

Withlacoochee River Addition
(Citrus and Hernando Counties)

Less-than-Fee

Florida Forever Project Evaluation Report

Prepared by:
Division of State Lands
Office of Environmental Services

Submitted to the Acquisition and Restoration Council
October 2020



Proposed Land Manager: Landowners (monitored by DEP)
Acres: 1,645
Just Value: \$2,890,995
Application Date: May 14, 2020
Project Sponsors: Conservation Advisors LLC, Triple S Ranch LLC
and Conservation Florida, Inc.

Executive Summary

The Withlacoochee River Addition Florida Forever is proposed as a less-than-fee acquisition and is comprised of five ownerships containing 1,645 acres along the west shoreline of the Withlacoochee River, ranging from about three miles east of Floral City in southern Citrus County to Istachatta in northern Hernando County. This proposal is sponsored by Conservation Advisors LLC, Triple S Ranch LLC and Conservation Florida, Inc., and is a result of feedback received during an assessment team site visit in February 2020 to the Withlacoochee River Corridor project proposal submitted in 2020 Cycle 1. Additional conservation of the properties proposed for less-than-fee acquisition evaluated in this report will enhance the protection of a significant portion of the Withlacoochee River watershed and provide connectivity to existing conservation lands that will benefit numerous fish and wildlife species.

Local members of the Florida Forever project proposal site assessment team toured the property on Thursday, July 30, 2020, as the Covid-19 pandemic has affected travel restrictions on state office staff who reside in Tallahassee.

The landowners are utilizing the property in a manner consistent with management practices that will sustain wildlife habitat on the area and establishing the property as an easement would ensure the properties remain undeveloped in the future. Habitats present include mesic hammock, xeric hammock, floodplain swamp, cypress dome, basin marsh, ruderal (improved pasture), and small pockets of pine flatwoods and scrub.

If approved for addition to the 2021 Priority List, this project would be added to the recently-approved Withlacoochee River Corridor project boundary and ideally would be ranked in the Less-Than-Fee category. The land would be designated as essential.

Purpose for Acquisition

The Withlacoochee River Addition project is proposed to: (a) enhance the coordination and completion of land acquisition projects; (b) increase the protection of Florida's biodiversity at the species, natural community, and landscape levels; (c) protect, restore, and maintain the quality and natural functions of land, water, and wetland systems of the state; and, (d) ensure that sufficient quantities of water are available to meet the current and future needs of natural systems and the citizens of the state. The goal is to use both of these projects to create a conservation corridor along the Withlacoochee River from Flying Eagle Preserve in the north to the Withlacoochee State Forest in the south.

Location and Proximity to Other Managed Areas

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-approved Withlacoochee River Corridor Florida Forever BOT project. The combined site is being offered for less-than-fee simple sale to the state. The acreage discrepancy may be due to one or more parcels that were left off of the original application. There is also a sixth ownership that is interested in being included in the boundary. These issues could be addressed in a boundary amendment should the project be added to the Florida Forever list.

Nearby conservation lands include the Flying Eagle Preserve (Southwest Florida Water Management District), adjacent to the northernmost parcel, as well as several tracts of the Withlacoochee State Forest. The Withlacoochee State Trail is adjacent to the western boundary of the southernmost tract for ca. 0.25 miles. Two additional 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. County Road (CR) 48 runs along the northern boundary of one of the ownerships for 0.5 mile. The properties include almost 4 miles of frontage along the Withlacoochee River.

Resource Description

Florida Natural Areas Inventory (FNAI)

This evaluation is based on information gathered from the proposal, historic and current aerial photography, Florida Cooperative Land Cover data version 3.3, and information in the Florida Natural Areas Inventory (FNAI) database. A field survey was conducted on July 30, 2020, by FNAI biologist Kim Alexander, along with project sponsor Cheney Simmons, regional state agency staff representing FWC and FFS, and several of the landowners.

The Withlacoochee River Addition 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 a maze of swamps, marshes, and lakes in a matrix of mostly flatwoods. Terrestrial and aquatic caves are known to occur in this limestone terrain; however, none are reported to occur within the proposal.

Elevation ranges from around 80 feet above mean sea level in the southernmost property to as low as 40 feet above mean sea level along the river. Soils in uplands are mainly Sparr, Tavares, Immokalee, and Orsino soils, while most wetlands have Eaugallie or Basinger fine sands or Terra Ceia-Okeelanta mucks. The large basin wetlands on the properties mainly drain east and southward towards the Withlacoochee River. An old canal on the northernmost parcel connects wetlands there to the river.

Just over 80% of the Withlacoochee River Addition proposal is in varying degrees of natural condition. This is mostly due to the large complex of basin swamps, hydric hammocks, and marshes that make up close to 60% of the total acreage; hardwood forested uplands make up the rest, approximately 20%, of the additional communities in fairly natural condition. The remaining 20% of the proposal has been cleared or developed to some degree to support the existing and former land uses, primarily cattle ranching and hunting. Most of the converted land (around 13% of the total proposal area) is currently open, either as improved pasture or other clearing. A few acres are developed with low density buildings and associated open areas.

The dominant natural feature of the Withlacoochee River Addition proposal is the vast area of floodplain/basin swamp along the river and backwaters. These iconic Florida wetlands cover approximately 28% of the combined properties within the proposal. These swamps fringe the Withlacoochee River and occupy large basins adjacent to the floodplain, often interspersed with willow marshes. The canopy is primarily bald cypress (*Taxodium distichum*), but other trees are common

including red maple (*Acer rubrum*), swamp tupelo (*Nyssa biflora*), green ash (*Fraxinus pennsylvanica*), American elm (*Ulmus americana*), and swamp laurel oak (*Quercus laurifolia*). An isolated dome swamp on the central parcel of the proposal has a similar canopy composition. Epiphytic air-plants are common in the canopy, mostly consisting of Bartram's air-plant (*Tillandsia bartramii*) and Spanish moss (*Tillandsia usneoides*). Understory species include swamp milkweed (*Asclepias perennis*), false nettle (*Boehmeria cylindrica*), sedge (*Carex* sp.), common buttonbush (*Cephalanthus occidentalis*), and woolgrass (*Scirpus cyperinus*). Inundated areas of the swamps have floating mats of yellow pondlily (*Nuphar advena*), water paspalum (*Paspalum repens*), and water-lettuce (*Pistia stratiotes*). Swamps in the northern two ownerships have been altered by canals that traverse these systems connecting to the main river channel. The disturbed areas are more likely to have populations of invasive exotics species. Large populations occur of the FLEPPC Category I species West Indian marsh grass (*Hymenachne amplexicaulis*), Peruvian primrosewillow (*Ludwigia peruviana*), and water spangles (*Salvinia minima*). Elephant ear (*Xanthosoma sagittifolium*; FLEPPC Category II) has been cultivated at the floodplain edge near at least one house.

Shrubby, willow-dominated marshes occupy deep basin wetlands on, near, and sometimes adjacent to the Withlacoochee River. These have a short canopy of coastalplain willow (*Salix caroliniana*), red maple, and common buttonbush. These often have patches of forested swamp, and although it is difficult to tell exactly to what extent the vegetation types have been impacted by the installation of canals, it is clear from the 1944 aerial photographs that much of the forested area in these basins was once open marsh.

There are also large, more or less isolated marshes on the proposal that are currently open and herbaceous with lemon bacopa (*Bacopa caroliniana*), sawgrass (*Cladium jamaicense*), spikerush (*Eleocharis* sp.), coastalplain St. John's-wort (*Hypericum brachyphyllum*), Piedmont marshelder (*Iva microcephala*), southern bayberry (*Morella cerifera*), white waterlily (*Nymphaea odorata*), maidencane (*Panicum hemitomon*), meadowbeauty (*Rhexia* sp.), and bulltongue arrowhead (*Sagittaria lancifolia*). The FLEPPC Category I water hyacinth (*Eichhornia crassipes*) is found in disturbed marsh areas, particularly where there has been ditching or other digging.

Hardwood forested uplands (upland hardwood forest, mesic hammock, and xeric hammock) cover up to approximately 20% of the combined proposed addition. Mesic hammock forms the majority of these communities, particularly in the central and northern ownership. The canopy is dominated by live oak (*Quercus virginiana*) and cabbage palm (*Sabal palmetto*), with pignut hickory (*Carya glabra*), sweetgum (*Liquidambar styraciflua*), and southern magnolia (*Magnolia grandiflora*) also common. The understory is not highly diverse, usually a mix of small trees and tall shrubs of American beautyberry (*Callicarpa americana*), American holly (*Ilex opaca*), red cedar (*Juniperus virginiana*), red bay (*Persea borbonia*), and saw palmetto (*Serenoa repens*). Airplants and other epiphytes are common, including the endemic Florida air-plant (*Tillandsia simulata*) and the state-listed commercially exploited green fly orchid (*Epidendrum conopseum*). Invasive exotics are occasional in this community with patches of the FLEPPC Category I species cogon grass (*Imperata cylindrica*), sword fern (*Nephrolepis cordifolia*), and Caesar's weed (*Urena lobata*) seen along the vehicle trails. Grading upwards on the higher ridges of the northernmost parcel, the live oak-dominated mesic hammock gives way to xeric hammock, a drier,

scrubbier community with a canopy of mostly sand live oak (*Quercus geminata*) and an understory with a higher proportion of rusty staggerbush (*Lyonia ferruginea*), Chapman's oak (*Quercus chapmanii*), sparkleberry (*Vaccinium arboreum*), shiny blueberry (*Vaccinium myrsinites*), muscadine (*Vitis rotundifolia*), and hog plum (*Ximenia americana*).

On the southernmost ownership, there seems to be more limestone influence in the soil, leading to a more diverse upland hardwood forest. This community is similar to the mesic hammocks found on the northern ownerships, but has more canopy species, particularly swamp chestnut oak (*Quercus michauxii*). The understory includes greendragon (*Arisaema dracontium*), American hornbeam (*Carpinus caroliniana*), and bluestem palmetto (*Sabal minor*). Like mesic hammock, these uplands make ideal homesites, and with a resulting increase in exotic plant species, either through cultivation or accidental introduction. Along the vehicle trail through the upland hardwood forest areas of the property, a patch of pineapple (*Ananas comosus*) was seen, as well as the FLEPPC Category I air-potato (*Dioscorea bulbifera*). There is an old mining pit dug into the limestone on the western edge of the property, and the FLEPPC Category I sword fern was observed becoming dominant on the exposed walls.

Hydric hammocks are interspersed with the floodplain swamp, often occurring as slightly elevated islands. These are forested wetlands with a canopy of swamp laurel oak, live oak, and cabbage palm, along with other wetland trees including sugarberry (*Celtis laevigata*), Carolina ash (*Fraxinus caroliniana*), water oak (*Quercus nigra*), American elm (*Ulmus americana*), and sweetgum (*Liquidambar styraciflua*). Epiphytes are common to abundant on oaks and palms, especially Bartram's air-plant (*Tillandsia bartramii*) and resurrection fern (*Pleopeltis michauxiana*). Epiphytes also include shoestring fern (*Vittaria lineata*), the state endangered plume polypody (*Pecluma plumula*), and the state commercially exploited green fly orchid. The understory is open and diverse with scattered American beautyberry (*Callicarpa americana*), St. Andrew's cross (*Hypericum hypericoides*), maidencane (*Panicum hemitomon*), bluestem palmetto (*Sabal minor*), bristly greenbrier (*Smilax tamnoides*), eastern poison ivy (*Toxicodendron radicans*), beaked panicum (*Coleataenia anceps*), blue mistflower (*Conoclinium coelestinum*), and bully (*Sideroxylon* sp.). There is some clearing for vehicle trails and food plots in some of the hammock, particularly on the northern parcels. A few patches of FLEPPC Category I invasive exotic plants were observed, although in fairly low concentrations. These included Japanese climbing fern (*Lygodium japonicum*), skunk vine (*Paederia foetida*), and Chinese tallow tree (*Triadica sebifera*).

Although most natural pine communities on the proposal are converted to pastures, there is a small 3-acre area of wet pine flatwoods on the northernmost parcel adjacent to one of the large marshes. This is a stand of mature slash pines (*Pinus elliottii*), with an open, somewhat marshy understory that includes common buttonbush, Virginia buttonweed (*Diodia virginiana*), Carolina redroot (*Lachnanthes caroliniana*), netted nutrush (*Scleria reticularis*), and sand cordgrass (*Spartina bakeri*).

Approximately 200 acres (12%) of the combined properties is improved or woodland pasture (or mowed grass). These are mostly planted with bahiagrass (*Paspalum notatum*) but may have other groundcover including grassnut (*Arachis glabrata*). Scattered trees of slash pine, longleaf pine (*Pinus palustris*), oaks, and Hercules' club (*Zanthoxylum clava-herculis*) occur throughout. The FLEPPC Category I invasive

exotic tropical soda apple (*Solanum viarum*) was observed growing at the edges of forested areas. On the central ownership, there is a wet pasture that doesn't have any obvious planted grasses but is cleared and covered with a mix of maidencane (*Panicum hemitomom*), turkey tangle fogfruit (*Phyla nodiflora*), netted nutrush (*Scleria reticularis*), and danglepod (*Sesbania herbacea*). Portions of hammock on the northern property are cleared for food plots, which are planted in millet.

There are approximately 72 acres (5%) in planted pine on the central and southern ownerships. These are stands of slash pine in formerly cleared pastures. The property has a few acres that are considered to be developed with low-density houses, barns, and sheds, as well as associated maintained lawns. As discussed above, there are several ditches and canals on the properties, some dating back to the early 20th century. Adjacent to one of the properties is a winding series of canals, reported by the owner as being dug for a planned development, but abandoned when permission to connect these to the existing canals, and thus to the river, was denied.

Invasive exotic plants are common, but rarely dense outside of developed and cultivated areas. As described above, several species are found on the property, of which cogon grass and sword fern are the most concerning. Cogon grass has the potential to become a dominant around hammock edges, and sword fern may crowd potential habitat for rare ferns on exposed limestone on the proposal.

The following table lists, in approximate order of estimated areal extent, natural communities and other land cover types within the site's boundaries.

Natural communities and landcover types within the Withlacoochee River Addition Florida Forever proposal.

| Community or Landcover | Acres | Percent of Proposal |
|-------------------------------|--------------|----------------------------|
| floodplain/basin swamp | 447 | 28% |
| basin marsh | 282 | 18% |
| mesic hammock | 142 | 9% |
| upland hardwood forest | 105 | 7% |
| hydric hammock | 91 | 6% |
| floodplain marsh | 85 | 5% |
| xeric hammock | 70 | 4% |
| depression marsh | 43 | 3% |
| dome swamp | 4 | <1% |
| wet flatwoods | 3 | <1% |
| blackwater stream | 2 | <1% |
| | | |
| pasture-improved | 199 | 13% |
| planted pine | 72 | 5% |
| ditch/canal | 16 | 1% |
| developed | 5 | <1% |
| food plot | 5 | <1% |
| road | 3 | <1% |
| artificial pond | 1 | <1% |

Florida Fish and Wildlife Conservation Commission (FWC)

This summary provides a resource assessment of the Withlacoochee River Addition Florida Forever proposal based on field observations during the July 30, 2020 tour and results of the GIS analysis. The

property consists of five ownerships in Citrus and Hernando counties totaling 1,645 acres. All the properties lie on the west shore of the Withlacoochee River and could help to provide a corridor of habitat for wildlife from Flying Eagle Wildlife Management Area (WMA) to the north to the Withlacoochee State Forest to the south. Smaller properties are located within the proposed corridor but were not targeted since it is unlikely the properties will be developed or altered because of the plant communities and soil types present. Most are floodplain swamp and not suitable for development. This is Phase 2 of a 3-phase plan to complete the wildlife corridor.

The project is proposed as a less-than-fee acquisition, with the landowners continuing to use the property for sustainable timber management, cattle grazing, and outdoor recreation that includes hunting. Habitats present include mesic hammock, xeric hammock, floodplain swamp, cypress dome, basin marsh, ruderal (improved pasture), and small pockets of pine flatwoods and scrub. Habitat found in Mr. Stevenson's two parcels (574 acres) is very similar to that found in Flying Eagle WMA. A small amount of planted slash pine (*Pinus elliottii*) was also found on one of the parcels. No burn history was given for any of the subject parcels, but none appeared to be fire-maintained. Several houses are present on the collection of parcels. Some were inhabited and others were not, but none appear to interfere with the proposed conservation easement.

Exotic plant species were found, as expected, on almost all the parcels to varying degrees. Cogon grass (*Imperata cylindrica*), bamboo (unknown species), Boston fern (*Nephrolepis exaltata*), Caesar weed (*Urena lobata*), Climbing fern (*Lygodium japonicum*), and Chinese tallow (*Triadica sebifera*) among others were found and could benefit from targeted treatment.

The gopher tortoise (*Gopherus polyphemus*; State-designated Threatened) is an example of a species that occurs on at least one of the parcels. Two adults were seen adjacent to a pasture so there is evidence they exist on the property. Unfortunately, it appeared they were both road-killed. Based on the amount of suitable soil types, some of these parcels could potentially support populations of tortoises. Establishing the area as a conservation easement would align with objectives in FWC's Gopher Tortoise Management Plan to increase the amount of protected habitat for this species.

Mr. Stevenson has a road on his property that he named Bear Boulevard because during certain times of the year he gets numerous trail camera pictures of at least one bear traversing the property. Florida black bears (*Ursus americanus floridanus*) are present at times and would certainly benefit from the establishment of this corridor for dispersal between bear populations as well as extensions of home ranges.

Game species occurring on the property and observed during the tour include white-tailed deer (*Odocoileus virginianus*), wild turkey (*Meleagris gallopavo*), and waterfowl. Numerous tree stands and feeders were observed on Mr. Stevenson's property. A small number of hunters have permission to hunt the property, mostly family members, and they are to adhere to antler restrictions of eight points or better. The other parcels did not have obvious sign of extensive hunting pressure. Feral hogs (*Sus scrofa*) are present and are also harvested.

The Florida Cooperative Land Cover version 3.3 lists numerous natural communities occurring on the areas including freshwater forested wetlands (29%), mixed hardwood-coniferous (15%), isolated freshwater marsh (14%), cypress (11%), improved pasture (9%), and mesic hammock (7%). For a complete list, see the attached FWC GIS Environmental Resources Analysis.

The Florida Natural Areas Inventory (FNAI) Element Occurrence database shows ten records within the boundary for rare wildlife or plant species including a dwarf spleenwort (*Asplenium pumilum*), eastern indigo snake (*Drymarchon couperi*), gopher tortoise, hammock fern (*Blechnum occidentale* var. *minor*), little blue heron (*Egretta caerulea*), osprey (*Pandion haliaetus*), snowy egret (*egretta thula*), white ibis (*Eudocimus albus*), a bird rookery, and floodplain swamp. The GIS model shows the property as Potential Habitat for eastern indigo snake, Craighead's nodding-caps (*Triphora craigheadii*), and Florida sandhill crane (*Grus canadensis pratensis*).

Goals, Measures and Criteria

Goal A:

Enhance the coordination and completion of land acquisition projects

Measure A1:

The number of acres acquired through the state's land acquisition programs that contribute to the enhancement of essential natural resources, ecosystem service parcels, and connecting linkage corridors as identified and developed by the best available scientific data.

Approximately 1,645 acres (100%) provides for the protection of ecological greenways, as noted in the FFME table (see Appendix A).

Measure A2:

The number of acres protected through the use of alternatives to fee simple acquisition.

Approximately 1,645 acres would be protected through less-than-fee acquisition.

Goal B:

Increase the protection of Florida's biodiversity at the species, natural community, and landscape levels

Measure B1:

The number of acres acquired of significant Strategic Habitat Conservation Areas.

Approximately 61% lies within a designated FWC Strategic Habitat Conservation Area (SHCA) for species including Cooper's hawk (*Accipiter cooperii*), swallow-tailed kite (*Elanoides forficatus*), and Florida mouse (*Podomys floridanus*).

Measure B2:

The number of acres acquired of highest priority conservation areas for Florida's rarest species.

An analysis of priority conservation areas based on Florida Forever Conservation Needs Assessment data may be found in the Florida Forever Measures table. Habitat conservation priorities for 281 of Florida's rarest species were mapped and divided into six priority classes. The Florida Forever Measures table shows the acres for each priority class found on the Withlacoochee River Addition proposal. Overall, the site contains approximately 1,296 acres (82% of site) of rare species habitat. The habitat is

mostly in Priority 5 (56% of site), with the remainder in Priorities 4, 6, and 1 (12%, 8%, and 6%, respectively).

The following table lists the acres of habitat for each species that may be found on the site, based on the FNAI Habitat Conservation Priorities. Please note that habitats for these species overlap, so that the sum total of habitat for all species is more than the total acreage of the priority conservation areas.

Rare species habitat based on FNAI Habitat Conservation Priorities for 281 species with the greatest conservation need.

| Scientific Name | Common Name | Global Rank | Acres |
|-----------------------------|--------------------------|-------------|-------|
| <i>Triphora craigheadii</i> | Craighead's nodding-caps | G1 | 100 |
| <i>Drymarchon couperi</i> | eastern indigo snake | G3 | 932 |
| <i>Mycteria Americana</i> | wood stork | G4 | 556 |

Measure B4:

The number of acres acquired of under-represented native ecosystems.

The Florida Forever natural community analysis includes only those communities that are under-represented on existing conservation lands. This analysis provides a conservative estimate of the extent of these communities, because it identifies only relatively undisturbed portions of these communities that occur within their historic range. The Florida Forever Measures table lists the acreages of under-represented natural communities found on the site. Based on this analysis, the Withlacoochee River Addition proposal contains 105 acres of upland hardwood forest (7% of site), and 3 acres of wet flatwoods (<1% of site).

Measure B5:

The number of landscape-sized protection areas of at least 50,000 acres that exhibit a mosaic of predominantly intact or restorable natural communities established through new acquisition projects, or augmentations to previous projects.

The Withlacoochee River Addition proposal is adjacent to a couple conservation lands that include Flying Eagle Preserve (Southwest Florida Water Management District), which in turn is adjacent to the Withlacoochee State Forest. However, the proposal in conjunction with these conservations would not make up a contiguous landscape-sized protection area of >50,000 acres.

Measure B6:

The percentage increase in the number of occurrences of imperiled species on publicly managed conservation areas.

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 property is within a region where the Florida Fish and Wildlife Conservation Commission considers Florida black bear use to be occasional. The hardwood forests and any exposed limestone features on site have the potential to harbor several rare plants known to occur in the region, including rare ferns. During the site visit, the state endangered plume polypody was seen growing as an epiphyte on live oaks in hydric hammock on the northern ownership. Several species reported from the property but not seen during the site assessment are listed in the table below.

Additionally, several bird species of concern are known to occur in the area according to the Florida Breeding Bird Atlas. A little blue heron was seen along a canal in the northern ownership, and a limpkin (*Aramus guarauna*; G5, S3, N, N*) was seen along the marshy edge of the river just outside of the proposal boundary. Rarity rankings listed above are in the following order: FNAI global (G, T) and state

(S) ranks, federal status, state status. Species ranks and conservation status are described at <https://www.fnai.org/ranks.cfm>.

The Florida Forever Measures table lists the number of Element Occurrences by Global Rank (G-rank) that are found on the proposal. Note that the number of occurrences does not necessarily match the number of species in the following table because a) some species may have more than one occurrence on the proposal site, or b) some species observed on site lack sufficient data to justify addition to the FNAI database at this time. The table below contains species falling into any of these observational categories, as well as species gleaned from other sources (e.g., Florida Breeding Bird Atlas) with different degrees of locational precision.

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

| Scientific Name | Common Name | Global Rank | State Rank | Federal Status | State Status |
|--|---------------------------|-------------|------------|----------------|--------------|
| Rare plants documented on site | | | | | |
| <i>Pectuma plumula</i> | plume polypody | G5 | S2 | N | E |
| Additional rare plants reported on site by applicant | | | | | |
| none | | | | | |
| Rare animals documented on site | | | | | |
| <i>Gopherus polyphemus</i> | gopher tortoise | G3 | S3 | C | ST |
| <i>Drymarchon couperi</i> | eastern indigo snake | G3 | S3 | T | FT |
| <i>Egretta caerulea</i> | little blue heron | G5 | S4 | N | ST |
| Additional rare animals reported on site by applicant | | | | | |
| <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>Haliaeetus leucocephalus</i> | bald eagle | G5 | S3 | N | N |
| <i>Pandion haliaetus</i> | osprey | G5 | S3S4 | N | N |
| <i>Sciurus niger niger</i> | southeastern fox squirrel | G5T5 | S3 | N | N |

The FWC Florida Landscape Assessment Model (FLAM) 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. The mean FLAM score for this property is 7.5. Approximately 92% is identified as Priority 1 or 2 (of 5) for the Critical Lands and Waters Identification Project. The National Wetlands Inventory data shows 62% classified as wetlands.

Goal C:

Protect, restore and maintain the quality of natural functions of land, water, and wetland systems of the state

Measure C1:

The number of acres of publicly-owned land identified as needing restoration; enhancement, and management, acres undergoing restoration or enhancement; acres with restoration activities completed, and acres managed to maintain such restored or enhanced conditions; the number of acres which represent actual or potential imperiled species habitat; the number of acres which are available pursuant to a management plan to restore, enhance, repopulate, and manage imperiled species habitat; and the number of acres of imperiled species habitat managed, restored, and enhanced, repopulated, or acquired.

Lands on the Withlacoochee River Addition proposal are working cattle ranches and private hunting lands. Disturbed, cleared uplands on the site will continue to be utilized for grazing and hunting, and most would be impractical to restore to the historic condition. However, existing hardwood forests and limestone outcroppings around the mined area would benefit from periodic removal of invasive exotic species to keep the rare species habitat on the property in good condition. The infestation of West Indian marsh grass in disturbed areas near the Withlacoochee River should be treated to prevent further spread into the many wetlands on the property. This grass is likely a relative newcomer and its spread should be halted wherever possible.

Measure C4:

The number of acres acquired that protect natural floodplain functions.

Approximately 1,250 acres (80%) provides for the protection of floodplain functions, as noted in Appendix A.

Measure C5:

The number of acres acquired that protect surface waters of the State.

Approximately 1,555 acres (99%) provides for the protection of surface waters, as noted in Appendix A.

Measure C8:

The number of acres of functional wetland systems protected.

Approximately 975 acres (62%) provides for the protection of functional wetlands, as noted in Appendix A.

Goal D:

Ensure that sufficient quantities of water are available to meet the current and future needs of natural systems and the citizens of the state

Measure D3:

The number of acres acquired of groundwater recharge areas critical to springs, sinks, aquifers, other natural systems, or water supply.

Approximately 1,572 acres (100%) provides for the aquifer recharge areas, as noted in Appendix A. These parcels are located in the far eastern location of the Crystal River/Kings Bay Basin Management Area Plan (BMAP). The parcel is in a medium vulnerable aquifer area and could provide some benefit for the BMAP, and protection to the adjacent wetlands.

Spatial Analysis for Potential Water Quality Benefits

| Categories | Scoring Criteria | Project Score |
|--|------------------|---------------|
| FDEP High Profile Springs (In 1,2,3 or > spring sheds) | 12,24,36 | 0 |
| FDEP Select Agricultural Land Use (0-30%, >30-65%, >65%) | 4,8,12 | 0 |
| FDEP Florida Aquifer Vulnerability (FAVA) | 4,7,10 | 10 |
| FDEP Special Nutrient Impaired WBIDs | 9 | 9 |
| FDEP Distance to Major Lakes (100, 500, 1000 meters) | 8,7,6 | 8 |
| FDEP Springsheds or within 5 miles | 10,7 | 10 |
| FDEP BMAPs | 10 | 10 |
| FDEP Distance to Major Rivers (100, 500, 1000 meters) | 6,5,4 | 6 |

| | | |
|-----------------------|------------|-----------|
| Total Possible | 101 | 53 |
|-----------------------|------------|-----------|

GIS Evaluation score is converted to a 1 to 5 value (low to high),

FINAL DEAR SCORE = 3 (medium Water Quality Protection Benefits)

Goal E:

Increase natural resource-based public recreational and educational opportunities

Measure E1:

The number of acres acquired that are available for natural resource-based public recreation or education.

The Withlacoochee River Addition project located in Citrus and Hernando Counties is comprised of five separate ownerships and are proposed for less-than-fee with no public access.

Goal F:

Preserve significant archaeological or historic sites

Measure F1:

The increase in the number of and percentage of historic and archaeological properties listed in the Florida Master Site File or National Register of Historic Places which are protected or preserved for public use.

The proposed project does meet measure F1 because these sites are not preserved for public use.

Measure F2:

The increase in the number and percentage of historic and archaeological properties that are in state ownership.

The proposed project does not meet measure F2 because the state would not hold title as a less-than-fee acquisition where the historical and archaeological resources are located.

CULTURAL RESOURCES:

This tract holds 10 historical sites currently listed in the Florida Master Site File. These include two sites associated with Colson's Landing (CI905, CI922) as well as several historic phosphate mines, and one linear resource (CI334). The recorded historical phosphate mines occupy the same area, mined under different names during the phosphate boom between 1889 – 1918. These include the Istachatta (CI963), Lockhart (CI982), Camp (CI983), Buttenback (CI984), Black Diamond (CI985), Tiger Rag (8CI986), Early Bird (CI987), and Eagle (CI988) Phosphate Mines. None of these sites have been assessed for eligibility for the NRHP.

Colson's Landing I (CI905) is a small lithic scatter of indeterminate pre-Columbian age. Colson's Landing II (CI922) is a 5-acre site that includes the remains of a wooden pier structure that extends out into the Withlacoochee River, a phosphate mine talus pile, and building remains. Colson's Landing served as an important crossing point on the Withlacoochee River during the 19th century and is reported to contain an abundance of historic cultural materials.

The Orange State Canal (CI334) intersects the project running for ~0.6 miles through the property. The canal was dug in the 1880s to connects Lake Tsala Apopka with Lake Panasoffkee, which featured the closest rail station for early Floral City-area citrus growers to access markets. applicant stated that they are unaware of any historical structures or archaeological sites on the property.

Most of the southern portion of the property has been professionally surveyed for archaeological and historical sites. The site file shows 86 historic structures, 95 archaeological sites, and 5 resource groups as being located within a five-mile radius of this property. Less than two miles to the east of the Withlacoochee River Addition project is Wahoo Swamp (SM567), the site of the Second Seminole Indian War battle that took place on November 21, 1836 and at least one large Seminole Indian village.

The tract's location, topography, and proximity to freshwater suggests high probability of holding any potentially significant archaeological or historical sites.

FIELD OBSERVATIONS:

Due to restrictions imposed by Covid-19, DHR did not participate in a field review for this project.

Goal G:

Increase the amount of forestland available for sustainable management of natural resources

Measure G1:

The number of acres acquired that are available for sustainable forest management.

Approximately 144 acres (22%) would be available for sustainable forest management, as noted in Appendix A.

Measure G3:

The number of acres of forestland acquired that will serve to maintain natural groundwater recharge functions.

If approved for placement on the Florida Forever Priority List, this project would enable wildlife to move across the landscape between larger units of conservation land in the area, as well as contribute to regional water-storage during flood events and mitigation of flooding effects to developed areas, as residential encroaching into undeveloped lands is migrating closer to the subject property from the south and west.

Management

If acquired as a perpetual conservation easement, primary management responsibility would remain with the landowner. Periodic monitoring of the site's management to confirm continued compliance with the conditions of the easement would be coordinated by the Florida DEP, Division of State Lands, Office of Environmental Services.

Transfer of ownership would not affect the conditions of the perpetual easements and rights acquired. Each time the land would transfer to another ownership, the perpetual easement and its conditions run with title. The Board of Trustees is granted the opportunity to exercise its right of first refusal (to acquire the land in fee simple) each time the land under the acquired perpetual conservation easement is transferred from one landowner to another.

Funding Sources

Florida Forever

Funding for Mapping, Appraisal, Negotiations and Closing

Florida Forever

Ownership Pattern and Acquisition Planning

This project has five owners, who own various amounts of acreages; Emily Miller Dierlam and Ellen M. Miller Sewell as Trustees of the Richard J. Miller Revocable Trust own 378 acres, Terrence Cronin, Jr. owns 97 acres, JEM Investments Ltd. owns 52 acres, Cosmic Mortgage Corporation owns 544 acres, and Ray W. Stevenson owns 574 acres.

Jurisdictional and Sovereignty Lands Issues

Parts of the properties are located on the Withlacoochee River. The extent and limits of sovereignty lands associated with this project will be determined during the appraisal mapping process. The property appears to be mostly wooded, some pasture, and wetlands. The limits and area of the jurisdictional wetlands and uplands would be determined during the appraisal mapping.

Government Planning and Development

Contribution to Recreation and Open Space Needs

This property sites host a variety of private recreation activities and uses, and little to no public recreational activity. The Withlacoochee River Addition project lands are all family owned and are enjoyed for private outdoor recreational opportunities including wildlife viewing, hiking, hunting, boating and fishing.

The Withlacoochee River Addition is proposed to Florida Forever as a less-than-fee acquisition project, although some parcels may also be attractive to state managing agencies as additions to public lands. The project area will continue to be used for cattle grazing and pine plantations hydrological values, including habitat preservation and protection of Withlacoochee River floodplain. As a less-than-fee project, the conservation and hydrological values of the properties will be protected in perpetuity and the state will continue to receive the provided environmental services, particularly floodplain water storage, without the public costs associated with land ownership and management.

As a less-than-fee project, Withlacoochee River Addition will continue to be managed by the landowners subject to the terms and conditions of conservation easement(s) encumbering the project. It is assumed that the Florida Department of Environmental Protection will conduct the easement monitoring.

Potential for Losing Significant Natural Attributes or Recreational Open Spaces

The purpose of this project is to create a conservation corridor along the Withlacoochee River, stretching from Flying Eagle Preserve in Citrus County to the Withlacoochee State Forest in Hernando County. All properties provide habitat ideal for all types of wildlife. Uplands have dry, sandy, poor soil quality not suited for agricultural crops and heavily forested floodplain swamps. The dry uplands offer a wide range of flora ranging from oak hammocks and pine trees. The lowlands are vast, consisting of mostly mature cypress swamps that are home to countless native species.

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.

A Critical Lands and Water Identification Project (CLIP) analysis revealed the properties are predominantly Priority 2 and 3 for biodiversity values, Priority 2 for the Florida Ecological Greenways Network, contain Priority 1 habitat according to the FNAIHAB model, may support 5-13 species targeted by a Habitat Richness analysis, and rank highly for landscape integrity.

One of the most attractive features of the Withlacoochee River Corridor project is its eastern boundary border along miles of the Withlacoochee River. The project contains wetlands that serve as a seasonal floodplain and watershed for the Withlacoochee River during the rainy season. This was recently demonstrated by the properties' capacity to hold extensive amounts of water after the passage of Hurricane Irma. Water naturally flows into the properties, channeled through ancient cypress swamps and low-lying islands of oak hammocks. The project also encompasses recharge areas for the river.

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.

Potential for Being Subdivided

Low Potential: The subject property has low potential for being subdivided. In Hernando County that property is designated as Rural Category, which allows for 0.1 dwelling unit per gross acre (1 unit per ten gross acres).

Low Potential: Citrus County Conservation does not allow development, and Coastal Lake allows 1 dwelling unit per 20 gross acres.

Existing Land Uses and Future Land Use Designations

The property site is designated on the Citrus County's comprehensive plan future land use map as Conservation and (Low Intensity) Coastal Lake. On the Hernando County's comprehensive plan future land use map, the property is designated as Rural.

Land Use and Development Potential

The project has residential development encroaching from the south and west. Located not far from Highway 41, the area has become very popular for the development of rural ranchettes with homesites and residential subdivisions. Without protection from this encroaching development by conservation easements, the properties will eventually succumb to development pressures, threatening the Withlacoochee River floodplain and its wildlife habitat.

Transportation Issues

Located in FDOT's District 7 in Citrus and Hernando counties, the proposed project would protect by conservation easement (less-than-fee-simple acquisition) approximately 1,645 acres along the west shoreline of the Withlacoochee River. These properties are currently used for outdoor recreation, cattle grazing and pine plantation.

The property is located approximately 3 miles east of SR 45/US 41, 6 miles south of SR 44, and 7 miles west of SR 93/I-75. SR 44 and SR 93/I-75 are Strategic Intermodal System facilities and evacuation routes. A portion of the proposed project area is adjacent to CR 48, an evacuation route as well. Another portion of the project is adjacent to the Withlacoochee State Trail, a SUN Trail priority corridor.

In addition, this project is located within the study area for both the Northern Turnpike Connector and the Suncoast Connector, two of the corridors being studied under the Multi-use Corridors of Regional Economic Significance (M-CORES) program. The M-CORES program was created through Senate Bill 7068, signed by Governor Ron DeSantis on May 17, 2019. More information about M-CORES can be found at www.floridamcores.com.

There should be coordination with the appropriate FDOT District staff during the acquisition process to ensure that any issues related to the transportation facilities and the SUN Trail priority corridor are addressed and incorporated into the management plan as appropriate.

Acknowledgements

Staff in DEP's Division of State Lands (DSL) and the Florida Natural Areas Inventory determined the final project recommendations. Deborah Burr in DSL's Office of Environmental Services was responsible for the overall coordination of this report, with contributions from the following:

Florida Department of State, Division of Historical Resources - Joshua Goodwin

Florida Forest Service - Cat Ingram and Vince Morris

Department of Economic Opportunity - Dan Evans

Florida Fish and Wildlife Conservation Commission – Laramie Ferry, Victor Echaves and Rick Spratt

Florida Natural Areas Inventory – Kimberely Alexander and Dan Hipes

DEP Division of Environmental Assessment and Restoration - Kevin Coyne and Janis Morrow

Florida Department of Transportation - Jennifer Carver

Appendices

Appendix A:

Final FF proposal boundary maps prepared by Florida Natural Areas Inventory (report requirement 259.105 (15)k)

Withlacoochee River Addition: Florida Forever Measure Evaluation 20200820

GIS ACRES = 1,572

| MEASURES | Resource Acres ^a | % of project |
|--|-----------------------------|--------------|
| B1: Strategic Habitat Conservation Areas | | |
| Priority 1 | 0 | 0% |
| Priority 2 | 3 | < 1% |
| Priority 3 | 353 | 22% |
| Priority 4 | 0 | 0% |
| Priority 5 | 603 | 38% |
| Total Acres | 959 | 61% |
| B2: FNAI Habitat Conservation Priorities | | |
| 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% |
| B3: Ecological Greenways | | |
| 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% |
| B4: Under-represented Natural Communities | | |
| 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) | 3 | < 1% |
| Upland Hardwood Forest (G5) | 105 | 7% |
| Total Acres | 108 | 7% |
| B6: Occurrences of FNAI Tracked Species | | |
| G1 | 0 | |
| G2 | 0 | |
| G3 | 2 | |
| G4 | 0 | |
| G5 | 0 | |
| Total | 2 | |
| C4: Natural Floodplain Function | | |
| 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% |

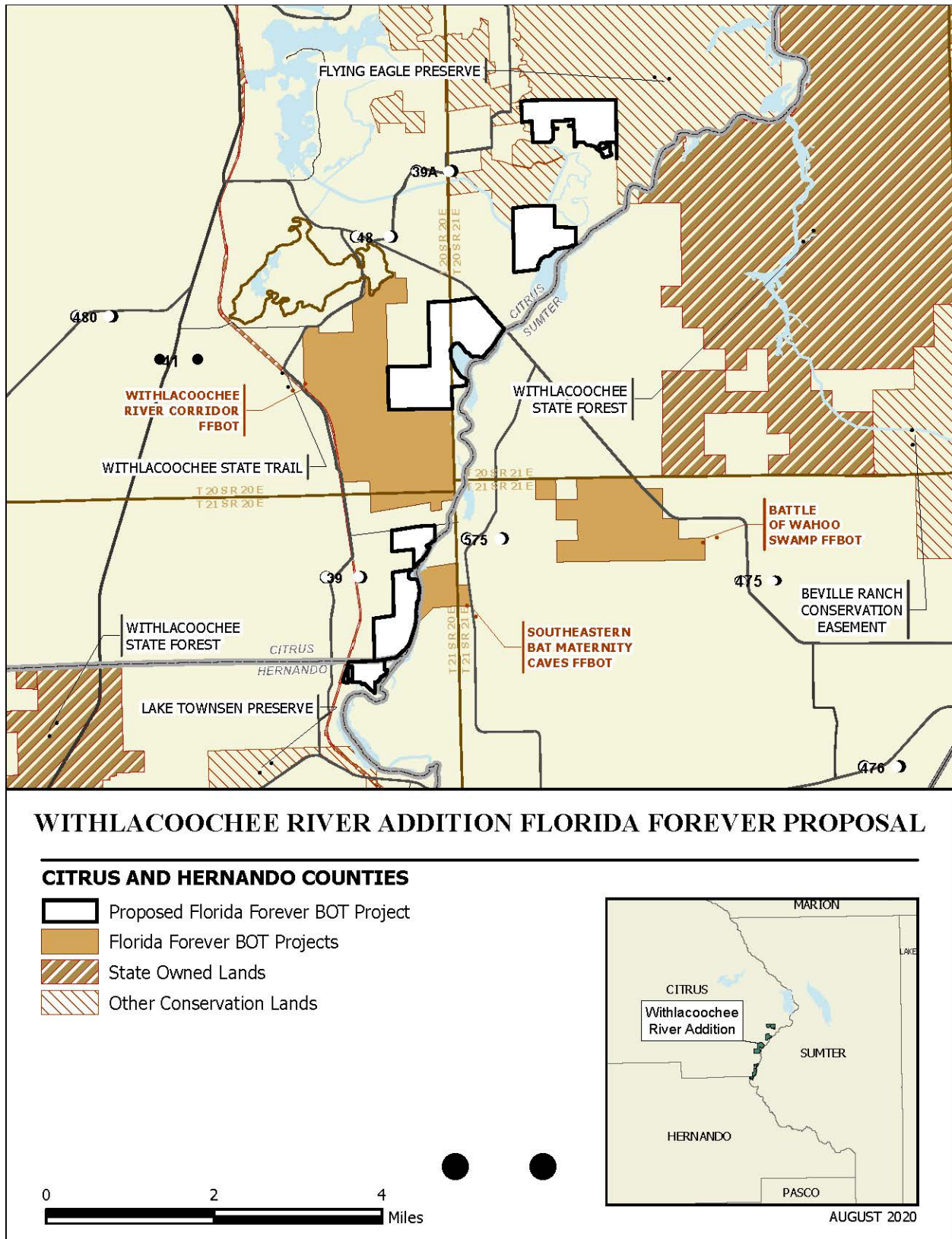
| MEASURES (continued) | Resource Acres ^a | % of project |
|--|-----------------------------|--------------|
| C5: Surface Water Protection | | |
| Priority 1 | 0 | 0% |
| Priority 2 | 534 | 34% |
| Priority 3 | 870 | 55% |
| Priority 4 | 151 | 10% |
| Priority 5 | 0 | 0% |
| Priority 6 | 0 | 0% |
| Priority 7 | 0 | 0% |
| Total Acres | 1,555 | 99% |
| C7: Fragile Coastal Resources | | |
| Fragile Coastal Uplands | 0 | 0% |
| Imperiled Coastal Lakes | 0 | 0% |
| Coastal Wetlands | 0 | 0% |
| Total Acres | 0 | 0% |
| C8: Functional Wetlands | | |
| 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% |
| D3: Aquifer Recharge | | |
| 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% |
| E2: Recreational Trails (miles) <small>(prioritized trail opportunities from Office of Greenways and Trails & Univ. Florida)</small> | | |
| Land Trail Priorities | 1.2 | |
| Land Trail Opportunities | 0.0 | |
| Total Miles | 1.2 | |
| F2: Arch. & Historical Sites (number) | | |
| | 10 sites | |
| G1: Sustainable Forestry | | |
| 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% |
| G3: Forestland for Recharge | | |
| | 22 | 1% |

^aAcres 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.

Appendix B:

Final FF proposal boundary maps: Report requirement 259.105 (15)k, prepared by Florida Natural Areas Inventory

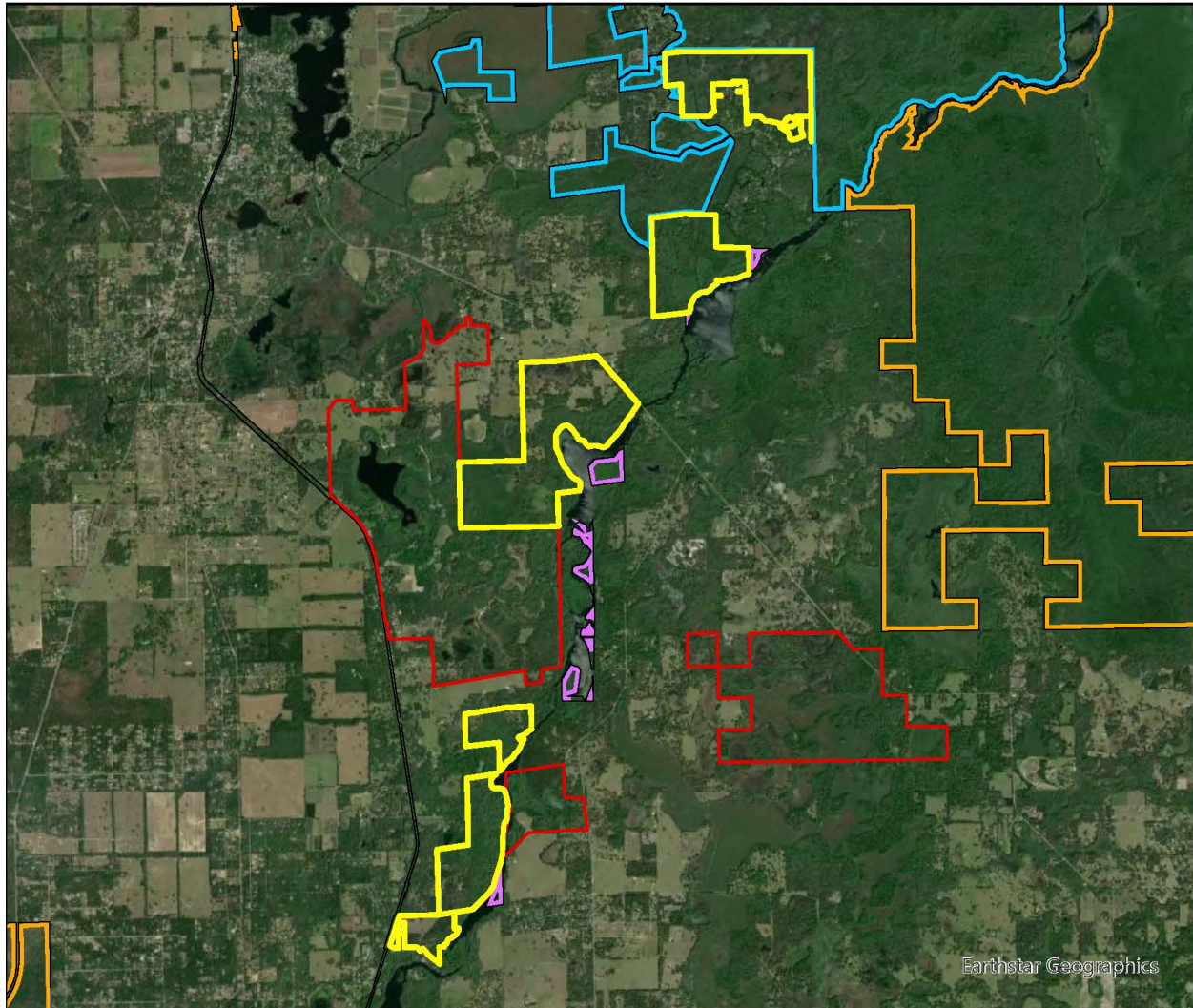
B1: Florida Forever map



B2: Aerial map

Withlacoochee River Addition Florida Forever Proposal

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

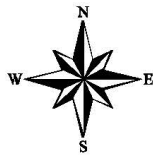


Map Produced by: N. Pasco, August 2020

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 |



Appendix C:

Withlacoochee River Addition Tax Parcels for final recommended boundary

| County | Parcel ID | Owner | Acres | Just (Market) Value |
|----------|---------------------------|----------------------|----------|---------------------|
| Citrus | 21E20S08 21000 | Ray W Stevenson | 40.47 | \$92,350 |
| Citrus | 21E20S08 22000 | Ray W Stevenson | 256.08 | \$403,240 |
| Citrus | 21E20S07 21100 | Ray W Stevenson | 19.19 | \$81,560 |
| Citrus | 21E20S17 33000 | Ray W Stevenson | 39.95 | \$13,450 |
| Citrus | 21E20S18 22000 | Ray W Stevenson | 39.71 | \$25,740 |
| Citrus | 21E20S19 11000 | Ray W Stevenson | 80.76 | \$70,540 |
| Citrus | 21E20S20 41000 | Ray W Stevenson | 98.26 | \$20,930 |
| Citrus | 20E20S24 22000 | Cosmic Mortgage Corp | 40 | \$74,260 |
| Citrus | 20E20S25 20000 | Cosmic Mortgage Corp | 329.74 | \$426,740 |
| Citrus | 21E20S30 41000 | Cosmic Mortgage Corp | 85.15 | \$220,290 |
| Citrus | 21E20S19 32000 | Cosmic Mortgage Corp | 70.72 | \$245,340 |
| Citrus | 21E20S30 34000 | Cosmic Mortgage Corp | 18.46 | \$3,930 |
| Citrus | 21E20S30 13000 | JEM Investments Ltd. | 51.96 | \$17,810 |
| Citrus | 20E21S01 11000 | Terrence Cronin Jr | 97.16 | \$172,010 |
| Citrus | 20E21S12 33000 | Emily Miller Dierlam | 231.63 | \$525,483 |
| Hernando | R13 421 20 0000 0020 0000 | Emily Miller Dierlam | 36 | \$124,812 |
| Hernando | R14 421 20 0000 0210 0000 | Emily Miller Dierlam | 110 | \$372,510 |
| | | | 1,645.24 | \$2,890,995 |