

Charlie Creek

Hardee County

Florida Forever Project Evaluation Report

Prepared by:

Division of State Lands

Office of Environmental Services

Submitted to the Acquisition and Restoration Council

April 8, 2022



Acquisition Type: Less-than-Fee

Acres: 1,547

Just Value: \$5,477,550

Application Date: October 31, 2021

Project Sponsor: National Wildlife Refuge Association

Executive Summary

The proposed Charlie Creek Florida Forever project contains 5 parcels totaling 1,547 acres in northeastern Hardee County. The project is located at the intersection of State Road 64 (SR 64) and Old Town Creek Road and shares a northern boundary with the Charlie Creek Cattle Company (CCCC) Agricultural and Conservation Easements managed by the Florida Forest Service (FFS). The closest cities are Wauchula to the west and Avon Park to the east. The project is proposed as a less-than-fee acquisition and has a total tax assessed value of \$5,477,550.

Charlie Creek Ranch was acquired and cleared in the 1920s by the current landowner's grandfather. For the past 90 years, the property has been managed as a commercial cow-calf operation. The owners have expressed their interest in helping local conservation efforts, while continuing to enjoy the property in a manner compatible with a conservation easement.

A little more than half of the proposed project consists of natural vegetation in varying degrees of disturbance. Mesic hammock is the most common natural community and large blocks of mesic hammock border basin swamp and improved pasture. The project's namesake, Charlie Creek, is a tributary of the Peace River that becomes a ditched channel as it enters the project boundary from the north-northwest, leaves the property at the southern-most point near SR 64 and continues south to its confluence with the Peace River.

Nearly all of the property is Priority 1 (Critical Linkages) within the Florida Ecological Greenways Network (FEGN). Rare animals documented or reported within the proposed project area include the American alligator (*Alligator mississippiensis*), gopher tortoise (*Gopherus polyphemus*), roseate spoonbill (*Platalea ajaja*), eastern indigo snake (*Drymarchon couperi*), Florida sandhill crane (*Antigone canadensis pratensis*), and southeastern fox squirrel (*Sciurus niger niger*). Rare plants documented or reported within the project area include cutthroatgrass (*Coleataenia abscissa*), Florida butterfly orchid (*Encyclia tampensis*), common wild-pine (*Tillandsia fasciculata*) and spreading airplant (*Tillandsia utriculata*). No archaeological or historical resources have been reported on site. However, no professional surveys have been conducted in the project area.

If approved for addition to the 2023 Florida Forever Priority List, all of the 1,547 acres proposed for acquisition should be considered as an amendment to the Old Town Creek Watershed Florida Forever project boundary. All of the 1,547 acres proposed for acquisition are considered essential due to the resources documented on the property (see Appendix C). An interagency team conducted a site visit to the project site on February 1, 2022. Information included in this project evaluation report is a result of this site visit.

PURPOSE FOR ACQUISITION

Acquisition of the Charlie Creek project would protect a portion of Florida's rural agricultural landscape that is managed to support Florida's biodiversity. The project would protect an existing wildlife corridor and improve connectivity between established conservation lands in the greater regional landscape of the Peace River basin.

Acquisition of this project would serve to:

- Enhance the coordination and completion of land acquisition projects.
- Increase the protection of Florida's biodiversity at the species, natural community, and landscape levels.
- Conserve and protect a portion of Florida's rural landscape in order to provide and enhance wildlife corridors for rare and imperiled species.

LOCATION AND PROXIMITY TO OTHER MANAGED AREAS

The Charlie Creek proposal comprises 1,547 acres (1,533.7 GIS acres) in northeastern Hardee County approximately 3.5 miles west of the Highlands County line. The southern boundary abuts State Road 64 (SR 64) for ca. 1 mile. The property is rectangular except for an irregularly shaped southern boundary, extending ca. 2 miles east-west and ca. 1.6 miles north-south at its widest points. The entire northern boundary is contiguous with Charlie Creek Cattle Company Agricultural and Conservation Easement #1 (FFS), which itself is contiguous with two additional Forest Service Conservation Easements. Further north, Crews Grove Conservation Easement (Division of State Lands [DSL], Florida Department of Environmental Protection [DEP]) touches the northeast corner of the Forest Service easements and occupies the northeastern corner of Hardee County. The Hardee Flatwoods Conservation Easement (Board of Trustees) is within a mile to the south across SR 64. Highlands Hammock State Park is approximately eight miles to the southeast and the Silver Lake and Sun-n-Lake tracts of the Florida Fish and Wildlife Conservation Commission's (FWC) Lake Wales Ridge Wildlife and Environmental Area (WEA) are approximately five miles to the east of the project.

RESOURCE DESCRIPTION

Florida Natural Areas Inventory (FNAI)

This evaluation is based in part on information gathered from the proposal application, the Florida Natural Areas Inventory (FNAI) database, aerial photography from 1995 to 2021, U.S. Geologic Survey (USGS) 7.5' topographic maps, and Cooperative Land Cover data (FNAI, Florida Cooperative Land Cover Map, version 3.4). A field survey was conducted on February 1, 2022, by FNAI staff Dan Hipes and Katy NeSmith, along with the Acquisition and Restoration Council (ARC) liaison staff and the landowners.

The Charlie Creek property has been managed by the family as a commercial cow-calf operation since the 1930s. Timber was cut in the 1920s and most of the mesic flatwoods was converted to improved pasture or woodland pasture, which together make up 41% of the project area. Improved pastures vary from bahiagrass (*Paspalum notatum*)-dominated pastures with scattered clumps of broomsedge bluestem (*Andropogon virginicus*), thistle (*Cirsium sp.*), and smutgrass (*Sporobolus indicus*) to areas with widely scattered longleaf pine (*Pinus palustris*), some old flattops, and saw palmetto (*Serenoa repens*) over bahiagrass. Savanna iris (*Iris savannarum*) is common in wetter parts of the pastures. A smaller component of woodland pasture at Charlie Creek has a mostly closed canopy of mature laurel oak (*Quercus laurifolia*), live oak (*Quercus virginiana*), and cabbage palm (*Sabal palmetto*), with pasture grasses and leaf litter making up the groundcover. Brazilian pepper (*Schinus terebinthifolia*, FLEPCC Category I) was only seen once in a pasture area. Other altered landcover types include the canal/ditch (Charlie Creek in part) that bisects the middle of the project area and a cattle pond.

About 58% of the Charlie Creek project consists of natural vegetation that have varying degrees of disturbance. Mesic hammock is the most common natural community, making up about 29% of the project area. Large blocks of hammock border basin swamp and improved pasture. It also occurs linearly along the creek in the northeastern portion of the property. All hammocks visited show disturbance by hogs and cattle. The canopy layer consists of slash pine (*Pinus elliotii*), live oak, laurel oak, and cabbage palm. Midstory is variable, and consists of younger cabbage palm, citrus (*Citrus sp.*), Walter's viburnum (*Viburnum obovatum*), wax myrtle (*Morella cerifera*), saw palmetto, and American beautyberry (*Callicarpa americana*). Herbaceous plants are generally sparse but when present, primarily consist of witchgrass (*Dichanthelium sp.*) and the invasive exotic plant Caesar's weed (*Urena lobata*; FISC Category I). Some areas have dense pockets of Caesar's weed and bare ground rooted up by pigs. Old world climbing fern (*Lygodium microphyllum*; FISC Category I) appears to be spotty. Arrowhead vine (*Syngonium podophyllum*; FISC Category I) is especially prevalent along the northeastern creek drainage. Epiphytes are abundant and include southern needleleaf (*Tillandsia setacea*), Bartram's air-plant (*Tillandsia bartramii*), Spanish moss (*Tillandsia usneoides*), resurrection fern (*Pleopeltis michauxiana*), golden polypody (*Phlebodium aureum*), and shoestring fern (*Vittaria*

lineata). Spreading air-plant (*Tillandsia utriculata*), common wild-pine, and Florida butterfly orchid are present but much less abundant. A small patch of the rare plant cutthroatgrass is present on the edge of mesic hammock, west of the canal. This area was likely an open ecotonal area of wet prairie from flatwoods to hammock or basin swamp, historically.

Basin swamp makes up approximately 326 acres (21%) of the project area. Charlie Creek formerly flowed into a large swamp, which ran north-south in a wide swath through the center of the property. Clearing and construction of canals and pasture have altered hydrology and reduced the size and continuity of the swamp. The canopy includes a relatively open cover of short statured, 30ft, red maple (*Acer rubrum*) and swamp tupelo (*Nyssa biflora*) and a sparse midstory of cabbage palm and common buttonbush (*Cephalanthus occidentalis*). West Indian marsh grass (*Hymenachne amplexicaulis*; FISC Category I), butterweed (*Packera glabella*), smartweed (*Persicaria sp.*), and alligator flag (*Thalia geniculata*) are characteristic herbaceous plants in the groundcover. Epiphytes include Bartram's air-plant. A large, cleared strip of swamp (wet prairie according to the CLC) west of the canal, has widely spaced, Spanish moss-draped swamp tupelo and an occasional cabbage palm and no understory. The groundcover appears to consist entirely of West Indian marsh grass. Another area visited during the field assessment had young sweetgum (*Liquidambar styraciflua*), laurel oak, and cabbage palm with little to no shrub layer with savanna iris, clustered bushmint (*Hyptis alata*), and Caesar's weed making up the herbaceous cover. Epiphytes and vines include southern needleleaf and saw greenbrier (*Smilax bona-nox*). A cypress dominated basin swamp occurs in the northwestern corner of the property according to the applicant, but this area was not assessed.

Small remnants, totaling 79 acres, of mesic flatwoods are found adjacent to mesic hammock and pasture and linearly between hammock and pasture that is parallel to the creek in the northeastern portion of the property. The open canopy consists of older mature longleaf pine with an equally open subcanopy of live oak and laurel oak. A significant shrub component includes the above oaks, water oak (*Quercus nigra*), wax myrtle, dense saw palmetto, fetterbush (*Lyonia lucida*), groundsel tree (*Baccharis halimifolia*), common persimmon (*Diospyros virginiana*), sand live oak (*Quercus geminata*), blackberry (*Rubus sp.*), and winged sumac (*Rhus copallinum*). The thick undergrowth is likely a result of fire exclusion and contributes to a scarcity of herbaceous cover. Wiregrass (*Aristida stricta*), clustered bushmint, slender flatterop goldenrod (*Euthamia caroliniana*), witchgrass, and broomsedge bluestem comprise about 1-5% herbaceous cover. Cogongrass (*Imperata cylindrica*; FLEPCC Category I) is invading the flatwoods and is growing intermingled with the saw palmetto. Spanish moss is common as are the vines, saw greenbrier, laurel greenbrier (*Smilax laurifolia*), and yellow jessamine (*Gelsemium sempervirens*). A 20-acre patch on the western boundary supports a mature, but sparse canopy of longleaf pine and some slash pine. A rather open understory consists of slash pine, sand live oak, live oak, and common persimmon. The shorter shrub layer includes saw palmetto, netted pawpaw (*Asimina reticulata*), blue huckleberry (*Gaylussacia frondosa var. tomentosa*), coastalplain staggerbush (*Lyonia fruticosa*), sand live oak, and shiny blueberry (*Vaccinium myrsinites*). Herbaceous cover is moderate to abundant and includes bluestem (*Andropogon sp.*), chalky bluestem (*Andropogon virginicus var. glaucus*), threeawn (*Aristida sp.*), wiregrass, pineland daisy (*Chaptalia tomentosa*), tall elephantsfoot (*Elephantopus elatus*), slender flatterop goldenrod, panic grass (*Panicum sp.*), crowngrass (*Paspalum sp.*), sweet goldenrod (*Solidago odora*), queen's delight (*Stillingia sylvatica*), and yellow-eyed grass (*Xyris sp.*). Epiphytes include Spanish moss and Bartram's air-plant.

Depression marsh makes up about 2% of the proposal. These small wetlands, from <1 acre – ca. 5 acres, are scattered in the eastern portion of the proposal, within mesic hammock and pasture. A 2-acre depression marsh in mesic hammock has some taller red maple and wax myrtle but is largely comprised of a dense herbaceous cover of shortspike bluestem (*Andropogon brachystachyus*), marshpennywort (*Hydrocotyle sp.*), clustered bushmint, rush (*Juncus sp.*), maidencane (*Panicum hemitomon*), panic grass, smartweed (*Persicaria sp.*), pickerelweed (*Pontederia cordata*), and goldenrod (*Solidago sp.*). Depression marshes in pasture are generally less diverse and characterized by soft rush (*Juncus effusus ssp. solutus*), broomsedge, turkey tangle fogfruit (*Phyla nodiflora*), and pasture grasses.

There are only a few small dome swamps on the property making up 8 acres or 1% of the proposal area. These small wetlands are forested with red maple and swamp tupelo in the canopy layer and cabbage palm comprising the more open midstory layers. Herbaceous plants include lemon bacopa (*Bacopa caroliniana*), sedge (*Carex sp.*), panic grass, turkey tangle fogfruit, lizard's tail (*Saururus cernuus*), toothed midsorus fern (*Telmatoblechnum serrulatum*), and Virginia chain fern (*Woodwardia virginica*).

The canals and ditches are generally bermed and those viewed are shallow channels lined with pasture grasses and vegetation reflective of the adjacent community, namely basin swamp or pasture. These ditches provide habitat for wildlife such as wading birds and alligators. Table 1 provides a list of the landcover types identified on the proposal and their approximate acreages.

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

Community or Landcover	Acres	Percent of Proposal
mesic hammock	450	29%
basin swamp	326	21%
mesic flatwoods	79	5%
depression marsh	24	2%
dome swamp	8	1%
pasture - improved	603	39%
woodland pasture	28	2%
canal/ditch	15	1%
artificial pond	1	<1%
Totals	1534	100%

Florida Fish and Wildlife Conservation Commission (FWC)

Charlie Creek is a working cattle ranch with a herd of approximately 500 cows. Cattle have access to both native and non-native areas and the property maintains several cattle pens and other infrastructure that supports the cattle operation.

Freshwater forested wetlands (698 acres), cypress (39 acres), and mixed coniferous hardwoods (32 acres) comprise approximately 45%, 3%, and 2% of the property, respectively. Approximately 403 acres (26%) are improved pasture. Approximately 249 acres (16%) are wet prairie, and mesic flatwoods (57 acres) and marshes (30 acres) comprise approximately 4% and 2% of the landcover, respectively. The remaining landcover types (residential, transportation, shrub and brushland, and rural) each comprise less than 1% the property. The northeast and southwest portions of the property are improved pasture interspersed with pockets of native upland habitat. A large mixed hardwood and prairie wetland system including Charlie Creek bisect the property from north to south, and areas of cypress can be found within the mixed hardwood forest and on the northwest corner.

Prescribed fire has occasionally been a management tool on the property, as evidenced by the presence of fire scars on trees. The dominant native communities on the area are not typically considered fire-dependent, but the mesic flatwoods and pockets of native habitat in pastures would benefit from more frequent prescribed fire. Pastures are relatively open, with snags and trees to provide perching and roosting habitat for wildlife. Invasive non-native plant species do not appear to be a widespread issue, aside from the non-native pasture grasses. Small patches of cogongrass were observed within the pastures during the site assessment. Overall, native communities on the property would benefit from an increase in the application of prescribed fire. However, the dominant community type is not typically maintained with fire and is in overall good condition.

Wildlife species observed during the tour included Florida sandhill crane, eastern meadowlark (*Sturnella magna*), red-shouldered hawk (*Buteo lineatus*), American kestrel (*Falco sparverius*), killdeer (*Charadrius vociferus*), and many other species. Feral hogs (*Sus scrofa*) and their signs were observed. The landowner also reports that the eastern indigo snake, Florida burrowing owl (*Athene cunicularia*), gopher tortoise, and southern fox squirrel have been observed on-site. In 2017, an active bald eagle (*Haliaeetus leucocephalus*) nest was observed on the property.

During the field tour, listed wildlife species observed included Florida sandhill cranes. The pastures are suitable for use by other listed wildlife such as the northern crested caracara (*Caracara cheriway*) and southeastern American kestrel (*Falco sparverius paulus*). These species were not observed during the field tour but are known to occur in the surrounding landscape. Approximately 75% lies within a designated FWC Strategic Habitat Conservation Area (SHCA) for species including Cooper's hawk (*Accipiter cooperii*), American swallow-tailed kite (*Elanoides forficatus*), and Short-tailed hawk (*Buteo brachyurus*). All the area is within "Common" bear range.

Charlie Creek is a well-kept property located within a larger landscape of lands critical to the long-range conservation of wildlife and natural communities. Its proximity to existing conservation lands and those protected under easement provides a vital link connecting protected lands along the western edge of the Lake Wales Ridge. Though Florida panthers (*Puma concolor coryi*) and Florida black bears (*Ursus americanus floridanus*) have not been reported within the project, they are known to occur in this area. Protection of the property in the long-term would be very beneficial to these wide-ranging imperiled species.

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 7.2. The National Wetlands Inventory data shows 59% classified as wetlands.

Establishment of a conservation easement on the CC would increase the amount of protected area and connectivity between established conservation lands in the greater landscape. A habitat management program that incorporates routine prescribed fire, particularly within native habitats, will improve and maintain conditions in native habitat and benefit many imperiled wildlife species. Charlie Creek lies within a landscape that is increasingly under pressure from expansion of nearby phosphate mine operations, cities, and developments. Long-term protection of intact private lands such as Charlie Creek is vital to the long-term persistence of wildlife in this region.

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.

If interest is acquired, 1,547 acres would contribute to the enhancement of essential natural resources, ecosystem service parcels, and connecting linkage corridors.

Measure A2:

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

If interest is acquired, 1,547 acres would be protected through the use of alternatives to fee simple 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.

The SHCA Florida Forever Conservation Needs layer identifies important remaining habitat conservation needs for 33 wildlife species on private lands. Priority 1 and 2 represent habitat for species considered imperiled or critically imperiled in Florida. The Florida Forever Measure Evaluation (FFME) (Appendix A) reports the site contains approximately 1,521 acres (100% of site). This is primarily within Priority 2 (94% of site) with the remainder in Priority 2 (6%) and Priority 5 (<1%).

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 FFME. Habitat conservation priorities for 281 of Florida’s rarest species were mapped and divided into six priority classes. The FFME shows the acres for each priority class found on the Charlie Creek proposal. Overall, the site contains approximately 1,259 acres (82% of site) of rare species habitat. The habitat is divided between Priority 5 (65% of the site), Priority 6 (13%), and Priority 4 (4%).

Table 2 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.

Table 2. Rare species habitat based on FNAI Habitat Conservation Priorities

Scientific Name	Common Name	Global Rank	Acres
<i>Drymarchon couperi</i>	eastern indigo snake	G3	1,247
<i>Mycteria americana</i>	wood stork	G4	77

**For 281 species with the greatest conservation need.*

Measure B3:

The number of acres acquired of significant landscapes, landscape linkages, and conservation corridors, giving priority to completing linkages

The FFME reports approximately 1,533 acres (100%) of the proposed project contributes to protection of ecological greenways with 99% of the acreage falling within Priority 1 areas, and 1% in Priority 3. Priority 1 and 3 areas represent a significant opportunity to maintain the large connected landscape needed to conserve viable populations of Florida’s flagship animal species such as the Florida panther and Florida black bear.

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 FFME lists the acreages of under-represented natural communities found on the site. Based on this analysis, the Charlie Creek proposal contains 79 acres of mesic/wet flatwoods (5% of the 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 Charlie Creek proposal would not contribute to a contiguous landscape-sized protection area of >50,000 acres. However, it is adjacent to a few conservation lands that include Charlie Creek Cattle Company Agricultural and Conservation Easements #1 and #2, and Fussell Farms Old Town Agricultural and Conservation Easement (FFS, FDACS). Further north, Crews Grove Conservation Easement (DSL, DEP) touches the northeast corner of the Forest Service Easements. Several larger conservation lands are in the general vicinity, specifically Lake Wales Ridge State Forest and Avon Park Air Force Range, but disjunct from the proposal.

Measure B6:

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

The property supports habitat for several rare species of conservation concern. Relatively fresh gopher tortoise scat was observed during the site visit and the applicant has reported tortoises from the property. Florida burrowing owl (*Athene cunicularia floridana*, G4T3/S3, N, ST) was originally reported as being on site but they are actually on the property to the north, according to the owner. Two sandhill cranes were seen in a pasture; the time of year precludes identifying as the Florida subspecies, *A. c. pratensis*. A group of roseate spoonbills (*Platalea ajaja*, G5/S2, N, ST) flew up the canal near its southern point. The Florida black bear (*Ursus americanus floridanus*) is considered common in the region of the property by the FWC 2018 range estimate. Other rare species are known from the region, including crested caracara (*Caracara cheriway*, G5/S2, T, FT) and wood stork (*Mycteria americana*, G4/S2, T, FT). Other wading birds are also likely to forage in wet pasture areas and other wetlands on the site.

The FNAI database contains no documentation of rare plants in the project area, but a small remnant patch of cutthroatgrass was observed during the field assessment. Additional survey effort could possibly find more rare plant species.

The FFME 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 do not meet the criteria for addition to the FNAI database at this time. Table 3 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. Rarity rankings are listed in the following order: FNAI global (G, T) and state (S) ranks, federal status, state status. Species ranks and conservation status are described in Appendix D.

Table 3. Rare plants and animals documented or reported to occur within the proposed project

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
Rare plants documented on site					
<i>Coleataenia abscissa</i>	cutthroatgrass	G3	S3	N	E
<i>Encyclia tampensis</i>	Florida butterfly orchid	G4	SNR	N	CE
<i>Tillandsia fasciculata</i>	common wild-pine	G5	SNR	N	E
<i>Tillandsia utriculata</i>	spreading air-plant	G5	S3	N	E
Additional rare plants reported on site by applicant					
none					
Rare animals documented on site					
<i>Alligator mississippiensis</i>	American alligator	G5	S4	SAT	FT(S/A)
<i>Gopherus polyphemus</i>	gopher tortoise	G3	S3	C	ST
<i>Platalea ajaja</i>	roseate spoonbill	G5	S2	N	ST
Additional rare animals reported on site by applicant					
<i>Drymarchon couperi</i>	eastern indigo snake	G3	S3	T	FT
<i>Antigone canadensis pratensis</i>	Florida sandhill crane	G5T2	S2	N	ST
<i>Sciurus niger niger</i>	southeastern fox squirrel	G5T5	S3	N	N

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.

The owner attempts to burn the small acreage (ca. 80 ac.; largest block being ca. 20 ac.) of mesic flatwoods every 2-4 years although the areas seen appear to be behind schedule. Getting these areas back on an increased burn frequency would help reduce the shrub density and increase herbaceous growth. Hydrological modifications on the property in the past have particularly affected the basin swamp, which would likely benefit from some hydrological restoration. Approximately 150 acres of improved pasture and woodland pasture, on the west side of the canal, have a significant cover of older mature longleaf pine, some saw palmetto cover, and possibly native plants mixed with pasture grasses. Restoration of native species and the mesic flatwoods would be rewarding but require a considerable commitment that may be outside the scope of restoration commitment expected for a working cattle ranch.

Based on the field assessment, most invasive plants on the proposal area were localized, with the exception being West Indian marsh grass and Caesar’s weed. Cogongrass infestations were observed in mesic flatwoods areas, and this species should be treated aggressively to ensure that it does not spread throughout the remaining flatwoods. Brazilian pepper and old world climbing fern appear to be

at low levels and would also be priorities for control. Caesar's weed and West Indian marsh grass were widespread and may be difficult to eradicate. A baseline assessment to determine the full extent of invasive plant infestations is warranted if an easement is to be acquired.

Measure C4:

The number of acres acquired that protect natural floodplain functions.

The FFME reports approximately 1,136 acres (74%) of the proposed project may contribute to the protection of natural floodplain function. This area is mostly divided between Priority 2 (40% of site) and Priority 3 (31% of site), with the remainder in Priority 4 (3% of site) and Priority 5 (<1%). Priority 1 areas are the most natural with the lowest intensity land uses.

Measure C5:

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

The FFME reports approximately 1,531 acres (100%) of the proposed project could provide protection for those surface waters of the State that currently remain in good condition. This area is divided between Priority 5 (65% of site) and Priority 6 (35% of site). These areas represent acreage that contributes to the protection of state-designated Outstanding Florida Waters, springs, rare fish habitat, or other surface waters.

Measure C8:

The number of acres of functional wetland systems protected.

The FFME reports approximately 1,016 acres (66%) of the proposed project would provide protection for functional wetland systems. This area is divided mostly between Priority 2 (40% of site) and Priority 3 (24% of site), with the remainder in Priority 4 (2% of site) and Priority 5 (<1% of site). Priority 1 areas are the most natural with the lowest intensity land uses.

Measure C11:

The number of acres of public conservation lands in which upland invasive, exotic plants are under maintenance control.

Scattered areas of cogon grass, ceaser weed, and Brazilian pepper were observed during site visit.

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 D1:

The number of acres acquired which provide retention and storage of surface water in naturally occurring storage areas, such as lakes and wetlands, consistent with the maintenance of water resources or water supplies and consistent with district water supply plans.

Measure D2:

The quantity of water made available through the water resource development component of a district water supply plan for which a water management district is responsible.

The Charlie Creek Florida Forever project is located within SWFWMD's Heartland Planning Region. The District prioritizes improving water bodies by planning and implementing projects focused on the improvement of water quality and natural systems (as stated in SWFMD's 2022-2026 Strategic Plan).

The Charlie Creek project contains a portion of Charlie Creek, an altered waterway which flows into the Peace River. Naturally-occurring storage areas within the project area would benefit the District's goals of water quality and natural systems improvement.

The project area is also located in the Southern Water Use Caution Area (SWUCA), a region of the District where groundwater withdrawals have negatively impacted water resources. Acquisition of natural lands in the SWUCA would aid the quantity of water available.

Measure D3:

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

The property is not in a restoration plan area; however, the property would provide some surface and ground water protection.

Table 4. Spatial Analysis for Potential Water Quality Benefits of Aucilla River Corridor

Categories	Scoring Criteria	Project Score
DEP High Profile Springs (In 1,2,3 or > spring sheds)	12, 24, 36	0
DEP Select Agricultural Land Use (0-30%, >30-65%, >65%)	4,8,12	4
DEP Florida Aquifer Vulnerability (FAVA)	4,7,10	7
DEP Special Nutrient Impaired WBIDs	9	0
DEP Distance to Major Lakes (100, 500, 1000 meters)	8,7,6	0
DEP Springsheds or within 5 miles	10, 7	0
DEP BMAPs	10	0
DEP Distance to Major Rivers (100, 500, 1000 meters)	6,5,4	0
Total Possible	101	11

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

FINAL DEAR SCORE = 1 – Low water quality protection benefits.

GOAL E:

INCREASE NATURAL RESOURCE-BASED PUBLIC RECREATIONAL AND EDUCATIONAL OPPORTUNITIES

Measures E1-E3

The Charlie Creek project is proposed for less-than-fee acquisition 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 Charlie Creek Florida Forever project would not meet Measure F1 as project contains no archaeological sites recorded or known to exist.

Measure F2:

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

The Charlie Creek Florida Forever project would not meet Measure F2 as project contains no archaeological sites recorded or known to exist.

CULTURAL RESOURCES:

There are no cultural resources recorded or known to exist on this Florida Forever project. To date, no portion of this property has been professionally surveyed for archaeological and/or historical sites. The

site file shows 16 historic structures, 20 archaeological sites, and 6 resource groups as being located within a five-mile radius of this property.

FIELD OBSERVATIONS:

There were no archaeological or historical resources observed on the project and the landowners are unaware of any unrecorded resources known to exist on the Charlie Creek Florida Forever project. There is potential for sites to exist, and based upon our field observation of land management practices on the project, it would appear that any unknown and unrecorded sites that may exist would be preserved in relatively good condition.

Should this project be acquired as Less-Than-Fee, it is recommended that any known and currently unrecorded cultural resources are recorded in the Florida Master Site File noting their current condition, and for conservation easement land owners to be made aware of their responsibility to not willingly disturb or destroy any existing or newly discovered cultural resources protected on their property. Should any artifacts be discovered on the project in the future, the Division of Historical Resources (DHR) recommends leaving them in place and contacting one of DHR's archaeologists.

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.

The FFME reports approximately 488 acres (32%) could be available for sustainable forest management, divided between Priority 5 (428 acres) and Priority 3 (60 acres). Prioritization is based on 4 criteria set by FFS: whether trees are natural or planted, size of tract, distance to market, and hydrology. Priority 5 areas are considered "potential" pinelands; agricultural areas that could be restored to pineland. Future silvopasture could occur via planting slash pines at 12x12 spacing and approximately 58 acres of flatwoods need prescribed fire.

Measure G3:

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

The FFME reports approximately 2 acres (< 1%) would provide forestland to maintain natural groundwater recharge functions.

FLORIDA FOREVER CRITERIA

The proposed project meets the following Florida Forever criteria (section 259.105, F.S.)

- The project has a significant portion of its land area in imminent danger of development, in imminent danger of losing its significant natural attributes or recreational open space, or in imminent danger of subdivision which would result in multiple ownership and make acquisition of the project costly or less likely to be accomplished.
- The project may be acquired, in whole or in part, using alternatives to fee simple, including but not limited to, tax incentives, mitigation funds, or other revenues, the purchase of development rights, hunting rights, agricultural or silvicultural rights, or mineral rights or obtaining conservation easements or flowage easements.

The Acquisition and Restoration Council shall give increased priority to:

- Projects that can be acquired in less than fee ownership, such as a permanent conservation easement.

MANAGEMENT

If acquired as a perpetual conservation easement, primary management responsibility would remain with the landowner. Periodic monitoring of the site's management would occur to confirm continued compliance with the conditions of the easement. Monitoring would be coordinated by DEP, DSL, Office of Environmental Services (OES).

FUNDING SOURCES

Florida Forever.

OWNERSHIP PATTERN AND ACQUISITION PLANNING**Title and Legal Access, Jurisdictional and Sovereignty Lands, Legal Issues**

The property is accessible from a public road. Record of title, a designation of jurisdictional and sovereignty lands and any other legal issues will be determined at the time of acquisition and are not known at this time.

Known Encumbrances (easement, long-term leases, restrictive covenants, etc.)

The easements and encumbrances of record would be determined during the appraisal mapping. A current title insurance commitment would be obtained, or the owner's title insurance policy would be reviewed if the policy is available. The easements and encumbrances would be depicted or noted on the appraisal map.

Description and location of hazardous waste sites, dumps, borrow pits

There are no apparent contamination sites within the project based on the application form.

Estimated Cost of Appraisal and Mapping

DEPs Bureau of Appraisal estimates \$10,000 to \$20,000 in appraisal fees.

Acquisition Phases

Subject to funding, the Charlie Creek Florida Forever project will be phased based upon price.

GOVERNMENT PLANNING and DEVELOPMENT**Contribution to Recreation and Open Space Needs**

Hardee County's comprehensive plan recognizes the value of open space as evidenced by its standards which range from 50 to 80 percent for residential uses located within Agriculture (AG) future land use. The addition of ±1,547-acres would provide a significant contribution to functional open space through the preservation of aquifer recharge areas, wildlife habitat, and network connectivity. Hardee County's adopted recreation level-of-service standard is 15-acres per 1,000 residents. However, the site is proposed to be acquired through a less-than-fee conservation easement which would not permit public access to the property. Preservation of the site creates multiple external recreational benefits in the surrounding region by connecting critical wildlife linkages, preservation of natural floodplains, support for wildlife habitat, and aquifer recharge.

Potential for Losing Significant Natural Attributes or Recreational Open Spaces

Medium Potential: A review of property ownership and recent sales confirm that mining operations have expanded eastwardly approximately 2 miles from the Charlie Creek property in 2019. A second mining land acquisition occurred less than a half mile from the property's northeastern border in 2021. The Charlie Creek property's location between the two mine land acquisitions increases the potential for external impacts to the site's natural attributes.

Conservation Policy C2.4.2 of the Hardee County Comprehensive Plan prohibits mining/extraction within the portions of the 100-year floodplain of Charlie Creek that are classified as wetlands. Additional

restrictions protect seepage wetland areas outside the Charlie Creek 100-year floodplain through the environmental resource permitting process (Chapter 373, F.S.) Approximately 71% of the site's ±1,547-acres contains priority floodplain resources. Further protections for the Charlie Creek floodplains are provided in the adopted comprehensive plan and land development regulations that limit density to 1 du/20-acres, require large setbacks and restrict septic systems on certain soil types.

Potential for Being Subdivided

Low Potential: As noted above, residential development is limited by floodplains and soil types. Density is limited to one unit per 20-acres within the Charlie Creek 100-year floodplain. A minimum 3,000-foot setback from Charlie Creek is required for agricultural and residential septic systems. Combined, these limitations serve to discourage subdivision of the property into a dense development model of small residential lots. The Hardee County property appraisers map identifies a shared property boundary with a platted subdivision of residential manufactured homes (MH). The County's 2021 aerial photos indicate the MH subdivision is largely undeveloped. Such prevalence of vacant lots may signal a low demand for or surplus of the housing type.

Zoning and Densities within the Project Boundaries

The entire property is zoned Agriculture (A-1). The primary purpose of A-1 is to provide areas in Hardee County for the primary practice of unlimited agriculture, very low density residential, low intensity commercial services, industrial, public and community services, and recreation and open space land uses.

Agriculture is Hardee County's predominant zoning land use district. As such, the permitted and special exception uses are broad. In addition to unlimited agriculture, the Hardee County Unified Land Development Code (UDLC) permits agriculture storage and sales uses, educational/cultural facilities, recreation, clubs, conservation, single family residential, farmworker housing, mobile homes, bed & breakfast lodging, food processing plants, solar energy "farms", and extraction/mining uses. Special exception uses allowed upon review by the Board of County Commissioners within A-1 include waste sludge, land disposal excluding hazardous/bio-hazardous materials, sanitary landfill, outdoor recycling center, shopping center, feedlots and dairies.

Existing Land Uses and Future Land Use Designations

The subject site is designated Agriculture (AG) on the County's Future Land Use Map. Agriculture is also the existing and surrounding future land use.

Development Potential

Moderate Potential: There is limited residential development potential. The site's maximum residential development potential is approximately 144 dwelling units. Hardee County permits power generation uses within its AG future land use and A-1 zoning districts. The site has a moderate risk of Mining/Extraction development due to its proximity to recent mining land acquisitions. Although, the subject site is not located within Hardee County's currently adopted Mining Overlay District (FLU Policy 1.1.7 & FLU MAP 2), its proximity to the overlay and the region's historical trend for mining operation expansions may be a future risk. On January 6, 2022, Hardee County amended its Mining Overlay Map to add 198-acres. Phosphate mining is significant to Hardee County's economy. Duke Energy's Charlie Creek Solar Farm is located just north of the Charlie Creek property.

Transportation Planning Issues

The proposed project area is located in Hardee County in the Florida Department of Transportation's (FDOT) District 1, and portions of the project's southern border lie directly adjacent to SR 64, a Strategic Intermodal System (SIS) facility.

Several FDOT Work Program projects are in the vicinity of the proposed acquisition:

- There are three projects along SR 64 in Hardee County included in the current SIS Cost Feasible Plan. These projects would widen SR 64 from two to four lanes, and the plan includes both Project Development and Environment Study (2031-2035) and Preliminary Engineering (2036-2040) for each of the projects.
 - SR 64 from US 17 to State Road 636 - widen from two to four lanes (Project ID 3357).
 - SR 64 from Old Town Creek Rd. / County Road 671 / Parnell Rd. to Hardee / Highlands County Line
 - o widen from 2 to 4 lanes (Project ID 3358).
 - SR 64 from Hardee / Highlands County Line to US 27 – widen from two to four lanes (Project ID 3359).
- Additional projects in the area include:
 - SR 64 (SR 636) from W of PRESCOTT RD to MORGAN GRICE RD – resurfacing
 - OLD TOWN CREEK RD from SR 64 to POLK COUNTY LINE – widen/resurface existing lanes (local project funded through FDOT local agency programs.)

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

FOOTNOTES/REFERENCES

Southwest Florida Water Management District. (n.d.). *Southern Water Use Caution Area*. Southern Water Use Caution Area. Retrieved March 22, 2022, from <https://www.swfwmd.state.fl.us/projects/southern-water-use-caution-area>

Southwest Florida Water Management District. (2022, February 22). 2022–2026 Strategic Plan. Brooksville.

ACKNOWLEDGEMENTS

Staff in DEPs DSL and the FNAI determined the final project recommendations. Sine Murray and Hannah Turbiville in DSL's OES were 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 & Richard Larsen
- Department of Economic Opportunity – Barbara Powell
- DEP Division of State Lands, Bureau of Appraisal – Jay Scott & Amy Phillips
- Florida Fish and Wildlife Conservation Commission – Laramie Ferry & Jennifer Myers
- Florida Natural Areas Inventory – Dan Hipes, Katy NeSmith & Nathan Pasco
- DEP Division of Environmental Assessment and Restoration – Kevin Coyne
- Florida Department of Transportation – Jennifer Carver
- Southwest Florida Water Management District – Steven Blaschka

APPENDICES

Appendix A:

Final FF measures table: Report requirement 259.105 (15)d, prepared by FNAI

Charlie Creek: Florida Forever Measure Evaluation 20220216

GIS ACRES = 1,534

MEASURES	Resource Acres ^a	% of project
B1: Strategic Habitat Conservation Areas		
Priority 1	1,436	94%
Priority 2	91	6%
Priority 3	0	0%
Priority 4	0	0%
Priority 5	4	< 1%
Total Acres	1,531	100%
B2: FNAI Habitat Conservation Priorities		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	0	0%
Priority 4	64	4%
Priority 5	997	65%
Priority 6	198	13%
Total Acres	1,259	82%
B3: Ecological Greenways		
Priority 1	1,514	99%
Priority 2	0	0%
Priority 3	19	1%
Priority 4	0	0%
Priority 5	0	0%
Total Acres	1,533	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)	79	5%
Upland Hardwood Forest (G5)	0	0%
Total Acres	79	5%
B6: Occurrences of FNAI Tracked Species		
G1	0	
G2	0	
G3	0	
G4	1	
G5	0	
Total	1	
C4: Natural Floodplain Function		
Priority 1	0	0%
Priority 2	617	40%
Priority 3	472	31%
Priority 4	41	3%
Priority 5	6	< 1%
Priority 6	0	0%
Total Acres	1,136	74%

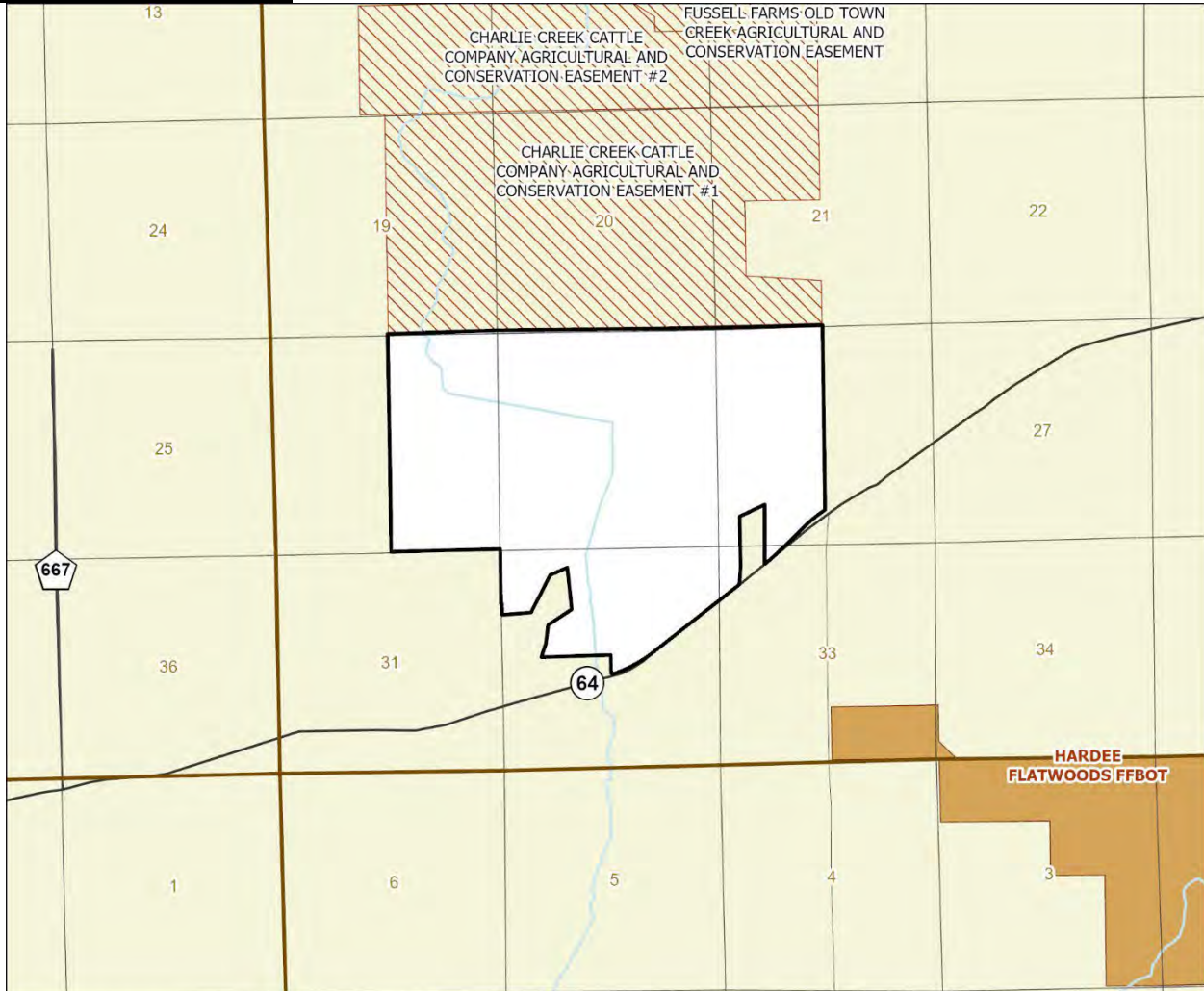
MEASURES (continued)	Resource Acres ^a	% of project
C5: Surface Water Protection		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	0	0%
Priority 4	0	0%
Priority 5	996	65%
Priority 6	535	35%
Priority 7	0	0%
Total Acres	1,531	100%
C7: Fragile Coastal Resources		
Fragile Coastal Uplands	0	0%
Imperiled Coastal Lakes	0	0%
Coastal Wetlands	0	0%
Total Acres	0	0%
C8: Functional Wetlands		
Priority 1	0	0%
Priority 2	611	40%
Priority 3	372	24%
Priority 4	30	2%
Priority 5	3	< 1%
Priority 6	0	0%
Total Acres	1,016	66%
D3: Aquifer Recharge		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	80	5%
Priority 4	861	56%
Priority 5	248	16%
Priority 6	344	22%
Total Acres	1,533	100%
E2: Recreational Trails (miles)		
<small>(prioritized trail opportunities from Office of Greenways and Trails & UPRR EIS/EA)</small>		
Land Trail Priorities	0.0	
Land Trail Opportunities	0.0	
Total Miles	0.0	
F2: Arch. & Historical Sites (number)		
0 sites		
G1: Sustainable Forestry		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	60	4%
Priority 4	0	0%
Priority 5 - Potential Pinelands	428	28%
Total Acres	488	32%
G3: Forestland for Recharge		
	2	< 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 most noticeable on small sites.

Appendix B:




Final FF proposal boundary maps: Report requirement 259.105 (15)k, prepared by FNAI

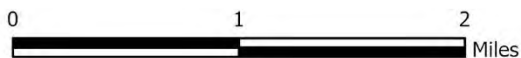
B1: Florida Forever map



CHARLIE CREEK FLORIDA FOREVER PROPOSAL

HARDEE COUNTY

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

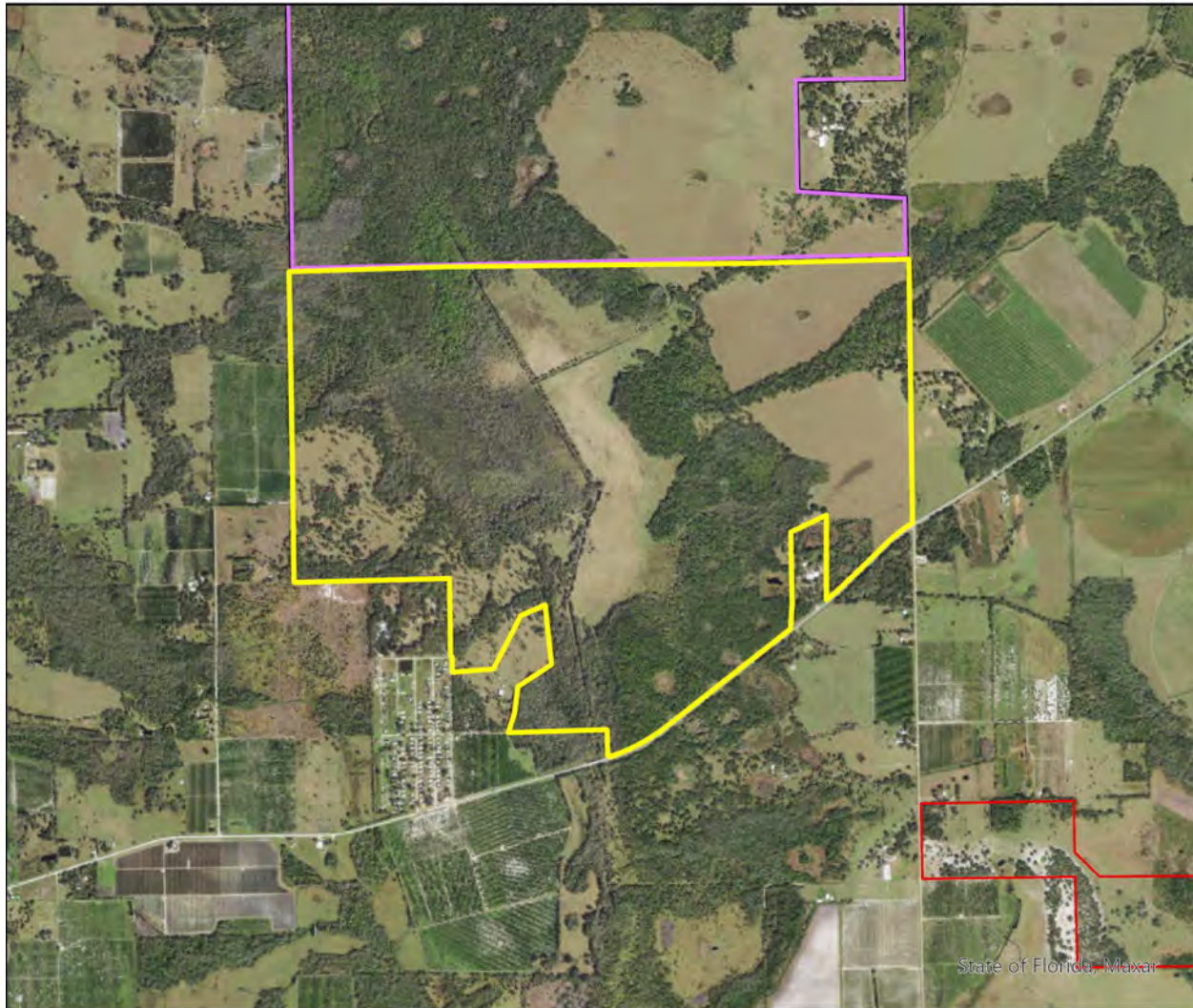


FEBRUARY 2022

B2: Aerial map

Charlie Creek Florida Forever Proposal

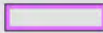
FLORIDA FOREVER BOARD OF TRUSTEES PROPOSED PROJECT BOUNDARY AS OF FEBRUARY 2022



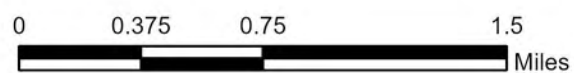
Map Produced by: N. Pasco, February 2022

Background: World Imagery Resolution = 0.3 meter



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

1018 Thomasville Road
 Suite 200-C
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Appendix C:

PROPERTY ID #'S FOR FINAL RECOMMENDED BOUNDARY

HARDEE COUNTY

COUNTY	PARCEL ID	OWNER	ACRES PER TAX CARD	JUST VALUE	ASSESSED VALUE	PARCEL DESIGNATION
Hardee	30-33-27-0000-07500-0000	Sanders, Carol Buttwalller	320	\$1,121,750.00	\$28,069.00	Essential
Hardee	29-33-27-0000-10010-0000	Sanders, Carol Buttwalller	640	\$2,224,000.00	\$74,560.00	Essential
Hardee	28-33-27-0000-10010-0000	Sanders, Carol Buttwalller	306.5	\$1,166,190.00	\$48,715.00	Essential
Hardee	32-33-27-0000-05000-0000	Sanders, Carol Buttwalller	262.09	\$868,360.00	\$22,054.00	Essential
Hardee	33-33-27-0000-02550-0000	Sanders, Carol Buttwalller	18.5	\$97,250.00	\$1,351.00	Essential
TOTALS			1547.09	\$5,477,550.00		

Appendix D:**Imperiled Species FNAI Ranking Definitions**

FNAI
Definitions of imperiled species ranks and conservation 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

- G1** = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- G2** = Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3** = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- G4** = Apparently secure globally (may be rare in parts of range).
- G5** = Demonstrably secure globally.
- GH** = Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker).
- GX** = Believed to be extinct throughout range.
- GXC** = Extirpated from the wild but still known from captivity or cultivation.
- G#?** = Tentative rank (e.g., G2?).
- G#G#** = Range of rank; insufficient data to assign specific global rank (e.g., G2G3).
- G#T#** = Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1).
- G#Q** = Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q).
- G#T#Q** = Same as above, but validity as subspecies or variety is questioned.
- GU** = Unrankable; due to a lack of information no rank or range can be assigned (e.g., GUT2).
- GNA** = Ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- GNR** = Element not yet ranked (temporary).
- GNRTNR** = Neither the element nor the taxonomic subgroup has yet been ranked.

FNAI STATE ELEMENT RANK

- S1** = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- S2** = Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- S3** = Either very rare and local in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- S4** = Apparently secure in Florida (may be rare in parts of range).
- S5** = Demonstrably secure in Florida.
- SH** = Of historical occurrence in Florida, possibly extirpated, but may be rediscovered (e.g., ivory-billed woodpecker).
- SX** = Believed to be extirpated throughout Florida.
- SU** = Unrankable; due to a lack of information no rank or range can be assigned.
- SNA** = State ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- SNR** = Element not yet ranked (temporary).

FEDERAL LEGAL STATUS

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

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida

2019-04-19

Page 2

FNAI
Definitions of imperiled species ranks and conservation status

populations and that federal status may differ elsewhere.

C = 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.

E = Endangered: species in danger of extinction throughout all or a significant portion of its range.

E, T = Species currently listed endangered in a portion of its range but only listed as threatened in other areas

E, PDL = Species currently listed endangered but has been proposed for delisting.

E, PT = Species currently listed endangered but has been proposed for listing as threatened.

E, XN = Species currently listed endangered but tracked population is a non-essential experimental population.

T = Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.

PE = Species proposed for listing as endangered

PS = Partial status: some but not all of the species' infraspecific taxa have federal

PT = Species proposed for listing as threatened

SAT = Treated as threatened due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.

SC = Not currently listed, but considered a "species of concern" to USFWS.

STATE LEGAL STATUS

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, 1 August 1997, and subsequent updates.

C = Candidate for listing at the Federal level by the U. S. Fish and Wildlife Service

FE = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service

FT = Listed as Threatened Species at the Federal level by the U. S. Fish and Wildlife Service

FXN = Federal listed as an experimental population in Florida

FT(S/A) = Federal Threatened due to similarity of appearance

ST = State population listed as Threatened by the FFWCC. Defined as a species, subspecies, or isolated population which 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.

SSC = Listed as Species of Special Concern by the FFWCC. Defined as a population which 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.)

N = 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/>>.

E = 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.

T = 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.

N = Not currently listed, nor currently being considered for listing.

Appendix E:

Site Visit Photos



1. *Semi-improved pasture*



2. *Depression Marsh*



3. Charlie Creek



4. Basin swamp



5. Historic Basin Swamp (altered) along Charlie Creek.



6. Mesic Flatwoods