

**ITEM 18:**

Vote on whether the Abington Ranch, Bluefield to Cow Creek, Crayfish Habitat Restoration, Welannee Watershed Forest and Withlacoochee River Addition 2020 Cycle 2 Florida Forever proposals will proceed through the project evaluation process for potential addition to the 2021 Florida Forever Priority List.

**DSL STAFF REMARKS:**

The Division of State Lands have received the following complete Florida Forever proposals for consideration during the Second Cycle of 2020: Abington Ranch, Bluefield to Cow Creek, Crayfish Habitat Restoration, Welannee Watershed Forest and Withlacoochee River Addition. Only those proposals receiving at least five affirmative Council votes will be further evaluated for possible addition to the 2021 Florida Forever Priority List.

<b>PROPOSAL</b>	<b>COUNTY</b>	<b>CATEGORY</b>	<b>ACRES</b>
Abington Ranch	Okeechobee	Fee Simple	3,656
Bluefield to Cow Creek	Okeechobee	Less-than-fee	10,942
Crayfish Habitat Restoration	Bay	Fee Simple	4,086
Welannee Watershed Forest	Okaloosa	Less-than-fee	8,370
Withlacoochee River Addition	Citrus/Hernando	Less-than-fee	1,645

**STAFF RECOMMENDATION:**

Vote on each proposal.

**ARC RECOMMENDATION:**

<b>Project</b>	<b>DHR</b>	<b>FFS</b>	<b>Griner</b>	<b>FWC</b>	<b>Palmer</b>	<b>Peppers</b>	<b>DEP</b>	<b>Selected</b>
Abington Ranch								
Bluefield to Cow Creek								
Crayfish Habitat Restoration								
Welannee Watershed Forest								
Withlacoochee River Addition								

**PRELIMINARY EVALUATIONS  
OF THE MAY 2020  
FLORIDA FOREVER PROPOSALS**

Prepared by

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The Florida Natural Areas Inventory (FNAI) is dedicated to gathering, interpreting, and disseminating information critical to the conservation of Florida's biological resources. The Inventory was founded in 1981 as a member of The Nature Conservancy's international network of natural heritage programs, and it is now part of Florida State University's Institute of Science and Public Affairs. Funding for FNAI is provided through contracts, which currently include work for the Florida Department of Environmental Protection (DEP), the U. S. Fish and Wildlife Service, Florida Forest Service, Florida Fish and Wildlife Conservation Commission, and Florida's Water Management Districts.

FNAI staff builds and maintains a comprehensive statewide database that now includes more than 35,000 occurrences of rare plant and animal species and high-quality natural communities. The database also contains information on more than 2,000 lands managed wholly or in part for conservation. This database includes national forests, parks and wildlife refuges; state parks, forests, aquatic preserves, and wildlife management areas; water management district lands; county and municipal parks; private preserves; and military installations with substantial natural areas. Boundaries of state land acquisition projects are also represented.

As part of an agreement with DEP, FNAI provides data and expertise to assist with the multi-step process of evaluating lands proposed for acquisition through the Florida Forever Program. This document presents our preliminary review of proposals submitted for the cycle beginning May 2020. This includes five proposals: Abington Ranch (Okeechobee County), Bluefield to Cow Creek (Okeechobee and St. Lucie counties), Crayfish Habitat Restoration (Bay County), Welannee Watershed Forest (Okaloosa County), and Withlacoochee River Addition (Citrus and Hernando counties). This review includes the following for the proposals: Biological Conservation Priority; Natural Resource Description; Rare Species on the site; and maps of the proposed site. Recreational and archeological values are not considered in this evaluation. A tabular evaluation based on the Florida Forever Conservation Needs Assessment (FFCNA) GIS data layers is also included.

**Biological Conservation Priority:** We summarize our overall preliminary assessment of the proposals as a "Biological Conservation Priority" for each site. This rank represents our initial assessment of a proposal's contribution to the protection of significant ecological resources from a **statewide perspective**. These ranks reflect the FNAI scientific staff's best judgment based on information available at the time of the evaluation. Further assessment may be needed for some proposals in order to appreciate their biological importance. Factors weighed in the assignment of the priority ranks include rarity, condition, and diversity of ecological resources; perceived degree of threat to the site; and relative degree of protection of the resources (i.e., number and quality of resources already adequately protected elsewhere). The importance of a proposal to the natural resource management of contiguous or nearby conservation lands is also considered. Finally, we acknowledge that sites with low ranks, though of lesser statewide significance, may nonetheless be locally valuable for education, recreation, and protection of locally rare resources.

The Biological Conservation Priority is based on a proposal's boundary as submitted. These ranks may change if alterations are made to the boundary or if new biological information about a site becomes available.

**Natural Resource Description:** The description of the natural resources presented for each proposal is developed from information provided in the proposal application, the FNAI database, FNAI staff comments, and aerial photographs. The natural communities listed in this evaluation and the percentage of the total area that each comprises were derived principally from aerial photographs as interpreted by FNAI staff and by landcover information from the Water Management Districts. These data were supplemented by FNAI natural community occurrence data where available. These sources were also used to determine the extent of disturbed lands that no longer support natural communities (agriculture areas, developed areas, mines, etc.). Acreages of communities and disturbances are approximate, but provide a reasonable estimate for this stage of the evaluation process. More precise landcover information is gathered during the project assessment phase for those proposals selected for further evaluation.

Acreages of natural communities, particularly mesic and wet flatwoods, may differ from acreages given in the Florida Forever Measures Evaluation (FFME) evaluation table (described below). The FFME relies on statewide remotely sensed data where on the ground information is lacking. Using current high resolution aerial photography, FNAI scientists sometimes identify different acreage of certain landcover types, for example, pine plantation or flatwoods, than is identified through remotely sensed data.

Rare species on the proposed areas are listed in each evaluation. Species recorded in the FNAI database and those reported in the application are listed separately in the table. Potential rare species may be discussed in the evaluation text. FNAI Global and State ranks and Federal and State legal statuses are given for each species in the table. Rank and statuses provided in the text are listed in the same order after the scientific species name. A rank/status explanation sheet is included at the end of this document.

**Maps:** This report provides two maps of each proposed site. The first is a small-scale map showing the proposed site in the context of surrounding conservation lands and land protection projects. The second map is of larger scale and uses recent aerial imagery that provides a view of the overall landcover of each site.

**Florida Forever Measures Evaluation:** Accompanying each evaluation is a table illustrating to what extent each proposed site meets 15 Florida Forever performance measures. These 15 measures were selected because they are resource-based criteria that can be used to set acquisition priorities. For each measure, we report the acres of the resource found on the proposed site and the percentage of the site containing the resource. The data in this assessment represent a highly standardized, statewide perspective of natural resource distributions. More detailed information may be gathered during the Project Assessment phase for those proposals voted upon for further evaluation. The data used in this evaluation are described in detail in the Florida Forever Conservation Needs Assessment Summary Report and Technical Report, available at [www.fnai.org](http://www.fnai.org).

***Abington Ranch*** (Okeechobee County)

Fee Simple

## Preliminary Evaluation

**Biological Conservation Priority:** Medium

FNAI considers much of the value of the proposal to be in conjunction with Kissimmee Prairie Preserve State Park, Tiger Cattle Company Conservation Easement, and Pine Island Slough Florida Forever BOT Project; the proposal's small size and disturbed condition are mitigated by its location in the landscape.

**Natural Resources Description:** This evaluation is based on information gathered from the proposal, high resolution aerial imagery, U.S. Geological Survey (USGS) 7.5' topographic maps, Florida Cooperative Land Cover Map (version 3.4), and information in the Florida Natural Areas Inventory (FNAI) database.

Abington Ranch consists of one, mostly rectangular, tract covering 3,656 acres in northern Okeechobee County. Kissimmee Prairie Preserve State Park borders the ranch on the west for two miles and on the south for 3 miles. Tiger Cattle Company Conservation Easement (CE) is contiguous with the proposal's north boundary for 3.2 miles. U.S. Highway 441 runs north-south approximately 5 miles east of the eastern boundary of the proposal.

The proposal lies within a large landscape of conservation lands and acquisition projects. In addition to lands immediately adjacent, the Kissimmee Prairie Preserve State Park also shares a contiguous boundary on the west with Kissimmee River (South Florida Water Management District [SFWMD]), which abuts Avon Park Air Force Range and Bombing Range Ridge Florida Forever BOT Project on its western boundary. Pine Island Slough Florida Forever BOT Project is contiguous with the Tiger Cattle Company CE on the north and Kissimmee-St. Johns River Connector Florida Forever BOT Project lies 1.0 mile east. The land is offered for fee simple acquisition.

A large percentage of the upland communities (historically mostly dry prairie) that provided the matrix community of the proposal has been converted to improved pasture (Table 1). Within this current pasture matrix are several large depression/basin marshes, 200 to 400 plus acres, that dominate the center of the property and many smaller marshes are scattered over the rest of the site. Numerous drainage ditches are evident in and between wetland areas. Narrow bands of oak/palm mesic hammock border many of the marshes and appear to be relatively undisturbed. Remnant dry prairie ranges from two to 70 acres, commonly fringing the largest marshes and wet prairie. A reintroduction of fire to the prairies and adjacent marshes is needed as shown from photography in the application and aerial imagery. A site assessment will clarify the degree of disturbance, especially to the groundcover, in these communities. Some areas classified as pastureland may have a good complement of native grasses and shrubs and be less difficult to restore than more improved pastures. An abandoned tomato field (ca. 106 acres) was converted to a wetland conservation area through the SFWMD as part of the multi-agency Dispersed Water Management Program. It is managed as a flow-through reservoir to increase water storage on the property. Buildings and other features include a large lodge, airstrip, dock and boat lift, and numerous structures associated with ranching. There is currently about 500 head of cattle on the ranch.

Table 1. Natural communities and landcover types estimated within Abington Ranch Florida Forever proposal

Community or Landcover	Acres	Percent of Proposal
depression/basin marsh	1378	38
dry prairie	325	9
mesic hammock	301	8
wet prairie	138	4
basin swamp	40	1
mesic flatwoods	8	<1
pasture - improved	1299	35
water retention project	106	3
unimproved - woodland pasture	49	1
ditch/canal	10	<1
developed (house, ranching structures)	2	<1
<b>Total</b>	<b>3656</b>	<b>100</b>

The proposal reports several animal species of conservation concern, including American alligator, Florida sandhill crane, crested caracara, and southeastern fox squirrel (Table 2). The Florida grasshopper sparrow (*Ammodramus savannarum floridanus*; FNAI G5T1, Federal - E, State - FE), a federally Endangered subspecies endemic to the prairie and pasture region of south-central Florida, has undergone a precipitous population decline and is unlikely to be present on the property currently. Preservation and restoration of dry prairie and possibly some pastureland remains an important goal in an effort to enhance the habitat available to the bird. Florida burrowing owls (*Athene cunicularia floridana*; G4T3, S3, N, ST) and Bachman's sparrow (*Peucaea aestivalis*; G3/S3, N, N) have been documented nearby and may occur on the property. The large acreage of herbaceous marshes is significant to the cranes as well as to a host of wading birds including the federally Threatened wood stork (*Mycteria americana*; FNAI G4/S2, Federal - T, State - FT), which is not reported from the site but is likely to be present. The state-listed airplants, Balbis' airplant and common wild-pine, and Florida butterfly orchid (Table 2), are plants of concern that have been recorded on Abington Ranch by the applicant. Additional rare animals and plants are possible, especially given the site's proximity to the state park.

Table 2. Rare plants and animals documented or reported to occur within Abington Ranch Florida Forever proposal.

Scientific name	Common name	Global Rank	State Rank	Federal Status	State Status
<b>Rare plants documented on site</b>					
None					
<b>Additional rare plants reported on site by applicant</b>					
<i>Encyclia tampensis</i>	Florida butterfly orchid	N	N	N	CE
<i>Tillandsia balbisi</i>	Balbis' airplant	N	N	N	T
<i>Tillandsia fasciculata</i>	common wild-pine	N	N	N	E
<b>Rare animals documented on site</b>					
None					
<b>Additional rare animals reported on site by applicant</b>					
<i>Alligator mississippiensis</i>	American alligator	G5	S4	SAT	FT(S/A)
<i>Antigone canadensis pratensis</i>	Florida sandhill crane	G5T2	S2	N	ST
<i>Caracara cheriway</i>	crested caracara	G5	S2	T	FT
<i>Sciurus niger niger</i>	Southeastern fox squirrel	G5T5	S3	N	N

The Florida Forever Measures Evaluation (FFME) at the end of this memo is based on the Florida Forever Conservation Needs Assessment developed by FNAI. The data used in that analysis represent a standardized, statewide perspective of natural community distributions based primarily on data from the Cooperative Land Cover Map. As summarized in the evaluation, most of the site contributes to Strategic Habitat Conservation Areas, Ecological Greenways, Natural Floodplain Function, Surface Water Protection, and Aquifer Recharge. Contributions to FNAI Habitat Conservation Priorities and Functional Wetlands are also significant.



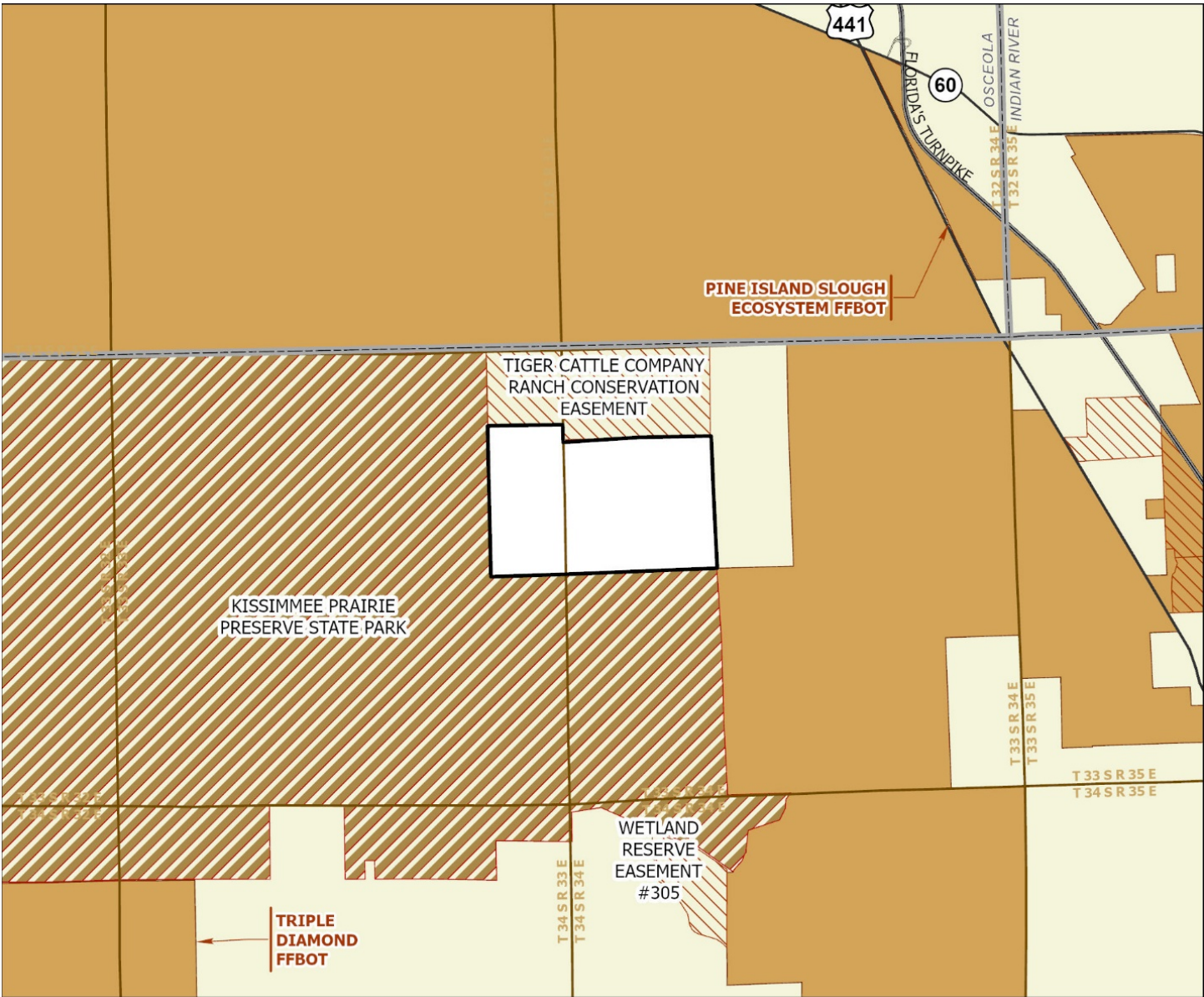
**Abington Ranch: Florida Forever Measure Evaluation 20200519**

GIS ACRES = 3,656

MEASURES	Resource Acres <sup>a</sup>	% of project
<b>B1: Strategic Habitat Conservation Areas</b>		
Priority 1	0	0%
Priority 2	3,057	84%
Priority 3	28	< 1%
Priority 4	0	0%
Priority 5	0	0%
Total Acres	3,085	84%
<b>B2: FNAI Habitat Conservation Priorities</b>		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	1	< 1%
Priority 4	86	2%
Priority 5	1,475	40%
Priority 6	0	0%
Total Acres	1,561	43%
<b>B3: Ecological Greenways</b>		
Priority 1	3,656	100%
Priority 2	0	0%
Priority 3	0	0%
Priority 4	0	0%
Priority 5	0	0%
Priority 6	0	0%
Total Acres	3,656	100%
<b>B4: Under-represented Natural Communities</b>		
Upland Glade (G1)	0	0%
Pine Rockland (G1)	0	0%
Scrub and Scrubby Flatwoods (G2)	0	0%
Rockland Hammock (G2)	0	0%
Dry Prairie (G2)	325	9%
Seepage Slope (G2)	0	0%
Sandhill (G3)	0	0%
Sandhill Upland Lake (G3)	0	0%
Upland Pine (G3)	0	0%
Mesic/Wet Flatwoods (G4)	8	1%
Upland Hardwood Forest (G5)	0	0%
Total Acres	325	9%
<b>B6: Occurrences of FNAI Tracked Species</b>		
G1	0	
G2	0	
G3	0	
G4	0	
G5	0	
Total	0	
<b>C4: Natural Floodplain Function</b>		
Priority 1	31	< 1%
Priority 2	204	6%
Priority 3	664	18%
Priority 4	2,535	69%
Priority 5	12	< 1%
Priority 6	0	0%
Total Acres	3,446	94%

MEASURES (continued)	Resource Acres <sup>a</sup>	% of project
<b>C5: Surface Water Protection</b>		
Priority 1	0	0%
Priority 2	768	21%
Priority 3	0	0%
Priority 4	2,853	78%
Priority 5	0	0%
Priority 6	10	< 1%
Priority 7	0	0%
Total Acres	3,631	99%
<b>C7: Fragile Coastal Resources</b>		
Fragile Coastal Uplands	0	0%
Imperiled Coastal Lakes	0	0%
Coastal Wetlands	0	0%
Total Acres	0	0%
<b>C8: Functional Wetlands</b>		
Priority 1	30	< 1%
Priority 2	182	5%
Priority 3	499	14%
Priority 4	956	26%
Priority 5	0	0%
Priority 6	0	0%
Total Acres	1,668	46%
<b>D3: Aquifer Recharge</b>		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	73	2%
Priority 4	416	11%
Priority 5	1,388	38%
Priority 6	1,778	49%
Total Acres	3,656	100%
<b>E2: Recreational Trails (miles)</b> (prioritized trail opportunities from Office of Greenways and Trails & Univ. Florida)		
Land Trail Priorities	0.0	
Land Trail Opportunities	0.0	
Total Miles	0.0	
<b>F2: Arch. &amp; Historical Sites (number)</b>		
	0 sites	
<b>G1: Sustainable Forestry</b>		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	33	< 1%
Priority 4	0	0%
Priority 5 - Potential Pinelands	3	< 1%
Total Acres	37	1%
<b>G3: Forestland for Recharge</b>		
	0	0%

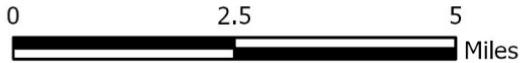
<sup>a</sup>Acres of each resource in the project and percentage of project represented by each resource are listed except where noted. This analysis converts site boundary into pixels, which causes slight differences from GIS acres; this effect is greatest on small sites.



**ABINGTON RANCH FLORIDA FOREVER PROPOSAL**

**OKEECHOBEE COUNTY**

-  Proposed Florida Forever BOT Project
-  Florida Forever BOT Projects
-  State Owned Lands
-  Other Conservation Lands



MAY 2020

# Abington Ranch Florida Forever Proposal

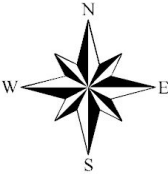
FLORIDA FOREVER BOARD OF TRUSTEES PROJECT PROPOSAL BOUNDARY AS OF MAY 2020



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

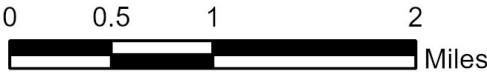
Map Produced by: N. Pasco, May 2020

Background: World Imagery Resolution = 0.3 meter



	Florida Forever Proposal Boundary
	Florida Forever BOT Projects
	Existing State Conservation Lands
	Existing Private Conservation Lands

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***Bluefield to Cow Creek*** (Okeechobee and St. Lucie counties)

Less-than-Fee Simple

## Preliminary Evaluation

**Biological Conservation Priority:** Medium

**Natural Resources Description:** This evaluation is based on information gathered from the proposal, high resolution aerial imagery, U.S. Geological Survey (USGS) 7.5' topographic maps, Florida Cooperative Land Cover Map (version 3.4), and information in the Florida Natural Areas Inventory (FNAI) database.

The Bluefield to Cow Creek proposal encompasses 10,996 (GIS) acres (10,942 per application) of ownerships in eastern Okeechobee County and western St. Lucie County approximately 12 miles northeast of the town of Okeechobee on SR 70. The proposed area is being offered for less-than-fee simple sale to the state to maintain a landscape of agriculture and to help protect water quality of the Indian River Lagoon.

Many conservation easements and county-owned conservation lands lie in the vicinity of Bluefield to Cow Creek. The Triple S Ranch Agricultural and Conservation Easement is adjacent to the northwest boundary. St. Lucie County's Pineland Preserve and Cypress Creek Preserve are also adjacent toward the southern end of the proposal. Several water resource easements held by South Florida Water Management District are in the vicinity.

Bluefield to Cow Creek is located at the intersection of the St Johns Marsh Province, the Holopaw-Indiantown Ridges and Swales Province and the Allapattah Flats Province of the Eastern Flatwoods Physiographic District. The area is characterized by poorly drained soils composed of deep sand and clays and sand and shell supporting swamps, marshes, prairies and hammocks. The topography is generally flat, but an escarpment between the districts is present along the western boundary where the elevation falls from around 50 feet above mean sea level to 35 feet.

The dominant natural feature of the Bluefield to Cow Creek proposal is the large system of basin swamp and hydric hammock that generally extends along the entire western boundary continuing to the north and south of proposal. This intact wetland complex along with embedded marshes and peripheral mesic hammocks covers approximately forty percent of the proposal. A small area (<1%) of wet prairie is present in association with depression marshes away from the large wetland. Landcover information identifies small areas (total of 99 acres) of mesic flatwoods; the proposal indicates that this includes scrubby flatwoods as well. The extent of these communities will require on-the-ground determination.

Nearly all of the former prairies and flatwoods on Bluefield to Cow Creek have been converted to pasture and semi-improved/woodland pasture, which combined make up a little more than half of the total acreage. An extensive network of ditches is present to maintain the pasture and former crop fields (included in the improved pasture acreage in the table below). The northern third of the proposal drains north and east to the C-24 canal. The southern two thirds drain to the southeast to the C-23 canal. The proposal provides additional detail on the natural resources of the site.

Table 1. Natural communities and landcover types within the Bluefield to Cow Creek Florida Forever proposal.

<b>Community or Landcover</b>	<b>Acres</b>	<b>Percent of Proposal</b>
hydric hammock	1884.3	17
basin swamp	1173.7	11
mesic hammock	988.8	9
depression/basin marsh	815.5	7
dome swamp	161.1	1
mesic/wet flatwoods	99.0	<1
wet prairie	24.0	<1
basin marsh	6.1	<1
pasture-improved	5163.8	47
unimproved-woodland pasture	670.0	6
road	5.4	<1
ditch/canal	5.0	<1
<b>Total</b>	<b>10996.7</b>	<b>100</b>

The FNAI database has two records for crested caracara on site. Additional species are likely present, including those reported in the proposal (see table below). Many rare species occur within the vicinity of the proposal and likely use the site to maintain populations in the area.

Table 2. Rare plants and animals documented or reported to occur within the Bluefield to Cow Creek Florida Forever proposal.

<b>Scientific Name</b>	<b>Common Name</b>	<b>Global Rank</b>	<b>State Rank</b>	<b>Federal Status</b>	<b>State Status</b>
<b>Rare plants documented on site</b>					
none					
<b>Additional rare plants reported on site by applicant</b>					
<i>Encyclia tampensis</i>	butterfly orchid	G4	SNR	N	CE
<i>Tillandsia balbisiana</i>	Balbis' airplant	G4	S3	N	T
<i>Tillandsia fasciculata</i>	common wild-pine	G5	SNR	N	E
<b>Rare animals documented on site</b>					
<i>Caracara cheriway</i>	crested caracara	G2	S2	T	FT
<b>Additional rare animals reported on site by applicant</b>					
<i>Alligator mississippiensis</i>	American alligator	G5	S4	SAT	FT(SA)
<i>Crotalus adamanteus</i>	eastern diamondback rattlesnake	G4	S3	N	N
<i>Drymarchon couperi</i>	eastern indigo snake	G3	S2	LT	FT
<i>Gopherus polyphemus</i>	gopher tortoise	G3	S3	C	ST
<i>Antigone canadensis pratensis</i>	Florida sandhill crane	G5T2T3	S2S3	N	ST
<i>Egretta caerulea</i>	little blue heron	G5	S4	N	ST
<i>Haliaeetus leucocephalus</i>	bald eagle	G5	S3	N	N
<i>Mycteria americana</i>	wood stork	G4	S2	T	FT

<b>Scientific Name</b>	<b>Common Name</b>	<b>Global Rank</b>	<b>State Rank</b>	<b>Federal Status</b>	<b>State Status</b>
<i>Pandion haliaetus</i>	osprey	G5	S3S4	N	N
<i>Plegadis falcinellus</i>	glossy ibis	G5	S3	N	N
<i>Rostrhamus sociabilis</i>	snail kite	G4G5	S2	E	FE
<i>Sciurus niger niger</i>	southern fox squirrel	G5T5	S3	N	N

The Florida Forever Measures Evaluation (FFME) accompanying this evaluation is based on the Florida Forever Conservation Needs Assessment developed by FNAI. The data used in that analysis represent a standardized, statewide perspective of natural community distributions based primarily on data from the Cooperative Land Cover Map. Approximately 89% of the proposal is within FNAI Habitat Conservation Priorities 4, 5, and 6. The proposal also scores high for Ecological Greenways (75%). The entire site is within priority 6 Surface Water Protection and priorities 2 through 6 Aquifer Recharge.

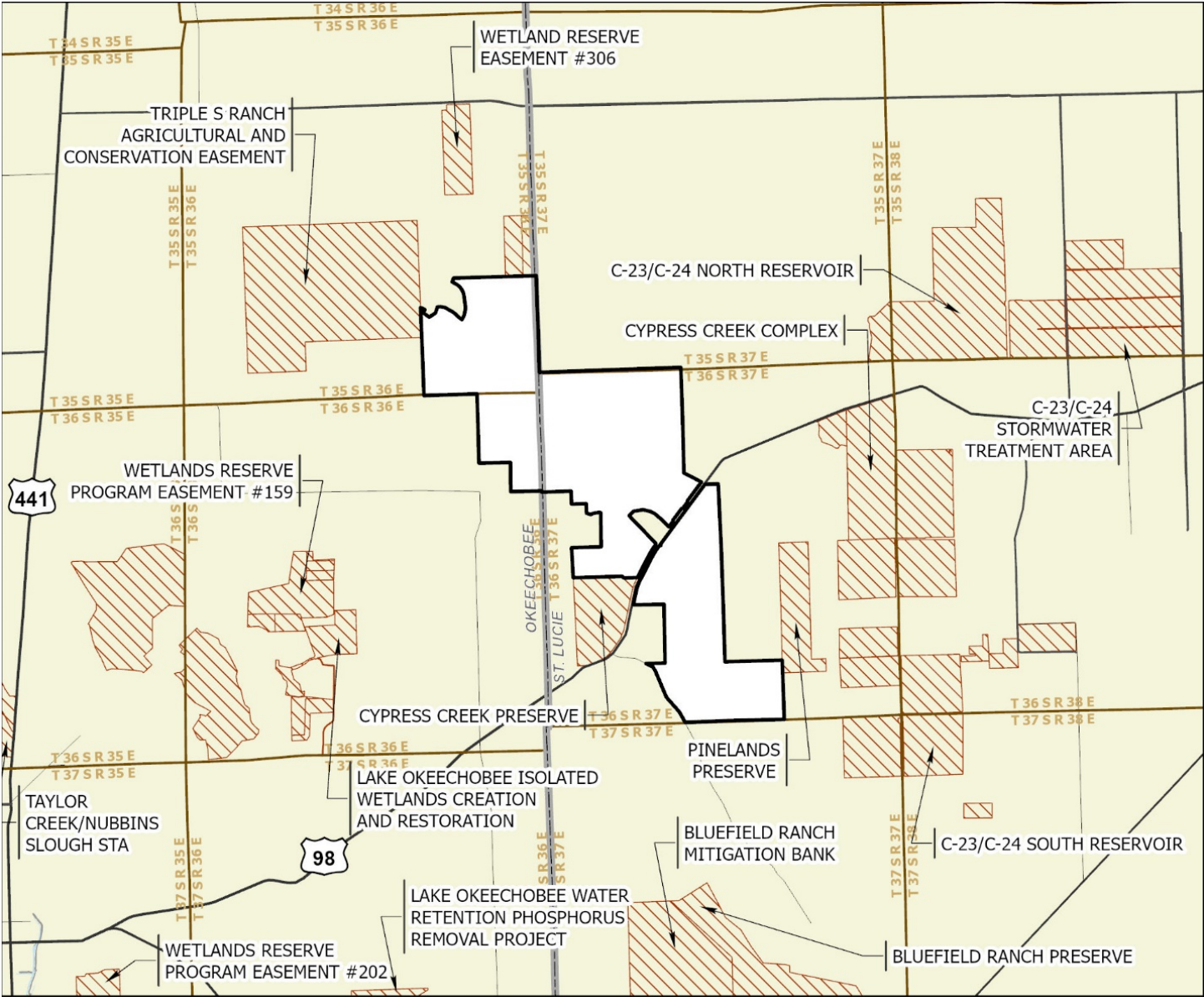
**Bluefield to Cow Creek: Florida Forever Measure Evaluation 20200521**

GIS ACRES = 10,996

MEASURES	Resource Acres <sup>a</sup>	% of project
<b>B1: Strategic Habitat Conservation Areas</b>		
Priority 1	0	0%
Priority 2	3	< 1%
Priority 3	1,720	16%
Priority 4	0	0%
Priority 5	1,491	14%
Total Acres	3,214	29%
<b>B2: FNAI Habitat Conservation Priorities</b>		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	16	< 1%
Priority 4	1,629	15%
Priority 5	2,712	25%
Priority 6	5,464	50%
Total Acres	9,821	89%
<b>B3: Ecological Greenways</b>		
Priority 1	0	0%
Priority 2	8,334	76%
Priority 3	0	0%
Priority 4	0	0%
Priority 5	0	0%
Priority 6	0	0%
Total Acres	8,334	76%
<b>B4: Under-represented Natural Communities</b>		
Upland Glade (G1)	0	0%
Pine Rockland (G1)	0	0%
Scrub and Scrubby Flatwoods (G2)	0	0%
Rockland Hammock (G2)	0	0%
Dry Prairie (G2)	0	0%
Seepage Slope (G2)	0	0%
Sandhill (G3)	0	0%
Sandhill Upland Lake (G3)	0	0%
Upland Pine (G3)	0	0%
Mesic/Wet Flatwoods (G4)	99	< 1%
Upland Hardwood Forest (G5)	0	0%
Total Acres	99	< 1%
<b>B6: Occurrences of FNAI Tracked Species</b>		
G1	0	
G2	0	
G3	0	
G4	0	
G5	2	
Total	2	
<b>C4: Natural Floodplain Function</b>		
Priority 1	12	< 1%
Priority 2	1,866	17%
Priority 3	1,083	10%
Priority 4	617	6%
Priority 5	232	2%
Priority 6	2	< 1%
Total Acres	3,812	35%

MEASURES (continued)	Resource Acres <sup>a</sup>	% of project
<b>C5: Surface Water Protection</b>		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	0	0%
Priority 4	0	0%
Priority 5	0	0%
Priority 6	10,988	100%
Priority 7	0	0%
Total Acres	10,988	100%
<b>C7: Fragile Coastal Resources</b>		
Fragile Coastal Uplands	0	0%
Imperiled Coastal Lakes	0	0%
Coastal Wetlands	0	0%
Total Acres	0	0%
<b>C8: Functional Wetlands</b>		
Priority 1	12	< 1%
Priority 2	1,823	17%
Priority 3	1,356	12%
Priority 4	468	4%
Priority 5	104	< 1%
Priority 6	0	0%
Total Acres	3,764	34%
<b>D3: Aquifer Recharge</b>		
Priority 1	0	0%
Priority 2	134	1%
Priority 3	1,335	12%
Priority 4	4,522	41%
Priority 5	3,776	34%
Priority 6	1,230	11%
Total Acres	10,996	100%
<b>E2: Recreational Trails (miles)</b> (prioritized trail opportunities from Office of Greenways and Trails & Univ. Florida)		
Land Trail Priorities	0.0	
Land Trail Opportunities	3.0	
Total Miles	3.0	
<b>F2: Arch. &amp; Historical Sites (number)</b>		
	0 sites	
<b>G1: Sustainable Forestry</b>		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	17	< 1%
Priority 4	0	0%
Priority 5 - Potential Pinelands	1,192	11%
Total Acres	1,209	11%
<b>G3: Forestland for Recharge</b>		
	5	< 1%

<sup>a</sup>Acres of each resource in the project and percentage of project represented by each resource are listed except where noted. This analysis converts site boundary into pixels, which causes slight differences from GIS acres; this effect is greatest on small sites.



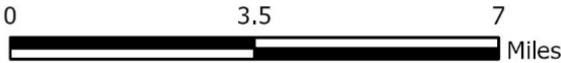
### BLUEFIELD TO COW CREEK FLORIDA FOREVER PROPOSAL

#### OKEECHOBEE AND ST. LUCIE COUNTIES

- Proposed Florida Forever BOT Project
- Other Conservation Lands



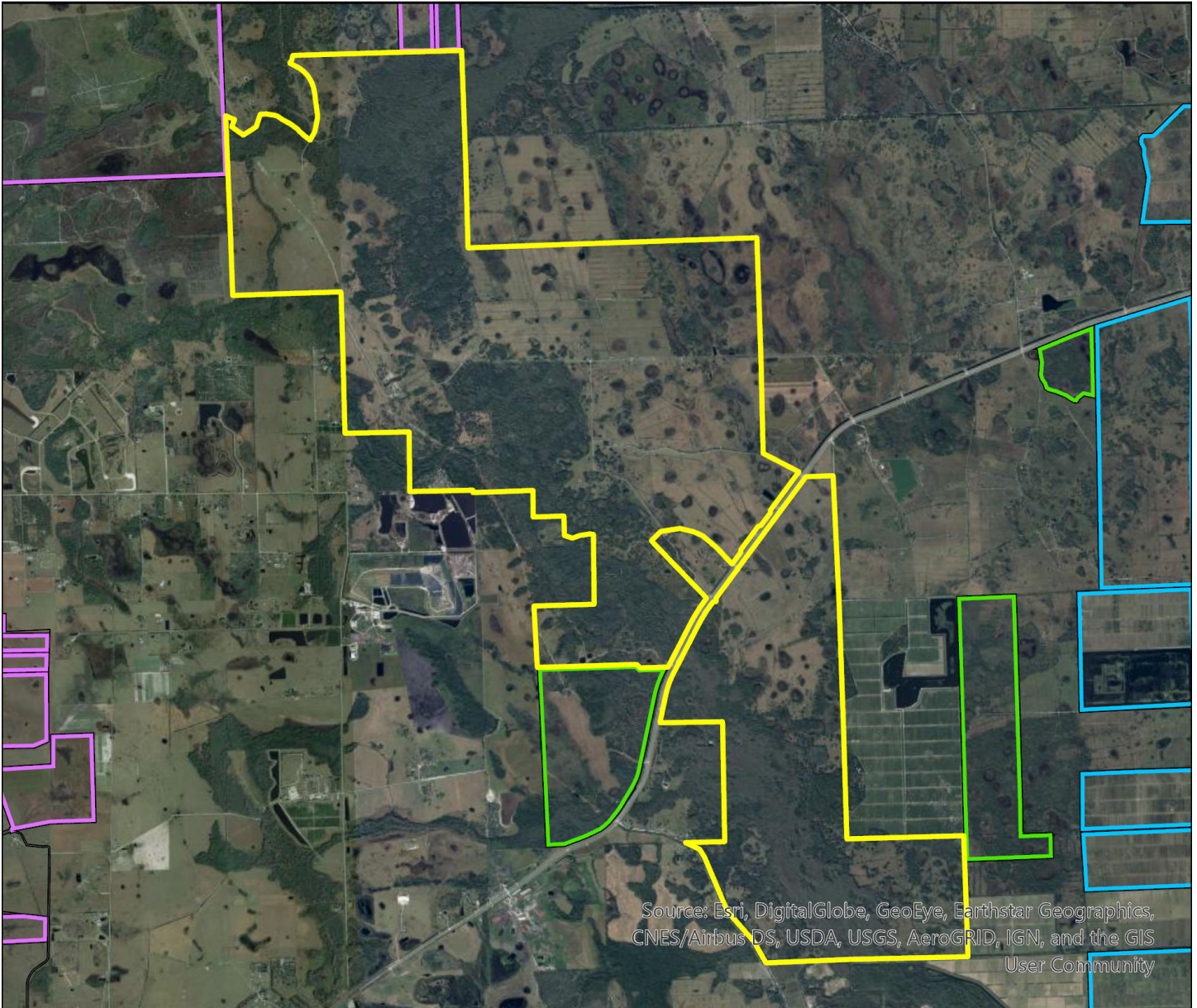
MAY 2020





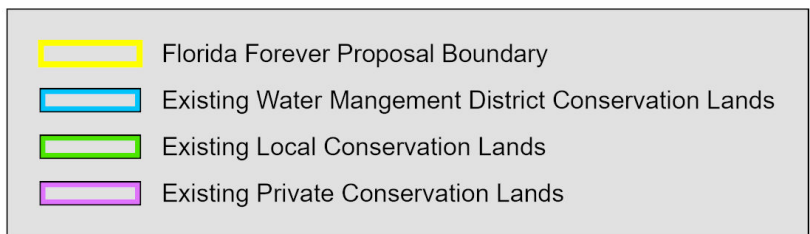
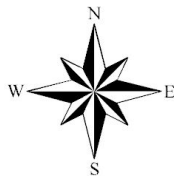
# Bluefield to Cow Creek Florida Forever Proposal

FLORIDA FOREVER BOARD OF TRUSTEES PROJECT PROPOSAL BOUNDARY AS OF MAY 2020

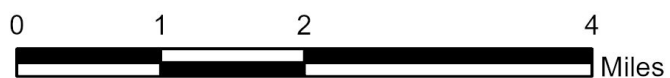


Map Produced by: N. Pasco, May 2020

Background: World Imagery Resolution = 0.3 meter



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## ***Bay County Crayfish Habitat Restoration (Bay County)***

Fee Simple

### Preliminary Evaluation

**Biological Conservation Priority:** High

**Natural Resources Description:** This evaluation is based on information gathered from the proposal, high resolution aerial imagery, U.S. Geologic Survey (USGS) 7.5' topographic maps, Florida Natural Areas Inventory (FNAI) Cooperative Land Cover data (FNAI, Florida Cooperative Land Cover Map, version 3.4), and information in the FNAI database.

The Bay County Crayfish Habitat Restoration proposal comprises multiple parcels that total 2,348 acres (per GIS) in eastern Bay County in urban/suburban Panama City. The parcels fall roughly into three disjunct tracts: a large eastern tract that is crossed by roads, a smaller western tract that includes slightly disjunct parcels, and a very small northern tract near the southern end of Deer Point Lake. The tracts are separated by ca. 2-3 miles of substantially developed habitat. All sites are owned by St. Joe Land & Development Company, identified as a willing seller. The county proposes to acquire the site to achieve multiple goals: to protect habitat for the Panama City crayfish (*Procambarus econfinae*), offer recreational greenspace, and provide watershed protection for St. Andrews Bay. Long-term management will be facilitated by funds pledged by the U.S. Fish and Wildlife Service and two private partners. The county proposes to restore disturbed habitats to more natural conditions and to develop a recreational trail system.

The lands fall largely within the Mills Bayou watershed between East Bay and North Bay of the St. Andrews Bay system. Predominant current land use is rural silviculture. Historically the sites supported wet and mesic flatwoods dominated by longleaf pine, in association with basin swamps dome swamps and other wetlands. Silvicultural activities replaced longleaf with short-rotation slash pine in bedded plantations with consequent loss of native groundcover and altered hydrological regimes, which has been detrimental to the Panama City crayfish. Plantations and other forested communities were severely damaged in 2018 by Hurricane Michael, so the time is opportune to begin ecosystem restoration. Table 1 provides an approximation of landcover types and their relative representation within the proposal.

Table 1. Natural communities and landcover types within the Bay County Crayfish Habitat Restoration Florida Forever proposal.

<b>Community or Landcover</b>	<b>Acres</b>	<b>Percent of Proposal</b>
basin swmap	752	32
mesic flatwoods	33	1
planted pine	945	40
wet coniferous plantation	555	24
road	63	3
<b>Total</b>	<b>2348</b>	<b>100</b>

The FNAI database includes few records of rare species of animals or plants on site (Table 2), and it is possible that decades of intensive silviculture eliminated some. The proposal encompasses much of the area that is the stronghold for *P. econfinae*. The state-endangered plant, Henry's spiderlily, has been found in the immediate vicinity and may occur on-site; field surveys are needed to search for it to assure that any remaining populations are protected during potential restoration activities. Although the Florida black bear occurs in low numbers regionally, the site's contribution to its conservation is likely minimal because of the relatively small size.

Table 2. Rare plants and animals documented or reported to occur within the Bay County Crayfish Habitat Restoration Florida Forever proposal.

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
<b>Rare plants documented on site</b>					
<i>Hymenocallis henryae</i> var. <i>henryae</i>	Henry's spiderlily	G2TNR	S2	N	E
<b>Additional rare plants reported on site by applicant</b>					
none					
<b>Rare animals documented on site</b>					
<i>Procambarus econfinae</i>	Panama City crayfish	G1G2	S1S2	PT	SSC
<i>Ursus americanus floridanus</i>	Florida black bear	G5T4	S4	N	N
<b>Additional rare animals reported on site by applicant</b>					
none					

The Florida Forever Measures Evaluation that follows is based on the Florida Forever Conservation Needs Assessment developed by FNAI. The data used in that analysis represent a standardized, statewide perspective of natural community distributions based primarily on data from the Cooperative Land Cover Map. As summarized in the evaluation, most of the site (89-100%) contributes to ecological greenways, sustainable forestry, FNAI habitat conservation priorities, surface water protection, and aquifer recharge, with nearly half or greater contributing to functional wetlands, strategic habitat conservation areas, and natural floodplain function.

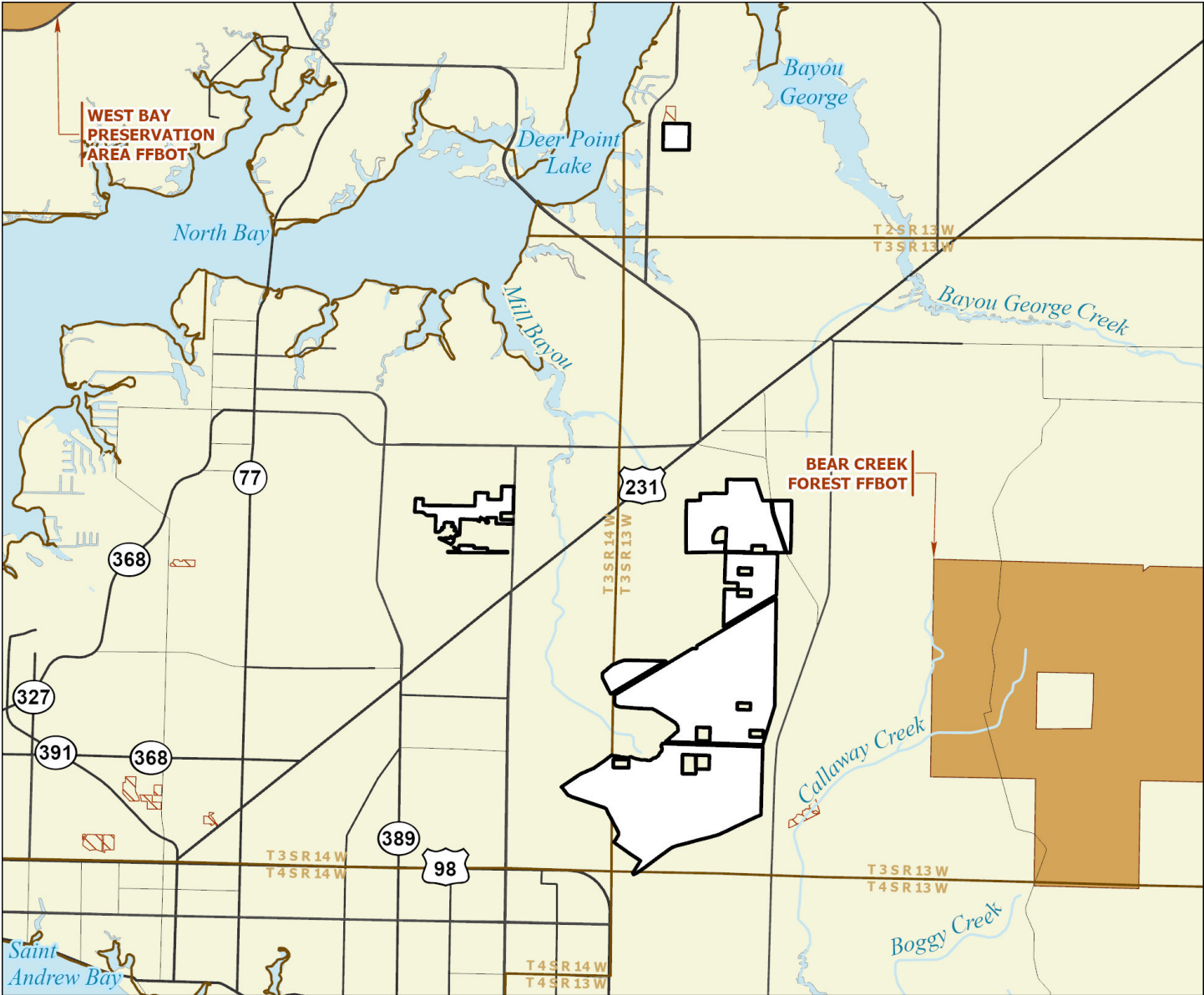
**Crayfish Habitat Restoration: Florida Forever Measure Evaluation 20200527**

GIS ACRES = 2,348

MEASURES	Resource Acres <sup>a</sup>	% of project
<b>B1: Strategic Habitat Conservation Areas</b>		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	1,470	63%
Priority 4	0	0%
Priority 5	53	2%
Total Acres	1,523	65%
<b>B2: FNAI Habitat Conservation Priorities</b>		
Priority 1	2,154	92%
Priority 2	122	5%
Priority 3	2	< 1%
Priority 4	0	0%
Priority 5	26	1%
Priority 6	1	< 1%
Total Acres	2,305	98%
<b>B3: Ecological Greenways</b>		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	0	0%
Priority 4	0	0%
Priority 5	2,099	89%
Priority 6	0	0%
Total Acres	2,099	89%
<b>B4: Under-represented Natural Communities</b>		
Upland Glade (G1)	0	0%
Pine Rockland (G1)	0	0%
Scrub and Scrubby Flatwoods (G2)	0	0%
Rockland Hammock (G2)	0	0%
Dry Prairie (G2)	0	0%
Seepage Slope (G2)	0	0%
Sandhill (G3)	0	0%
Sandhill Upland Lake (G3)	0	0%
Upland Pine (G3)	0	0%
Mesic/Wet Flatwoods (G4)	33	1%
Upland Hardwood Forest (G5)	0	0%
Total Acres	33	1%
<b>B6: Occurrences of FNAI Tracked Species</b>		
G1	2	
G2	1	
G3	0	
G4	1	
G5	0	
Total	4	
<b>C4: Natural Floodplain Function</b>		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	289	12%
Priority 4	1,262	54%
Priority 5	33	1%
Priority 6	101	4%
Total Acres	1,684	72%




MEASURES (continued)	Resource Acres <sup>a</sup>	% of project
<b>C5: Surface Water Protection</b>		
Priority 1	399	17%
Priority 2	0	0%
Priority 3	0	0%
Priority 4	1,898	81%
Priority 5	0	0%
Priority 6	0	0%
Priority 7	0	0%
Total Acres	2,297	98%
<b>C7: Fragile Coastal Resources</b>		
Fragile Coastal Uplands	0	0%
Imperiled Coastal Lakes	0	0%
Coastal Wetlands	0	0%
Total Acres	0	0%
<b>C8: Functional Wetlands</b>		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	204	9%
Priority 4	874	37%
Priority 5	26	1%
Priority 6	36	2%
Total Acres	1,141	49%
<b>D3: Aquifer Recharge</b>		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	0	0%
Priority 4	169	7%
Priority 5	2,009	86%
Priority 6	170	7%
Total Acres	2,347	100%
<b>E2: Recreational Trails (miles)</b> (prioritized trail opportunities from Office of Greenways and Trails & Univ. Florida)		
Land Trail Priorities	3.1	
Land Trail Opportunities	0.0	
Total Miles	3.1	
<b>F2: Arch. &amp; Historical Sites (number)</b>		
	0 sites	
<b>G1: Sustainable Forestry</b>		
Priority 1	277	12%
Priority 2	438	19%
Priority 3	1,343	57%
Priority 4	0	0%
Priority 5 - Potential Pinelands	38	2%
Total Acres	2,096	89%
<b>G3: Forestland for Recharge</b>		
	0	0%

<sup>a</sup>Acres of each resource in the project and percentage of project represented by each resource are listed except where noted. This analysis converts site boundary into pixels, which causes slight differences from GIS acres; this effect is greatest on small sites.



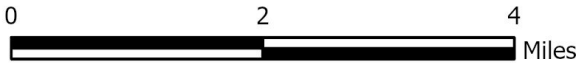
### CRAYFISH HABITAT RESTORATION FLORIDA FOREVER PROPOSAL

#### BAY COUNTY

-  Proposed Florida Forever BOT Project
-  Florida Forever BOT Projects
-  Other Conservation Lands



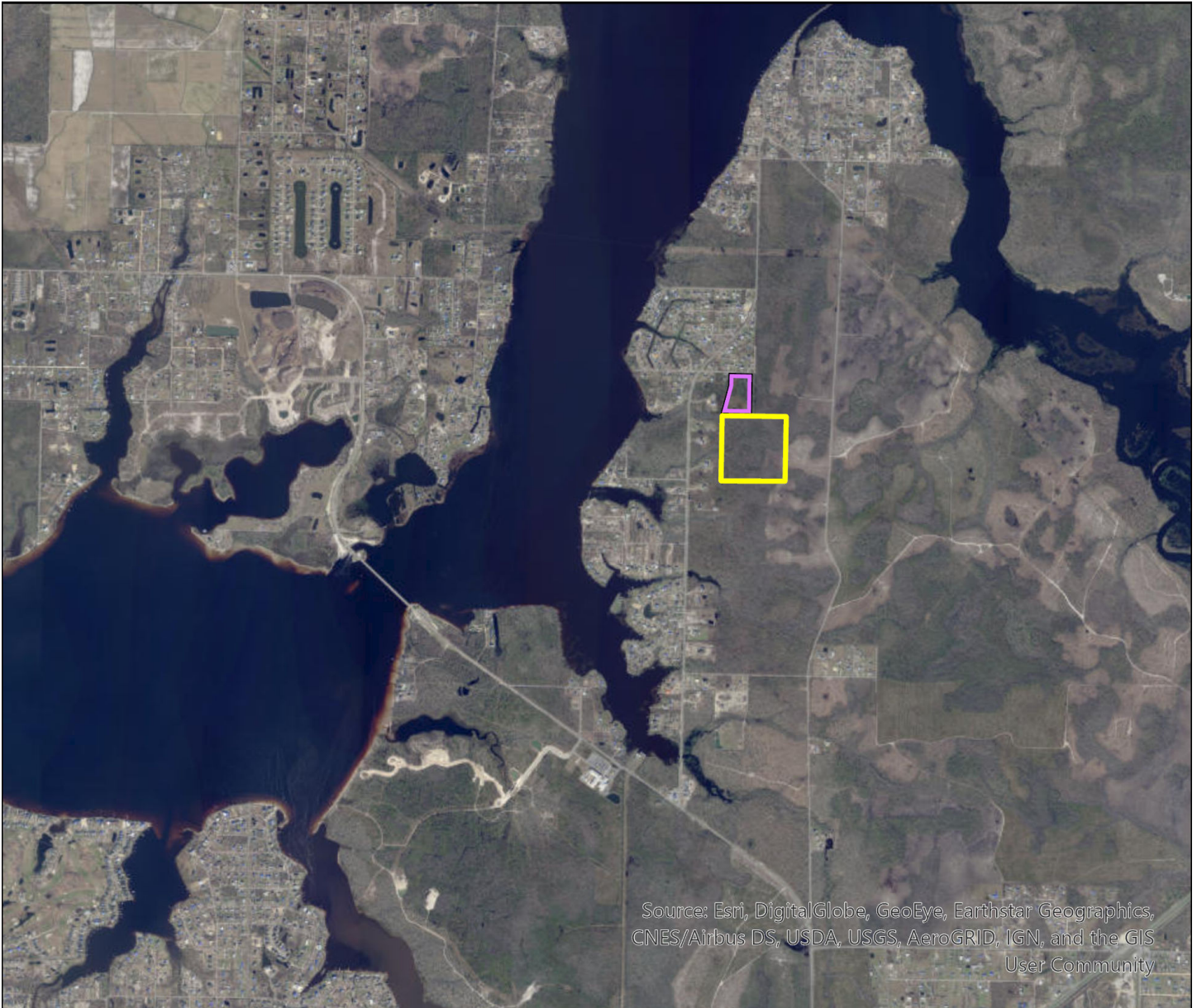
MAY 2020



# Crayfish Habitat Restoration Florida Forever Proposal

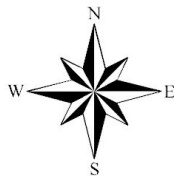
## Map 1 of 2

FLORIDA FOREVER BOARD OF TRUSTEES PROJECT PROPOSAL BOUNDARY AS OF MAY 2020

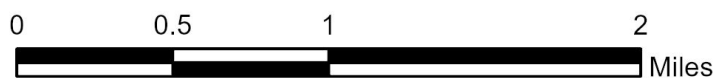


Map Produced by: N. Pasco, May 2020

Background: World Imagery Resolution = 0.3 meter



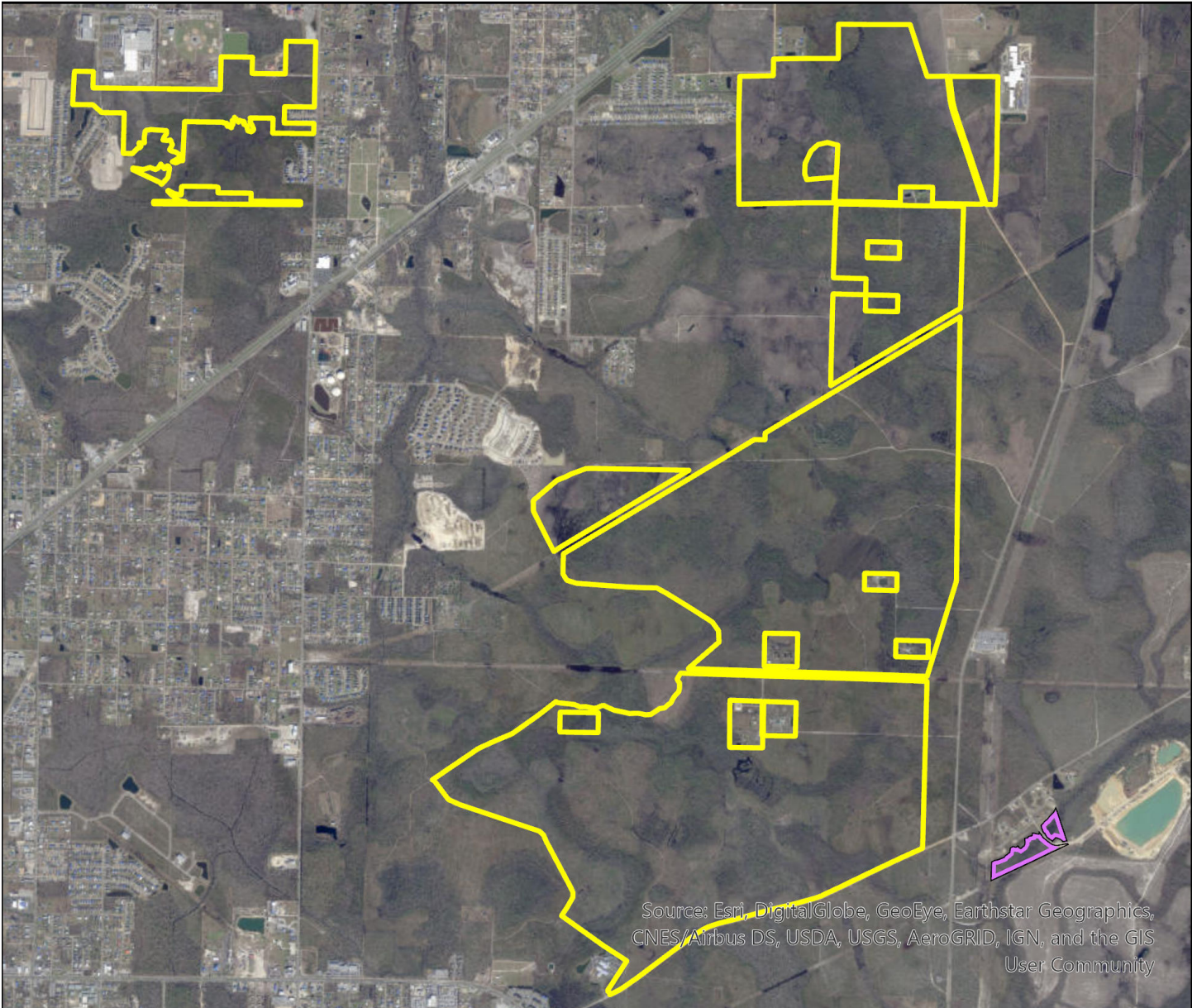
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# Crayfish Habitat Restoration Florida Forever Proposal

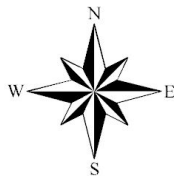
## Map 2 of 2

FLORIDA FOREVER BOARD OF TRUSTEES PROJECT PROPOSAL BOUNDARY AS OF MAY 2020

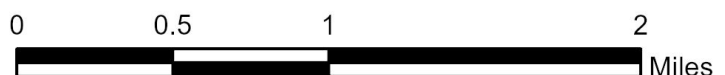


Map Produced by: N. Pasco, May 2020

Background: World Imagery Resolution = 0.3 meter



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## ***Welannee Watershed Forest (Okaloosa County)***

Less-than-fee

### Preliminary Evaluation

#### **Biological Conservation Priority: High**

**Natural Resources Description:** This evaluation is based on information gathered from the proposal, high resolution aerial imagery, U.S. Geological Survey (USGS) 7.5' topographic maps, Florida Cooperative Land Cover Map (version 3.4), information in the Florida Natural Areas Inventory (FNAI) database, and a September 2002 FNAI field assessment of the comparable Upper Yellow River 2002 Florida Forever proposal.

The Welannee Watershed Forest proposal includes approximately 8,370 acres (8,375 GIS acres) of floodplain and adjacent upland habitat along the Yellow River, from the Florida-Alabama state line extending downstream for approximately 11.5 straight-line miles (estimated 15–16 river miles). The proposal consists of northern and southern tracts; there is a small discontinuity within the northern tract at highway SR-2. Blackwater River State Forest lies generally 0.5 to 2 miles west of the northern tract, which encompasses both banks of the river, although the Forest and proposal share a small common border. The Yellow River Water Management Area lies immediately downstream of the northern tract (sharing a short common border) and directly across the river from the southern tract, which itself is restricted to the eastern side of the river. The two tracts have separately listed ownerships represented by a single business entity. The properties are offered for less-than-fee protection with owners continuing to manage for timber products.

The upper Yellow River region encompasses some of the highest elevations in Florida. Erosive dissection of the uplands by the river and its tributaries has produced dramatic physiographic relief, with a resulting transition from relatively high uplands through forested/seepage slopes to floodplain communities. In general, a band of floodplain and hardwood communities along the river retains natural characteristics. However, most of the site's uplands, as well as much of the seepage habitat, have been converted or substantially degraded by commercial silviculture. Whether many of the communities now in plantation and regeneration retain sufficient character to classify them as low-quality natural communities rather than other altered landcover is debatable. For this review, such areas are generally listed as altered and will require extensive restoration efforts before regarding them as natural communities. The following table lists, in approximate order of areal extent, natural communities and altered landcover types that occur within the site's boundaries and river corridor; communities that are difficult to distinguish or that interdigitate extensively are combined.



Table 1. Natural communities and landcover types within the Welannee Watershed Forest Florida Forever Proposal.

Community or Landcover	Acres	Percent of Proposal
bottomland forest/baygall	2090	25.0
floodplain swamp	1323	15.8
upland hardwood forest	170	2.0
mesic-wet flatwoods/seepage slope <sup>a</sup>	155	1.8
blackwater stream (river) <sup>b</sup>	49	0.6
basin marsh	31	0.4
upland pine	8	0.1
seepage stream	5	0.1
dome swamp	2	0.0
pine plantation	3740	44.7
clearcut pine plantation	456	5.5
pasture - improved	163	1.9
road	101	1.2
utility corridor	28	0.3
clearing	20	0.2
artificial pond	11	0.1
developed	10	0.1
successional hardwood forest	5	0.1
agriculture	3	0.0
<b>Total</b>	<b>8370</b>	<b>100</b>

<sup>a</sup> Young pines planted through these communities but understory still largely intact in 2002

<sup>b</sup> River technically may not be part of proposal but included for this analysis

The Florida Natural Areas Inventory database includes records for several rare species of animals on site, including within the river (Table 2). Of especially high importance from a conservation standpoint is the occurrence of the federally threatened Gulf sturgeon, which traverses the river from the Gulf upstream into Alabama, and which may spawn within the region. Other animals documented near the site and which may occur on site or within the river corridor include the Florida floater (*Utterbackia peggyae*, a mussel), blacktip shiner (*Lythrurus atrapiculus*), eastern copperhead (*Agkistrodon contortrix*), little blue heron (*Egretta caerulea*), southeastern American kestrel (*Falco sparverius paulus*), Louisiana waterthrush (*Seiurus motacilla*), and southeastern weasel (*Mustela frenata olivacea*). Rare plants documented near the site and which may occur on site include the panhandle lily (*Lilium iridollae*) and primrose-flowered butterwort (*Pinguicula primuliflora*). Potential exists for other rare species as well.

Table 2. Rare plants and animals documented or reported to occur within the Welannee Watershed Forest Florida Forever Proposal. List includes species within river itself.

Scientific name	Common name	Global Rank	State Rank	Federal Status	State Status
<b>Rare plants documented on site</b>					
<i>Asarum arifolium</i>	little brown jug	G5	S3	N	T
<b>Additional rare plants reported on site by applicant</b>					
none					
<b>Rare animals documented on site</b>					
<i>Fusconaia escambia</i>	narrow pigtoe (mussel)	G2	S1S2	T	T
<i>Toxolasma</i> sp. 1	Gulf lilliput	G2	S2	N	N
<i>Villosa choctawensis</i>	Choctaw bean (mussel)	G2G3	S1S2	E	E
<i>Baetisca rogersi</i>	a mayfly	G4	S3	N	N
<i>Hydroperla phormidia</i>	a stonefly	G3	S2	N	N
<i>Oxyethira pescadori</i>	Pescador's bottle-cased caddisfly	G3G4	S3	N	N
<i>Acipenser oxyrinchus desotoi</i>	Gulf sturgeon	G3T2T3	S2?	T	T
<i>Hyla andersonii</i>	pine barrens treefrog	G4	S3	N	N
<i>Apalone spinifera</i>	spiny softshell	G5	S3	N	N
<i>Gopherus polyphemus</i>	gopher tortoise	G3	S3	C	T
<i>Graptemys ernsti</i>	Escambia map turtle	G2	S2	N	N
<i>Macrochelys temminckii</i>	alligator snapping turtle	G3G4	S3	N	N
<i>Pseudemys concinna concinna</i>	eastern river cooter	G5T5	S3	N	N
<i>Tamias striatus</i>	eastern chipmunk	G5	S2	N	N
<b>Additional rare animals reported on site by applicant</b>					
none					

The Florida Forever Measures Evaluation (FFME) at the end of this memo is based on the Florida Forever Conservation Needs Assessment developed by FNAI. The data used in that analysis represent a standardized, statewide perspective of natural community distributions based primarily on data from the Cooperative Land Cover Map. As summarized in the evaluation, most of the site (> 95%) contributes to Ecological Greenways, Surface Water Protection, and Aquifer Recharge, with substantial contribution (40–60%) to Strategic Habitat Conservation Areas, FNAI Habitat Conservation Priorities, Natural Floodplain Function, Functional Wetlands, and Sustainable Forestry.

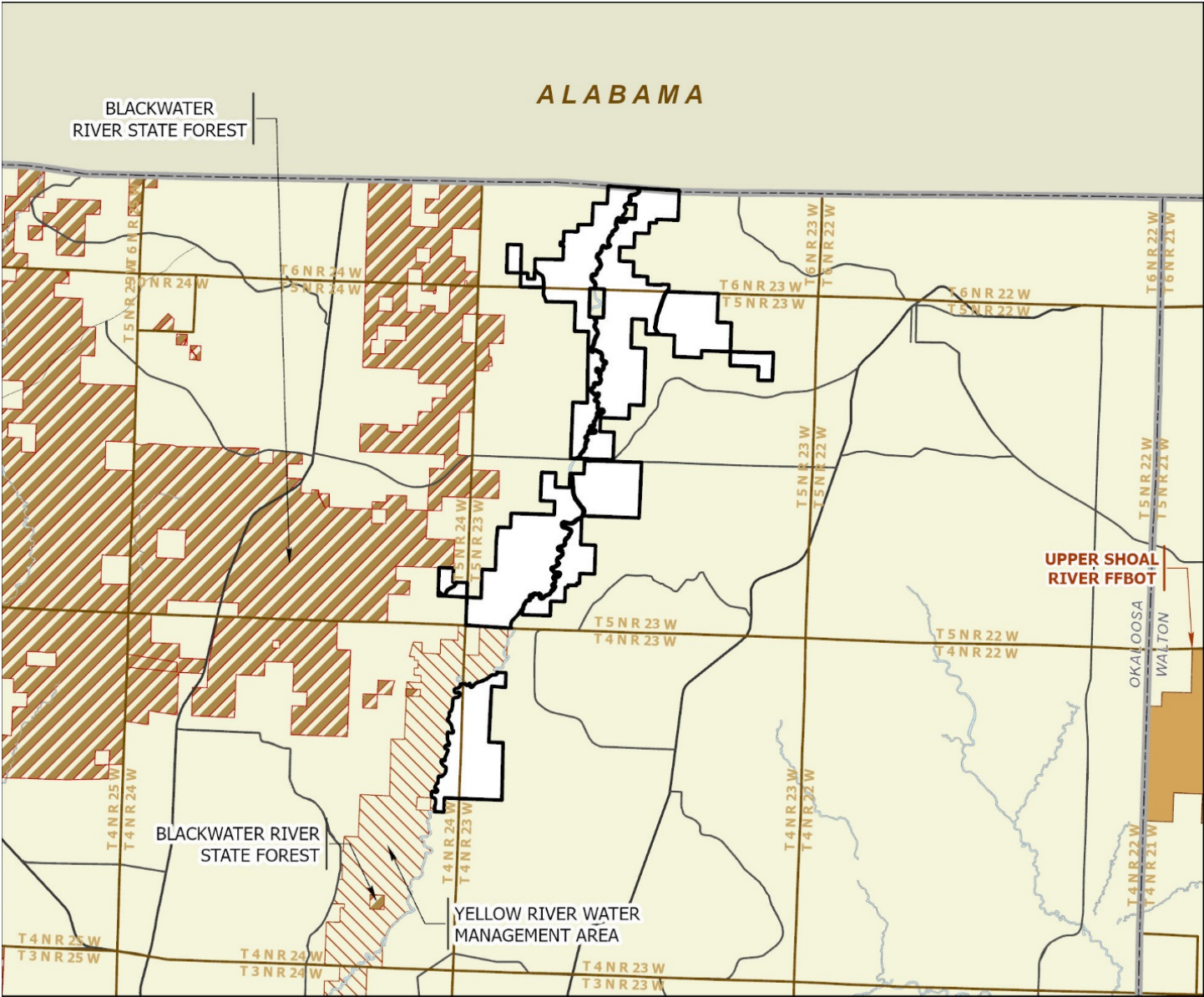
**Welanee Watershed Forest: Florida Forever Measure Evaluation 20200519**

GIS ACRES = 8,375

MEASURES	Resource Acres <sup>a</sup>	% of project
<b>B1: Strategic Habitat Conservation Areas</b>		
Priority 1	0	0%
Priority 2	141	2%
Priority 3	0	0%
Priority 4	2,681	32%
Priority 5	526	6%
Total Acres	3,348	40%
<b>B2: FNAI Habitat Conservation Priorities</b>		
Priority 1	2,972	35%
Priority 2	666	8%
Priority 3	67	< 1%
Priority 4	128	2%
Priority 5	469	6%
Priority 6	9	< 1%
Total Acres	4,312	51%
<b>B3: Ecological Greenways</b>		
Priority 1	0	< 1%
Priority 2	8,298	99%
Priority 3	0	0%
Priority 4	0	0%
Priority 5	0	0%
Priority 6	0	0%
Total Acres	8,298	99%
<b>B4: Under-represented Natural Communities</b>		
Upland Glade (G1)	0	0%
Pine Rockland (G1)	0	0%
Scrub and Scrubby Flatwoods (G2)	0	0%
Rockland Hammock (G2)	0	0%
Dry Prairie (G2)	0	0%
Seepage Slope (G2)	0	0%
Sandhill (G3)	1	< 1%
Sandhill Upland Lake (G3)	0	0%
Upland Pine (G3)	0	0%
Mesic/Wet Flatwoods (G4)	213	3%
Upland Hardwood Forest (G5)	53	< 1%
Total Acres	266	3%
<b>B6: Occurrences of FNAI Tracked Species</b>		
G1	0	
G2	4	
G3	2	
G4	3	
G5	2	
Total	11	
<b>C4: Natural Floodplain Function</b>		
Priority 1	61	< 1%
Priority 2	2,075	25%
Priority 3	1,880	22%
Priority 4	333	4%
Priority 5	0	0%
Priority 6	0	0%
Total Acres	4,349	52%

MEASURES (continued)	Resource Acres <sup>a</sup>	% of project
<b>C5: Surface Water Protection</b>		
Priority 1	0	0%
Priority 2	4,536	54%
Priority 3	1,235	15%
Priority 4	1,955	23%
Priority 5	445	5%
Priority 6	0	0%
Priority 7	0	0%
Total Acres	8,171	98%
<b>C7: Fragile Coastal Resources</b>		
Fragile Coastal Uplands	0	0%
Imperiled Coastal Lakes	0	0%
Coastal Wetlands	0	0%
Total Acres	0	0%
<b>C8: Functional Wetlands</b>		
Priority 1	61	< 1%
Priority 2	1,675	20%
Priority 3	1,587	19%
Priority 4	232	3%
Priority 5	0	0%
Priority 6	0	0%
Total Acres	3,555	42%
<b>D3: Aquifer Recharge</b>		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	0	0%
Priority 4	0	0%
Priority 5	0	0%
Priority 6	8,305	99%
Total Acres	8,305	99%
<b>E2: Recreational Trails (miles)</b> (prioritized trail opportunities from Office of Greenways and Trails & Univ. Florida)		
Land Trail Priorities	0.0	
Land Trail Opportunities	0.0	
Total Miles	0.0	
<b>F2: Arch. &amp; Historical Sites (number)</b>		
	3 sites	
<b>G1: Sustainable Forestry</b>		
Priority 1	0	0%
Priority 2	293	3%
Priority 3	3,865	46%
Priority 4	0	0%
Priority 5 - Potential Pinelands	277	3%
Total Acres	4,434	53%
<b>G3: Forestland for Recharge</b>		
	0	0%

<sup>a</sup>Acres of each resource in the project and percentage of project represented by each resource are listed except where noted. This analysis converts site boundary into pixels, which causes slight differences from GIS acres; this effect is greatest on small sites.



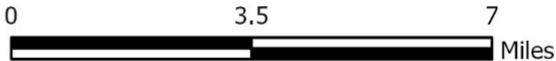
### WELANNEE WATERSHED FOREST FLORIDA FOREVER PROPOSAL

#### OKALOOSA COUNTY

-  Proposed Florida Forever BOT Project
-  Florida Forever BOT Projects
-  State Owned Lands
-  Other Conservation Lands

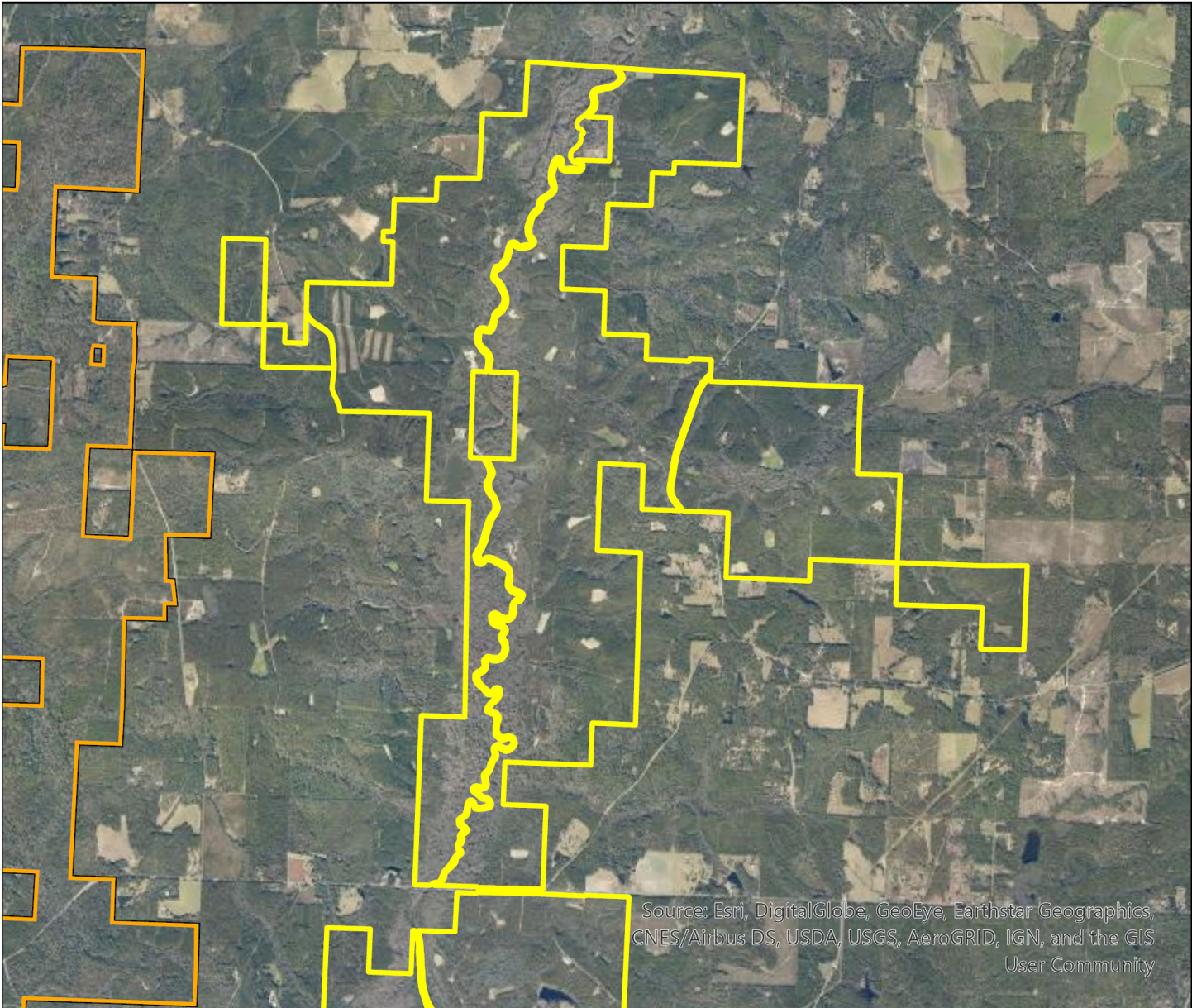


MAY 2020



# Welannee Watershed Forest Florida Forever Proposal Map 1 of 2

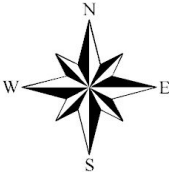
FLORIDA FOREVER BOARD OF TRUSTEES PROJECT PROPOSAL BOUNDARY AS OF MAY 2020



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

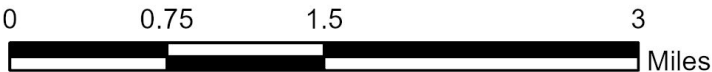
Map Produced by: N. Pasco, May 2020

Background: World Imagery Resolution = 0.3 meter



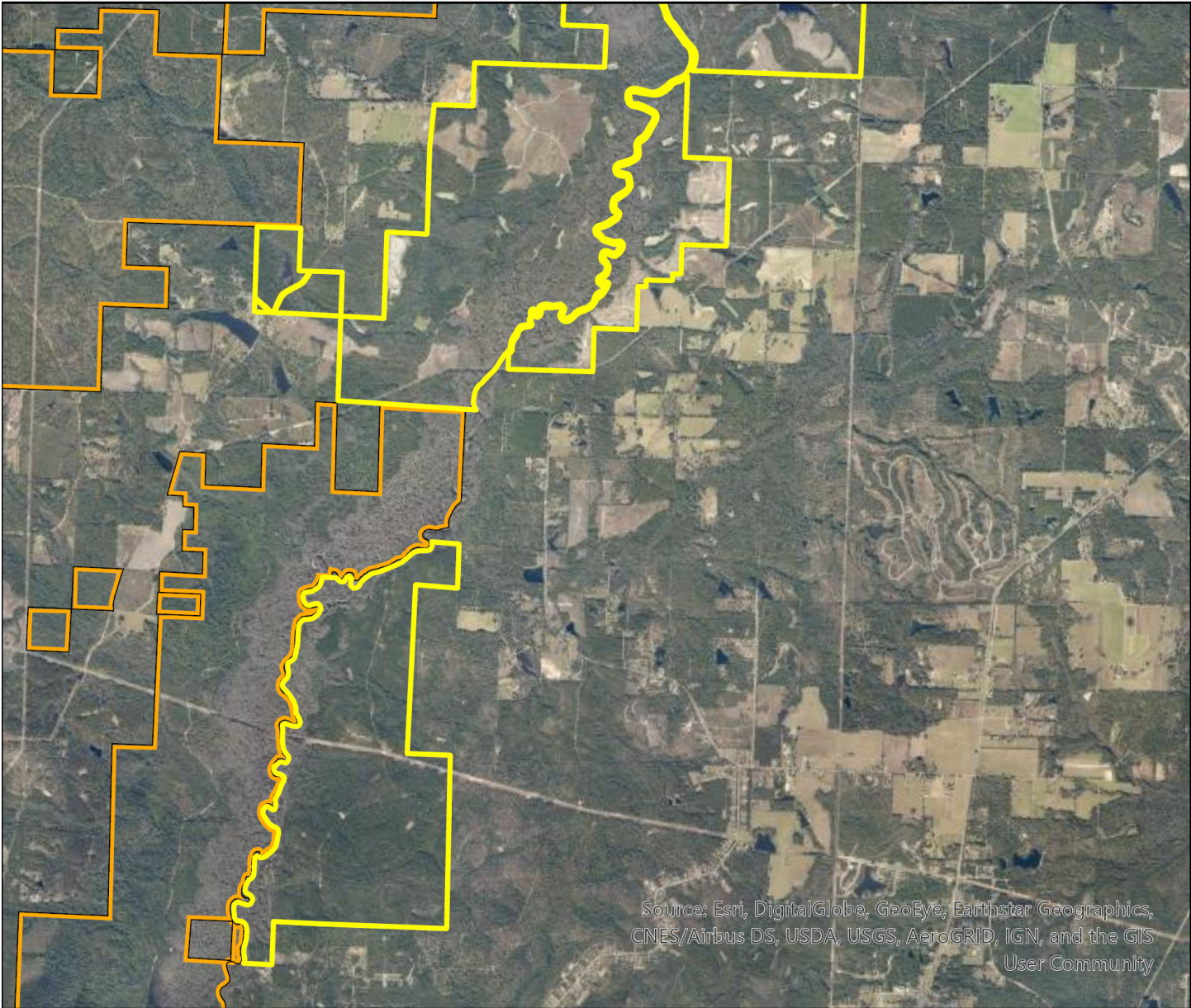
	Florida Forever Proposal Boundary
	Existing State Conservation Lands

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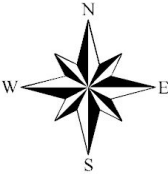
# Welannee Watershed Forest Florida Forever Proposal Map 2 of 2

FLORIDA FOREVER BOARD OF TRUSTEES PROJECT PROPOSAL BOUNDARY AS OF MAY 2020



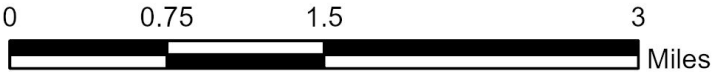
Map Produced by: N. Pasco, May 2020

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## ***Withlacoochee River Addition*** (Citrus and Hernando counties)

Less-than-Fee Simple

### Preliminary Evaluation

**Biological Conservation Priority:** Medium

**Natural Resources Description:** This evaluation is based on information gathered from the proposal, high resolution aerial imagery, U.S. Geological Survey (USGS) 7.5' topographic maps, Florida Cooperative Land Cover Map (version 3.4), and information in the Florida Natural Areas Inventory (FNAI) database.

The Withlacoochee River Addition proposal encompasses 1,572 (GIS) acres (1,645 per application) in five ownerships along the Withlacoochee River in Citrus and Hernando counties. The proposed properties extend both north and south of the recently-submitted Withlacoochee River Corridor proposal that is currently being considered for addition to the list of Florida Forever projects. The combined site is being offered for less-than-fee simple sale to the state.

Nearby conservation lands include the Flying Eagle Preserve, adjacent to the northernmost parcel, as well as several tracts of the Withlacoochee State Forest. The Lake Townsen Preserve lies just south of the southernmost tract. Two Florida Forever BOT projects are located within a mile of the proposed project, both across the river in Sumter County – Battle of Wahoo Swamp and Southeastern Bat Maternity Caves: Sumter County Cave.

The Withlacoochee River Corridor proposal is within the Ocala Uplift District of the Tsala Apopka Basin. This district is generally referred to as the Lime Sink Region, characterized by low rolling limestone plains overlain by thin sands supporting swamps, marshes, and lakes in a matrix of flatwoods. The district includes several terrestrial and aquatic caves; however, none are reported to occur within the proposal.

The dominant natural feature of the Withlacoochee River Corridor proposal is the vast area of floodplain/basin swamp along the river and backwaters. Along with bottomland forest these iconic Florida wetlands cover approximately 60% of the combined properties within the proposal. Swamps in the northern two ownerships have been altered by canals that traverse these systems connecting to the main river channel. These swamps are younger and less well developed than those on the properties to the south; it is not clear if this is a result of relatively recent cutting or succession of basin marshes, which are abundant in the vicinity as well as the proposal properties (11% of the acreage) with varying degrees of cypress canopy. Upland hardwood forest covers up to approximately 145 acres (9%) within the combined proposed addition. Approximately 110 acres of this is in one contiguous area on the northernmost tract; portions of the area identified may be forested wetland and require field confirmation. There are no disturbances evident from aerial photography in the upland hardwood forest. Floodplain marsh, dome swamp, wet prairie, and depression marsh make up less than one percent each of the total landcover.

Approximately 200 acres (12%) of the combined properties is improved or woodland pasture (or mowed grass). Approximately 73 acres (5%) is in planted pine. Other altered landcover types

include ditch/canal, abandoned fields, roads, and artificial ponds each covering less than one percent of the proposed lands.

Table 1. Natural communities and landcover types within the Withlacoochee River Corridor Florida Forever proposal.

<b>Community or Landcover</b>	<b>Acres</b>	<b>Percent of Proposal</b>
basin/floodplain swamp	708.0	45
bottomland forest	238.5	15
basin marsh	176.4	11
upland hardwood forest	145.2	9
floodplain marsh	7.5	<1
dome swamp	3.7	<1
wet prairie	3.7	<1
blackwater stream	2.4	<1
depression marsh	1.2	<1
pasture-improved	155.1	10
planted pine	72.9	5
woodland pasture	40.2	3
ditch/canal	9.3	1
abandoned field	4.5	<1
road	2.9	<1
artificial pond	1.0	<1
<b>Total</b>	<b>1572.5</b>	<b>100</b>

The FNAI database has two historical records of rare species on site: a gopher tortoise and indigo snake at the same location from 1992. The hardwood forest on site have potential for several rare plants and ferns known to occur in the region.

Table 2. Rare plants and animals documented or reported to occur within the Withlacoochee River Corridor Florida Forever proposal.

<b>Scientific Name</b>	<b>Common Name</b>	<b>Global Rank</b>	<b>State Rank</b>	<b>Federal Status</b>	<b>State Status</b>
<b>Rare plants documented on site</b>					
none					
<b>Additional rare plants reported on site by applicant</b>					
none					
<b>Rare animals documented on site</b>					
<i>Gopherus polyphemus</i>	gopher tortoise	G3	S3	C	ST
<i>Drymarchon couperi</i>	eastern indigo snake	G3	S3	T	FT
<b>Additional rare animals reported on site by applicant</b>					
<i>Haliaeetus leucocephalus</i>	bald eagle	G5	S3	N	N
<i>Sciurus niger niger</i>	southern fox squirrel	G5T5	S3	N	N



The Florida Forever Measures Evaluation (FFME) accompanying this evaluation is based on the Florida Forever Conservation Needs Assessment developed by FNAI. The data used in that analysis represent a standardized, statewide perspective of natural community distributions based primarily on data from the Cooperative Land Cover Map. The entire site contributes to Ecological Greenways, Surface Water Protection, and Aquifer Recharge. The site also scores highly for FNAI Habitat Conservation Priorities (68 percent in priorities 4 and 5) and Natural Floodplain Function (80%, mostly priorities 1 through 3).

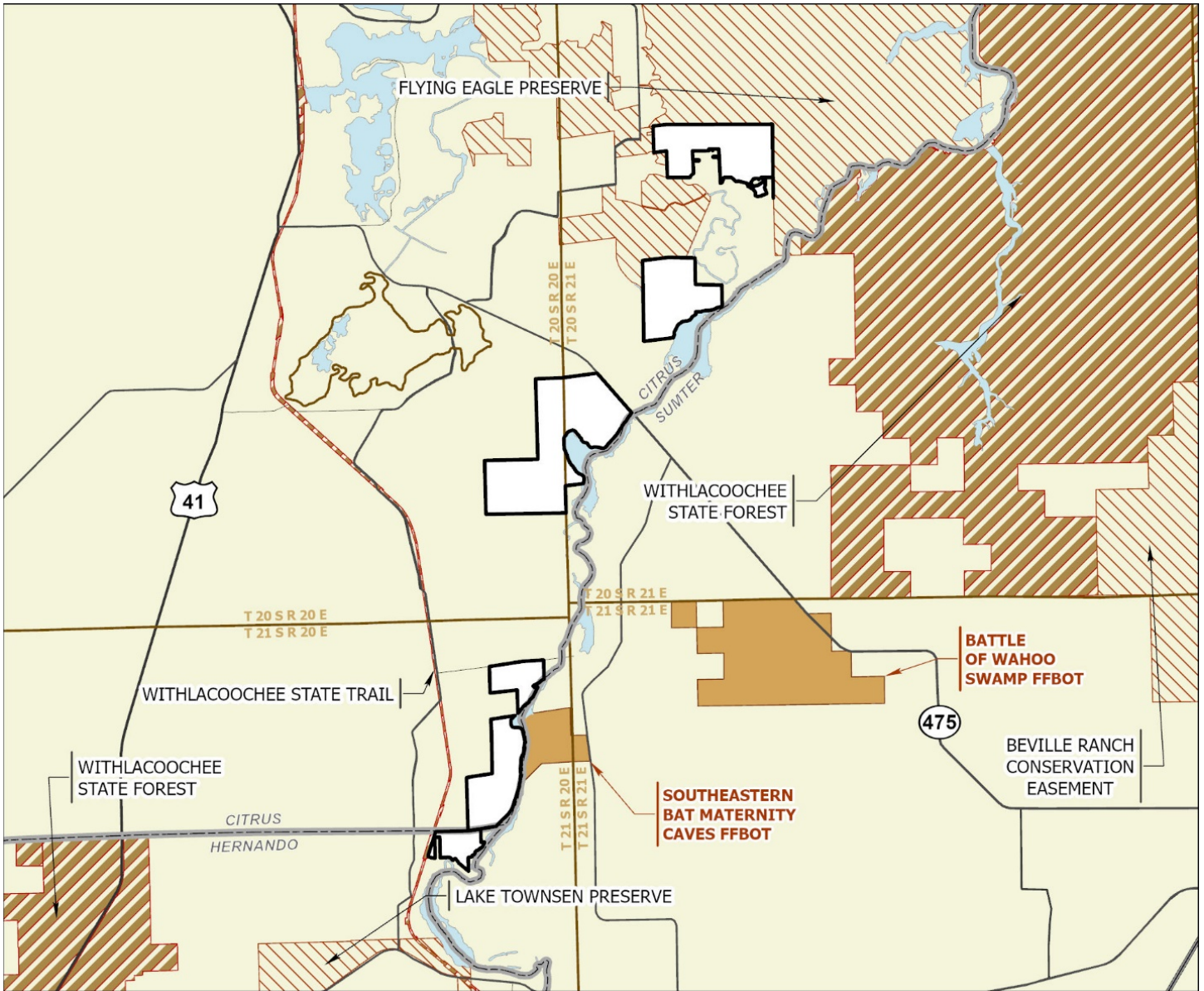
## Withlacoochee River Addition: Florida Forever Measure Evaluation 20200519

GIS ACRES = 1,572

MEASURES	Resource Acres <sup>a</sup>	% of project
<b>B1: Strategic Habitat Conservation Areas</b>		
Priority 1	0	0%
Priority 2	3	< 1%
Priority 3	353	22%
Priority 4	0	0%
Priority 5	603	38%
Total Acres	959	61%
<b>B2: FNAI Habitat Conservation Priorities</b>		
Priority 1	101	6%
Priority 2	0	0%
Priority 3	0	0%
Priority 4	194	12%
Priority 5	879	56%
Priority 6	123	8%
Total Acres	1,296	82%
<b>B3: Ecological Greenways</b>		
Priority 1	0	0%
Priority 2	1,571	100%
Priority 3	0	0%
Priority 4	0	0%
Priority 5	0	0%
Priority 6	0	0%
Total Acres	1,571	100%
<b>B4: Under-represented Natural Communities</b>		
Upland Glade (G1)	0	0%
Pine Rockland (G1)	0	0%
Scrub and Scrubby Flatwoods (G2)	0	0%
Rockland Hammock (G2)	0	0%
Dry Prairie (G2)	0	0%
Seepage Slope (G2)	0	0%
Sandhill (G3)	0	0%
Sandhill Upland Lake (G3)	0	0%
Upland Pine (G3)	0	0%
Mesic/Wet Flatwoods (G4)	0	0%
Upland Hardwood Forest (G5)	145	9%
Total Acres	145	9%
<b>B6: Occurrences of FNAI Tracked Species</b>		
G1	0	
G2	0	
G3	2	
G4	0	
G5	0	
Total	2	
<b>C4: Natural Floodplain Function</b>		
Priority 1	250	16%
Priority 2	390	25%
Priority 3	427	27%
Priority 4	183	12%
Priority 5	0	0%
Priority 6	0	0%
Total Acres	1,250	80%

MEASURES (continued)	Resource Acres <sup>a</sup>	% of project
<b>C5: Surface Water Protection</b>		
Priority 1	0	0%
Priority 2	534	34%
Priority 3	870	55%
Priority 4	151	10%
Priority 5	0	0%
Priority 6	0	0%
Priority 7	0	0%
Total Acres	1,555	99%
<b>C7: Fragile Coastal Resources</b>		
Fragile Coastal Uplands	0	0%
Imperiled Coastal Lakes	0	0%
Coastal Wetlands	0	0%
Total Acres	0	0%
<b>C8: Functional Wetlands</b>		
Priority 1	209	13%
Priority 2	287	18%
Priority 3	377	24%
Priority 4	101	6%
Priority 5	0	0%
Priority 6	0	0%
Total Acres	975	62%
<b>D3: Aquifer Recharge</b>		
Priority 1	143	9%
Priority 2	547	35%
Priority 3	612	39%
Priority 4	258	16%
Priority 5	12	< 1%
Priority 6	0	0%
Total Acres	1,572	100%
<b>E2: Recreational Trails (miles)</b> (prioritized trail opportunities from Office of Greenways and Trails & Univ. Florida)		
Land Trail Priorities	1.2	
Land Trail Opportunities	0.0	
Total Miles	1.2	
<b>F2: Arch. &amp; Historical Sites (number)</b>		
	10 sites	
<b>G1: Sustainable Forestry</b>		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	22	1%
Priority 4	0	0%
Priority 5 - Potential Pinelands	121	8%
Total Acres	144	9%
<b>G3: Forestland for Recharge</b>		
	22	1%

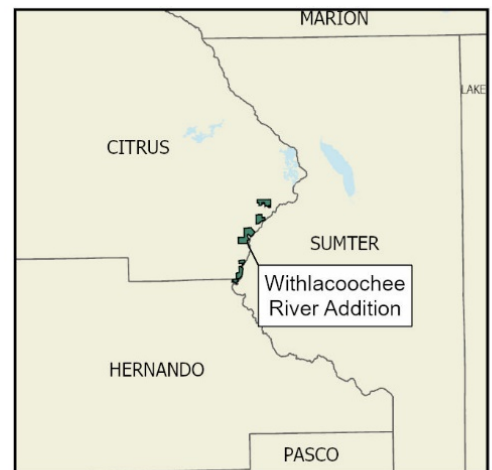
<sup>a</sup>Acres of each resource in the project and percentage of project represented by each resource are listed except where noted. This analysis converts site boundary into pixels, which causes slight differences from GIS acres; this effect is greatest on small sites.



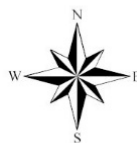
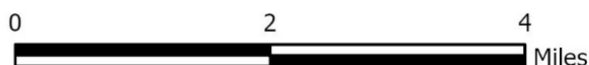
## WITHLACOOCHEE RIVER ADDITION FLORIDA FOREVER PROPOSAL

### CITRUS AND HERNANDO COUNTIES

-  Proposed Florida Forever BOT Project
-  Florida Forever BOT Projects
-  State Owned Lands
-  Other Conservation Lands

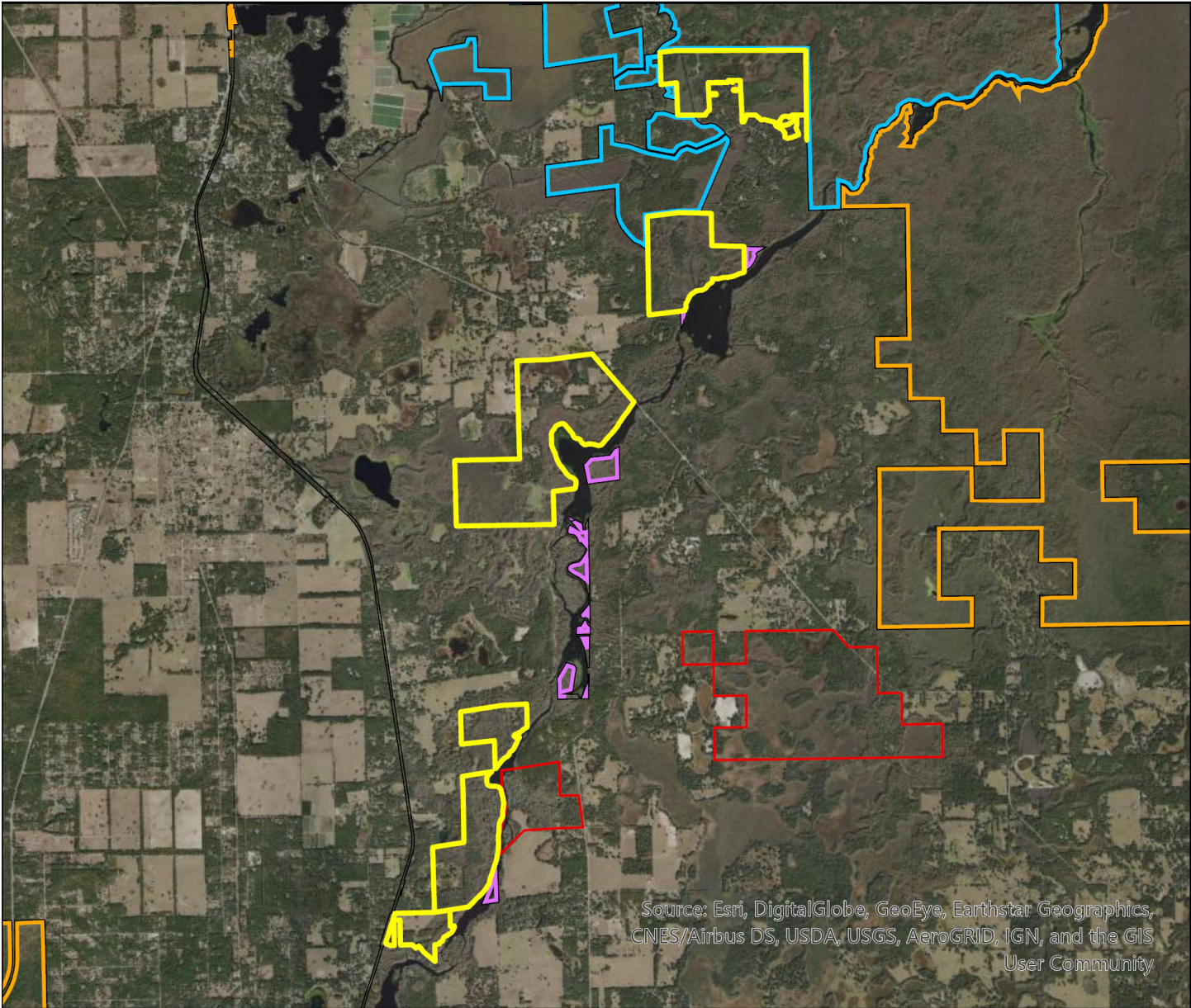


MAY 2020



# Withlacoochee River Addition Florida Forever Proposal

FLORIDA FOREVER BOARD OF TRUSTEES PROJECT PROPOSAL BOUNDARY AS OF MAY 2020



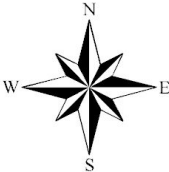
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Map Produced by: N. Pasco, May 2020

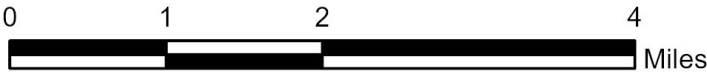
Background: World Imagery Resolution = 0.3 meter



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	Florida Forever Proposal Boundary
	Florida Forever BOT Projects
	Existing State Conservation Lands
	Existing Water Mangement District Conservation Lands
	Existing Private Conservation Lands



## Elements and Element Occurrences

An **element** is a biodiversity unit of conservation attention, such as a species, population, natural community, bird rookery, spring, sinkhole, or cave.

An **element occurrence (EO)** is an area of land and/or water in which a species or natural community is, or was, present. An EO should have practical conservation value for the Element as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location.

## Element Ranking and Legal Status

Using a ranking system developed by NatureServe and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks for each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element Occurrences (EOs), estimated abundance (number of individuals for species; area for natural communities), geographic range, estimated number of adequately protected EOs, relative threat of destruction, and ecological fragility.

### FNAI GLOBAL ELEMENT RANK DEFINITIONS

<b>G1</b>	<b>Critically Imperiled</b> —At very high risk of extinction or elimination due to extreme rarity, very steep declines, or other factors.
<b>G2</b>	<b>Imperiled</b> —At high risk of extinction or elimination due to very restricted range, very few populations or occurrences, steep declines, or other factors.
<b>G3</b>	<b>Vulnerable</b> —At moderate risk of extinction or elimination due to a restricted range, relatively few populations or occurrences, recent and widespread declines, or other factors.
<b>G4</b>	<b>Apparently Secure</b> —Uncommon, but not rare; some cause for long term concern due to decline or other factors.
<b>G5</b>	<b>Secure</b> —Common; widespread and abundant.
<b>GH</b>	<b>Possibly Extinct</b> —Known from only historical occurrences, but still some hope of rediscovery.
<b>GX</b>	<b>Presumed Extinct</b> —Not located despite intensive searches and virtually no likelihood of rediscovery.
<b>GXC</b>	<b>Captive or Cultivated Only</b> —Taxon at present is extinct in the wild across their entire native range, but is extant in cultivation, in captivity, or as a naturalized population or populations outside of its native range or a reintroduced population not yet established.
<b>G#?</b>	<b>Inexact Numeric Rank</b> —Denotes inexact numeric rank (e.g., G2?).
<b>G#G#</b>	<b>Range Rank</b> —Used to indicate uncertainty about the exact status of the element (e.g., G1G3, G2G3).
<b>G#T#</b>	<b>Infraspecific Taxon</b> —Rank of a taxonomic subgroup such as a subspecies; the G portion of the rank refers to the entire species and the T portion refers to the subgroup; numbers have same definition as above (e.g., G3T1).
<b>G#Q</b>	<b>Questionable Taxonomy</b> —Distinctiveness of this element as a taxon or ecosystem type at the current level is questionable; numbers have same definition as above (e.g., G2Q).
<b>G#T#Q</b>	<b>Questionable Taxonomy (T)</b> —Same as above, but validity as subspecies or variety is questioned.
<b>GU</b>	<b>Unrankable</b> —Currently unrankable due to lack of information and/or conflicting information (e.g., GUT2).
<b>GNA</b>	<b>Not Applicable</b> —The element is not a suitable target for conservation activities (e.g., a hybrid species).
<b>GNR</b>	<b>Unranked</b> —Global rank not yet assessed.
<b>GNRTNR</b>	<b>Unranked (T)</b> —Neither the element nor the taxonomic subgroup or population has yet been ranked.

### FNAI STATE ELEMENT RANK DEFINITIONS

<b>S1</b>	<b>Critically Imperiled</b> —At very high risk of extirpation from Florida due to extreme rarity, very steep declines, or other factors.
<b>S2</b>	<b>Imperiled</b> —At high risk of extirpation from Florida due to very restricted range, very few populations or occurrences, steep declines, or other factors.
<b>S3</b>	<b>Vulnerable</b> —At moderate risk of extirpation from Florida due to a restricted range, relatively few populations or occurrences, recent and widespread declines, or other factors.
<b>S4</b>	<b>Apparently Secure</b> —Uncommon, but not rare, in Florida; some cause for long term concern due to decline or other factors.
<b>S5</b>	<b>Secure</b> —Common; widespread and abundant in Florida.
<b>SH</b>	<b>Possibly Extirpated</b> —Known from only historical occurrences in Florida, but still some hope of rediscovery.
<b>SX</b>	<b>Presumed Extirpated</b> —Not located in Florida despite intensive searches and virtually no likelihood of rediscovery.
<b>SU</b>	<b>Unrankable</b> —Currently unrankable in Florida due to lack of information and/or conflicting information.
<b>SNA</b>	<b>Not Applicable</b> —Not a suitable target for conservation activities in Florida (e.g., a hybrid species).
<b>SNR</b>	<b>Unranked</b> —Neither the element nor the taxonomic subgroup/population has yet been ranked for Florida.

## FEDERAL LEGAL STATUS

Legal status information provided by FNAI for information only. For official definitions and lists of protected species, consult the United States Fish and Wildlife Service (USFWS).

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal statuses given by FNAI refer only to Florida populations and that federal statuses may differ elsewhere.

<b>C</b>	Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as endangered or threatened.
<b>E</b>	Endangered: species in danger of extinction throughout all or a significant portion of its range.
<b>E, T</b>	Species currently listed endangered in a portion of its range but only listed as threatened in other areas.
<b>E, PDL</b>	Species currently listed endangered but has been proposed for delisting.
<b>E, PT</b>	Species currently listed endangered but has been proposed for listing as threatened.
<b>E, XN</b>	Species currently listed endangered but tracked population is a non-essential experimental population.
<b>T</b>	Threatened: species likely to become endangered within the foreseeable future throughout all or a significant portion of its range.
<b>PE</b>	Species proposed for listing as endangered
<b>PT</b>	Species proposed for listing as threatened
<b>SAE</b>	Treated as endangered due to similarity of appearance to a species that is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.
<b>SAT</b>	Treated as threatened due to similarity of appearance to a species that is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.
<b>S</b>	Not currently listed, but considered a "species of concern" to USFWS.
<b>N</b>	No federal status

## STATE LEGAL STATUS

Legal status information is provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant state agency.

**Animals:** Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission (FWC), 1 August 1997, and subsequent updates.

<b>C</b>	Candidate for listing at the Federal level by USFWS
<b>FE</b>	Listed as endangered Species at the Federal level by USFWS
<b>FT</b>	Listed as threatened Species at the Federal level by USFWS
<b>FXN</b>	Listed as a non-essential experimental population in Florida by USFWS
<b>FT(S/A)</b>	Listed as threatened due to similarity of appearance by USFWS
<b>ST</b>	State population listed as threatened by the FWC. Defined as a species, subspecies, or isolated population that is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.
<b>SSC</b>	Listed as Species of Special Concern by the FWC. An element that warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation, which in the foreseeable future may result in its becoming a threatened species. (SSC* for Pandion haliaetus (Osprey) indicates that this status applies in Monroe county only.)
<b>N</b>	Not currently listed, nor currently being considered for listing.

**Plants:** Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or see: <http://www.doacs.state.fl.us/pi/>.

<b>E</b>	Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act.
<b>T</b>	Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be endangered.
<b>CE</b>	Commercially exploited: species native to Florida that are subject to being removed in significant numbers from native habitats in the state and sold or transported for sale.
<b>N</b>	Not currently listed, nor currently being considered for listing.

## Element Occurrence Ranking

FNAI ranks of quality of the element occurrence in terms of its viability (EORANK). Viability is estimated using a combination of factors that contribute to continued survival of the element at the location. Among these are the size of the EO, general condition of the EO at the site, and the conditions of the landscape surrounding the EO (e.g., an immediate threat to an EO by local development pressure could lower an EO rank).

<b>A</b>	Excellent estimated viability
<b>A?</b>	Possibly excellent estimated viability
<b>AB</b>	Excellent or good estimated viability
<b>AC</b>	Excellent, good, or fair estimated viability
<b>B</b>	Good estimated viability
<b>B?</b>	Possibly good estimated viability
<b>BC</b>	Good or fair estimated viability
<b>BD</b>	Good, fair, or poor estimated viability
<b>C</b>	Fair estimated viability
<b>C?</b>	Possibly fair estimated viability
<b>CD</b>	Fair or poor estimated viability
<b>D</b>	Poor estimated viability
<b>D?</b>	Possibly poor estimated viability
<b>E</b>	Verified extant (viability not assessed)
<b>F</b>	Failed to find
<b>H</b>	Historical
<b>NR</b>	Not ranked, a placeholder when an EO is not (yet) ranked.
<b>U</b>	Unrankable
<b>X</b>	Extirpated

\*For additional detail on the above ranks see: <http://www.natureserve.org/explorer/eorankguide.htm>

FNAI also uses the following EO ranks:

<b>H?</b>	Possibly historical
<b>F?</b>	Possibly failed to find
<b>X?</b>	Possibly extirpated

The following offers further explanation of the H and X ranks as they are used by FNAI:

The rank of H is used when there is a lack of recent field information verifying the continued existence of an EO, such as (a) when an EO is based only on historical collections data; or (b) when an EO was ranked A, B, C, D, or E at one time and is later, without field survey work, considered to be possibly extirpated due to general habitat loss or degradation of the environment in the area. This definition of the H rank is dependent on an interpretation of what constitutes "recent" field information. Generally, if there is no known survey of an EO within the last 20 to 40 years, it should be assigned an H rank. While these time frames represent suggested maximum limits, the actual time period for historical EOs may vary according to the biology of the element and the specific landscape context of each occurrence (including anthropogenic alteration of the environment). Thus, an H rank may be assigned to an EO before the maximum time frames have lapsed. Occurrences that have not been surveyed for periods exceeding these time frames should not be ranked A, B, C, or D. The higher maximum limit for plants and communities (i.e., ranging from 20 to 40 years) is based upon the assumption that occurrences of these elements generally have the potential to persist at a given location for longer periods of time. This greater potential is a reflection of plant biology and community dynamics. However, landscape factors must also be considered. Thus, areas with more anthropogenic impacts on the environment (e.g., development) will be at the lower end of the range, and less-impacted areas will be at the higher end.

The rank of X is assigned to EOs for which there is documented destruction of habitat or environment, or persuasive evidence of eradication based on adequate survey (i.e., thorough or repeated survey efforts by one or more experienced observers at times and under conditions appropriate for the Element at that location).