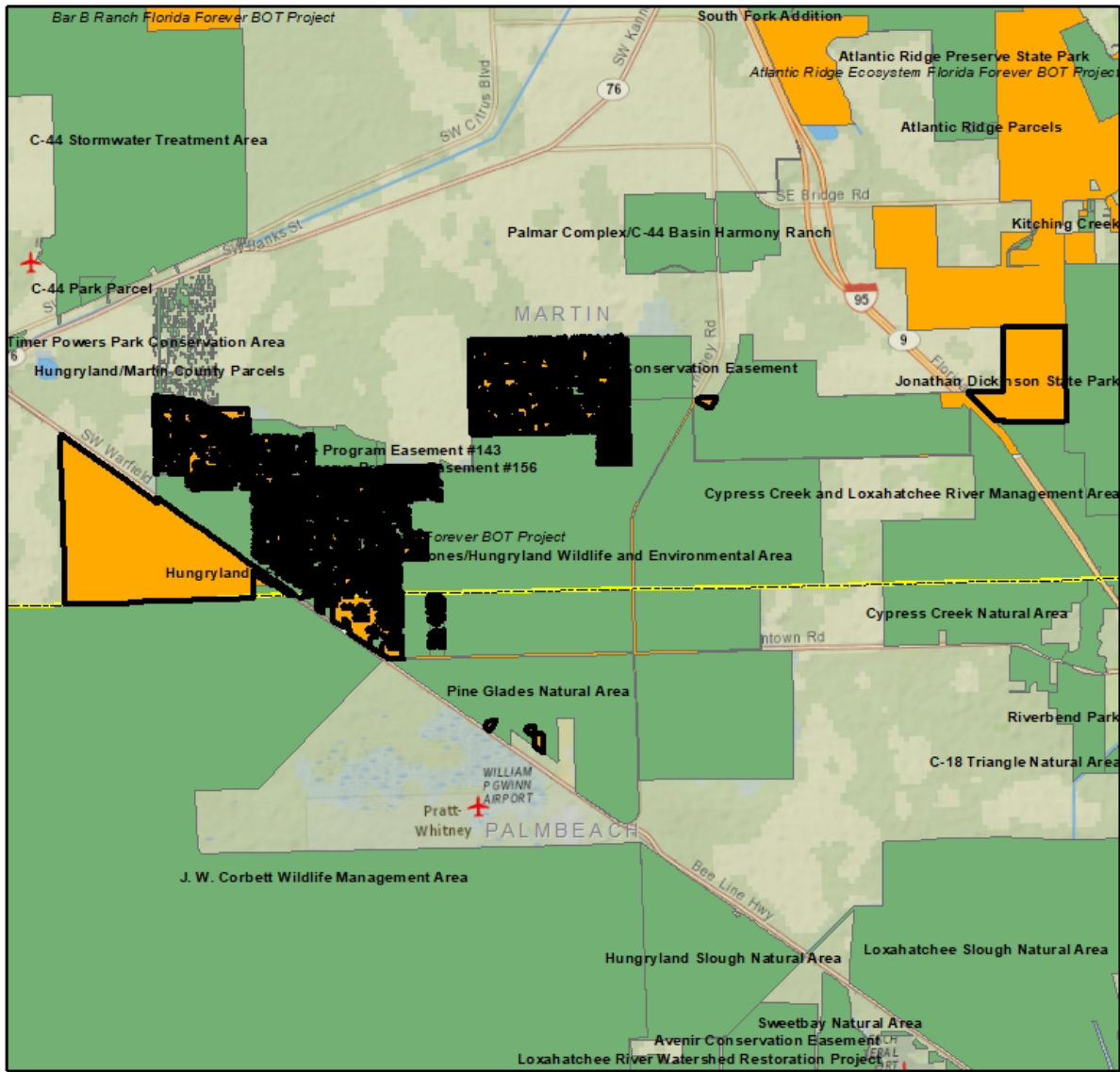
The FWC utilizes the Florida Cooperative Land Cover (CLC) GIS data layer for identification and mapping of land cover. The CLC is a cooperative effort between the FWC and the Florida Natural Areas Inventory (FNAI) to develop ecologically-based statewide land cover from existing sources and expert review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

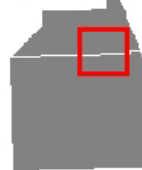
Important fish and wildlife resource GIS data were queried using Environmental Resource Analysis GIS computer software. These data include the following GIS layers:

- 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



**Pal-Mar
Florida Forever Project**
Martin and
Palm Beach Counties
8,838 Remaining Acres

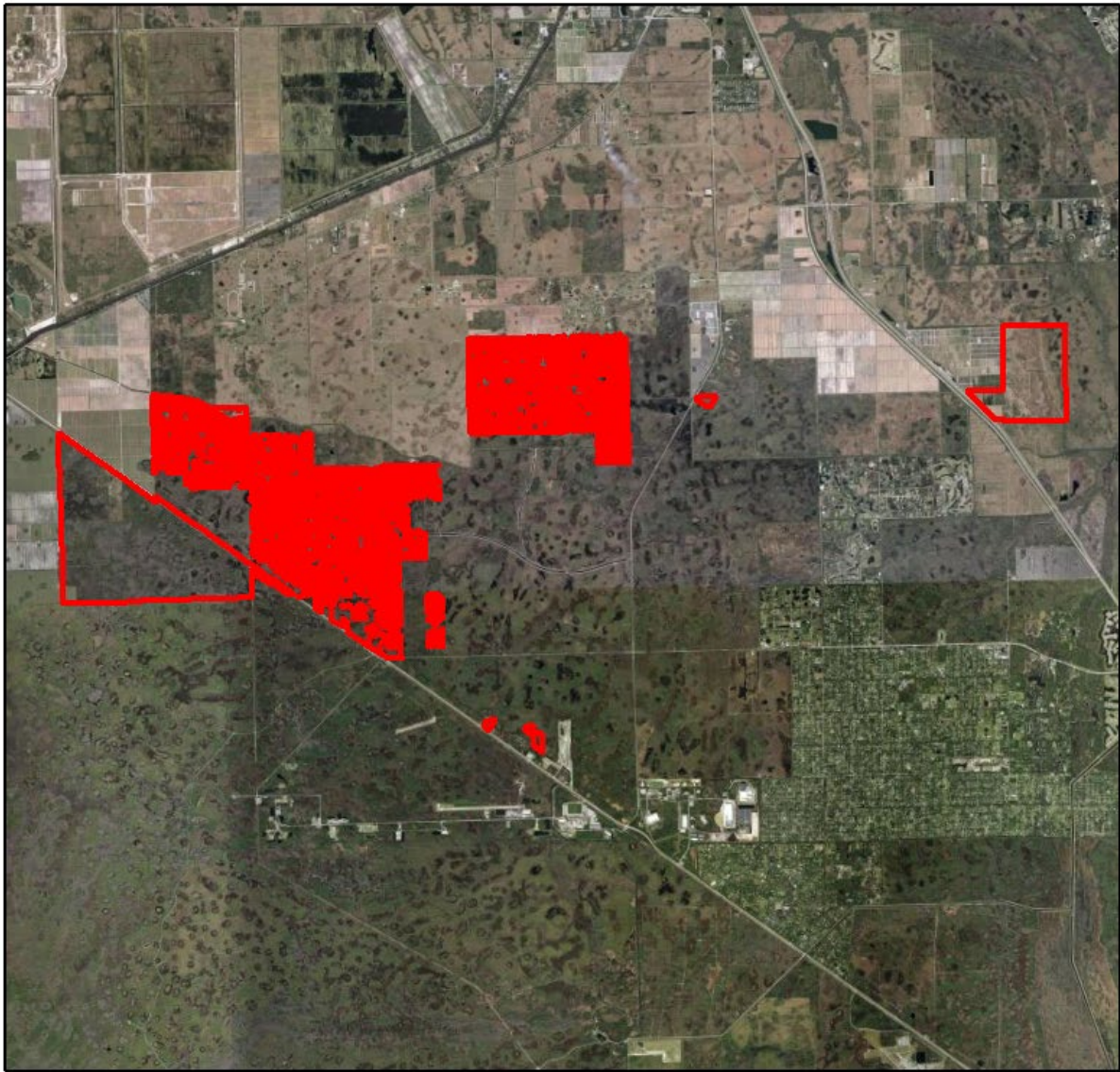


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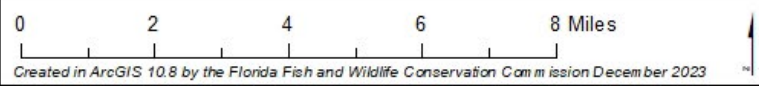
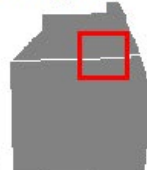
Created in ArcGIS 10.8 by the Florida Fish and Wildlife Conservation Commission December 2023

Vicinity Map

-  Pal-Mar Boundary
-  County Boundary
-  Conservation Lands
-  Florida Forever Projects



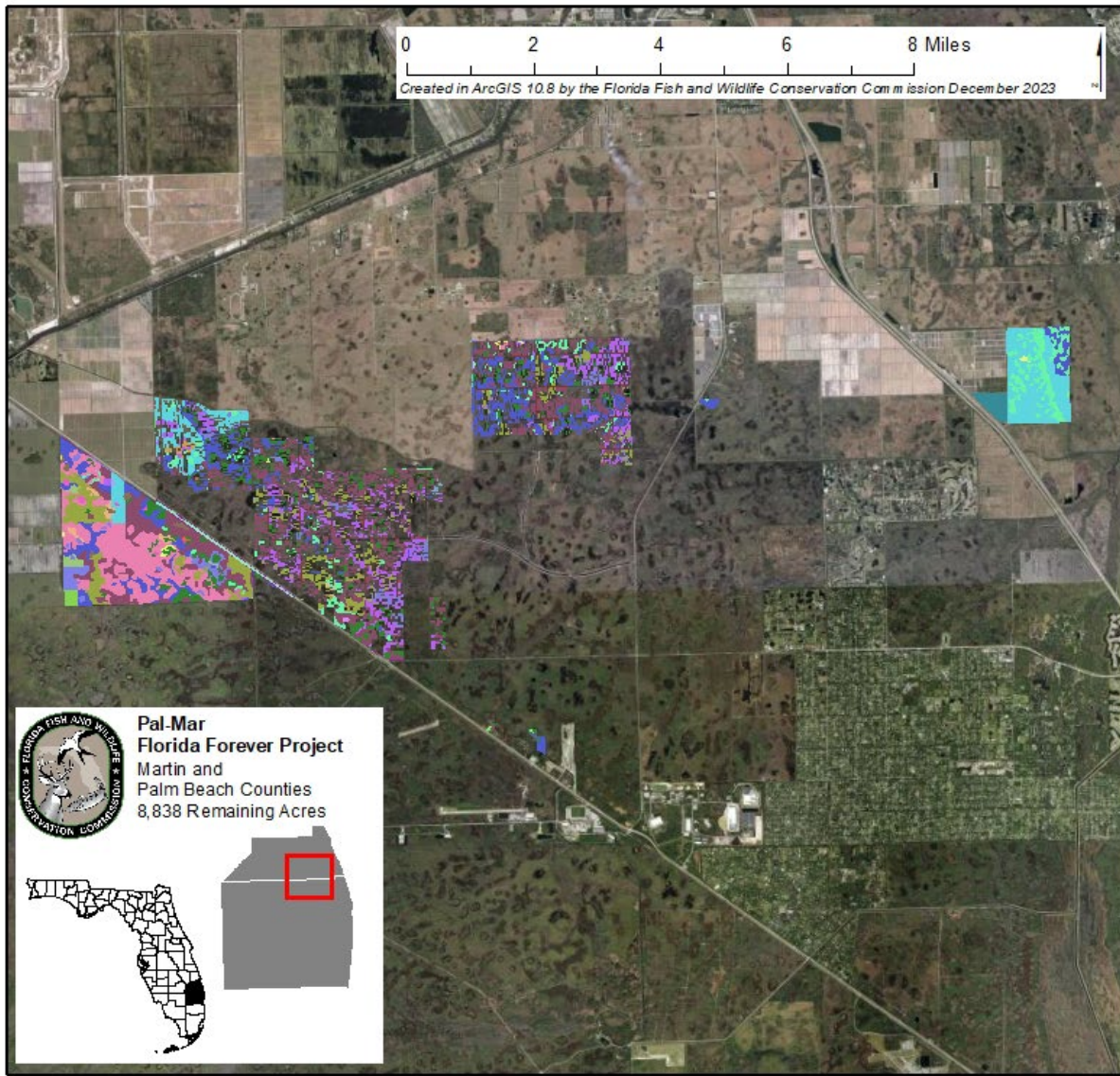
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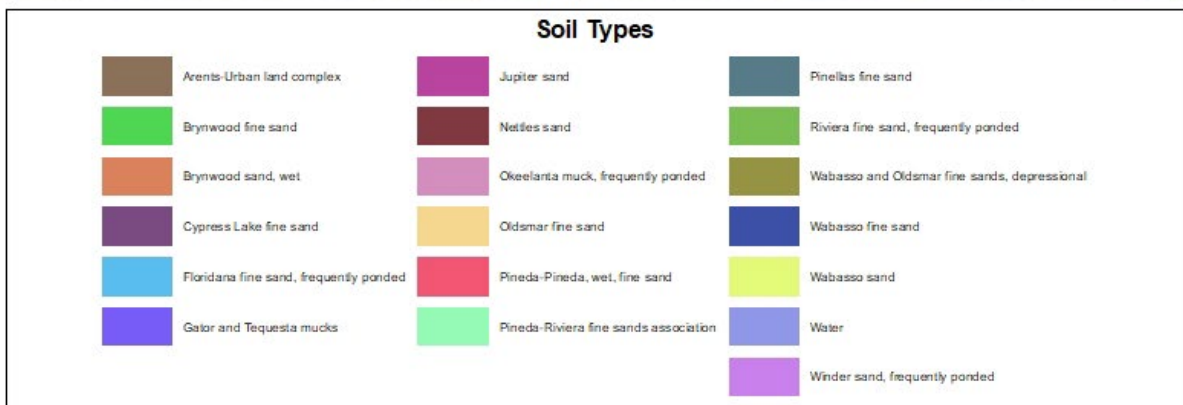
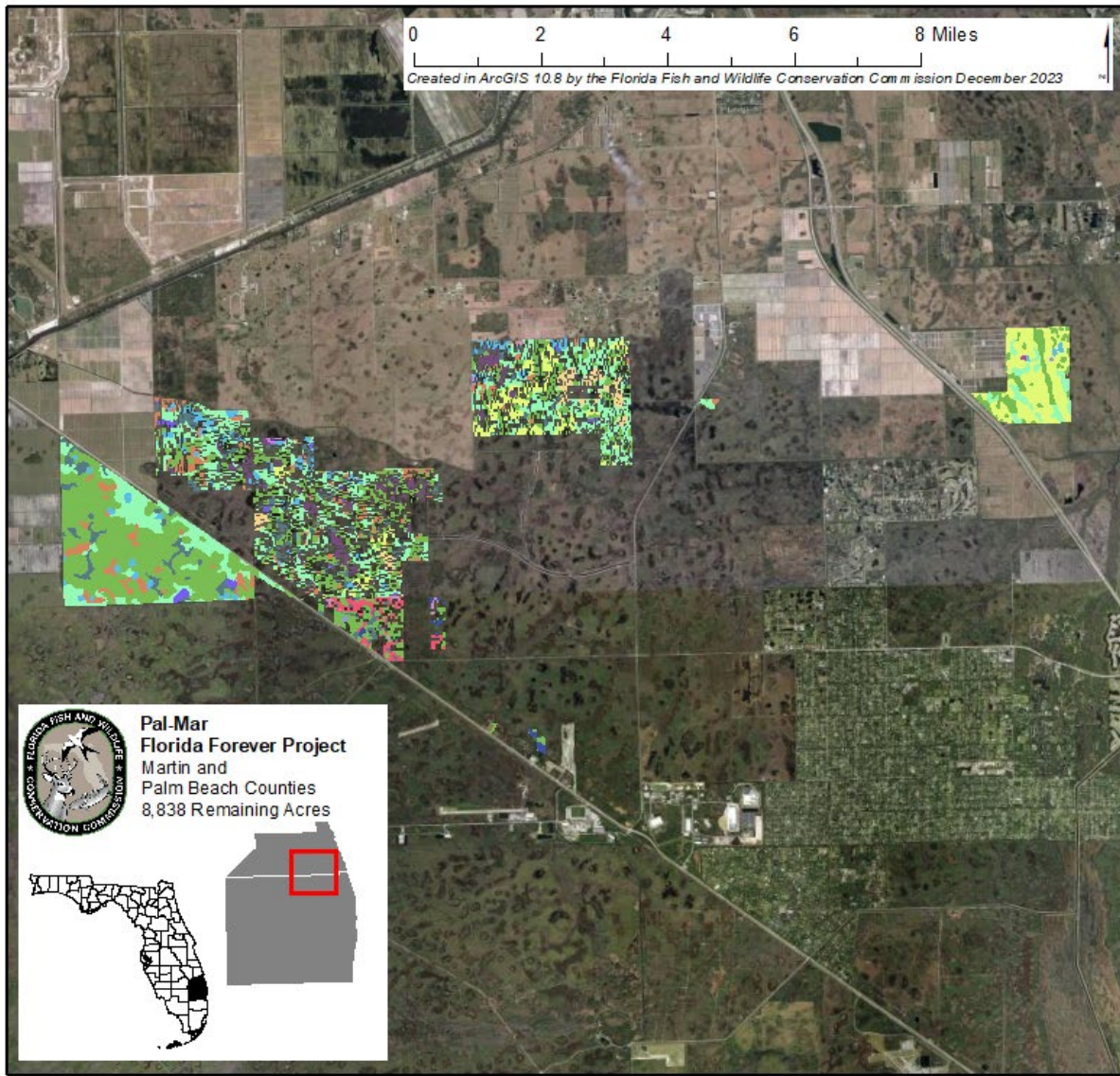


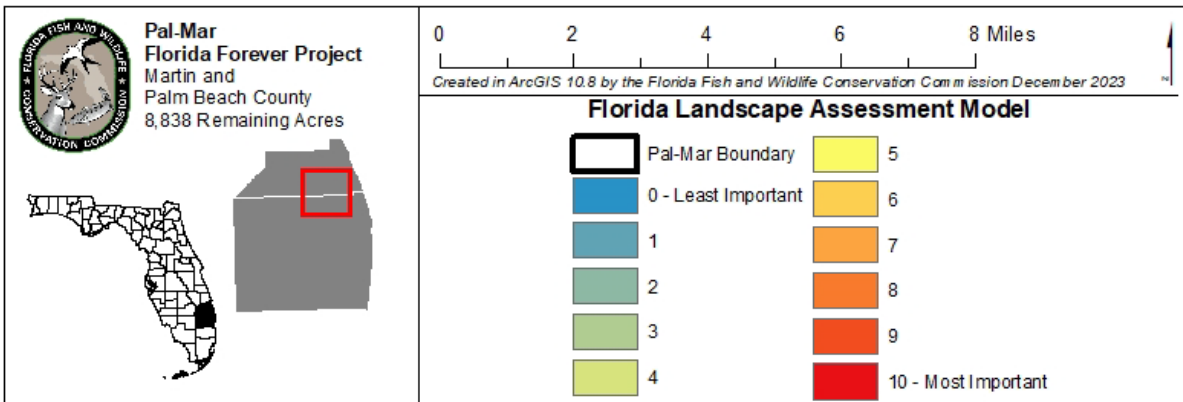
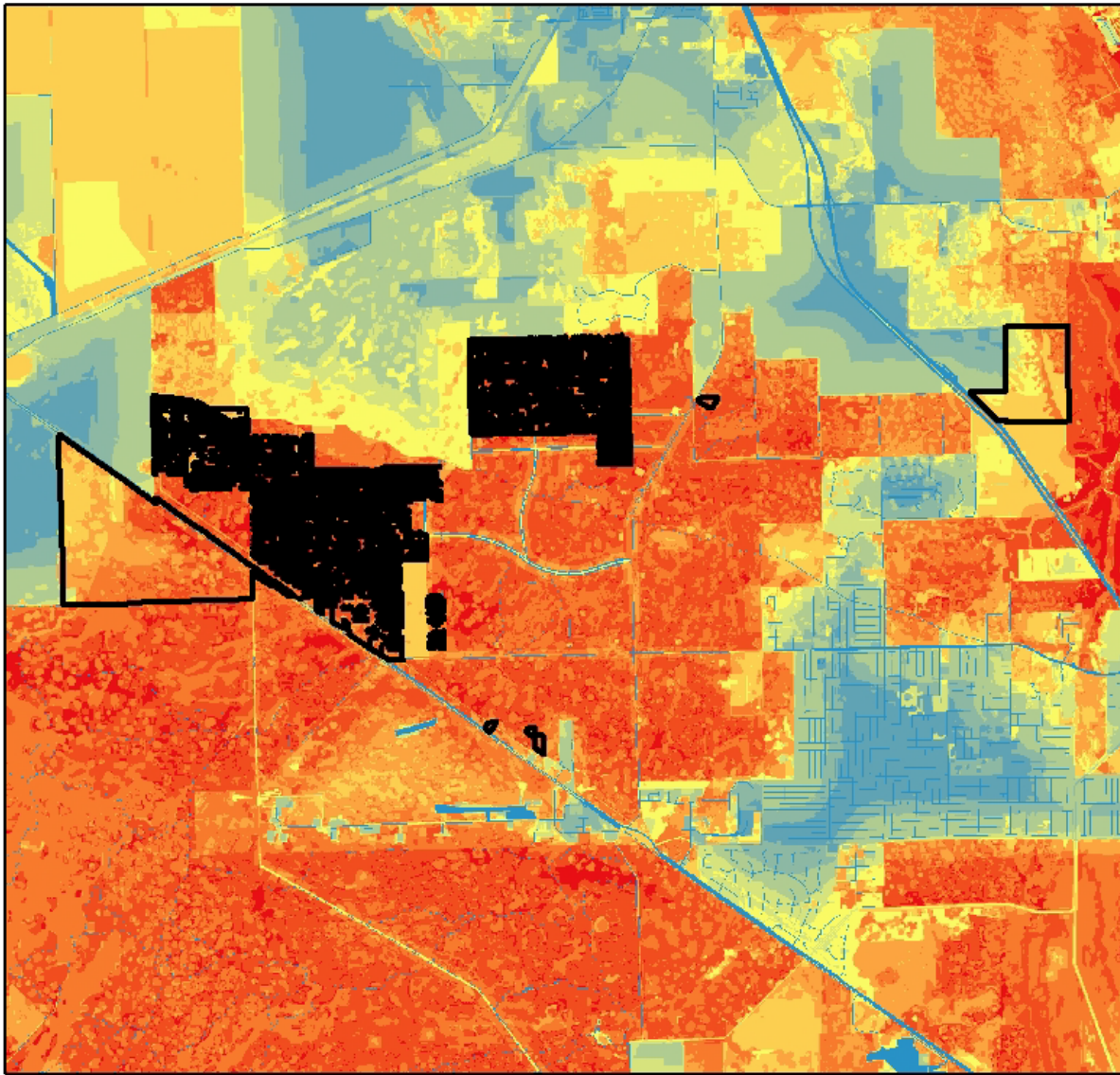
Aerial Imagery



Pal-Mar Boundary







FWC Florida Landscape Assessment Model 2023		
	Value	Acres
	0	46.0
	1	0.0
	2	1.2
	3	13.6
	4	187.5
	5	575.0
	6	1073.7
	7	1486.9
	8	2949.2
	9	2275.9
	10	227.1
Mean FLAM value =	7.6	

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: 11082023 12:04:17

Shape Name: Unnamed polygon centered at -80.304919 °, 26.969431 °

Boundary Area: 8,838.13 acres

Buffer Area: 0 acres

Total Area: 8,838.13 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
Cultural - Riverine	4200	Canal	4210	94.23	1.07 %
Cultural - Riverine	4200	Cultural - Riverine	4200	2.08	0.02 %
Exotic Plants	7000	Brazilian Pepper	7300	2.36	0.03 %
Exotic Plants	7000	Exotic Plants	7000	4.78	0.05 %
Freshwater Forested Wetlands	2200	Mixed Wetland Hardwoods	2233	29.58	0.33 %
Hydric Hammock	2232	Hydric Hammock	2232	0.84	0.01 %
Cultural - Lacustrine	3200	Artificial Impoundment/Reservoir	3220	5.86	0.07 %
Freshwater Forested Wetlands	2200	Mixed Hardwood-Coniferous Swamps	2240	40.69	0.46 %
Isolated Freshwater Marsh	2121	Depression Marsh	21211	944.11	10.68 %
Orchards/Groves	18332	Citrus	183321	107.86	1.22 %
Rural	1830	Unimproved/Woodland Pasture	183314	18.85	0.21 %
Transportation	1840	Transportation	1840	47.10	0.53 %
Cropland/Pasture	18331	Fallow Cropland	1833151	1.61	0.02 %
Dome Swamp	22131	Dome Swamp	22131	667.54	7.55 %
Isolated Freshwater Marsh	2121	Basin Marsh	21212	81.52	0.92 %
Improved Pasture	183313	Improved Pasture	183313	956.26	10.82 %
Cropland/Pasture	18331	Row Crops	183311	35.26	0.4 %
Rural	1830	Rural Open	1831	4.80	0.05 %
Cultural - Terrestrial	1800	Highway Rights of Way	1812	53.06	0.6 %
Utilities	1860	Utilities	1860	5.53	0.06 %
Rural	1830	Rural Structures	1832	3.97	0.04 %
Mesic Hammock	1120	Cabbage Palm	1125	1.63	0.02 %
Mesic Hammock	1120	Mesic Hammock	1120	7.51	0.09 %
Mixed Hardwood-Coniferous	1400	Mixed Hardwood-Coniferous	1400	23.38	0.26 %
Mesic Flatwoods	1311	Mesic Flatwoods	1311	1,203.82	13.62 %
Prairies and Bogs	2110	Wet Prairie	2111	767.28	8.68 %
Strand Swamp	2214	Strand Swamp	2214	5.80	0.07 %
Isolated Freshwater Swamp	2213	Isolated Freshwater Swamp	2213	72.07	0.82 %
Baygall	2231	Baygall	2231	0.64	0.01 %
Wet Flatwoods	2221	Wet Flatwoods	2221	1,691.49	19.14 %
Marshes	2120	Marshes	2120	969.98	10.97 %
Prairies and Bogs	2110	Mixed Scrub-Shrub Wetland	2112	758.15	8.58 %
Cypress	2211	Cypress	2211	220.17	2.49 %
Freshwater Non-Forested Wetlands	2100	Floating/Emergent Aquatic Vegetation	2140	8.30	0.09 %
TOTAL:				8,838.13	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	514.98	5.83 %
CLIP P1 in submerged lands/state waters	25.99	0.29 %
CLIP P1 in terrestrial	6,688.71	75.68 %
CLIP P2 in submerged lands/state waters	97.82	1.11 %
CLIP P2 in terrestrial	1,510.62	17.09 %
TOTAL:	8,838.13	100 %

CLIP- Landscape Category

Priority	Total Area (acres)	Percent of Area
0	6.53	0.07 %
1	2.82	0.03 %
2	5.78	0.07 %
3	8,823.00	99.83 %
TOTAL:	8,838.13	100 %

CLIP- Biodiversity Category

Priority	Total Area (acres)	Percent of Area
0	260.77	2.95 %

1	77.35	0.88 %					
2	1,517.87	17.17 %					
3	523.07	5.92 %					
4	6,459.07	73.08 %					
TOTAL:	8,838.13	100 %					
Priority FWC Strategic Habitat Conservation Areas 2021							
Priority	Total Area (acres)	Percent of Area					
0	3,943.86	44.62 %					
2	4,858.80	54.98 %					
3	35.01	0.4 %					
4	0.47	0.01 %					
TOTAL:	8,838.13	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						12.14	0.14 %
Florida black bear						526.73	5.96 %
Florida black bear	Florida snail kite					1,478.23	16.73 %
Florida snail kite						2,260.68	25.58 %
					TOTAL:	4,277.78	48.4 %
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					
Rare	8,838.13	100 %					
TOTAL:	8,838.13	100 %					
Rare Fish							
No Records Found							
Rare Fish Imperiled Waters							
COMMON NAME	SCIENTIFIC NAME	Total Area (acres)	Percent of Area				
Mountain mullet	Agonostomus monticola	44.24	0.5 %				
River goby	Awaous banana	3,980.53	45.04 %				
	TOTAL:	4,024.77	45.54 %				
Southern bald eagle nest							
No Records Found							
Imperiled Species Richness							
Number of Species	Total Area (acres)	Percent of Area					
0	219.08	2.48 %					
1	102.15	1.16 %					
3	1,168.60	13.22 %					
4	10.72	0.12 %					
5	910.82	10.31 %					
6	337.44	3.82 %					
7	1,661.82	18.8 %					
8	2,907.36	32.9 %					
9	1,520.14	17.2 %					
TOTAL:	8,838.13	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
American Alligator	Alligator mississippiensis	G5	S4	FT(S/A)	SAT	BC	2005	0.00	0 %
Bachman's Sparrow	Peuceaea aestivalis	G3	S3	N	N	B	2005	0.00	0 %
Dark Tiny Sand-loving Scarab	Geopsammodius fuscus	G1	S1	N	N	E	2005-12-18	0.01	0 %
DATA SENSITIVE ELEMENT OCCURRENCE - contact FNAI for more information	DATA SENSITIVE ELEMENT OCCURRENCE - contact FNAI for more information	G3	S1	E	N	E	1981 pre	1,075.20	12.17 %
DATA SENSITIVE ELEMENT OCCURRENCE - contact FNAI for more information	DATA SENSITIVE ELEMENT OCCURRENCE - contact FNAI for more information	G5	S3	T	N	CD	2004	0.00	0 %
Florida Sandhill Crane	Antigone canadensis pratensis	G5T2	S2	ST	N	E	2006	0.00	0 %
Glossy Ibis	Plegadis falcinellus	G5	S3	N	N	E	1987-04-14	454.76	5.15 %
Glossy Ibis	Plegadis falcinellus	G5	S3	N	N	E	2006	0.00	0 %

large-flowered rosemary	Conradina grandiflora	G3	S3	T	N	E	1988-01	453.03	5.13 %
Limpkin	Aramus guarana	G5	S3	N	N	BC	2005	0.00	0 %
Little Blue Heron	Egretta caerulea	G5	S4	ST	N	BC	2004-05-19	1.05	0.01 %
Little Blue Heron	Egretta caerulea	G5	S4	ST	N	E	2007	0.00	0 %
many-flowered grass-pink	Calopogon multiflorus	G2G3	S2S3	T	N	E	2013-03-01	0.00	0 %
Round-tailed Muskrat	Neofiber alleni	G2	S2	N	N	BC	2005	0.00	0 %
Sand Pine Scrub Ataenius Beetle	Haroldiataenius saramari	G3G4	S3S4	N	N	E	1994 pre	0.01	0 %
sand-dune spurge	Chamaesyce cumulicola	G2	S2	E	N	U	1981 pre	1,075.20	12.17 %
Snowy Egret	Egretta thula	G5	S3	N	N	E	2006	0.00	0 %
Swallow-tailed Kite	Elanoides forficatus	G5	S2	N	N	E	1990-05-09	38.33	0.43 %
Tricolored Heron	Egretta tricolor	G5	S4	ST	N	E	2007	0.00	0 %
White Ibis	Eudocimus albus	G5	S4	N	N	E	2007	0.00	0 %
Wood Stork	Mycteria americana	G4	S2	FT	DL	E	2007	0.00	0 %
ZZ	Depression marsh	G4	S4	N	N	A	1999	2.16	0.02 %
ZZ	Depression marsh	G4	S4	N	N	B	1999	7.51	0.08 %
ZZ	Dome swamp	G4	S4	N	N	A	1999	0.67	0.01 %
ZZ	Hydric hammock	G4	S4	N	N	A	1999	1.04	0.01 %
ZZ	Mesic flatwoods	G4	S4	N	N	B	1999	12.53	0.14 %
ZZ	Scrubby flatwoods	G2	S2?	N	N	AC	1999	1,064.75	12.05 %
ZZ	Wet flatwoods	G4	S4	N	N	A	1999	4.20	0.05 %
ZZ	Wet flatwoods	G4	S4	N	N	B	1999	54.38	0.62 %
TOTAL:								4,244.83	48.03 %

Suitable Habitat that Supports Species Known to Occur in the Vicinity

COMMON NAME	SCIENTIFIC NAME	Total Area (acres)	Percent of Area
celestial lily	Nemastylis floridana	42.79	0.48 %
Eastern Indigo Snake	Drymarchon couperi	1,179.75	13.35 %
Florida Sandhill Crane	Antigone canadensis pratensis	10,822.18	122.45 %
many-flowered grass-pink	Calopogon multiflorus	42.70	0.48 %
Red-cockaded Woodpecker	Dryobates borealis	241.18	2.73 %
Round-tailed Muskrat	Neofiber alleni	7.99	0.09 %
Snail Kite	Rostrhamus sociabilis	7,484.17	84.68 %
Wood Stork	Mycteria americana	3,745.77	42.38 %
TOTAL:		23,566.53	266.65 %

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
2	8,828.95	99.9 %
TOTAL:	8,828.95	99.9 %

Water Resources

FDEP Surface Water Classification

Waterbody Name	Water Type	Water Basin Classification	Total Area (acres)	Percent of Area
L-8	STREAM	3233A 3F	10.05	0.11 %
SOUTH FORK ST LUCIE RIVER (FRESHWATER SEGMENT)	STREAM	3210D 3F	20.36	0.23 %
C-44	STREAM	3218 3F	4,006.24	45.33 %
KITCHINGS CREEK	STREAM	3224B 3F	598.93	6.78 %
CYPRESS CREEK	STREAM	3224C1 3F	20.29	0.23 %

MOONSHINE CREEK	STREAM	3224C2	3F	476.26	5.39 %
PAL MAR	STREAM	3228	3F	3,666.28	41.48 %
C-18	STREAM	3234C	1	39.72	0.45 %
TOTAL:				8,838.13	100 %
Outstanding Florida Waters					
Name	OFW Type	Total Area (acres)		Percent of Area	
Jonathan Dickinson State Park	Other	11.66		0.13 %	
TOTAL:		11.66		0.13 %	
Florida Geological Survey Springs					
No Records Found					
National Wetlands Inventory					
Wetland Type	Wetland Code	Total Area (acres)		Percent of Area	
FRESHWATER POND	PAB4Fd	1.22		0.01 %	
FRESHWATER EMERGENT WETLAND	PEM1Ad	5.97		0.07 %	
LAKE	L2UBF	20.79		0.24 %	
LAKE	L1UBH	9.48		0.11 %	
FRESHWATER EMERGENT WETLAND	PEM1/FO4B	200.40		2.27 %	
LAKE	L2UBH	53.86		0.61 %	
FRESHWATER POND	PAB4F	6.27		0.07 %	
FRESHWATER EMERGENT WETLAND	PEM1A	0.28		0 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO4A	59.38		0.67 %	
FRESHWATER FORESTED/SHRUB WETLAND	PSS1/3Cd	492.26		5.57 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO4Ad	268.94		3.04 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO4C	74.24		0.84 %	
FRESHWATER FORESTED/SHRUB WETLAND	PSS1/3C	76.40		0.86 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO2/1F	10.41		0.12 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO2Cd	720.39		8.15 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO4Cd	609.05		6.89 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO1Fd	17.10		0.19 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO2Fd	169.71		1.92 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO2F	32.66		0.37 %	
FRESHWATER FORESTED/SHRUB WETLAND	PSS1/3A	6.05		0.07 %	
FRESHWATER FORESTED/SHRUB WETLAND	PSS1/3Ad	71.86		0.81 %	
FRESHWATER FORESTED/SHRUB WETLAND	PSS1F	181.92		2.06 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO2C	6.24		0.07 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO1C	13.24		0.15 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO1/SS1C	34.95		0.4 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO1/3Ad	12.11		0.14 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO1/3C	6.56		0.07 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO1/SS1B	39.51		0.45 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO1/3Cd	14.90		0.17 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO1B	0.77		0.01 %	
FRESHWATER EMERGENT WETLAND	PEM1Fd	1,061.99		12.02 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO1/2C	16.99		0.19 %	
FRESHWATER FORESTED/SHRUB WETLAND	PFO1F	8.03		0.09 %	
FRESHWATER EMERGENT WETLAND	PEM1Cd	256.15		2.9 %	
FRESHWATER EMERGENT WETLAND	PEM1F	484.44		5.48 %	
FRESHWATER EMERGENT WETLAND	PEM1C	579.20		6.55 %	
FRESHWATER EMERGENT WETLAND	PEM1B	132.17		1.5 %	
RIVERINE	R5UBH	0.31		0 %	
RIVERINE	R5UBFx	17.90		0.2 %	
FRESHWATER POND	PUBHx	14.27		0.16 %	
RIVERINE	R2UBHx	181.49		2.05 %	
FRESHWATER POND	PUBH	77.71		0.88 %	
TOTAL:		6,047.56		68.43 %	
Priority Floodplain Resources					
Priority	Total Area (acres)		Percent of Area		
4	242.54		2.74 %		
2	1,145.79		12.96 %		
3	903.63		10.22 %		
0	3,237.78		36.63 %		
1	3,304.15		37.39 %		
5	3.33		0.04 %		
6	0.92		0.01 %		
TOTAL:	8,838.13		100 %		