

Florida Fish and Wildlife Conservation Commission
Division of Habitat and Species Conservation
Land Conservation and Planning
Archie Carr Sea Turtle Refuge 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 **Archie Carr Sea Turtle Refuge** 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

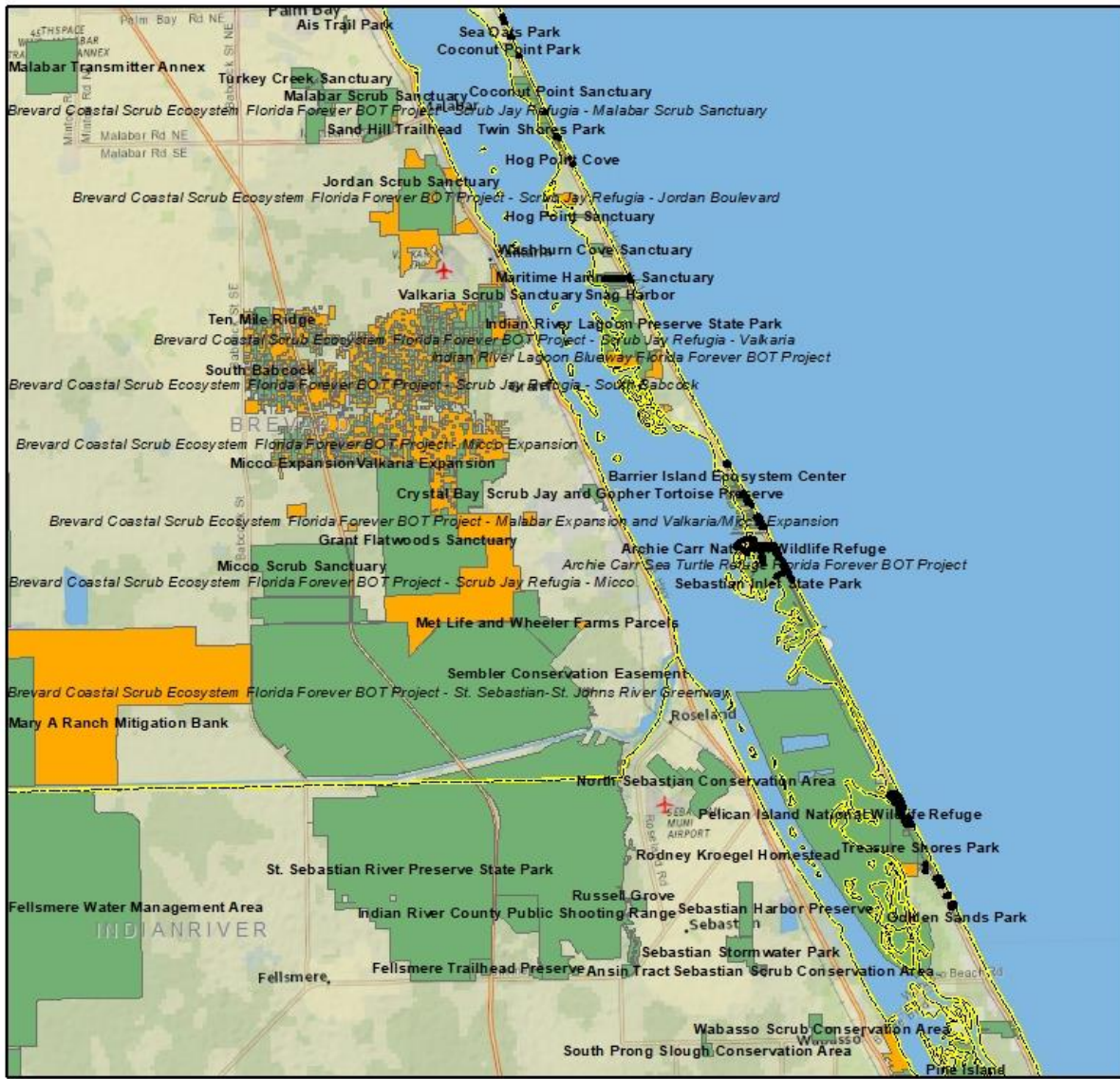
The FWC utilizes the Florida Cooperative Land Cover (CLC) GIS data layer for identification and mapping of land cover. The CLC is a cooperative effort between the FWC and the Florida Natural Areas Inventory (FNAI) to develop ecologically-based statewide land cover from existing sources and expert review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



**Archie Carr
Sea Turtle Refuge
Florida Forever Project**
Brevard & Indian River Counties
118 Remaining Acres

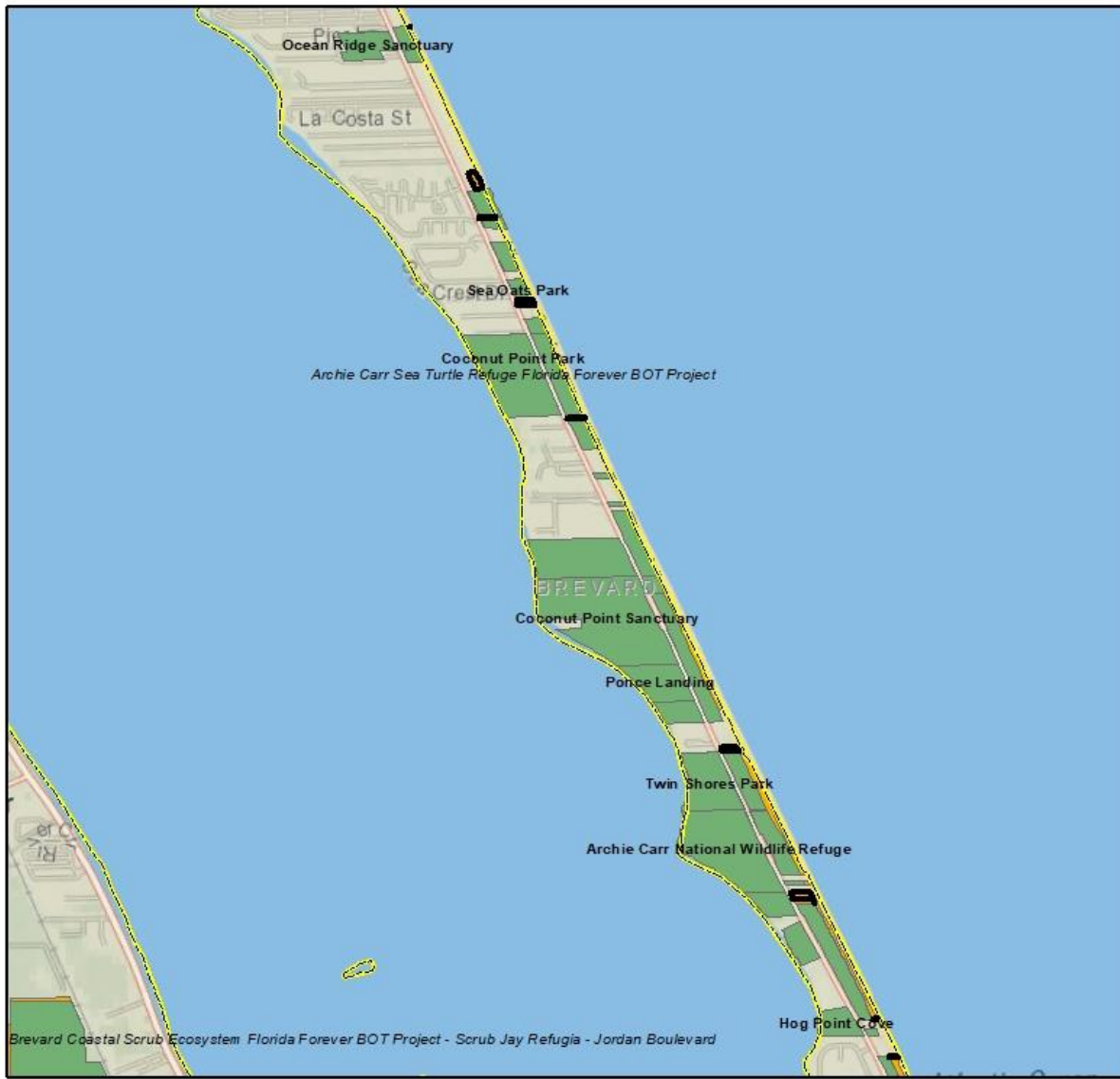


0 2.5 5 7.5 10 Miles

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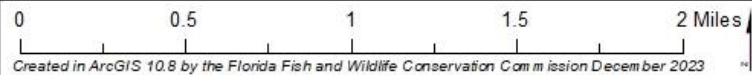
Vicinity Map

- Archie Carr Sea Turtle Refuge
- County Boundaries
- Conservation Lands
- Florida Forever Projects



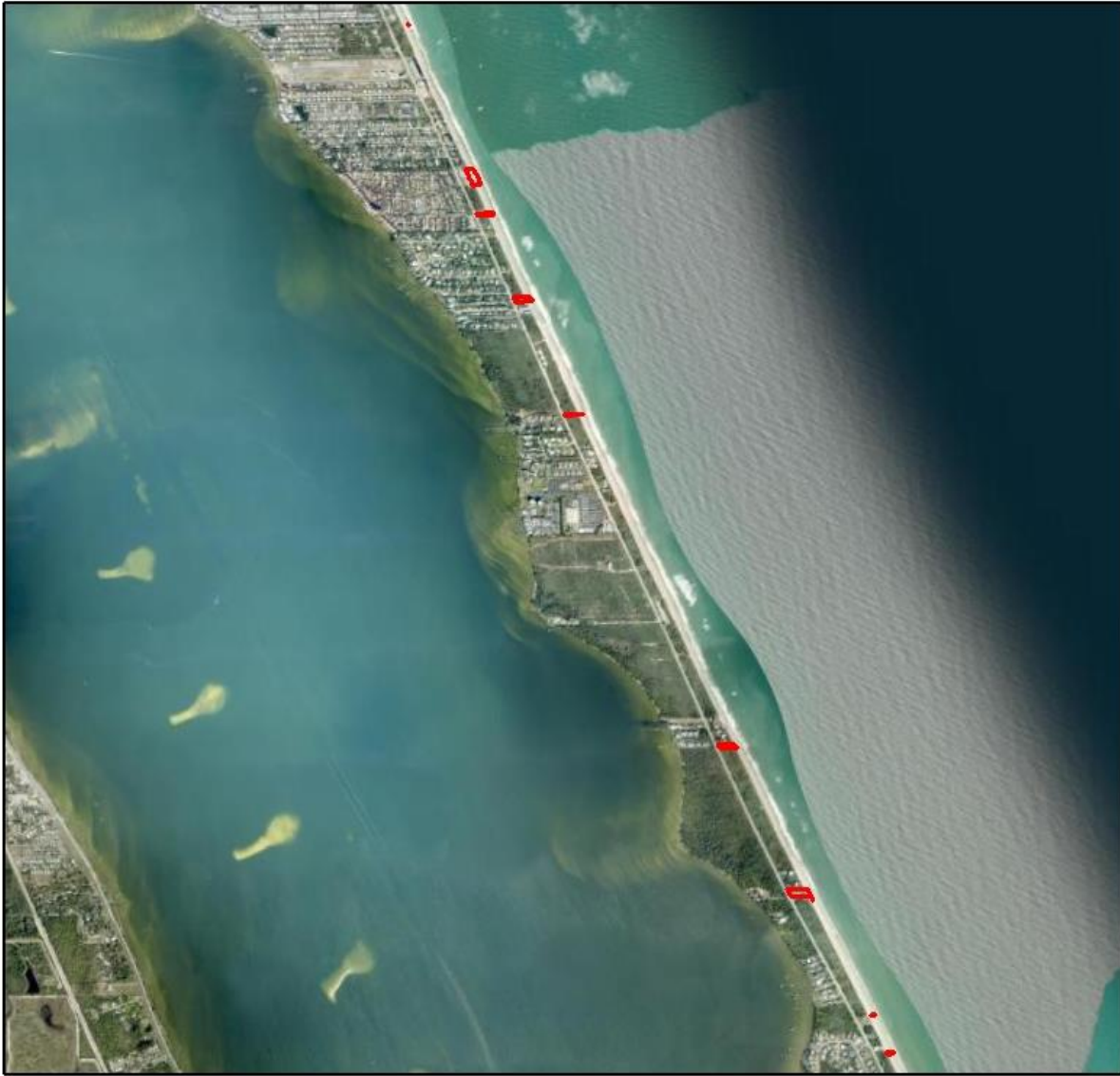
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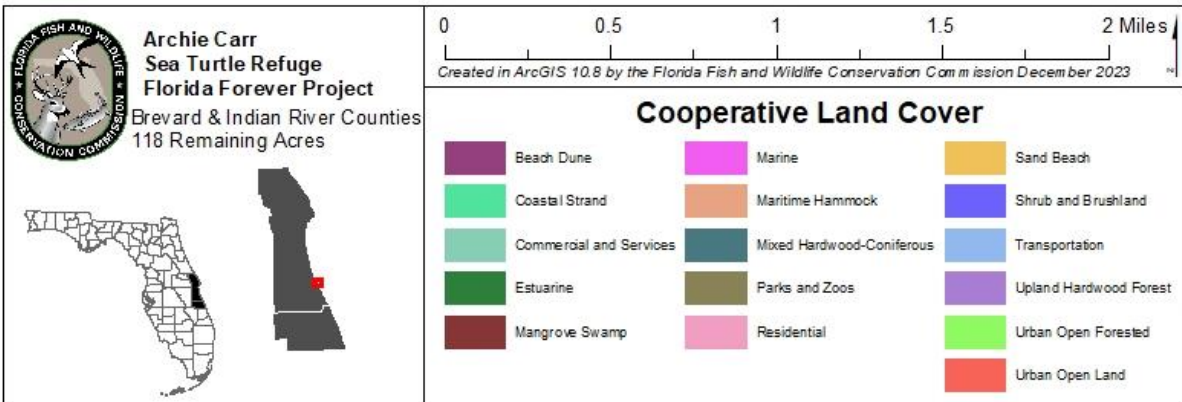
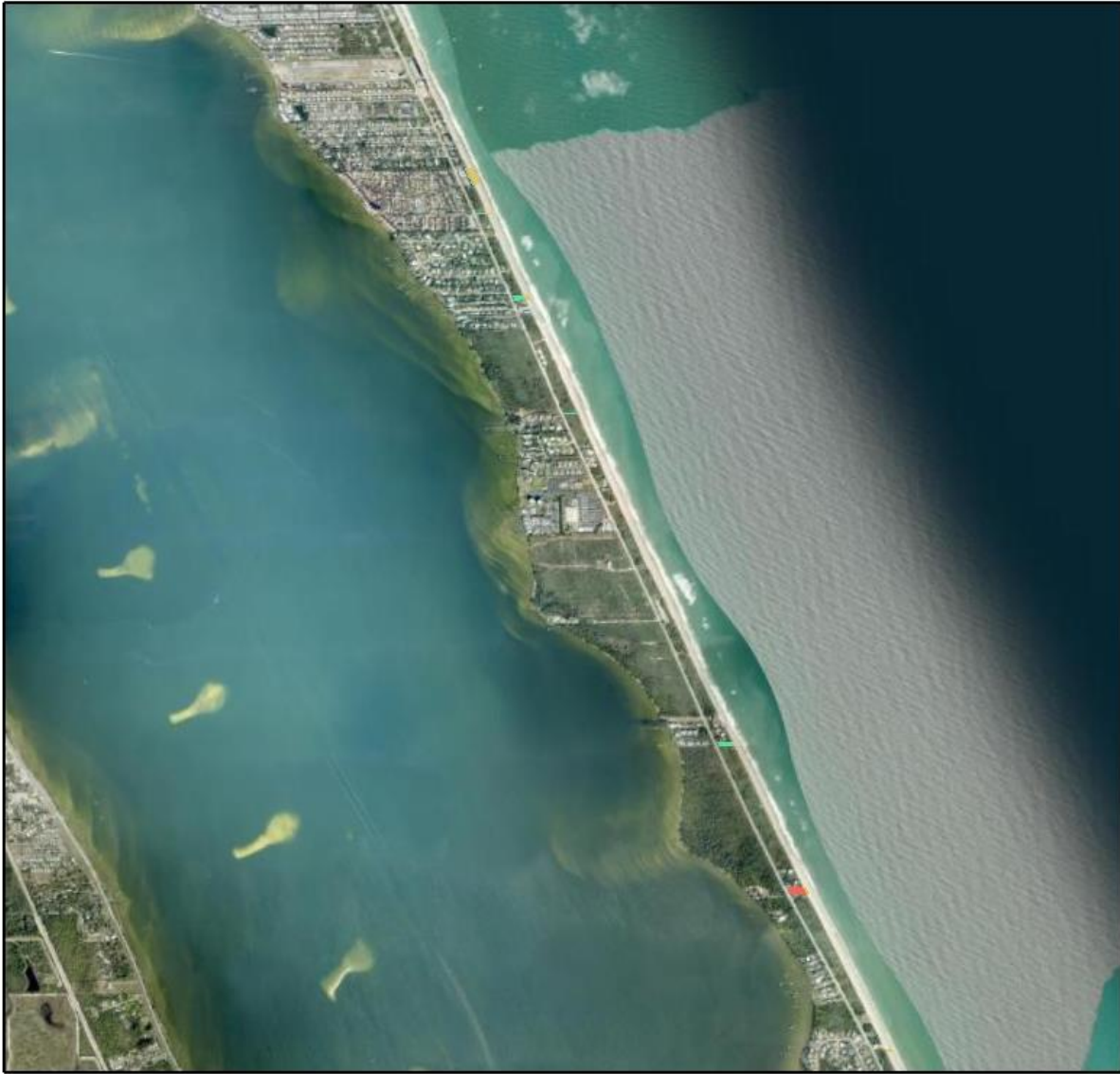
0 0.5 1 1.5 2 Miles

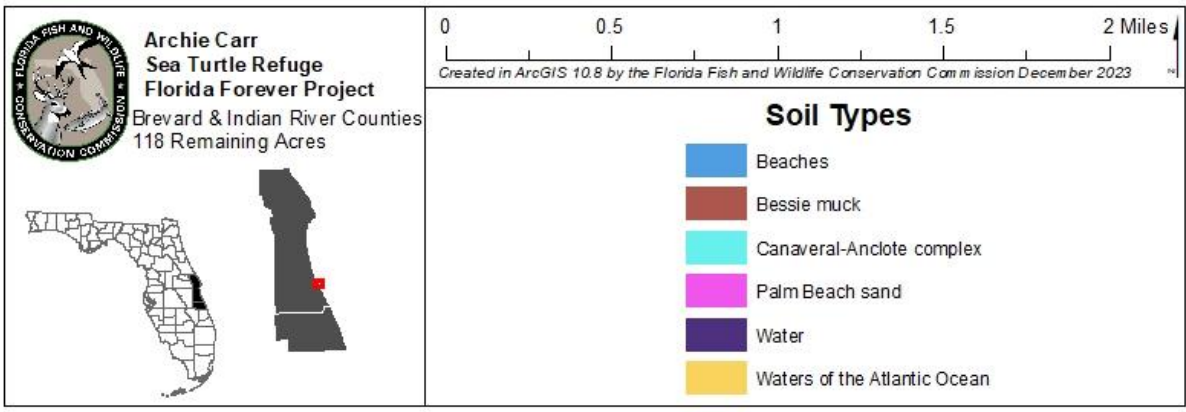
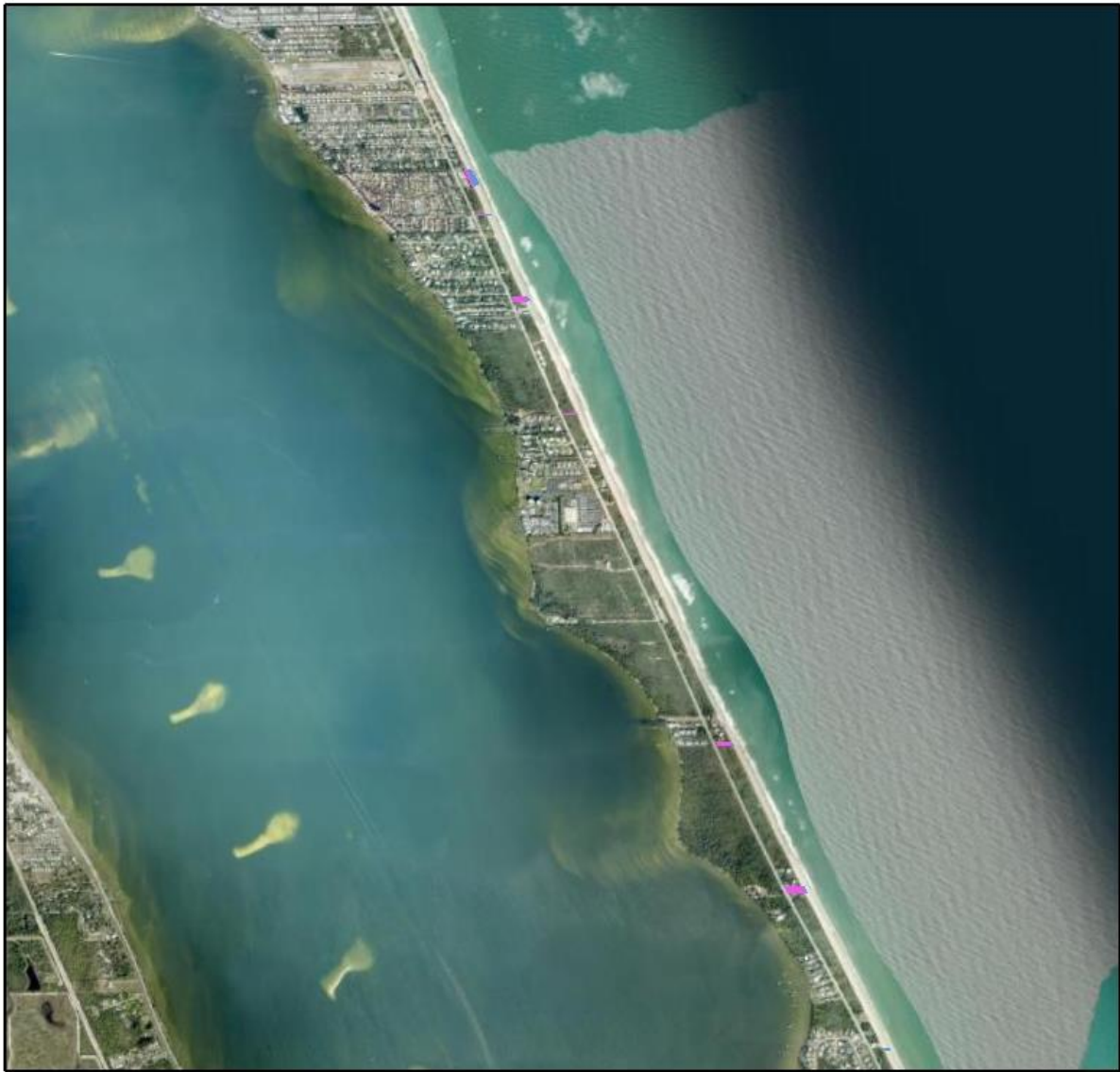
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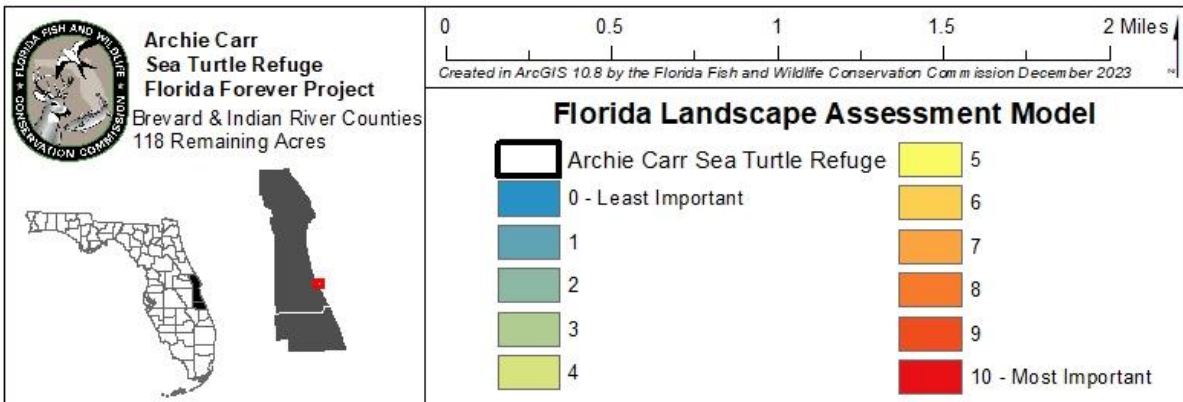
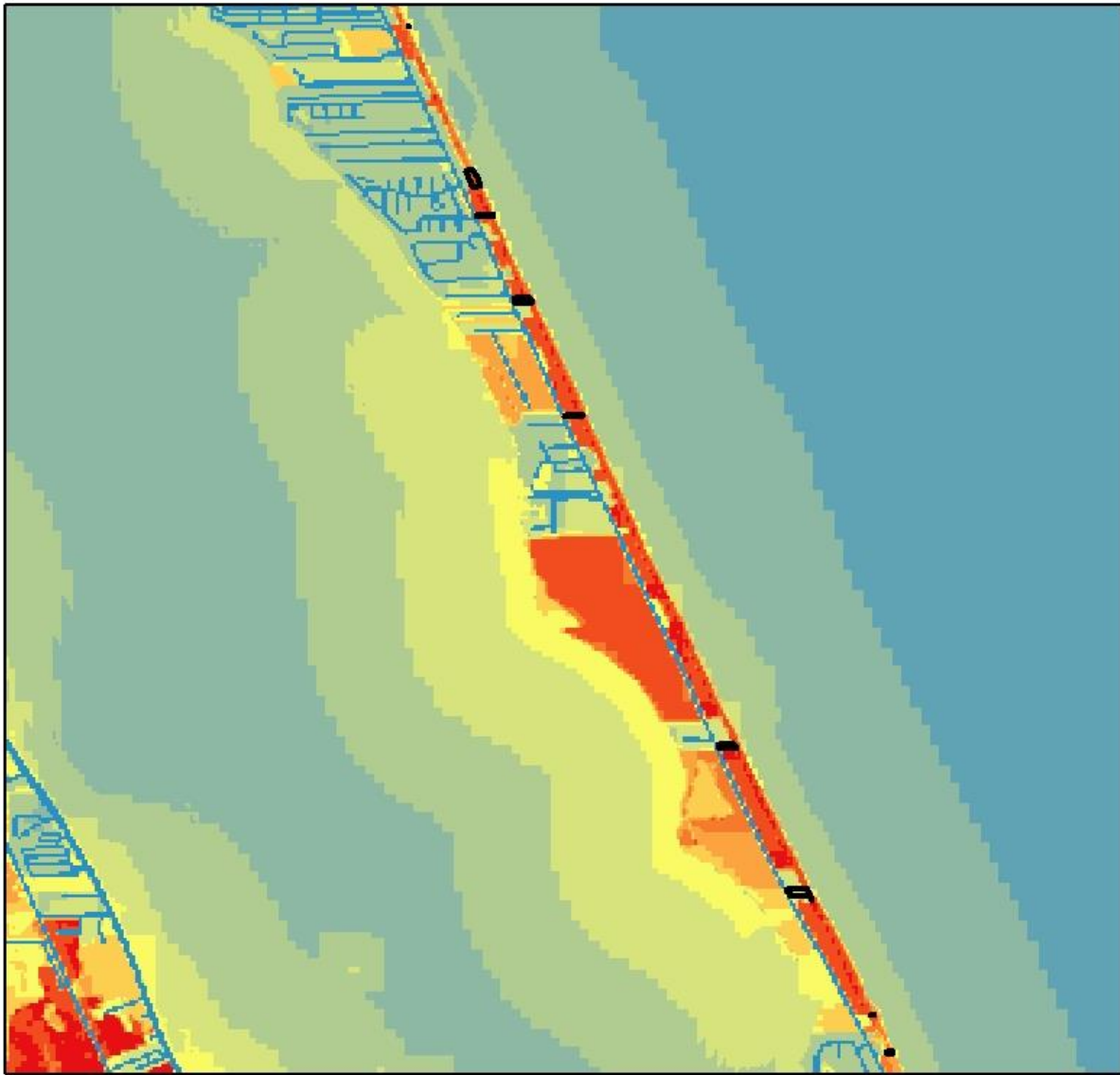
Aerial Imagery

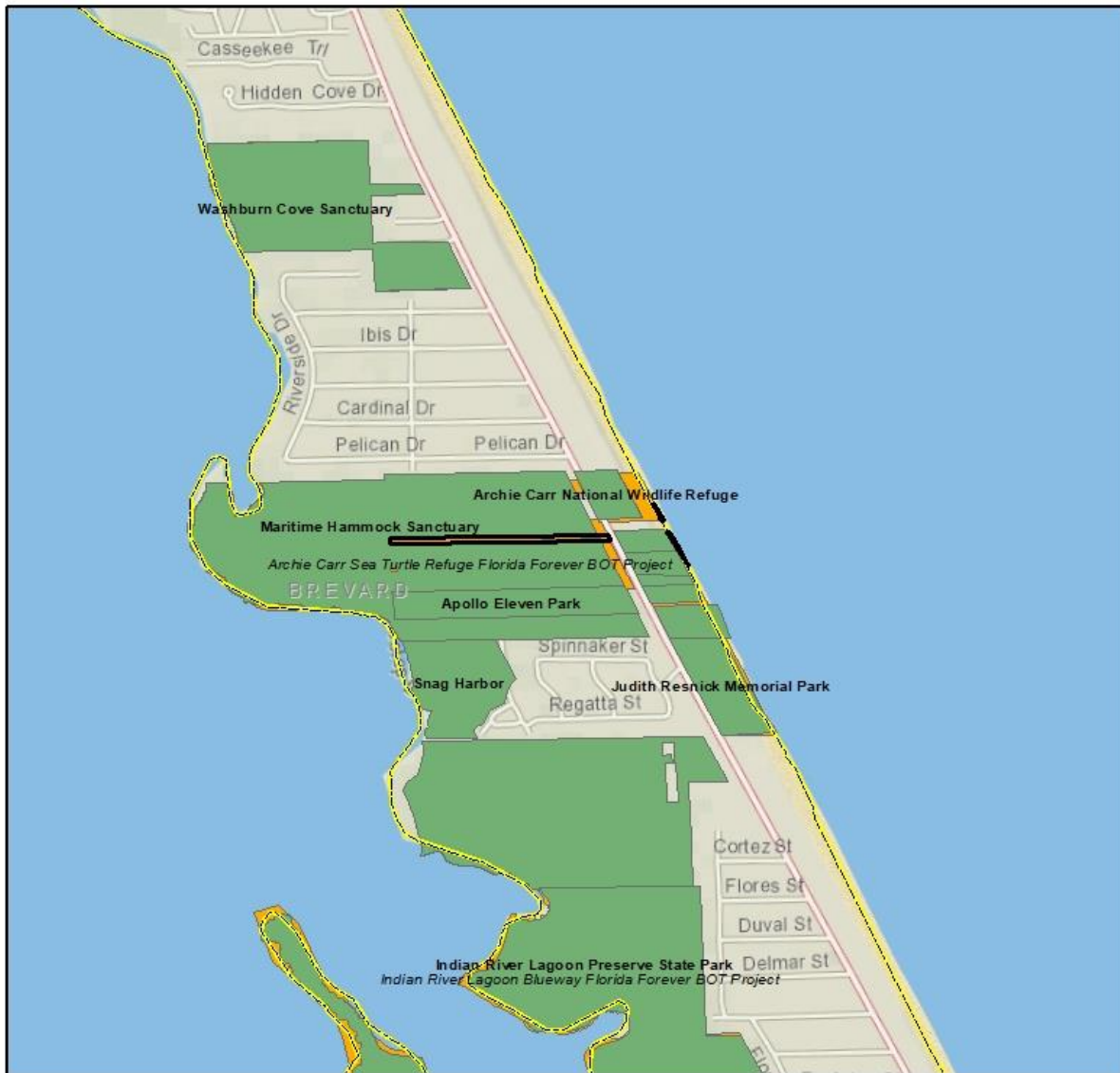


Archie Carr Sea Turtle Refuge









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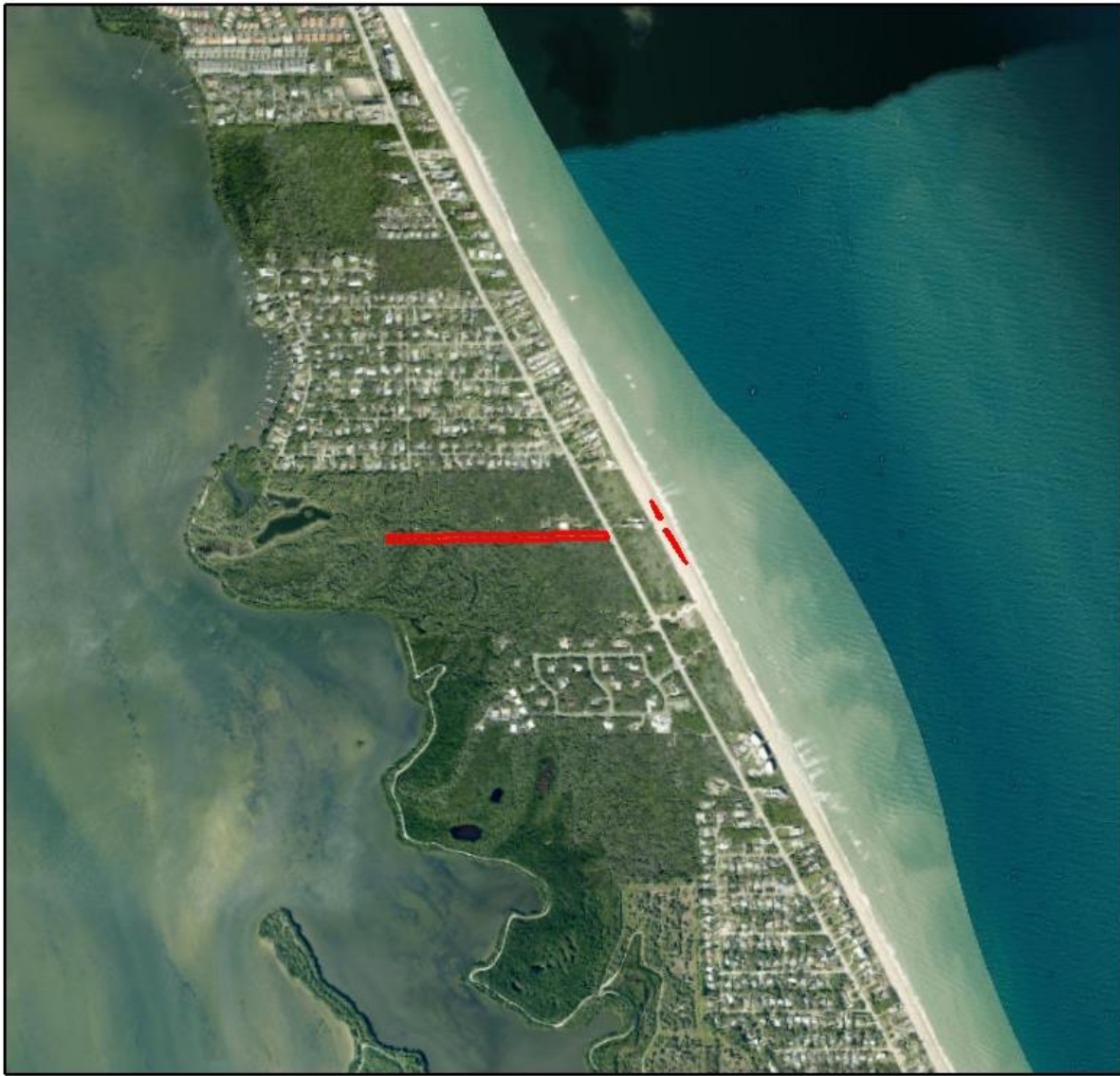


0 0.25 0.5 0.75 1 Miles

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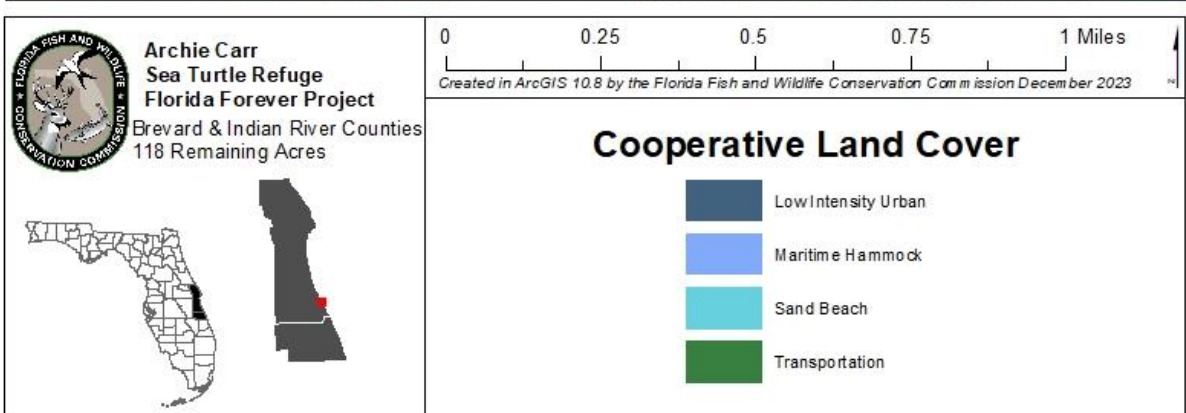
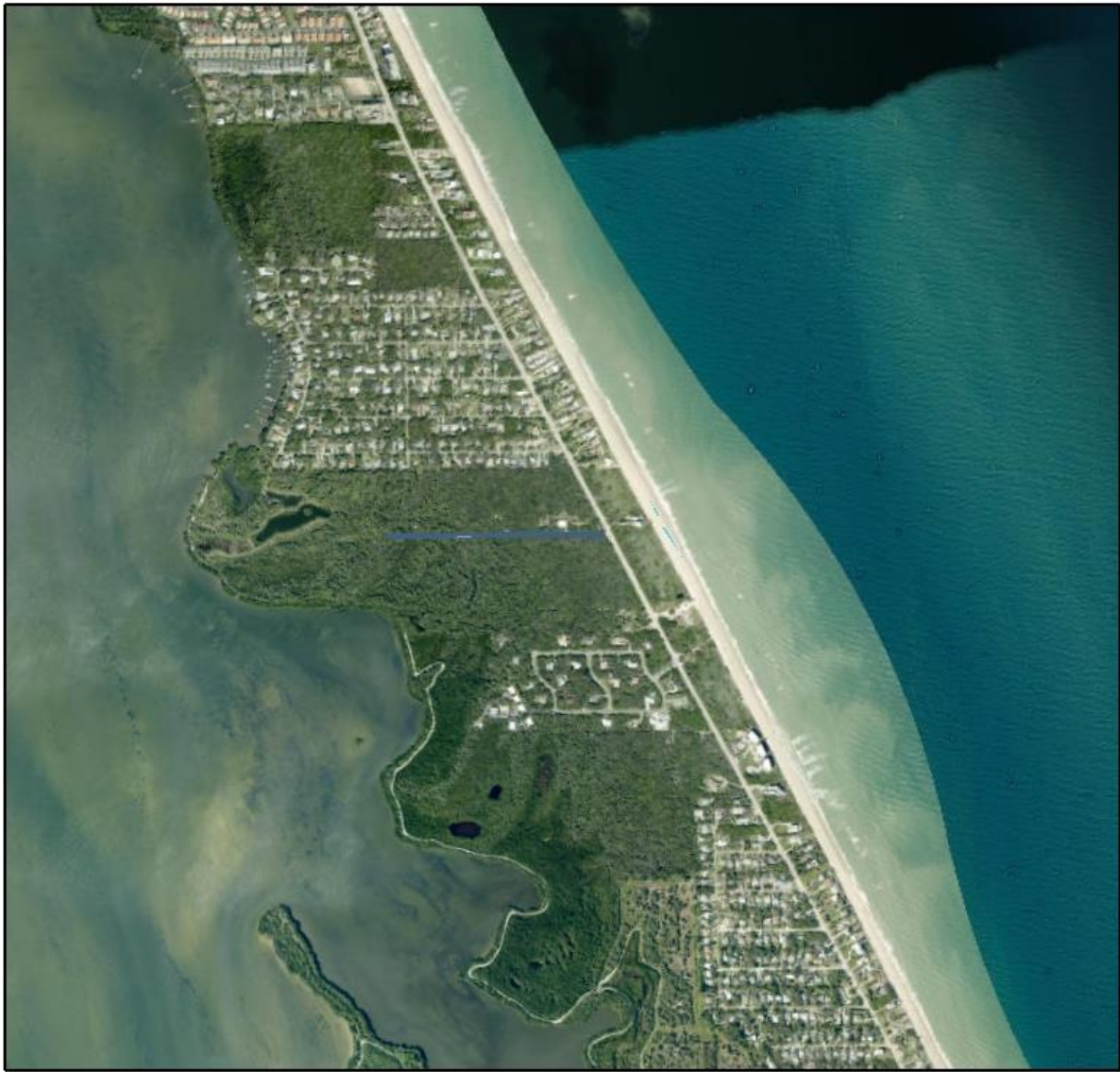
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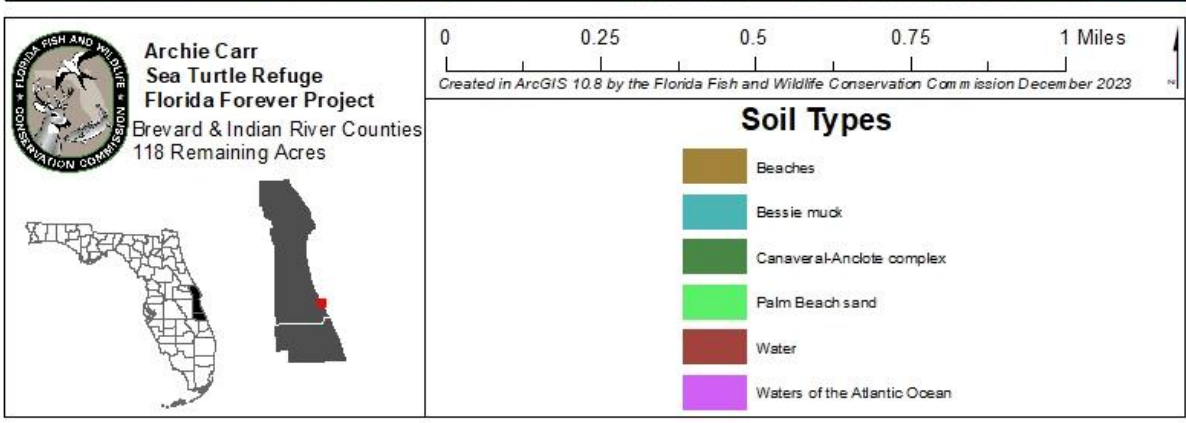
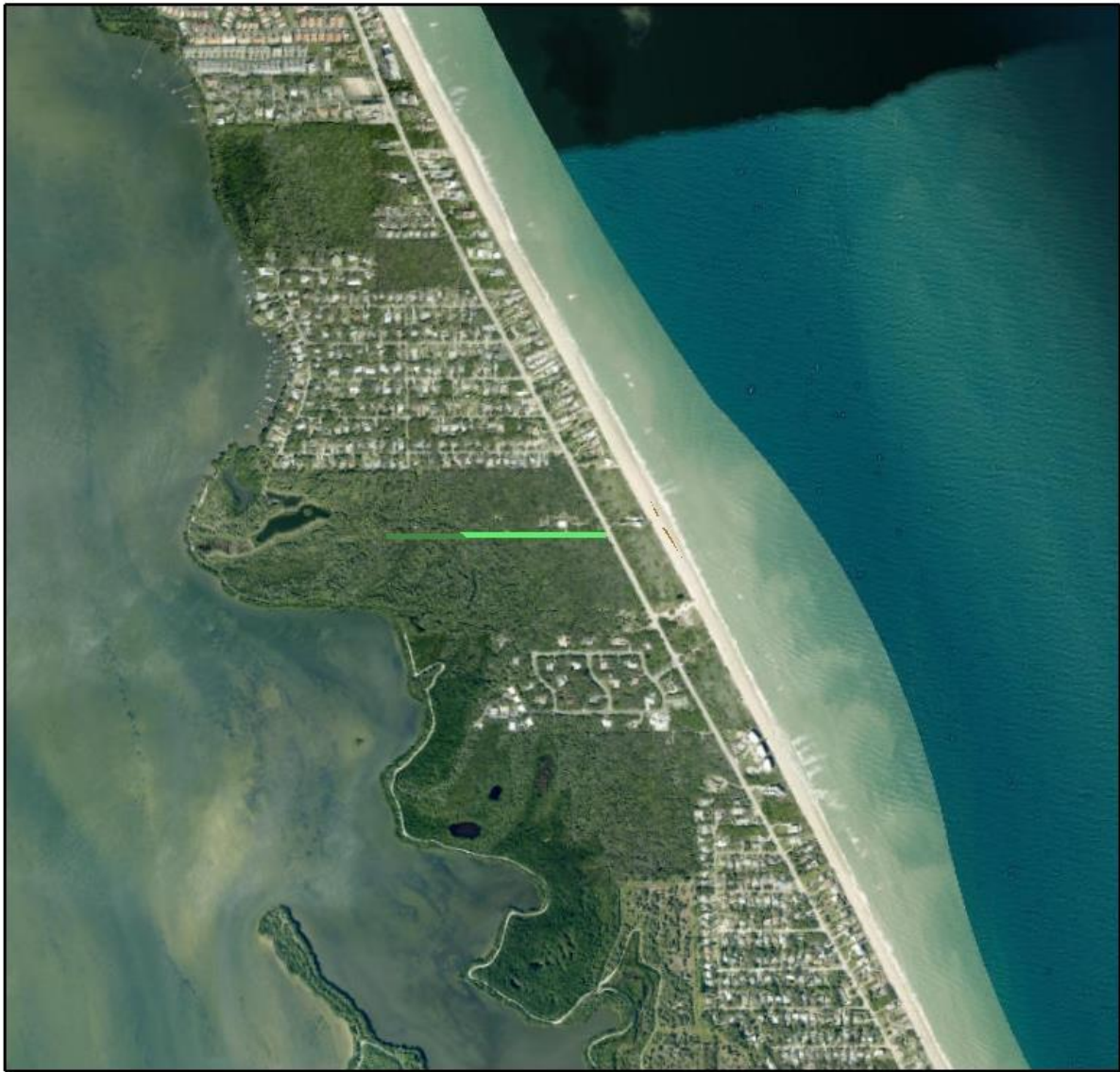


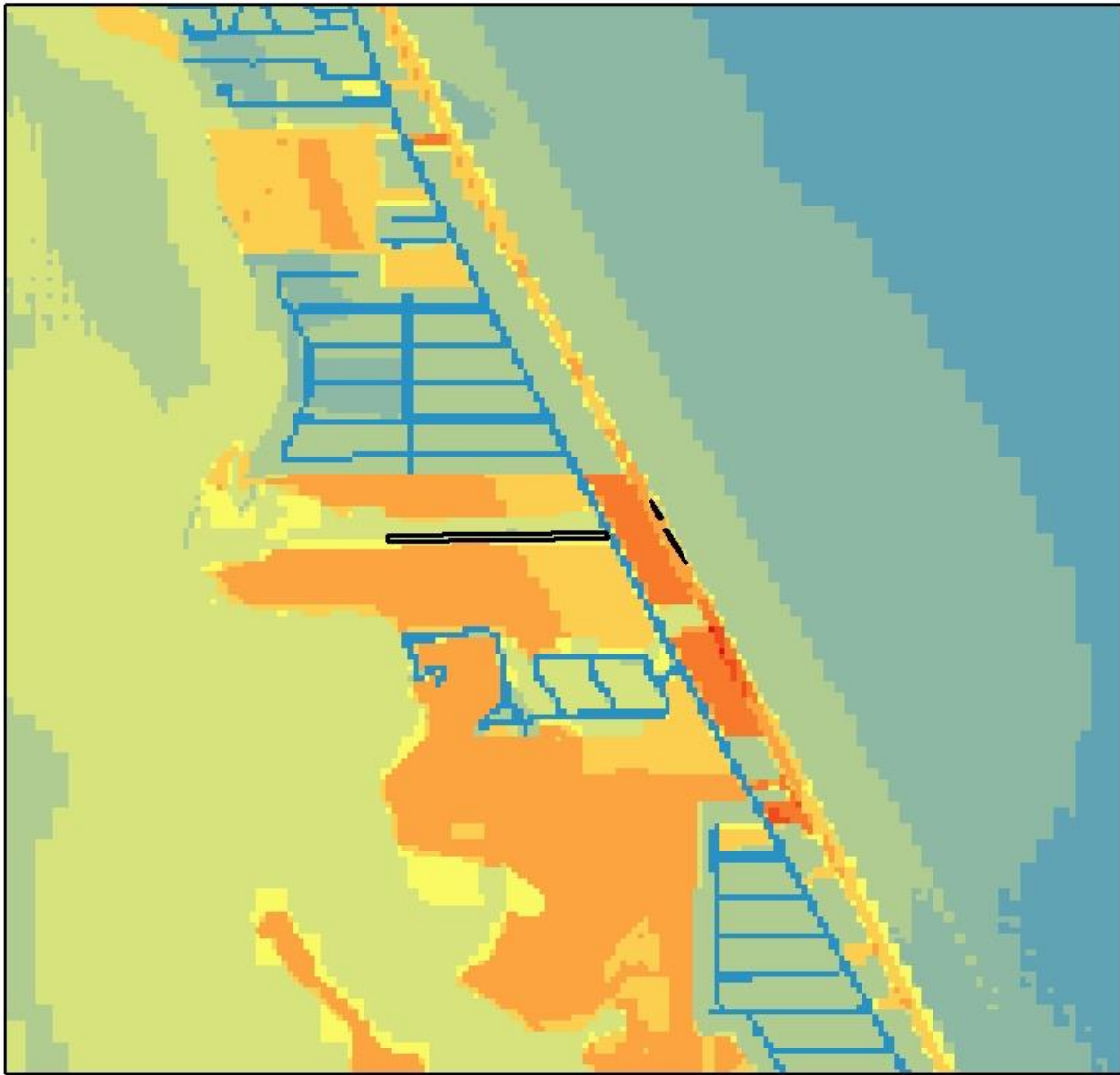
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Archie Carr Sea Turtle Refuge







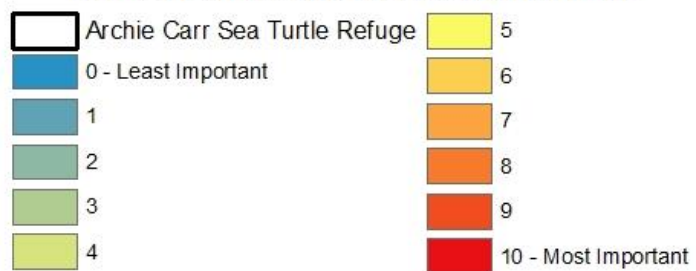
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Florida Landscape Assessment Model





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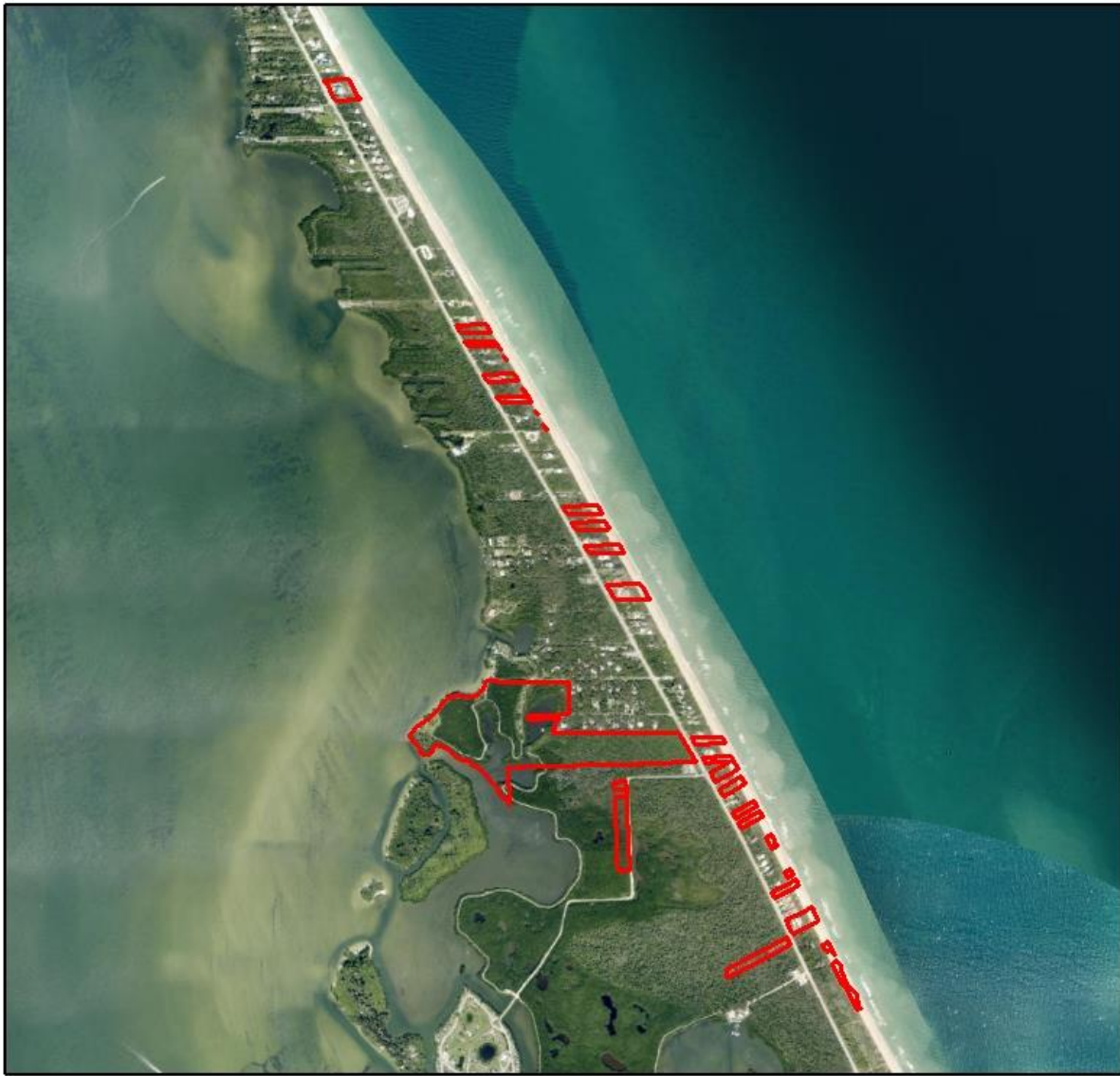


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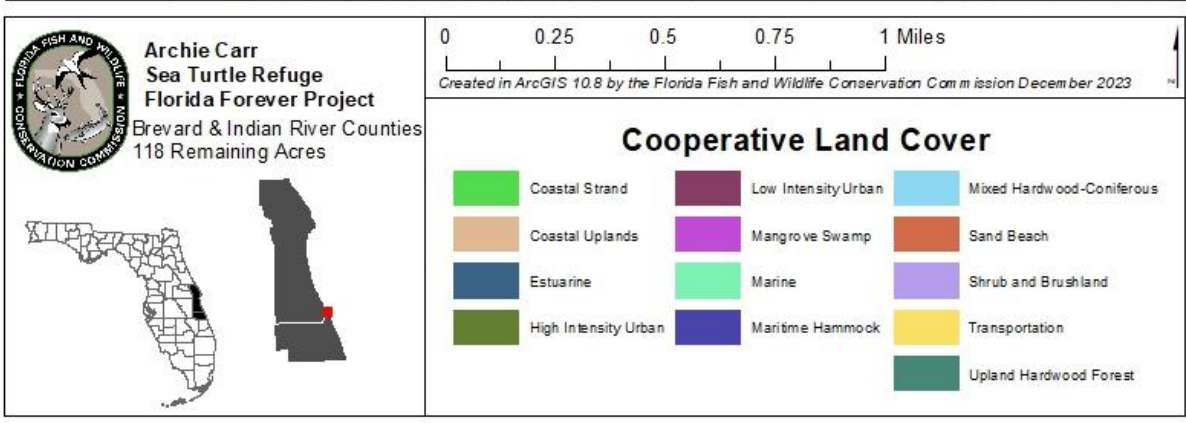
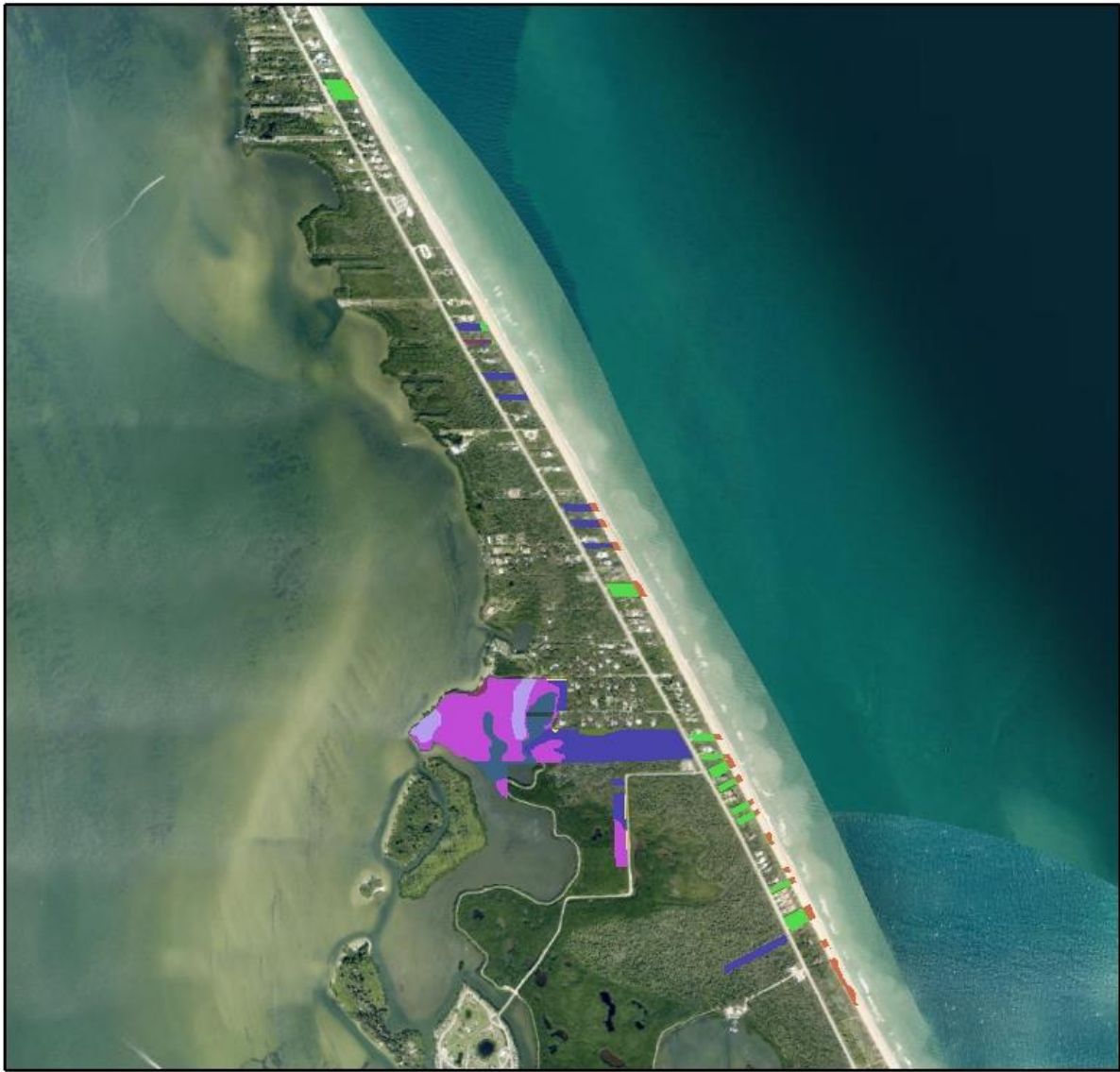
0 0.25 0.5 0.75 1 Miles

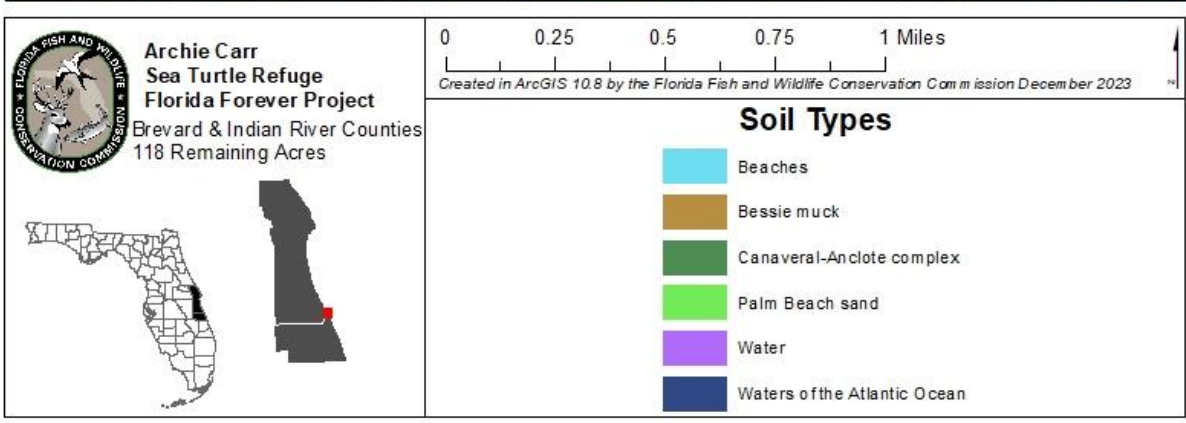
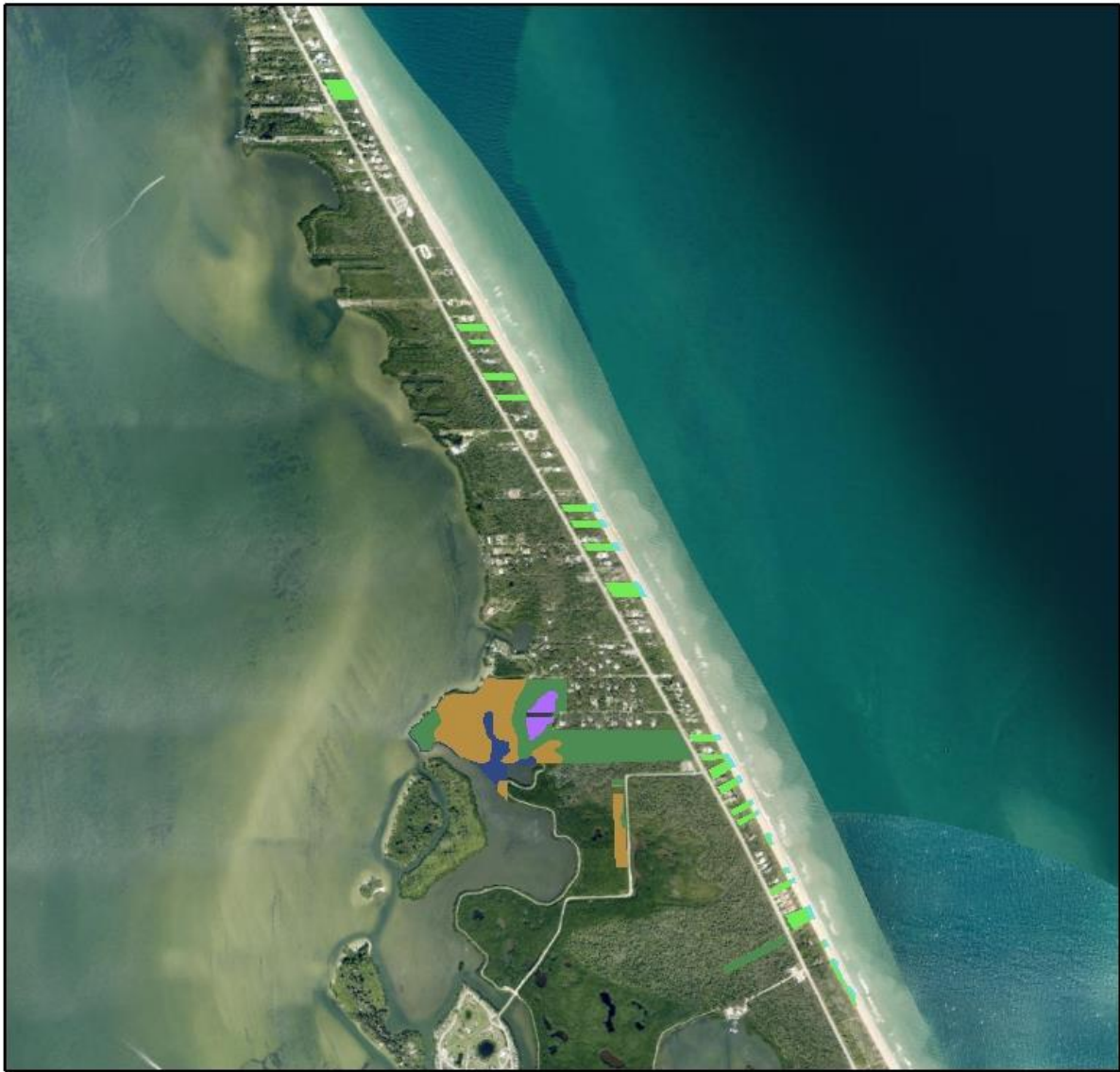
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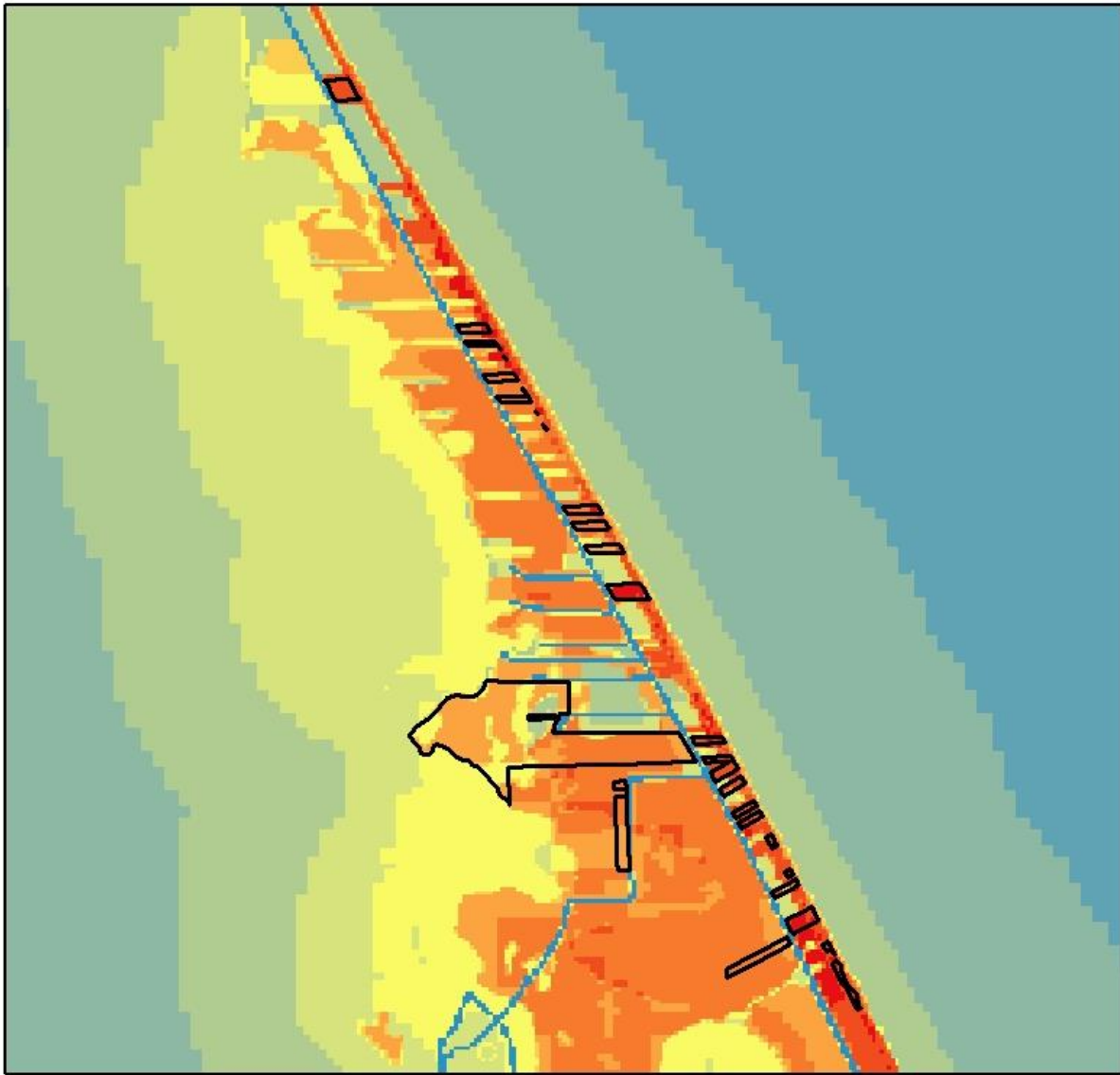


Aerial Imagery

 Archie Carr Sea Turtle Refuge







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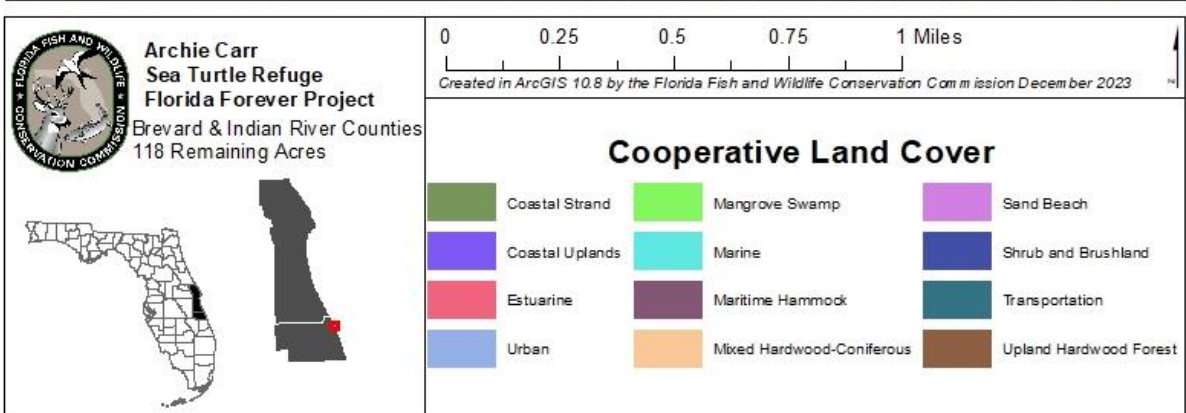
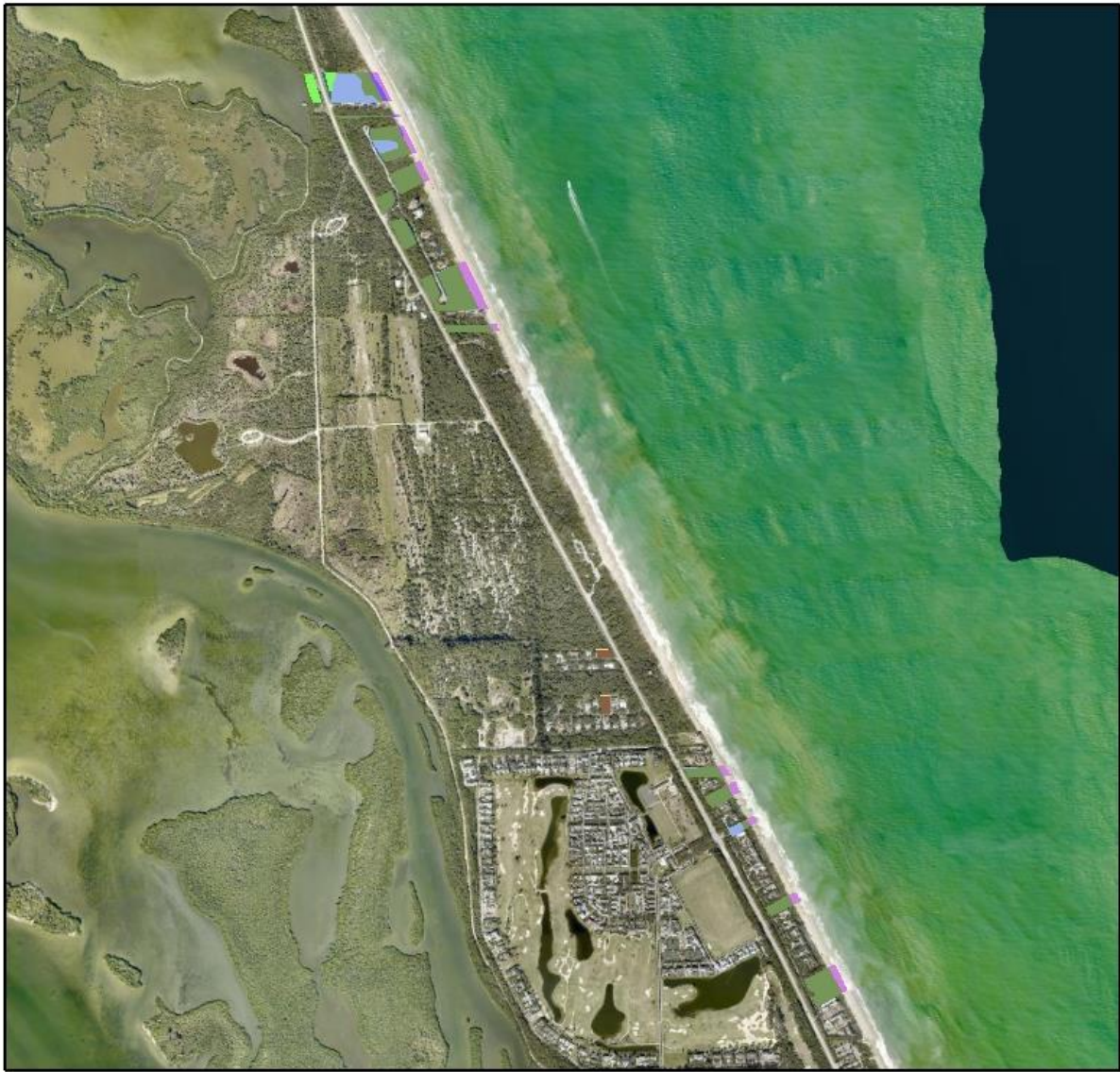
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Aerial Imagery



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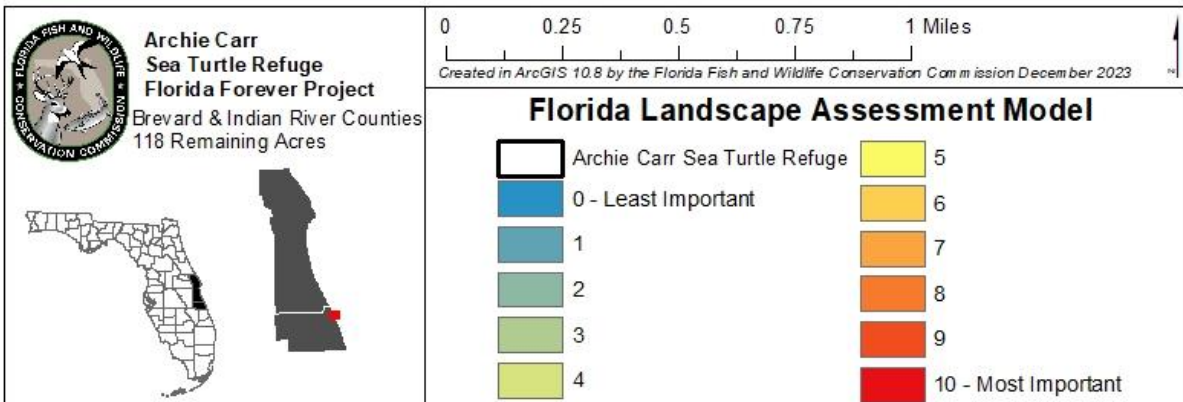
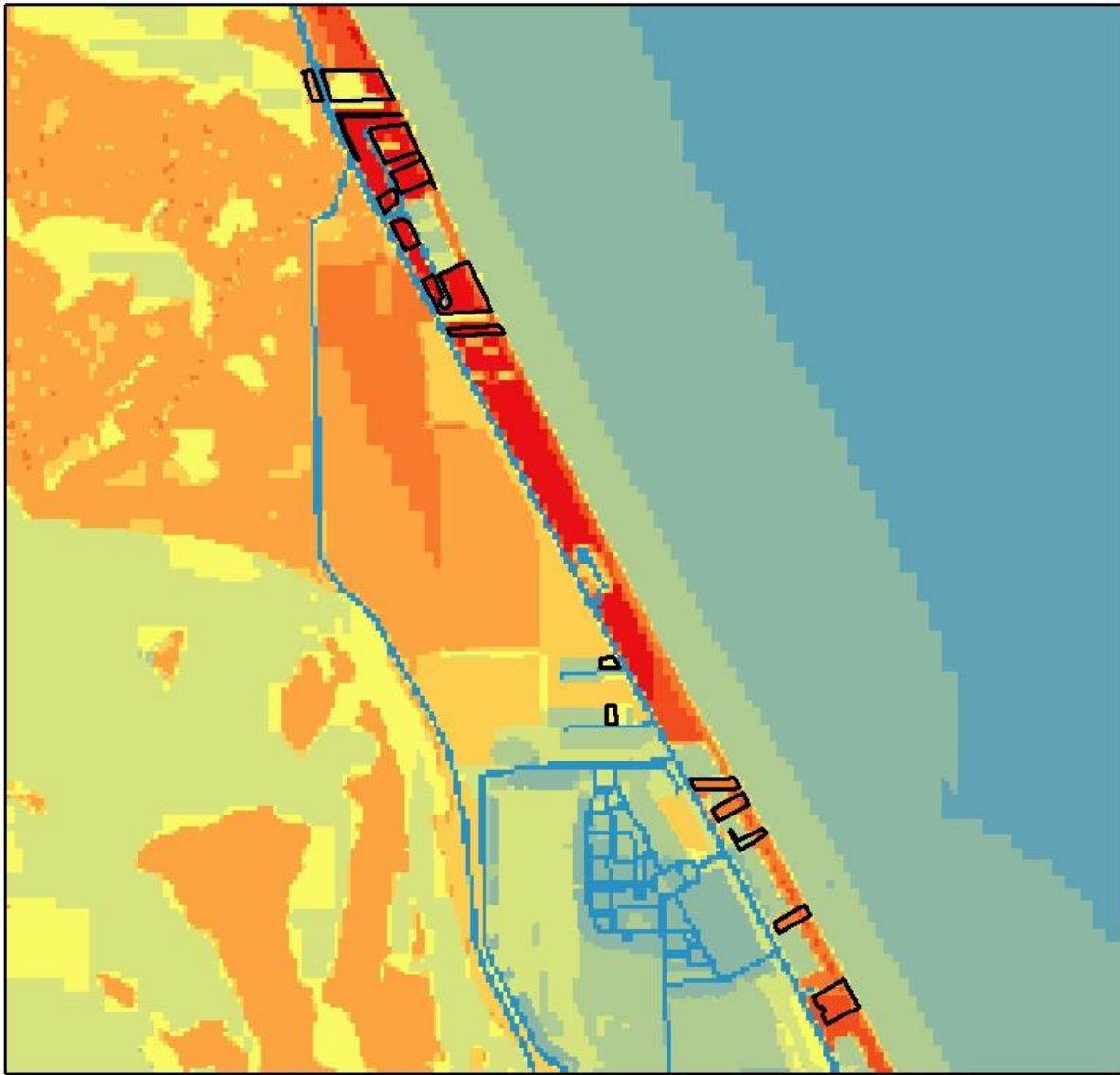


0 0.25 0.5 0.75 1 Miles

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Soil Types

- Beaches
- Canaveral fine sand
- Kesson muck
- Palm Beach sand



FWC Florida Landscape Assessment Model 2023		
	Value	Acres
	0	1.1
	1	0.0
	2	0.2
	3	3.0
	4	4.1
	5	13.8
	6	4.6
	7	27.9
	8	29.8
	9	15.7
	10	18.1
Mean FLAM value =	7.4	

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: 10242023 02:32:19

Shape Name: Unnamed polygon centered at -80.474889 °, 27.911126 °

Boundary Area: 117.88 acres

Buffer Area: 0 acres

Total Area: 117.88 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
High Intensity Urban	1822	Residential, Med. Density - 2-5 Dwelling Units/AC	18221	1.74	1.47 %
High Intensity Urban	1822	Commercial and Services	18223	0.63	0.54 %
Low Intensity Urban	1821	Urban Open Land	18211	3.86	3.27 %
Low Intensity Urban	1821	Low Structure Density	18212	1.29	1.09 %
Low Intensity Urban	1821	Urban Open Forested	182111	0.07	0.06 %
Transportation	1840	Transportation	1840	0.82	0.69 %
Marine	6000	Marine	6000	0.00	0 %
Low Intensity Urban	1821	Parks and Zoos	182131	2.30	1.95 %
High Intensity Urban	1822	Residential, High Density > 5 Dwelling Units/AC	18222	0.16	0.14 %
Shrub and Brushland	1500	Shrub and Brushland	1500	5.11	4.34 %
Coastal Uplands	1600	Beach Dune	1610	0.44	0.37 %
Upland Hardwood Forest	1110	Upland Hardwood Forest	1110	0.95	0.81 %
Mixed Hardwood-Coniferous	1400	Mixed Hardwood-Coniferous	1400	0.10	0.09 %
Coastal Strand	1640	Coastal Strand	1640	30.70	26.04 %
Estuarine	5000	Estuarine	5000	7.77	6.59 %
Mangrove Swamp	5250	Mangrove Swamp	5250	26.70	22.65 %
Maritime Hammock	1650	Maritime Hammock	1650	24.45	20.74 %
Sand Beach (Dry)	1670	Sand Beach (Dry)	1670	10.79	9.15 %
TOTAL:				117.88	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	0.86	0.73 %
CLIP P1 in submerged lands/state waters	6.30	5.35 %
CLIP P1 in terrestrial	104.81	88.91 %
CLIP P2 in terrestrial	1.56	1.32 %
TOTAL:	113.53	96.31 %

CLIP- Landscape Category

Priority	Total Area (acres)	Percent of Area
0	26.24	22.26 %
1	91.65	77.74 %
TOTAL:	117.88	100 %

CLIP- Biodiversity Category

Priority	Total Area (acres)	Percent of Area
0	7.28	6.18 %
1	4.27	3.62 %
2	9.28	7.87 %
3	4.45	3.77 %
4	24.51	20.79 %
5	68.09	57.76 %
TOTAL:	117.88	100 %

Priority FWC Strategic Habitat Conservation Areas 2021

Priority	Total Area (acres)	Percent of Area
0	77.66	65.88 %
1	18.93	16.06 %
2	3.26	2.77 %
3	0.35	0.3 %
5	17.68	15 %
TOTAL:	117.88	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						16.85	14.3 %
Cooper's hawk	Florida scrub jay					0.48	0.4 %

Florida mouse	Florida scrub jay	0.96	0.81 %
Florida scrub jay		0.12	0.1 %
Southeastern beach mouse		16.13	13.68 %
TOTAL:		34.54	29.3 %
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	106.13	90.03 %	
TOTAL:	106.13	90.03 %	
Rare Fish			
No Records Found			
Rare Fish Imperiled Waters			
COMMON NAME	SCIENTIFIC NAME	Total Area (acres)	Percent of Area
Mangrove rivulus	Kryptolebias marmoratus	98.68	83.71 %
Mountain mullet	Agonostomus monticola	69.43	58.89 %
TOTAL:		168.11	142.6 %
Southern bald eagle nest			
No Records Found			
Imperiled Species Richness			
Number of Species	Total Area (acres)	Percent of Area	
0	30.09	25.53 %	
1	19.83	16.83 %	
2	1.46	1.23 %	
3	1.03	0.87 %	
4	2.16	1.84 %	
5	0.05	0.04 %	
6	0.82	0.7 %	
8	33.72	28.6 %	
9	28.71	24.36 %	
TOTAL:	117.88	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
Black Skimmer	Rynchops niger	G5	S3	ST	N	E	1992 -- 1993	0.04	0.04 %
DATA SENSITIVE ELEMENT OCCURRENCE - contact FNAI for more information	DATA SENSITIVE ELEMENT OCCURRENCE - contact FNAI for more information	G2	S2	N	N	E	1971	4.93	4.18 %
DATA SENSITIVE ELEMENT OCCURRENCE - contact FNAI for more information	DATA SENSITIVE ELEMENT OCCURRENCE - contact FNAI for more information	G2	S2	N	N	E	1988-04-09	0.49	0.42 %
Florida Deepdigger Scarab Beetle	Peltotrupes profundus	G3	S3	N	N	E	2017-02-08	34.87	29.58 %
Florida Scrub-Jay	Aphelocoma coerulescens	G1G2	S1S2	FT	T	E	1986	1.50	1.27 %
Florida Scrub-Jay	Aphelocoma coerulescens	G1G2	S1S2	FT	T	E	1993	0.46	0.39 %
Gopher Tortoise	Gopherus polyphemus	G3	S3	ST	N	CD	1993	0.12	0.1 %
Green Sea Turtle	Chelonia mydas	G3	S2S3	FT	T	AB	2019	22.40	19 %
Leatherback Sea Turtle	Dermochelys coriacea	G2	S2	FE	E	C?	2012	22.40	19 %
Loggerhead Sea Turtle	Caretta caretta	G3	S3	FT	T	AB	2017	22.40	19 %
Osprey	Pandion haliaetus	G5	S3S4	N	N	E	1987-07-10	24.97	21.18 %
ZZ	Beach dune	G3	S2	N	N	E	2004	1.88	1.6 %
ZZ	Coastal strand	G3	S2	N	N	A	2004	3.13	2.66 %
ZZ	Coastal strand	G3	S2	N	N	E	2004	20.50	17.39 %
ZZ	Maritime hammock	G3	S2	N	N	A	2004	27.26	23.13 %
ZZ	Maritime hammock	G3	S2	N	N	BD	2004	1.56	1.32 %
TOTAL:								188.93	160.27 %
Suitable Habitat that Supports Species Known to Occur in the Vicinity									
COMMON NAME	SCIENTIFIC NAME	Total Area (acres)		Percent of Area					
Atlantic Coast Florida lantana	Lantana depressa var. floridana	39.66		33.64 %					
coastal hoary-pea	Tephrosia angustissima var. curtissii	27.57		23.39 %					
coastal vervain	Glandularia maritima	10.34		8.77 %					
Eastern Indigo Snake	Drymarchon couperi	79.02		67.03 %					

Florida Mouse	Podomys floridanus	0.10	0.09 %
Florida Scrub-Jay	Aphelocoma coerulescens	1.05	0.89 %
Green Sea Turtle	Chelonia mydas	15.19	12.89 %
Johnson's seagrass	Halophila johnsonii	52.71	44.71 %
Kemp's Ridley Sea Turtle	Lepidochelys kempii	7.33	6.22 %
Leatherback Sea Turtle	Dermochelys coriacea	15.19	12.89 %
Loggerhead Sea Turtle	Caretta caretta	15.17	12.86 %
Simpson's prickly apple	Harrisia simpsonii	34.94	29.64 %
Wood Stork	Mycteria americana	28.62	24.28 %
	TOTAL:	326.89	277.3 %

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

No Records Found

Water Resources

FDEP Surface Water Classification

Waterbody Name	Water Type	Water Basin	Classification	Total Area (acres)	Percent of Area
INDIAN RIVER ABOVE SEBASTIAN INLET	ESTUARY	2963A1	2	5.74	4.87 %
ATLANTIC OCEAN (BREVARD COUNTY; SEBASTIAN INLET)	COASTAL	8107	3M	1.47	1.25 %
ATLANTIC OCEAN (BREVARD COUNTY)	COASTAL	8108	3M	0.00	0 %
SOUTH INDIAN RIVER (NEAR ST. SEBASTIAN RIVER)	ESTUARY	5003D1	2	110.67	93.88 %
			TOTAL:	117.88	100 %