

**Florida Fish and Wildlife Conservation Commission
Division of Habitat and Species Conservation
Land Conservation and Planning
Withlacoochee River Addition
Florida Forever Project Proposal Analysis
May 2020**



This document contains the Florida Fish and Wildlife Conservation Commission's (FWC) Geographic Information System (GIS) data analysis of the **Withlacoochee River Addition Florida Forever Project Proposal**. This analysis was performed to provide FWC and others with important fish and wildlife resource information to be used in evaluating Florida Forever project proposals. The data selected for analysis are those considered by FWC to spatially reflect important fish and wildlife habitat and life history requirements.

Should the Acquisition and Restoration Council (ARC) approve this project for further evaluation, FWC will complete a field review and associated assessment report for this project proposal that will be incorporated within the ARC Florida Forever Project Evaluation Report.

GIS Data

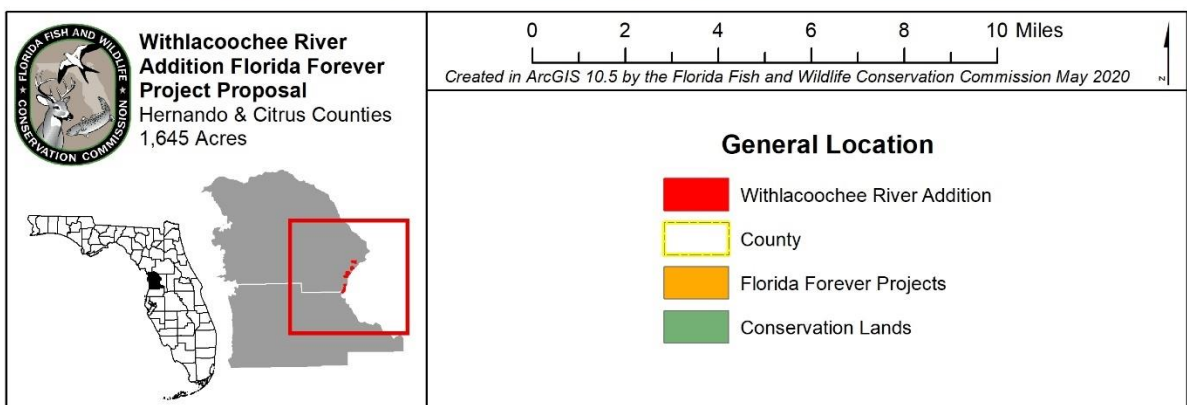
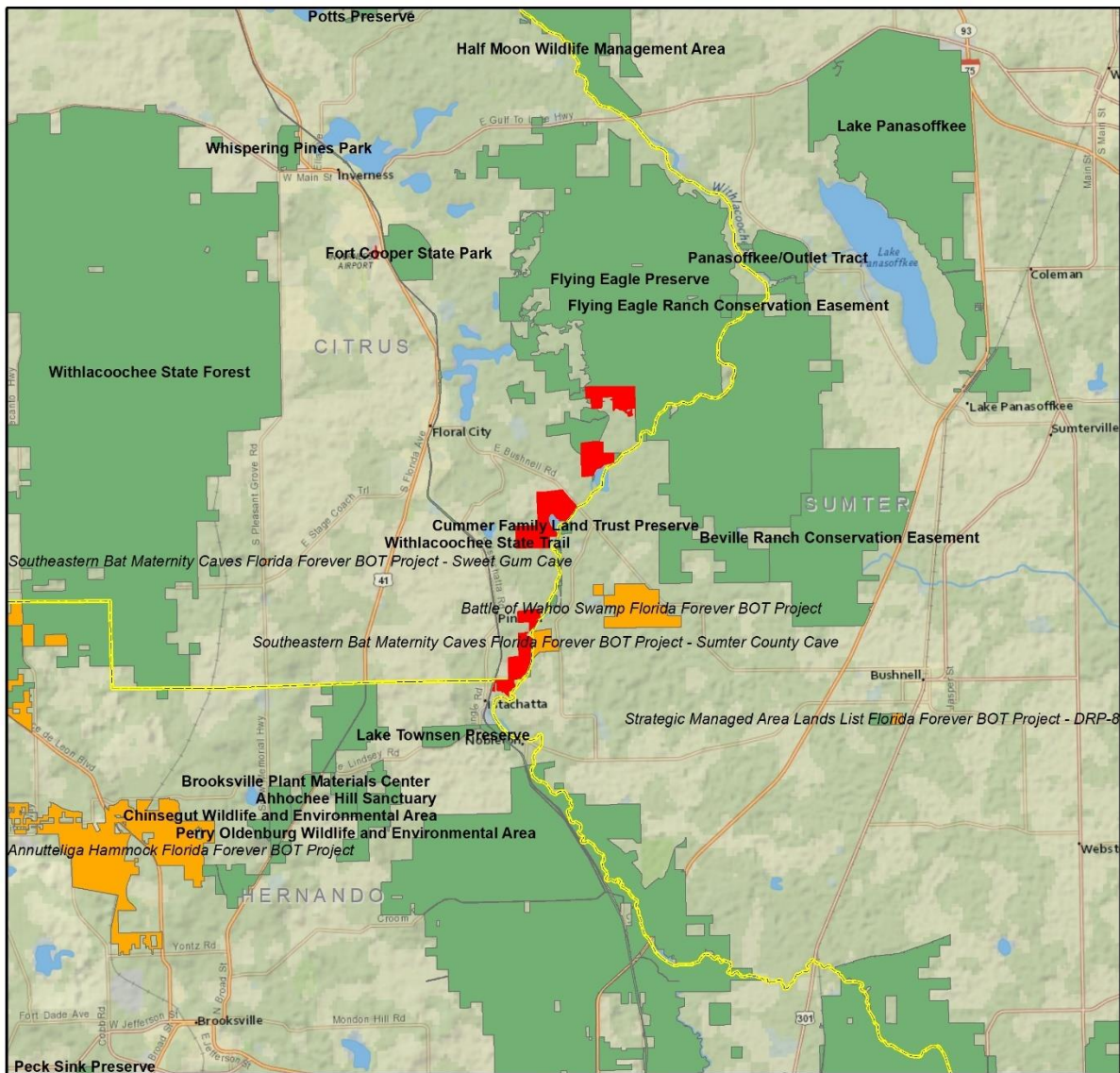
The FWC utilizes the Florida Cooperative Land Cover (CLC) GIS data layer for identification and mapping of land cover. The CLC is a cooperative effort between the FWC and the Florida Natural Areas Inventory (FNAI) to develop ecologically-based statewide land cover from existing sources and expert review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

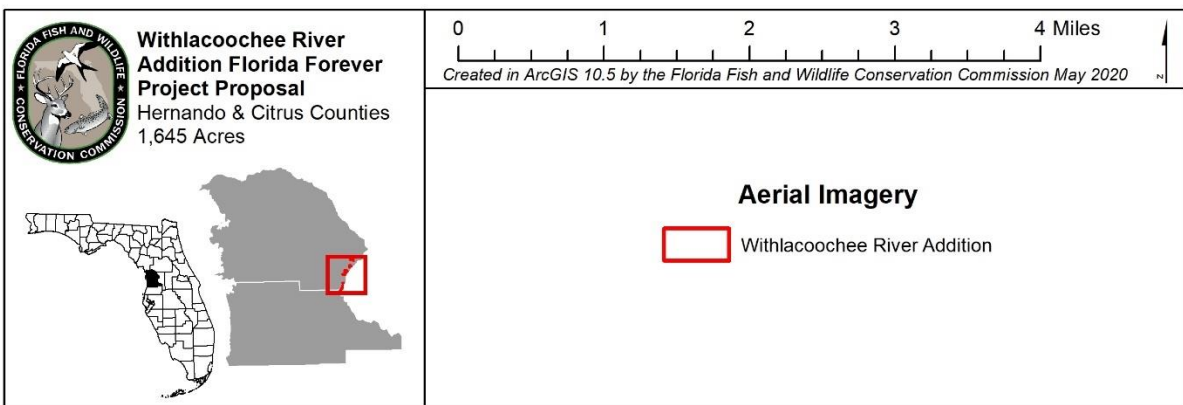
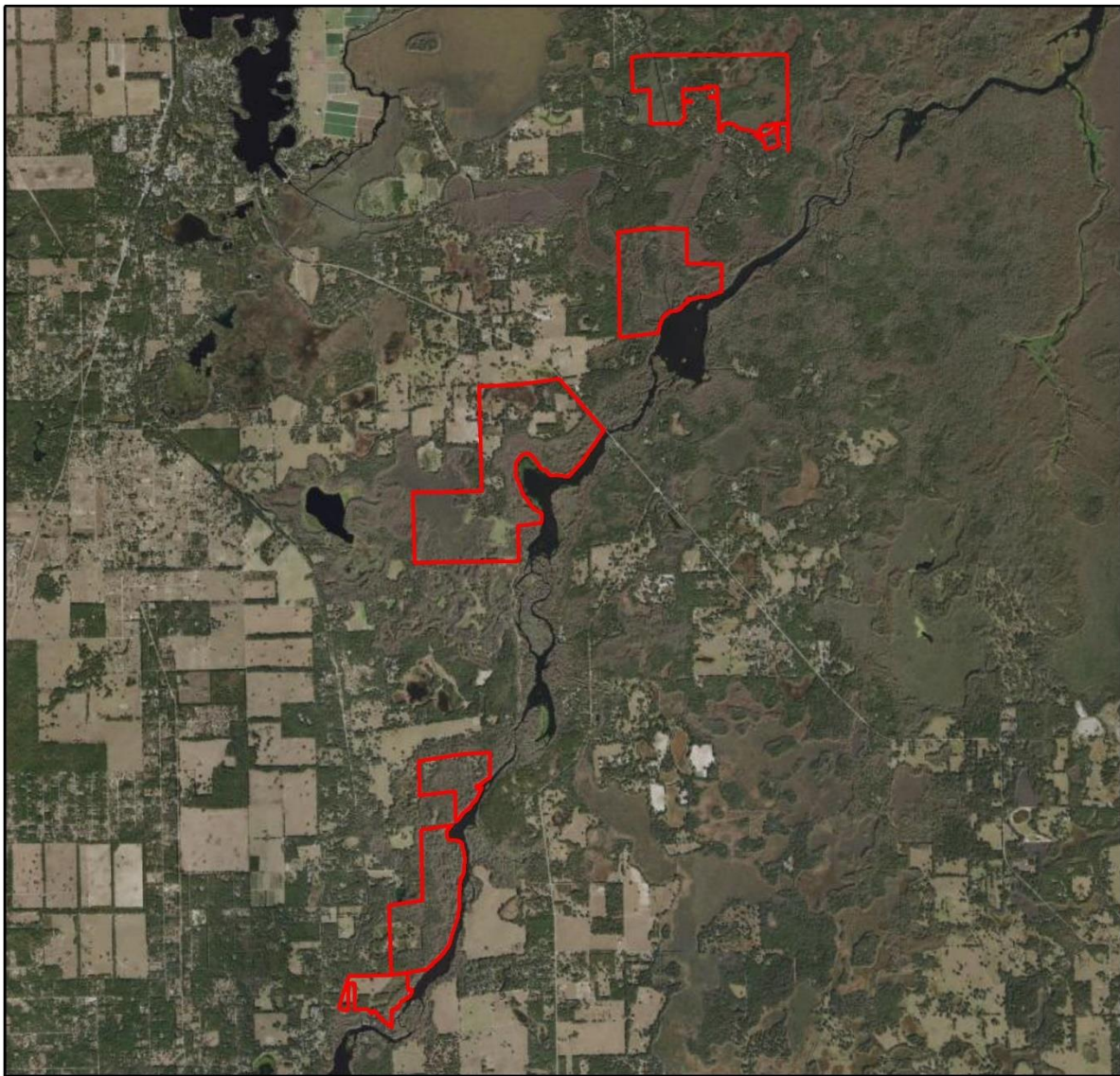
The FWC Florida Landscape Assessment Model (FLAM)¹ is a GIS model that determines the landscape value based on natural resources and fish and wildlife habitat. The FLAM ranks habitat from a 0-10; a rank of 10 being of greatest value.

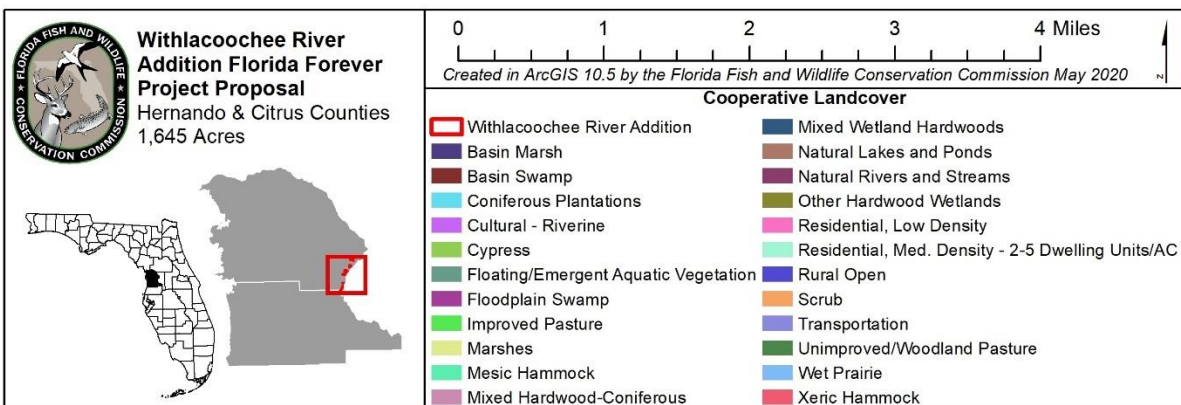
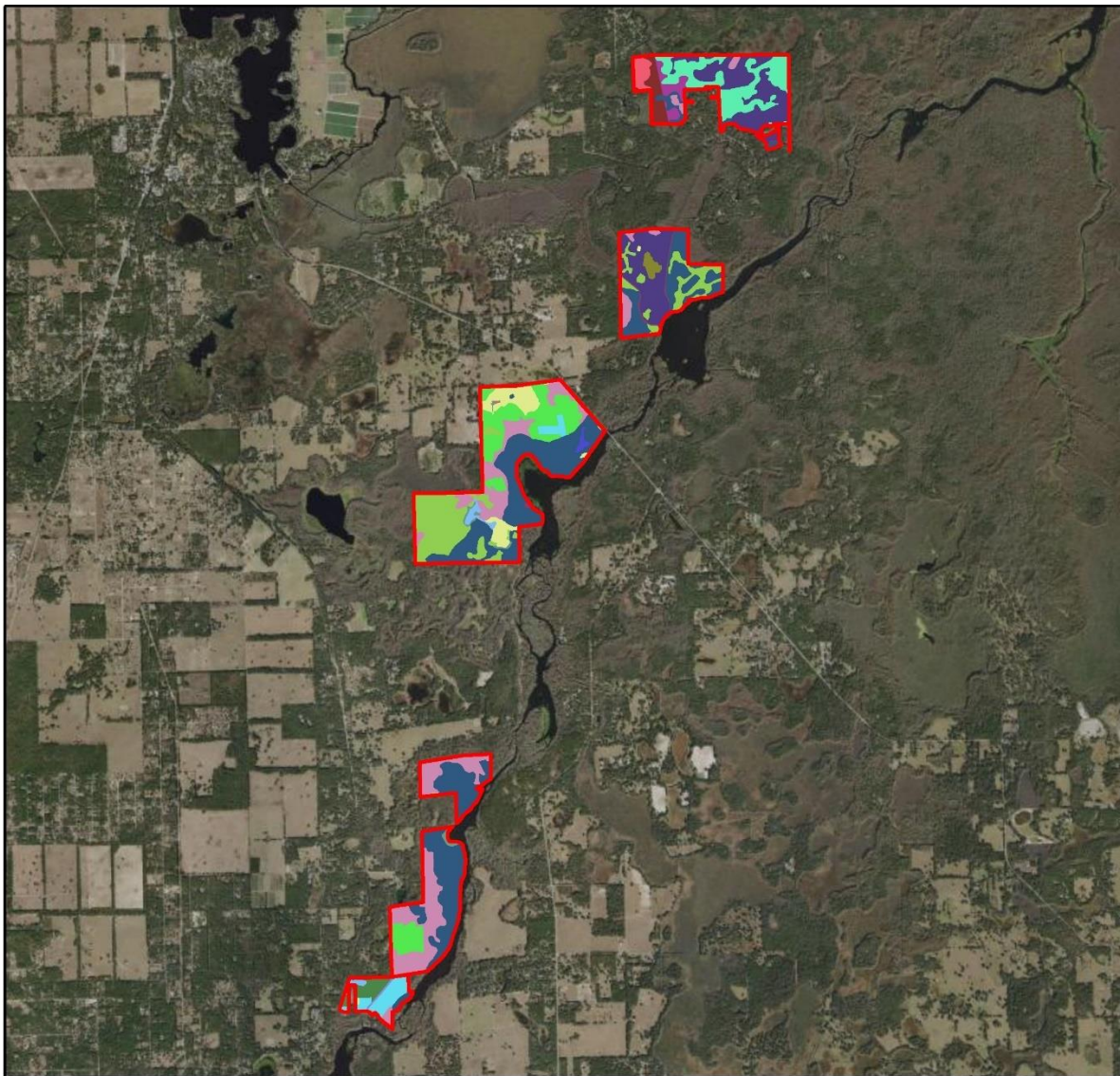
Important fish and wildlife resource GIS data were queried using Environmental Resource Analysis GIS computer software. These data include the following GIS layers:

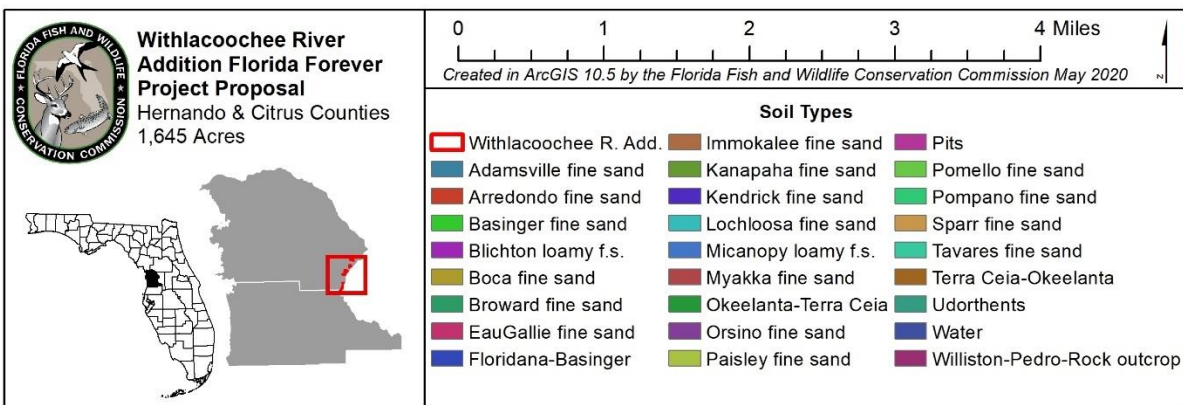
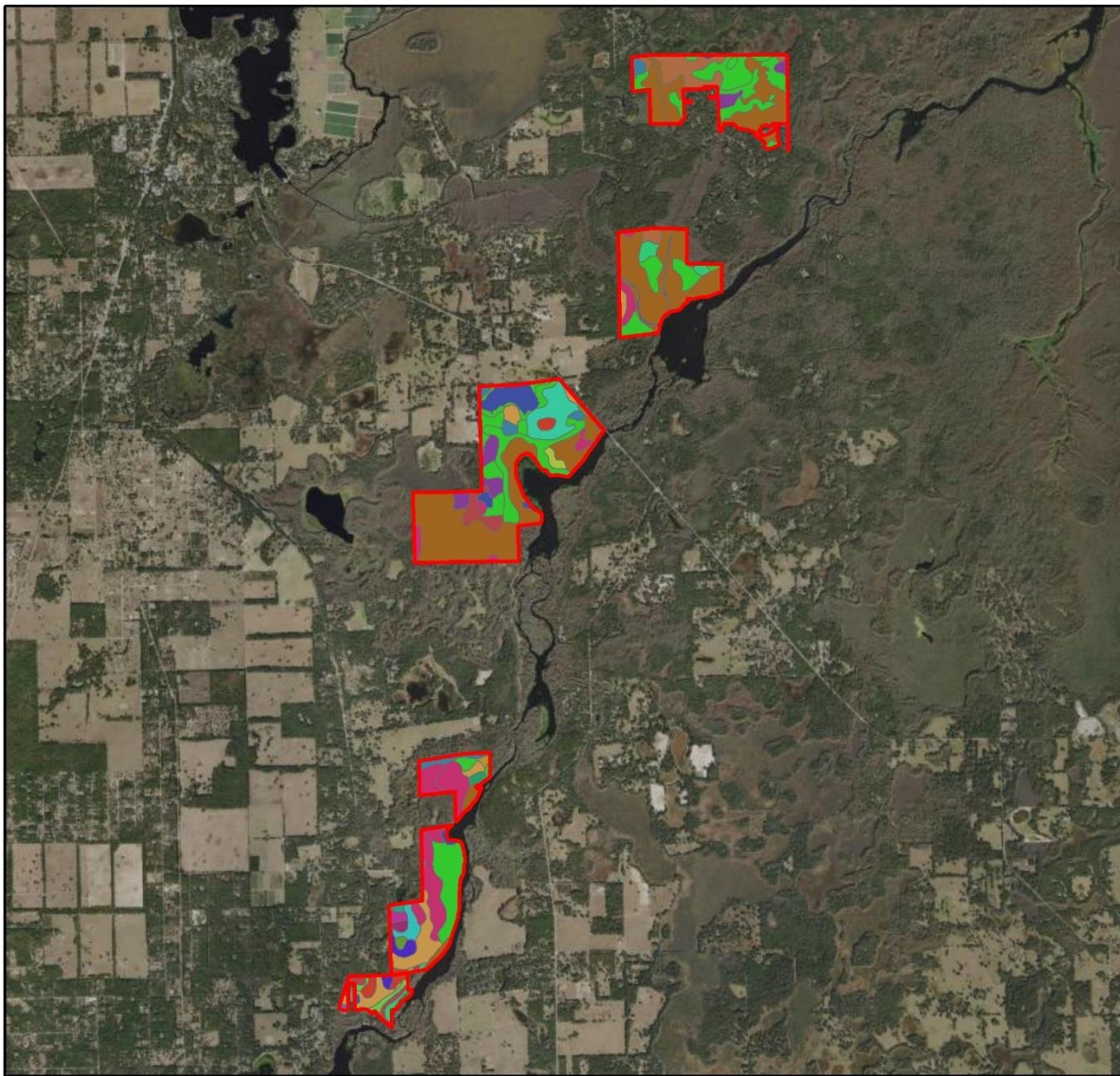
- FWC-FNAI Florida Cooperative Land Cover
- FWC Strategic Habitat Conservation Areas 2009² – Priority and Species
- Critical Lands and Waters Identification Project (CLIP)– Priority 1 and 2 – Terrestrial and Water
- CLIP – Landscape, Biodiversity, and Floodplain Resources
- Panther Location
- Panther Mortality
- Florida Panther Priority Habitat (Primary, Secondary, and Dispersal)
- Black Bear Range
- Rare Fish Locations/ Imperiled Waters

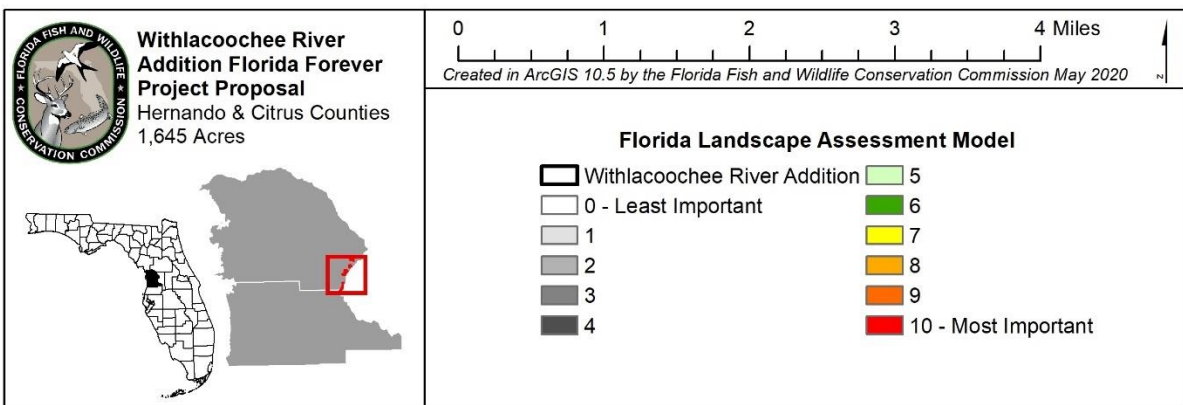
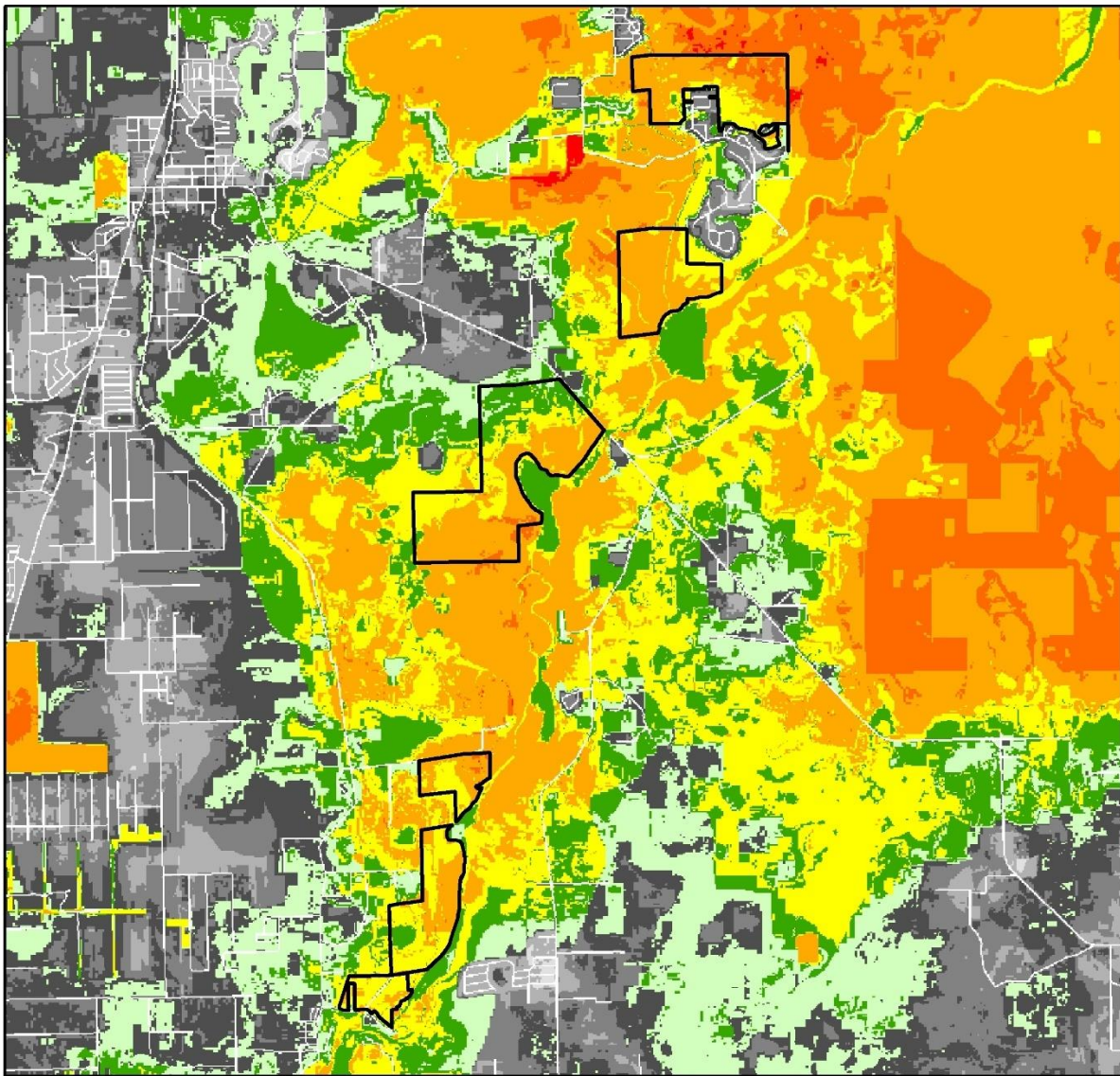
- Southern Bald Eagle Nest
- FWC Imperiled Species Richness
- FNAI Element Occurrences
- FNAI Potential Habitat 2008
- Florida Department of Environmental Protection Surface Water Classification
- U.S. Fish and Wildlife Service (USFWS) - National Wetlands Inventory
- USFWS Critical Habitat
- Florida Geological Survey Springs
- Outstanding Florida Waters
- Areas of Critical State Concern
- Natural Resources Conservation Service Soil Series and Depth to Water Table











FWC Florida Landscape Assessment Model 2020		
	Value	Acres
	0	4.1
	1	0.0
	2	0.0
	3	0.4
	4	0.8
	5	19.2
	6	130.5
	7	504.9
	8	833.7
	9	77.6
	10	0.4
Mean FLAM value =	7.5	

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: 05272020 10:43:36

Shape Name: Withlacoochee River Addition Florida Forever Project Proposal

Boundary Area: 1572.43 acres

Buffer Area: 0 acres

Total Area: 1572.43 acres

FWC Wildlife Data and Models

Cooperative Land Cover v3.3

Name - State	Code - State	Name - Site	Code - Site	Total Area (acres)	Percent of Area
Low Intensity Urban	1821	Residential, Low Density	18212	0.87	0.06 %
High Intensity Urban	1822	Residential, Med. Density - 2-5 Dwelling Units/AC	18221	1.78	0.11 %
Cultural - Riverine	4200	Cultural - Riverine	4200	0.03	0 %
Natural Lakes and Ponds	3100	Natural Lakes and Ponds	3100	0.60	0.04 %
Natural Rivers and Streams	4100	Natural Rivers and Streams	4100	14.84	0.94 %
Isolated Freshwater Marsh	2121	Basin Marsh	21212	212.64	13.52 %
Tree Plantations	18333	Coniferous Plantations	183332	42.03	2.67 %
Transportation	1840	Transportation	1840	4.80	0.31 %
Rural	1830	Unimproved/Woodland Pasture	183314	20.78	1.32 %
Basin Swamp	22132	Basin Swamp	22132	26.21	1.67 %
Improved Pasture	183313	Improved Pasture	183313	143.16	9.1 %
Freshwater Forested Wetlands	2200	Mixed Wetland Hardwoods	2233	457.77	29.11 %
Mixed Hardwood-Coniferous	1400	Mixed Hardwood-Coniferous	1400	235.28	14.96 %
Rural	1830	Rural Open	1831	4.50	0.29 %
Scrub	1210	Scrub	1210	0.07	0 %
Mesic Hammock	1120	Mesic Hammock	1120	111.26	7.08 %
Xeric Hammock	1150	Xeric Hammock	1150	16.97	1.08 %
Prairies and Bogs	2110	Wet Prairie	2111	12.09	0.77 %
Floodplain Swamp	2215	Floodplain Swamp	2215	19.79	1.26 %
Other Hardwood Wetlands	2230	Other Hardwood Wetlands	2230	9.57	0.61 %
Cypress	2211	Cypress	2211	170.77	10.86 %
Marshes	2120	Marshes	2120	56.42	3.59 %
Freshwater Non-Forested Wetlands	2100	Floating/Emergent Aquatic Vegetation	2140	10.22	0.65 %
TOTAL:				1,572.43	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	119.66	7.61 %
CLIP P1 in submerged lands/state waters	3.42	0.22 %
CLIP P1 in terrestrial	706.96	44.96 %
CLIP P2 in submerged lands/state waters	41.35	2.63 %
CLIP P2 in terrestrial	697.96	44.39 %
TOTAL:	1,569.35	99.8 %

CLIP- Landscape Category

Priority	Total Area (acres)	Percent of Area
0	0.39	0.03 %
2	0.68	0.04 %
3	1,571.35	99.93 %
TOTAL:	1,572.43	100 %

CLIP- Biodiversity Category

Priority	Total Area (acres)	Percent of Area
0	2.95	0.19 %
1	3.50	0.22 %
2	274.48	17.46 %
3	991.25	63.04 %
4	199.15	12.67 %
5	101.09	6.43 %
TOTAL:	1,572.43	100 %

Priority FWC Strategic Habitat Conservation Areas 2009

Priority Class	Total Area (acres)	Percent of Area
Priority 3	356.73	22.69 %
Priority 5	609.22	38.74 %

TOTAL:		965.95	61.43 %				
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						116.11	7.38 %
Cooper's hawk						609.22	38.74 %
Cooper's hawk						237.76	15.12 %
Florida mouse						2.86	0.18 %
TOTAL:						965.95	61.43 %
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	1,572.43					100 %	
TOTAL:	1,572.43					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		65.45				4.16 %	
1		33.61				2.14 %	
3		47.20				3 %	
4		1.37				0.09 %	
5		204.67				13.02 %	
6		366.30				23.3 %	
7		27.01				1.72 %	
8		826.81				52.58 %	
TOTAL:		1,572.43				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
dwarf spleenwort	Asplenium pumilum	G5	S1	E	N	H	1937-12-03	49.35	3.14 %
Eastern Indigo Snake	Drymarchon couperi	G3	S3	FT	T	NR	1992-05-12	2.01	0.13 %
Gopher Tortoise	Gopherus polyphemus	G3	S3	ST	C	E	1992-05-12	2.01	0.13 %
hammock fern	Blechnum occidentale var. minor	G5TNR	S1	E	N	H	1938-06-09	1,161.52	73.87 %
Little Blue Heron	Egretta caerulea	G5	S4	ST	N	NR	1989-05-08	70.37	4.48 %
Osprey	Pandion haliaetus	G5	S3S4	N	N	NR	1989-05-08	70.37	4.48 %
Snowy Egret	Egretta thula	G5	S3	N	N	NR	1989-05-08	70.37	4.48 %
White Ibis	Eudocimus albus	G5	S4	N	N	NR	1989-05-08	70.37	4.48 %
ZZ	Bird Rookery	G5	SNR	N	N	NR	1989-05-08	70.37	4.48 %
ZZ	Floodplain swamp	G4	S4	N	N	A	2004	0.16	0.01 %
TOTAL:								1,566.89	99.65 %
Potential Habitat 2008									
COMMON NAME		SCIENTIFIC NAME			Total Area (acres)		Percent of Area		
Eastern Indigo Snake		Drymarchon couperi			390.20		24.82 %		
Craighead's Nodding-caps		Triphora craigheadii			39.30		2.5 %		
Florida Sandhill Crane		Grus canadensis pratensis			215.98		13.74 %		
TOTAL:					645.49		41.05 %		

USFWS
Critical Habitat
No Records Found

Water Resources

FDEP Surface Water Classification

Name	Type	Basin	Classification	Total Area (acres)	Percent of Area
LESLIE-HEFNER CANAL	STREAM	LESLIE-HEFNER CANAL	3F	394.35	25.08 %
MCKETHAN LAKE OUTLET	STREAM	MCKETHAN LAKE OUTLET	3F	33.60	2.14 %
TSALA APOPKA OUTLET	STREAM	TSALA APOPKA OUTLET	3F	110.02	7 %
WITHLACOOCHEE RIVER	STREAM	WITHLACOOCHEE RIVER	3F	1,034.46	65.79 %
			TOTAL:	1,572.43	100 %

Outstanding Florida Waters

Name	OFW Type	Total Area (acres)	Percent of Area
Withlacoochee River System	Special	838.36	53.32 %
	TOTAL:	838.36	53.32 %

Florida Geological Survey Springs

No Records Found

National Wetlands Inventory

Wetland Type	Wetland Code	Total Area (acres)	Percent of Area
FRESHWATER EMERGENT WETLAND	PEM1Cd	2.88	0.18 %
FRESHWATER EMERGENT WETLAND	PEM1F	150.31	9.56 %
FRESHWATER EMERGENT WETLAND	PEM1Fd	15.10	0.96 %
FRESHWATER EMERGENT WETLAND	PEM1Fx	0.56	0.04 %
FRESHWATER EMERGENT WETLAND	PEM1G	70.85	4.51 %
FRESHWATER FORESTED/SHRUB WETLAND	PFO1C	2.23	0.14 %
FRESHWATER FORESTED/SHRUB WETLAND	PFO2F	12.22	0.78 %
FRESHWATER FORESTED/SHRUB WETLAND	PFO3C	10.04	0.64 %
FRESHWATER FORESTED/SHRUB WETLAND	PFO6C	50.10	3.19 %
FRESHWATER FORESTED/SHRUB WETLAND	PFO6F	310.73	19.76 %
FRESHWATER FORESTED/SHRUB WETLAND	PSS1F	14.97	0.95 %
FRESHWATER FORESTED/SHRUB WETLAND	PSS3F	3.84	0.24 %
FRESHWATER FORESTED/SHRUB WETLAND	PSS6F	252.64	16.07 %
FRESHWATER POND	PAB3H	14.59	0.93 %
FRESHWATER POND	PAB3Hx	0.09	0.01 %
FRESHWATER POND	PUBH	21.46	1.36 %
FRESHWATER POND	PUBHx	1.39	0.09 %
LAKE	L2AB3H	39.94	2.54 %
RIVERINE	R2UBH	5.84	0.37 %
	TOTAL:	979.77	62.31 %

Priority Floodplain Resources

Priority	Total Area (acres)	Percent of Area
0	317.95	20.22 %
1	261.33	16.62 %
2	414.22	26.34 %
3	394.61	25.1 %
4	182.95	11.63 %
5	1.36	0.09 %
TOTAL:	1,572.43	100 %

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

Soils - NFWFMD

Depth to Water Table (cm)

No Records Found

Soils - SRWMD

Depth to Water Table (cm)

No Records Found

Soils - SJRWMD

Depth to Water Table (cm)

No Records Found

Soils - SWFWMD

Depth to Water Table (cm)

Soil Series	Depth to Water Table (cm)	Total Area (acres)	Percent of Area
Arredondo fine sand, 0 to 5 percent slopes	201	13.63	0.87 %
Arredondo fine sand, 5 to 8 percent slopes	201	7.76	0.49 %
Kendrick fine sand, 0 to 5 percent slopes	201	15.83	1.01 %
Pits	201	6.42	0.41 %
Udorthents, 0 to 5 percent slopes	201	3.40	0.22 %
Williston-Pedro-Rock outcrop complex, 2 to 5 percent slopes	201	5.30	0.34 %
Tavares fine sand, 0 to 5 percent slopes	145	55.51	3.53 %
Orsino fine sand, 0 to 5 percent slopes	137	45.49	2.89 %
Lochloosa fine sand, 0 to 5 percent slopes	114	16.04	1.02 %
Pomello fine sand, 0 to 5 percent slopes	84	11.97	0.76 %
Micanopy loamy fine sand, 2 to 5 percent slopes	61	2.87	0.18 %
Broward fine sand	59	6.00	0.38 %
Sparr fine sand, 0 to 5 percent slopes	59	85.95	5.47 %
Adamsville fine sand, 0 to 2 percent slopes	51	33.98	2.16 %
Paisley fine sand	38	7.54	0.48 %
Boca fine sand	31	2.96	0.19 %
EauGallie fine sand	31	82.37	5.24 %
Immokalee fine sand	31	62.32	3.97 %
Kanapaha fine sand, 0 to 5 percent slopes	31	6.34	0.4 %
Myakka fine sand	31	11.48	0.73 %
Pompano fine sand	31	6.21	0.4 %
Myakka fine sand	22	24.98	1.59 %
Basinger fine sand	15	151.32	9.63 %
Blichton loamy fine sand, 2 to 5 percent slopes	15	0.69	0.04 %
Floridana-Basinger association, occasionally flooded	15	0.00	0 %
Pompano fine sand	15	1.13	0.07 %
Terra Ceia-Okeelanta association, very frequently flooded	15	553.30	35.2 %
Basinger fine sand, depressional	0	202.74	12.9 %
EauGallie fine sand, depressional	0	62.65	3.99 %
Okeelanta-Terra Ceia association	0	2.70	0.17 %
Pompano fine sand, depressional	0	14.27	0.91 %
Water	0	68.58	4.36 %
TOTAL:		1,571.75	100 %

Soils - SFWMD

Depth to Water Table (cm)

No Records Found