

Florida Forever Project Evaluation Report

Gardner Marsh ***Osceola County***



Acquisition Type: Less-Than-Fee

Acres: 5,712

Just Value: \$23,673,412

Application Date: April 30, 2022

Project Sponsor: SVN Saunders Ralston Dantzler Real Estate

Prepared By:

Division of State Lands

Office of Environmental Services



Submitted to the Acquisition and Restoration Council
October 14, 2022

Executive Summary

The proposed Gardner Marsh Florida Forever project contains 21 parcels, owned by Bronsons LLP, totaling 5,952 acres in Osceola County. The property is located in the Kissimmee Chain of Lakes area, directly in between Lake Hatchineha and Lake Kissimmee, and west of U.S. Route 192. The closest cities are St. Cloud and Lake Wales. The project is proposed as a less-than-fee acquisition and has a total tax assessed value of \$23,673,412.

The proposal lies within the Kissimmee Valley and would close a gap in an emerging corridor of contiguous conservation lands that includes The Nature Conservancy's Disney Wilderness Preserve, David Allen Broussard Catfish Creek Preserve State Park, Lake Kissimmee State Park and the Kissimmee Chain of Lakes properties (South Florida Water Management District). Together these lands protect a diversity of upland habitats and the headwaters of the Kissimmee River. The project is near several current Florida Forever projects, with the closest projects being Lake Hatchineha Watershed, Catfish Creek and Bombing Range Ridge.

Gardner Marsh is characterized by a nearly intact landscape of healthy and diverse natural communities including high quality examples of scrub and dry prairie. The property is actively managed with fire and current land management practices have maintained the quality of the site's natural communities. The project is a notable example of quality land stewardship. A multitude of rare and imperiled species are documented or reported on-site including the Florida scrub-jay (*Aphelocoma coerulescens*), Florida panther (*Puma concolor coryi*), Bachman's sparrow (*Peucaea aestivalis*), and the rare Nodding pinweed (*Lechea cernua*). Nearly all (99%) of the property is located within Priority 2 of the Florida Ecological Greenways Network (FEGN).

The project is within the Avon Park Air Force Range Sentinel Landscape and the Everglades Headwaters Conservation Partnership Area, an area established by the U.S. Fish and Wildlife Service to protect the Everglades Headwaters National Wildlife Refuge and one of the great grassland and savanna landscapes of eastern North America.

The property has been in the same ownership for several generations and has historically served as ranchland for the family cattle operation. The family has been working the lands of the Kissimmee Prairie since 1867 when cattle were free-ranging on the Osceola Plain. According to the Division of Historical Resources (DHR), there are three archaeological sites located within or intersecting the boundary of the proposed project that collectively contain evidence of pre-Columbian occupations spanning over 3,000 years of Florida history.

If approved for addition to the 2023 Florida Forever Priority List, it is recommended that the project be added to the Critical Natural Lands category. All 5,952 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 June 29, 2022. Information included in this project evaluation report is a result of this site visit.

PURPOSE FOR ACQUISITION

The Gardner Marsh project will conserve a mosaic of high quality ecological communities that protect the headwaters of the Kissimmee River and provide critical habitat for rare wildlife and plant species. The project will help complete a contiguous landscape-of protected conservation areas over a half million acres in size and provide critical ecological connectivity in a rapidly growing region of the state.

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
- preserve significant archaeological or historic sites

- conserve and protect a portion of Florida's rural landscape in order to provide and enhance wildlife corridors for rare and imperiled species
- provide surface and groundwater protection and protect natural floodplain functions
- protect, restore, and maintain the quality and natural functions of land, water and wetland systems

LOCATION AND PROXIMITY TO OTHER MANAGED AREAS

The Gardner Marsh Conservation Easement Florida Forever proposal is 5,958 acres (calculated through GIS; 5,952 acres per application) in Osceola County, approximately 8 miles southeast of Poinciana and 15 miles east of Lake Wales.

The proposal is surrounded on 3 sides by the South Florida Water Management District's (SFWMD) Kissimmee Chain of Lakes properties, which protect land around 5 lakes feeding into the Kissimmee River. The project area is an inholding in an otherwise contiguous block of conservation lands that includes the Disney Wilderness Preserve, David Allen Broussard Catfish Creek Preserve State Park, and Lake Kissimmee State Park. The property is positioned between Lake Hatchineha to the west, where it has about 1,400 feet of lake frontage, and Lake Kissimmee, from which it is separated by a few hundred feet. Protection of the property will help close a gap in existing conservation lands, protect water supply and water quality in the Kissimmee chain of lakes and the Kissimmee River, and would protect a significant area of high quality natural areas.

RESOURCE DESCRIPTION

Florida Natural Areas Inventory (FNAI)

This evaluation is based on information gathered from the proposal, aerial photography, U.S. Geological Survey (USGS) 7.5' topographic maps, Florida Cooperative Landcover data, the FNAI database, and a July 29 field survey by FNAI biologists Amy Jenkins and Geoff Parks along with the Acquisition and Restoration Council (ARC) liaison staff. The Gardner Marsh proposal lies within the Kissimmee Valley (Brooks 1981), a low basin of swamps and prairies bounded by the central ridge to its west and the Holopaw/Indiantown ridges and swales to the east. Elevations vary from about 54 feet near lakes and wetlands along the south, east, and north edges of the property, to higher ridges peaking at 68 feet near the west edge of the property. Soils within the project boundary are mostly fine sands from the Immokalee, Myakka, Malabar, Smyrna, Lokosee, and Eau Gallie series.

The Gardner Marsh property is currently used privately for recreation and cattle production. Approximately 74 percent of Gardner Marsh is a nearly intact landscape containing a mosaic of relatively healthy and diverse natural communities. These are managed with fire, dominated by native species, and have generally intact ecotones where the communities naturally grade into one another.

In the southwestern half of the property, mesic flatwoods form the matrix in which other natural communities are intermixed, and this community makes up the largest single cover type in the proposal. The mesic flatwoods observed during the site visit are typically open, with a canopy of mature, often old and flat-topped longleaf pine (*Pinus palustris*). Midstory is generally lacking, as is typical of healthy flatwoods. The shrub layer contains saw palmetto (*Serenoa repens*), fetterbush (*Lyonia lucida*), coastalplain staggerbush (*Lyonia fruticosa*), runner oak (*Quercus pumila*), dwarf huckleberry (*Gaylussacia dumosa*), shiny blueberry (*Vaccinium myrsinites*), southern bayberry (*Morella cerifera*), myrtle oak (*Quercus myrtifolia*), sand live oak (*Quercus geminata*), and tarflower (*Bejaria racemosa*). The groundcover consists of native bunchgrasses such as wiregrass (*Aristida stricta*), lopsided indiagrass (*Sorghastrum secundum*), bluestem (*Andropogon sp.*), and herbs such as Elliott's milkpea (*Galactia elliotii*) and coastalplain chaffhead (*Carphephorus corymbosus*).

In the central part of the property, the mesic flatwoods give way to a landscape dominated by dry prairie, in which various wetlands are embedded. Making up about 12% of the proposal, the dry prairie is a mostly treeless, open, saw-palmetto dominated community. These appear to be in excellent condition and contain a wide variety of native shrubs, including shiny blueberry, Atlantic St. John's wort (*Hypericum tenuifolium*), roundpod St. John's wort (*Hypericum cistifolium*), fourpetal St. John's wort (*Hypericum tetrapetalum*), dwarf live oak (*Quercus minima*), coastalplain staggerbush and herbs such as wiregrass, witchgrass (*Dichanthelium sp.*), Elliott's milkpea, fascicled beaksedge (*Rhynchospora fascicularis*), narrowleaf sunflower (*Helianthus angustifolius*), southern umbrellasedge (*Fuirena scirpoidea*), Mohr's thoroughwort (*Eupatorium mohrii*), candyroot (*Polygala nana*), pinweed (*Lechea sp.*), whitehead bogbutton (*Lachnocaulon anceps*), lopsided indiagrass, bluestem, southern umbrellasedge (*Fuirena scirpoidea*), slender flattop goldenrod (*Euthamia caroliniana*), and blackroot (*Pterocaulon pycnostachyum*).

Dozens of depression marshes are scattered throughout the entire property in isolated depressions within flatwoods, prairie, and pasture. These marshes often have a fringe of sand cordgrass (*Spartina bakeri*), and are generally dominated by herbaceous species including maidencane (*Panicum hemitomon*), blue maidencane (*Amphicarpum muehlenbergianum*), arrowhead (*Sagittaria sp.*), Canadian germander (*Teucrium canadense*), spadeleaf (*Centella asiatica*), narrowfruit horned beaksedge (*Rhynchospora inundata*), Virginia chain fern (*Woodwardia virginica*), rush (*Juncus sp.*), torpedo grass (*Panicum repens*), and pipewort (*Eriocaulon sp.*). Woody species are not typical, but occasional southern bayberry and common buttonbush (*Cephalanthus occidentalis*) are present. Variations in hydroperiod and water depth generally cause the vegetation in these marshes to be distinctly zoned, which was the case for marshes on this property both in pasture and more natural settings.

In the northeastern half of the property, wet prairies form a web of low areas through the dry prairie and semi-improved pasture landscape, often connecting depression marshes and swamps. These are generally herb-dominated communities, although occasional cabbage palm (*Sabal palmetto*), southern bayberry, and swamp bay (*Persea palustris*) occur. These open expanses of wetland have a wide variety of native herbaceous species, including blue maidencane (*Amphicarpum muehlenbergianum*), southern umbrellasedge (*Fuirena scirpoidea*), fascicled beaksedge, largeflower rosegentian (*Sabatia grandiflora*), bluestem, wiregrass, plumed beaksedge (*Rhynchospora plumosa*), tall pinebarren milkwort (*Polygala cymosa*), narrowleaf sunflower, Florida tickseed (*Coreopsis floridana*), partridge pea (*Chamaecrista fasciculata*), water dawnflower (*Stylisma aquatica*), taperleaf waterhorehound (*Lycopus rubellus*), colic-root (*Aletris sp.*), toothache grass (*Ctenium aromaticum*), peelbark St. John's wort (*Hypericum fasciculatum*), flattened pipewort (*Eriocaulon compressum*), roundpod St. John's wort, and meadowbeauty (*Rhexia sp.*)

On several slight rises within the mesic flatwoods, scrubby flatwoods occur. These areas are similar to mesic flatwoods, with a canopy of longleaf pine, and a low shrubby layer consisting of tarflower, coastalplain staggerbush, rusty staggerbush (*Lyonia ferruginea*), fetterbush, saw palmetto, shiny blueberry, with a notable component of myrtle oak, Chapman's oak (*Quercus chapmanii*), and sand live oak. Low shrubs and herbs are abundant, including gopher apple (*Geobalanus oblongifolius*), dwarf live oak, wiregrass, Elliott's milkpea, pinweed, Florida milkweed (*Asclepias feayi*), creeping little bluestem (*Schizachyrium stoloniferum*), coastalplain milkwort (*Polygala setacea*), bracken fern (*Pteridium aquilinum*), Florida scrub roseling (*Callisia ornata*), and capillary hairsedge (*Bulbostylis ciliatifolia*). In one location, cogongrass (*Imperata cylindrica*, FISC Category I) was found in this community.

Mesic hammock is present in several small to large areas, mostly near the margins of the property near the lakes. This community has a canopy of mature live oak (*Quercus virginiana*) and cabbage palm, with an understory consisting of cabbage palm, and a shrubby layer mostly of saw palmetto with some American beautyberry. Witchgrass, and flatsedge (*Cyperus sp.*), were among the few herbaceous species present. Resurrection fern (*Pleopeltis michauxiana*) was abundant on the live oaks, and

southern needleleaf (*Tillandsia setacea*) was occasional. Hog rooting was noted in this community, as were invasive Caesar's weed (*Urena lobata*; FISC Category I) and tropical soda apple (*Solanum viarum*, FISC Category I).

Wet flatwoods are found in scattered areas as narrow bands at the ecotones between mesic flatwoods and swamps. These communities have a longleaf pine canopy with shrubs including fetterbush, St. John's wort (*Hypericum sp.*), highbush blueberry (*Vaccinium corymbosum*), loblolly bay (*Gordonia lasianthus*), and winged sumac (*Rhus copallinum*). Virginia chain fern made up the majority of the groundcover in the example that was seen on the site visit.

Two larger areas of marsh in the central part of the project area are classified as basin marsh. These had many of the same species seen in depression marshes, but also had a deeper slough-like central section with peelbark St. John's wort, arrowfeather threeawn (*Aristida purpurascens*), Tracy's beaksedge (*Rhynchospora tracyi*), yellow-eyed grass (*Xyris sp.*), camphorweed (*Pluchea sp.*), and largeflower rosegiant.

The high elevations on the western edge of the property are vegetated in scrub. Scrub on the property varies from open waist-high shrubland with frequent sandy gaps where it had likely recently been burned, to tall dense scrub with a sand pine (*Pinus clausa*) canopy in areas that the owner indicated had not burned in at least 15 years. Dominant shrubs include Chapman's oak, sand live oak, myrtle oak, and scrub oak (*Quercus inopina*) as well as coastalplain staggerbush and fetterbush. Groundcover species in more open areas include wiregrass, hedge hyssop (*Gratiola sp.*), capillary hairsedge, pinweeds (including state-listed nodding pinweed [*Lechea cernuua*]), southern bogbutton (*Lachnocaulon beyrichianum*), and Florida alicia (*Chapmannia floridana*).

Baygalls occur mostly in a north-south band near the western edge of the property, on the slope below the scrubby ridges, where it is hydrated by seepage of groundwater from the upper elevations. This community is dominated by evergreen bays (loblolly bay and swamp bay). Occasional slash pine (*Pinus elliotii*) also occur. Fetterbush makes up a dense shrub layer, and occasional Virginia chain ferns grow from the peaty soil.

Four dome swamps, ranging in size from about 2.5 to 34 acres, are scattered on the property. These are isolated swamps with a canopy of bald cypress (*Taxodium distichum*) and a midstory consisting of fetterbush, southern bayberry, swamp bay. Lower-growing plants included peelbark St. John's wort, seedling bald cypress, sand cordgrass, Virginia chain fern, purple bluestem, pickerelweed, and smallfruit beggarticks (*Bidens mitis*). The dominant epiphyte on cypress trees in one dome swamp inspected was the state-listed Balbis' airplant (*Tillandsia balbisiana*).

An area of forested wetland adjacent to Lake Hatchineha is presumed to be hydric hammock, but this area was not seen during the site visit.

Improved bahiagrass (*Paspalum notatum*) pastures make up a relatively small area on the eastern side of the proposal. Intermixed with the dominant pasture grass are native species including American beautyberry (*Callicarpa americana*), tickseed (*Coreopsis sp.*), slender flattop goldenrod, beaksedge (*Rhynchospora sp.*), dogfennel (*Eupatorium capillifolium*), and soft rush (*Juncus effusus ssp. solutus*). Some cogongrass was also noted in the pasture.

Areas with bahiagrass that retain a significant component of native vegetation are considered semi-improved pasture. These areas are mostly at the northern and eastern edges of the property between improved pastures to the east and the more natural landscape on the remainder of the property. Areas of sand live oak, cabbage palm, and saw palmetto are interspersed with grassy openings; in addition to the bahiagrass, a wide variety of native grasses and wildflowers also occur, including bluestem, beaksedge, big carpetgrass (*Axonopus furcatus*), licoriceweed (*Scoparia dulcis*), largeflower

rosegentian, slender flattop goldenrod, sand cordgrass, blue maidencane, dogfennel, beaked panicum (*Coleataenia anceps*), hedge hyssop, and purple sesban (*Sesbania punicea*).

An area of successional hardwood forest is in a small fringe between an area of mesic hammock on the north end of the property and a large basin marsh. This area has a canopy of immature swamp laurel oak (*Quercus laurifolia*), live oak and cabbage palm. Shrubs, herbs, and vines include southern bayberry, St. Andrew's cross (*Hypericum hypericoides*), blackberry (*Rubus sp.*), beaksedge, bluestem, thistle (*Cirsium sp.*), woodsorrel (*Oxalis sp.*), peppervine (*Ampelopsis arborea*), turkey tangle fogfruit (*Phyla nodiflora*). Pasture grasses seemed to be absent from this area and no invasive plants were observed.

Electric transmission lines cross the property on a wide utility corridor. Vegetation on this corridor is largely similar to the adjacent natural communities, but a large population of the invasive cogongrass extends along the corridor itself.

A network of roads through the property generally consists of sand or limerock roads. These occupy a small portion of the property and are generally not noteworthy, except that some are lined with cogongrass.

Although not mapped, within the mesic hammock/semi-improved pasture at the north end of the property is a hunt camp consisting of approximately 10 small scattered buildings.

An artificial pond on the property was not visited.

Invasive exotic plants are nearly absent from most of the natural communities, but cogongrass was well established along fence lines and along the utility corridor and occasional in the improved pasture. Torpedograss was found in one wetland, and Caesar's weed in one area of mesic hammock.

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

Community or Landcover	Acres	Percent of Proposal
mesic flatwoods	1413	24
dry prairie	698	12
depression marsh	507	9
wet prairie	412	7
scrubby flatwoods	384	6
mesic hammock	330	6
basin marsh	233	4
scrub	194	3
baygall	142	2
dome swamp	43	1
wet flatwoods	29	<1
basin swamp	17	<1
hydric hammock	12	<1
pasture - semi-improved	819	14
pasture - improved	650	11
utility corridor	45	1
roads	25	<1
successional hardwood forest	4	<1
artificial pond	1	<1
Totals	5,958	100%

Florida Fish and Wildlife Conservation Commission (FWC)

This summary provides a resource assessment of the Gardner Marsh Florida Forever proposal based on field observations and GIS analysis. Current uses of the lands within the project area include cattle, hunting, and recreation. The property is a significant component of the Florida Wildlife Corridor and is embedded within the Kissimmee Chain of Lakes ecoregion. The property is located adjacent to the Kissimmee Chain of Lakes, Lake Kissimmee, and Lake Kissimmee State Park. Other conservation properties nearby include the Disney Wilderness Preserve, Three Lakes Wildlife Management Area, Bullfrog Bay Mitigation Bank, Lake Hatchineha Ranch Agricultural and Conservation Easement, and Allen David Broussard Catfish Creek Preserve State Park, as well as Florida Forever projects such as the Big Bend Swamp/Holopaw Ranch and the Lake Hatchineha Watershed.

Just under a quarter of the project area is mesic flatwoods (23%), primarily comprised of native species such as saw palmetto, gallberry (*Ilex glabra*), wiregrass, and winged sumac. Other significant landcover includes rural open/unimproved pasture (23%; Figure 6), dry prairie (15%; Figure 4), marshes (13%), and scrub (6%).

Animal species that were observed during the site visit include gopher tortoise (*Gopherus polyphemus*), evidence of wild hog (*Sus scrofa*), osprey (*Panidon haliaetus*), Northern bobwhite quail (*Colinus virginianus*), mourning dove (*Zenaida macroura*), bald eagle nest (*Haliaeetus leucocephalus*), and Bachman's sparrow. There were pine and oak snags within the flatwoods which will provide benefits for the wildlife resources within the project area. Non-native plants were noted within the project area with cogongrass being the most prevalent species in areas along roadsides, ditches, and in some of the natural areas. Cogongrass was mixed mainly in areas that are not grazed and also consisted of native species such as saw palmetto, winged sumac, American beautyberry, and other native plant species. The non-native Brazilian pepper tree (*Schinus terebinthifolia*) was not as common, but there were some areas along ditch embankments that were infested. Overall, the non-native plant infestations have not yet diminished the integrity of the natural areas. The density of cogongrass along roadsides and ditch banks appears to be the largest threat to the surrounding natural areas. Non-native plant management will need to be implemented in some capacity to maintain ecological integrity, biodiversity, and functionality of the ecosystems in the project area. Bee apiaries are also located on the property. There is a large system of utility lines that are on the property which may provide nesting to osprey or bald eagles.

There was evidence of recent prescribed burns occurring within the dry prairie, scrub, scrubby flatwoods, and mesic flatwoods sites. These sites appeared to receive successful and beneficial effects from the burn within the last few years. Midstory control within the dry prairie/flatwoods was generally good and native groundcover, including wiregrass and other native plant species, were sprouting throughout. Prescribed fire can be further implemented to benefit plant and wildlife species in other areas within the project boundary.

There is potential for Florida scrub-jay to utilize the portions of scrub/scrubby flatwoods on the property. The Florida scrub-jay may benefit from conservation of the project area due to its proximity to other suitable Florida scrub-jay habitat.

Native game species are hunted through a lease and there is a very large hunt camp on the property; habitat for game species is adequate. Wild hog damage was not severe within the areas viewed at the site visit. Most of the uplands were flatwoods or pasture. The ecotones and transitional zones between natural communities and pastures were occasionally abrupt, with pasture occurring right to the edge of the forest and wetlands. Although many of the ecotones amongst natural communities, such as mesic flatwoods to dome swamp, were in good condition to facilitate wildlife movement and provide wildlife corridors.

The FNAI Element Occurrence database shows four records for rare wildlife species: bald eagle (11 historically documented nests/territories), crested caracara (*Caracara cheriway*), and Florida snail kite (*Rostrhamus sociabilis plumbeus*). The FNAI model also shows 86% of the property as potential habitat for eastern indigo snake (*Drymarchon couperi*), 17% for wood stork (*Mycteria americana*) and 16% for the Florida snail kite. The geographic location of this property also proves as a valuable watershed resource within the Kissimmee Chain of Lakes ecoregion.

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 8.4. A majority of the property is identified as priority 1 or 2 for the Critical Lands and Waters Identification Project. Approximately 77% lies within a designated FWC Strategic Habitat Conservation Area for species including the swallow-tailed kite (*Elanoides forficatus*), Cooper's hawk (*Accipiter cooperii*), Florida grasshopper sparrow (*Ammodramus savannarum floridanus*), Florida snail kite, Florida scrub-jay, Florida mouse (*Podomys floridanus*), and short-tailed hawk (*Buteo brachyurus*).

The FWC GIS analysis of the Cooperative Land Cover v3.5 indicates that Gardner Marsh comprises a mixture of many different community types including mesic flatwoods (23%), rural open/unimproved pasture (23%), dry prairie (15%; Figure 4), marshes (13%), and scrub (6%). The GIS analysis contains more detailed information. Approximately 17% of the property is classified as wetland based on the National Wetlands Inventory.

Approximately 88% of the property shows a species richness for 7-10 imperiled species. FNAI also identified 100% of the property as potential habitat for Florida black bears (*Ursus americanus floridanus*). Nearly 100% of the property is within Priority 2 of the FEGN.

In conclusion, the Gardner Marsh project in its current condition will provide conservation value as a less-than-fee acquisition for the State of Florida. The primary benefit is providing connectivity between other conservation lands and protecting the area from future development.

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 acquired, all 5,952 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.

The entirety of the project (5,952 acres) is proposed for less-than-fee acquisition via conservation easement.

Measure A3:

The number of shared acquisition projects among Florida Forever funding partners and partners with other funding sources, including local governments and the federal government.

No funding partners have been identified for this project.

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 (SHCA).

The SHCA Florida Forever Conservation Needs layer identifies important remaining habitat conservation needs for 33 terrestrial vertebrates on private lands. Priority 1 and 2 represent habitat for species considered imperiled or critically imperiled in Florida. The Florida Forever Measure Evaluation (FFME) table (Appendix B) reports the site contains approximately 4,937 acres (83% of site) of SHCA. This is primarily within Priority 1 (77% of site) with the remainder in Priority 3 (4%) and Priority 5 (2%).

Measure B2:

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

Habitat conservation priorities for 633 of Florida’s rarest species were mapped and divided into six priority classes. The FFME reports the proposed project contains approximately 5,900 acres (99%) of rare species habitat. The habitat is mostly divided between Priority 5 (40%), Priority 3 (24%), Priority 4 (21%), and Priority 6 (9%), with the remainder in Priority 2 (4%).

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. Acreage for aquatic species includes a terrestrial buffer.

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	4,188
<i>Aphelocoma coerulescens</i>	Florida scrub-jay	G1G2	61
<i>Caracara cheriway</i>	crested caracara	G5	4,249
<i>Mycteria americana</i>	wood stork	G4	1,021
<i>Rostrhamus sociabilis</i>	snail kite	G4G5	2,359
<i>Mustela frenata peninsulae</i>	Florida long-tailed weasel	G5T3?	4,437

Measure B3:

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

The FFME reports approximately 5,959 acres (99%) of the proposed project contributes to protection of ecological greenways with 99% of the acreage falling within Priority 2 areas, and < 1% in Priority 5. Prioritization is based on such factors as importance for wide-ranging species like Florida panther and Florida black bear, importance for maintaining a connected reserve network, and riparian corridors.

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

acres of under-represented natural communities found on the site. Based on this analysis, the Gardner Marsh proposal contains 1,442 acres of mesic/wet flatwoods (24% of site), 698 acres of dry prairie (12%), and 578 acres of scrub/scrubby flatwoods (10%).

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 Gardner Marsh proposal, along with adjacent conservation lands that include Kissimmee Chain of Lakes (SFWMD), Disney Wilderness Preserve, Three Lakes Wildlife Management Area, Allen David Broussard Catfish Creek Preserve State Park, Lake Kissimmee State Park and Avon Park Air Force Range, would contribute to a contiguous landscape-sized protection area of >500,000 acres.

Measure B6:

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

This site supports habitat for many rare species of conservation concern, as listed in the table below. Swallow-tailed kite and Bachman’s sparrow, seen during the site inspection, were not previously documented on the site, and gopher tortoise, which had been reported on the application, was confirmed during the site visit as well. Two rare plants, nodding pinweed and Balbis’ airplant were seen during the site visit. A large number of additional species of concern—19 animals and 1 plant—have been documented within 10 km of the property and could occur on the proposal site. Given the amount of high-quality natural communities present, it is highly likely that additional surveys would reveal additional rare species.

The FFME 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 either some species may have more than one occurrence on the proposal site, or some species observed on site do not meet the criteria for 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. Rarity rankings are 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>Lechea cernua</i>	Nodding pinweed	G3	S3	N	T
<i>Tillandsia balbisiana</i>	Balbis’ airplant			N	T
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>Caracara cheriway</i>	crested caracara	G5	S2	T	FT
<i>Elanoides forficatus</i>	swallow-tailed kite	G5	S2	N	N

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
<i>Haliaeetus erythrocephalus</i>	bald eagle	G5	S3	N	N
<i>Peucaea aestivalis</i>	Bachman's sparrow	G3	S3	N	N
Additional rare animals reported on site by applicant					
<i>Aphelocoma coerulescens</i>	Florida scrub-jay	G1G2	S1S2	T	FT
<i>Puma concolor coryi</i>	Florida panther	G5T1	S1	E	FE

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 property is offered for less-than-fee acquisition, intended to be utilized in a manner consistent with existing uses. The flatwoods, marshes, prairies, and swamps on the property are in exceptional condition and would require little action beyond the current management. Restoration of native vegetation on the 1,469 acres of improved and semi-improved pasture would require significant expenditures and sustained long-term commitment. This level of investment is beyond what would be expected for a working cattle ranch.

Invasive exotic plant control needs on the property are, for the most part, minor, particularly in the natural communities. However, cogongrass along roads, fence lines, and the small amount in natural communities should be treated aggressively to halt further increases; this species can spread rapidly and cause tremendous damage to the high quality natural communities on this site. It is likely that other invasive species may be present that were not encountered during the site visit. A baseline assessment to determine the full extent of invasive plant infestations is warranted if acquisition of the easement occurs.

Measure C4:

The number of acres acquired that protect natural floodplain functions.

The FFME reports approximately 2,487 acres (42%) of the proposed project may contribute to the protection of natural floodplain function. This area is mostly divided between Priority 3 (21% of site) and Priority 2 (15%), with the remainder in Priority 1 (4%) and Priority 4 (2%). 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 5,959 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 primarily in Priority 4 (93% of site), with the remainder in Priority 2 (5%) and Priority 6 (2%). 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 1,144 acres (19%) of the proposed project would provide protection for functional wetland systems. This area is divided between Priority 1 (9% of site), Priority 2 (6%), and Priority 3 (4%), with the remainder in and Priority 4 (< 1%). 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.

Invasive exotic plants are nearly absent from most of the natural communities but were recorded, including soda apple and Brazilian pepper. Infestations of cogongrass were observed along the powerline road and western portions of the site. The land manager reports that cogongrass is sprayed for control.

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.

The Gardner Marsh property contains approximately 1,389 acres of wetland plant communities, including wet flatwoods, that provide hydrologic benefits through surface water storage and retention and groundwater recharge.

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 Gardner Marsh property is located within SFWMD's Upper Kissimmee Basin Water Supply Planning Area. The property is also located within the boundaries of the Central Florida Water Initiative Water Supply Plan, a joint planning effort between the South Florida Water Management District, St. Johns River Water Management District, and the Southwest Florida Water Management District. The property is not specifically included in any water resource development project listed in a water supply plan. However, open green space and water retention helps to promote the recharge of the surficial aquifer system.

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 approximately 5,960 acres and located in Osceola County, FL, just north of Lake Kissimmee. The property is in a restoration plan area (Lake Okeechobee Basin Management Action Plan [BMAP]), and the property would provide surface and ground water protection.

Table 4. Spatial Analysis for Potential Water Quality Benefits of Gardner Marsh

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	10
DEP Special Nutrient Impaired WBIDs	9	9
DEP Distance to Major Lakes (100, 500, 1000 meters)	8,7,6	8
DEP Springsheds or within 5 miles	10, 7	0
DEP BMAPs	10	10
DEP Distance to Major Rivers (100, 500, 1000 meters)	6,5,4	5
Total Possible	101	46

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

Measures E1-E3

The Gardner Marsh project is proposed for less-than-fee acquisition with no public access. However, Operation Outdoor Freedom hunts on the property may be considered by the landowner (administered by FFS). A portion of the property is currently under a private hunting lease.

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.

As a less-than-fee project, the Gardner Marsh Florida Forever project would not increase the number or percentage of historic and archaeological properties listed in the Florida Master Site File or National Register of Historic Places which are preserved for public use. However, through a conservation easement agreement that stipulates cultural resource protection, the Gardner Marsh Florida Forever project would protect historic and archaeological sites that are listed in the Florida Master Site File.

Measure F2:

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

As a Less-Than-Fee project, Gardner Marsh would not meet Measure F2, as the number and percentage of historic and archaeological properties on the project would remain privately owned.

CULTURAL RESOURCES:

According to DHR’s Florida Master Site File, there are currently three archaeological sites located within or intersecting the boundary of the Gardner Marsh Florida Forever project. The assemblage of sites found within the project area collectively contain evidence of pre-Columbian occupations spanning over 3,000 years of Florida history.

Of note is the inclusion of Greed Circle (OS2990) within the project boundary. Greed Circle is an archaeological mound, which has been assessed by the State Historic Preservation Officer as being eligible for inclusion in the National Register of Historic Places.

Importantly, Old Indian Village (OS1762), which is contained within the Gardner Marsh Florida Forever project boundary has been noted in the Florida Master Site File as containing human remains. Regardless of acquisition, this site is protected under §872.05, Florida Statutes. No ground disturbance may be conducted within the boundary of site OS1762 without prior consultation with the State Historic Preservation Office.

FIELD OBSERVATIONS:

No staff from DHR participated in the field evaluation of the Gardner Marsh Florida Forever Project.

GOAL G:

INCREASE THE AMOUNT OF FORESTLAND AVAILABLE FOR SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES

Approximately 2,500 acres could be restored through reforestation. Based on the limited site reconnaissance, approximately 40-50% (2,380-2,976 acres) of the total property is forestland (flatwoods, scrub, etc.) that could be managed with current best management practices (BMPs). Natural regeneration of longleaf pine was observed in the mesic flatwoods; slash pine was scattered onsite.

Measure G1:

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

The FFME reports approximately 1,726 acres (29% of site) could be available for sustainable forest management, divided between Priority 3 (1,299 acres) and Priority 4 (427 acres). Prioritization is based on 4 criteria set by the Florida Forest Service: 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.

Measure G2:

The number of acres of state owned forestland managed for economic return in accordance with current best management practices.

Timber resources on the property could be improved and utilized. The ranch manager communicated that some areas had been contemplated for logging and destumping in the last decade under the current owner. However, it was determined that too much damage to the resource would occur for the projected correlating economic return on investment.

Based on the limited site reconnaissance, approximately 40-50% (2,380 to 2,976 acres) of the total property is forestland (flatwoods, scrub, etc.) that could be managed with current BMPs. Natural regeneration of longleaf pine was observed in the mesic flatwoods, and slash pine was scattered onsite.

Measure G3:

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

The FFME reports approximately 821 acres (14%) would provide forestland to maintain natural groundwater recharge functions.

Measure G4:

The percentage and number of acres identified for restoration actually restored by reforestation.

Natural regeneration was observed in the vegetative communities that would be suitable for silvicultural activities. Approximately 2,500 acres could be restored through reforestation.

FLORIDA FOREVER CRITERIA

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

- the project is part of an ongoing governmental effort to restore, protect, or develop land areas or water resources
- the project enhances or facilitates management of properties already under public ownership
- the project has significant archaeological or historic value
- 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 where the state's land conservation plans overlap with the military's need to protect lands, water, and habitat to ensure the sustainability of military missions

MANAGEMENT

If acquired as a 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 the Department of Environmental Protection (DEP), Division of State Lands (DSL), Office of Environmental Services (OES).

FUNDING SOURCES

Florida Forever would be the funding source.

OWNERSHIP PATTERN AND ACQUISITION PLANNING

Title and Legal Access, Jurisdictional and Sovereignty Lands, Legal Issues

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

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

Acquisition Phases

Subject to funding, the Gardner Marsh Florida Forever project will be phased based upon price.

GOVERNMENT PLANNING AND DEVELOPMENT

Contribution to Recreation and Open Space Needs

The proposed Gardner Marsh project has a medium to high potential for contributing to Florida's open space and recreation. According to supporting documentation, the property includes approximately 5,958 acres located in Osceola County, featuring 1,027 acres of wetlands and approximately 4,931 acres of uplands. The site also features approximately 1,450 feet of water frontage on Lake Hatchineha and is boarded on three sides by the Kissimmee Chain of Lakes Area, managed by SFWMD.

The property is currently being used for recreational hunting and cattle operations. The landowners would like to retain the rights to continue historic cattle grazing operations, timber harvesting, recreation, as it has for generations. Nearby conservation areas include Lake Kissimmee State Park, the Allen David Broussard Catfish Creek Preserve State Park, the Lake Hatchineha Ranch Agricultural and Conservation Easement, and the Catfish Creek Florida Forever project.

Protection of the 5,958-acre site as a conservation easement would expand the wildlife network to enable connectivity and protection of the wetlands and the greater ecosystem.

The applicant proposes a less-than fee acquisition, and no public use would be allowed on the property. However, preservation of such a large critical link would create significant external benefits for the region's outdoor recreational activities such as wildlife viewing, hunting/fishing, and other water related activities. Such activities provide substantial revenue to the State of Florida at large.

Potential for Losing Significant Natural Attributes or Recreational Open Spaces

The property possesses substantial natural attributes. The application states that the property features a broad range of Florida habitat that includes Mixed Rangeland, Freshwater Marsh, Graminoid Prairie Marsh, Upland Mixed Coniferous/ Hardwood, Woodland Pastures, Improved Pastures, Upland Hardwood Forest, Herbaceous (Dry Prairie), Wet Prairie, Pine Flatwoods, and Cypress Domes. The site harbors listed plant species and support numerous rare annual species such as the Bald Eagle, Gopher Tortoise, Florida scrub-jay, and more.

Potential for Being Subdivided

Low-Medium: Not all of the site's twenty-one parcels qualify for residential development due to wetlands and floodplains which make the areas unsuitable for housing or septic systems. However, the application reports the dominant land cover consists of approximately 4,931 acres of uplands. Application of 1 du/ 5 acres on that acreage could potentially allow for 986 residential dwelling units.

Zoning and Densities within the Project Boundaries

The site is zoned Agricultural Development and Conservation (outside UGB (AC). The AC district implements the Rural/Agricultural policies of the Osceola County 2040 Comprehensive Plan to allow agricultural areas to be developed in a manner consistent with the retention of agriculture, open space

and rural character, and typically supports those land uses outside the Urban Growth Boundary. Specific uses premediated within the Rural/Agricultural Zoning Districts are those generally associated with agricultural uses and their support activities.

Existing Land Uses and Future Land Use Designations

The existing site is agriculture. The property is designated the Rural/Agriculture (RA) on the Osceola County Comprehensive Plan Future Land Use Map. Residential development standards within RA are defined within the following policy of the Future Land Use Element:

Policy 1-1.2.3: - Rural/Agricultural Future Land Use Map Designation Defined.

The Rural/Agricultural designation provides for continuation of agricultural production and supporting land uses outside of the adopted Urban Growth Boundary. Maximum density allowed shall be one dwelling unit per five acres. Limited residential subdivision development is allowed based upon meeting the following criteria:

1. The number of units allowed for a development proposed as “ranchettes” shall be based upon net density defined as the total number of dwelling units divided by developable land, i.e., land area minus natural water bodies and wetlands.
2. The number of units allowed for a development proposed as Conservation Subdivision shall be based upon gross density defined as the total number of dwelling units divided by the recreational open space.
 - a. At a minimum, 50 percent of the land area shall be set aside as conservation, agricultural, or recreational open space
 - b. Conservation Subdivision shall optimize the land maintained as open space in order to retain agricultural functions, minimize fragmentation of area resources and/or preserve existing ecological connections. Open space within Conservation Subdivision will be permanently preserved via easement and managed by the agricultural owner, homeowners association, property owners association, land trust, conservation organization, public agency, or other ownership and maintenance entity as defined on the plat. The easement or dedication shall remove all residential development rights from the open space, but shall not limit agricultural, conservation, or recreational uses.

Designations as conservation easement for preservation purposes would be consistent with the currently adopted land use.

Development Potential

Medium to High: The supporting documentation notes increasing development land purchases throughout Osceola County. For the purpose of calculating the maximum residential development potential for the 5,958-acre site, the Rural/Agriculture (RA) density standard of 1 du/5 ac would allow for approximately 1,191 residential units under the “ranchette” criteria. However, both the applicant and the Osceola County Comprehensive Plan 2040 identify considerable floodplains and wetlands onsite. The presence of these resources would limit the residential uses and densities at the permitting stage.

Transportation Planning Issues

The proposed project is located in Florida Department of Transportation (FDOT) District 5. FDOT finds no adverse impacts from the proposed project.

Ongoing Governmental Efforts

Lands adjacent to the Gardner Marsh property are under public ownership and are managed by the SFWMD as part of the Kissimmee Chain of Lakes Management Area. The adjacent properties are managed to protect and enhance their environmental and hydrologic values and to provide public recreational opportunities consistent with resource protection needs.

REFERENCES CITED

Brooks, H. K. 1981. *Guide to the physiographic divisions of Florida*. Florida Cooperative Extension Service, Institute of Food and Agriculture Sciences, University of Florida.

ACKNOWLEDGEMENTS

Staff in the DEP's DSL and 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 Natural Areas Inventory – Geoffrey Parks & Amy Jenkins
- Florida Fish and Wildlife Conservation Commission – Jacqueline Bucheck & David Schutt
- Florida Forest Service – Catherine Ingram & Samuel Kitchings
- Florida Department of State, Division of Historical Resources – Jason O'Donoghue & Brandon Ackermann
- South Florida Water Management District – Steven Coughlin
- Florida Department of Transportation – Ben Naselius
- Florida Department of Economic Opportunity – Barbara Powell
- DEP Division of Environmental Assessment and Restoration – Kevin Coyne
- DEP DSL, Bureau of Appraisal

APPENDICES

Appendix A:

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

Gardner Marsh Conservation Easement: Florida Forever Measure Evaluation 20220803

GIS ACRES = 5,958

MEASURES	Resource Acres ^a	% of project
B1: Strategic Habitat Conservation Areas		
Priority 1	4,559	77%
Priority 2	0	0%
Priority 3	251	4%
Priority 4	0	0%
Priority 5	127	2%
Total Acres	4,937	83%
B2: FNAI Habitat Conservation Priorities		
Priority 1	0	0%
Priority 2	236	4%
Priority 3	1,447	24%
Priority 4	1,277	21%
Priority 5	2,377	40%
Priority 6	564	9%
Total Acres	5,900	99%
B3: Ecological Greenways		
Priority 1	0	0%
Priority 2	5,917	99%
Priority 3	0	0%
Priority 4	0	0%
Priority 5	42	< 1%
Total Acres	5,959	100%
B4: Under-represented Natural Communities		
Upland Glade (G1)	0	0%
Pine Rockland (G1)	0	0%
Scrub and Scrubby Flatwoods (G2)	578	10%
Rockland Hammock (G2)	0	0%
Dry Prairie (G2)	698	12%
Seepage Slope (G2)	0	0%
Sandhill (G3)	0	0%
Sandhill Upland Lake (G3)	0	0%
Upland Pine (G3)	0	0%
Mesic/Wet Flatwoods (G4)	1,442	24%
Upland Hardwood Forest (G5)	0	0%
Total Acres	2,718	46%
B6: Occurrences of FNAI Tracked Species		
G1	0	
G2	0	
G3	0	
G4	1	
G5	9	
Total	10	
C4: Natural Floodplain Function		
Priority 1	262	4%
Priority 2	890	15%
Priority 3	1,231	21%
Priority 4	104	2%
Priority 5	0	0%
Priority 6	0	0%
Total Acres	2,487	42%

MEASURES (continued)	Resource Acres ^a	% of project
C5: Surface Water Protection		
Priority 1	0	0%
Priority 2	269	5%
Priority 3	0	0%
Priority 4	5,566	93%
Priority 5	0	0%
Priority 6	123	2%
Priority 7	0	0%
Total Acres	5,959	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	551	9%
Priority 2	368	6%
Priority 3	223	4%
Priority 4	1	< 1%
Priority 5	0	0%
Priority 6	0	0%
Total Acres	1,144	19%
D3: Aquifer Recharge		
Priority 1	0	0%
Priority 2	457	8%
Priority 3	1,775	30%
Priority 4	2,758	46%
Priority 5	679	11%
Priority 6	291	5%
Total Acres	5,959	100%
E2: Recreational Trails (miles)		
<small>(prioritized trail opportunities from Office of Greenways and Trails & Univ. Florida)</small>		
Land Trail Priorities	0.0	
Land Trail Opportunities	0.0	
Total Miles	0.0	
F2: Arch. & Historical Sites (number)		
	3	sites
G1: Sustainable Forestry		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	1,299	22%
Priority 4	427	7%
Priority 5 - Potential Pinelands	0	0%
Total Acres	1,726	29%
G3: Forestland for Recharge	821	14%

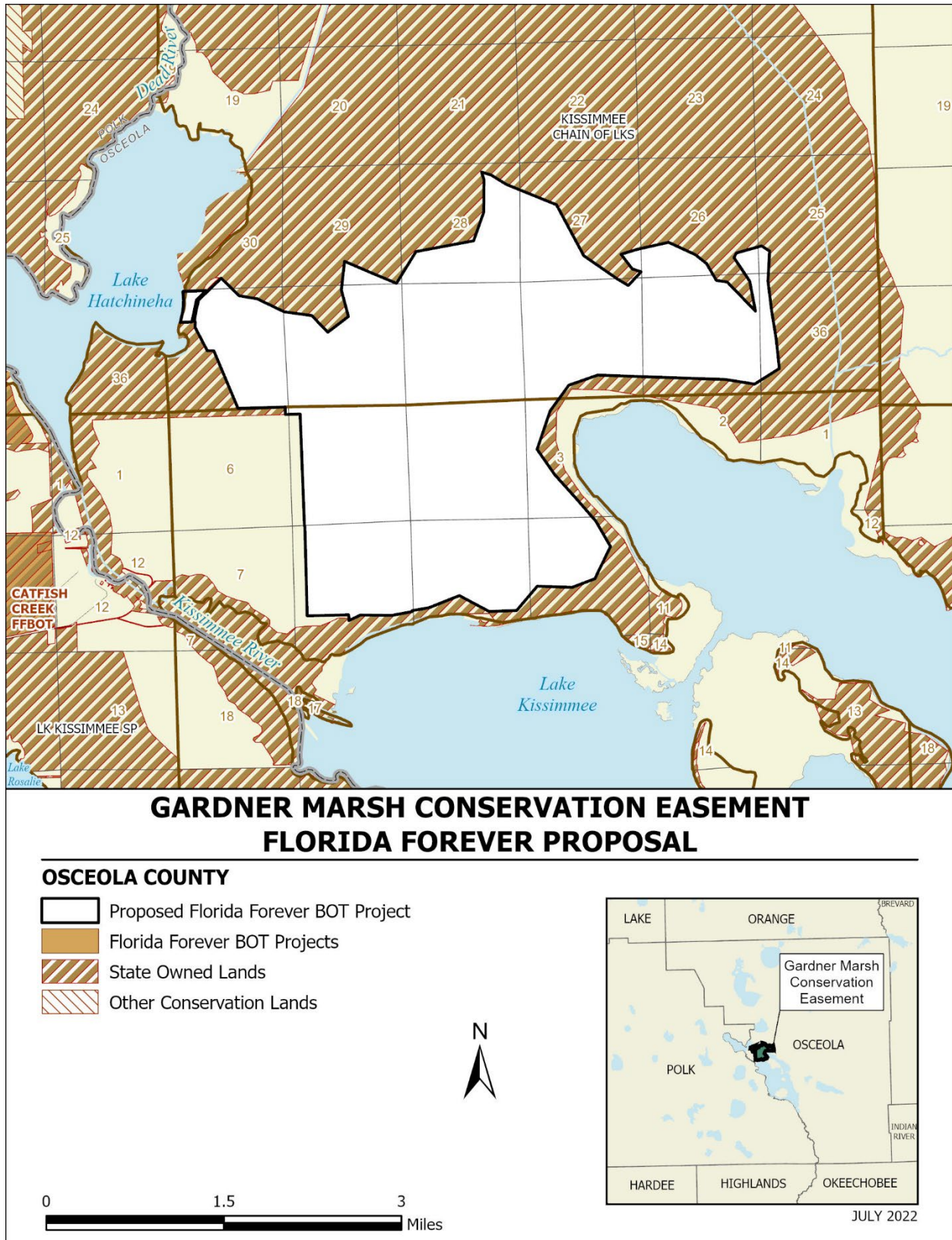
500,076

^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

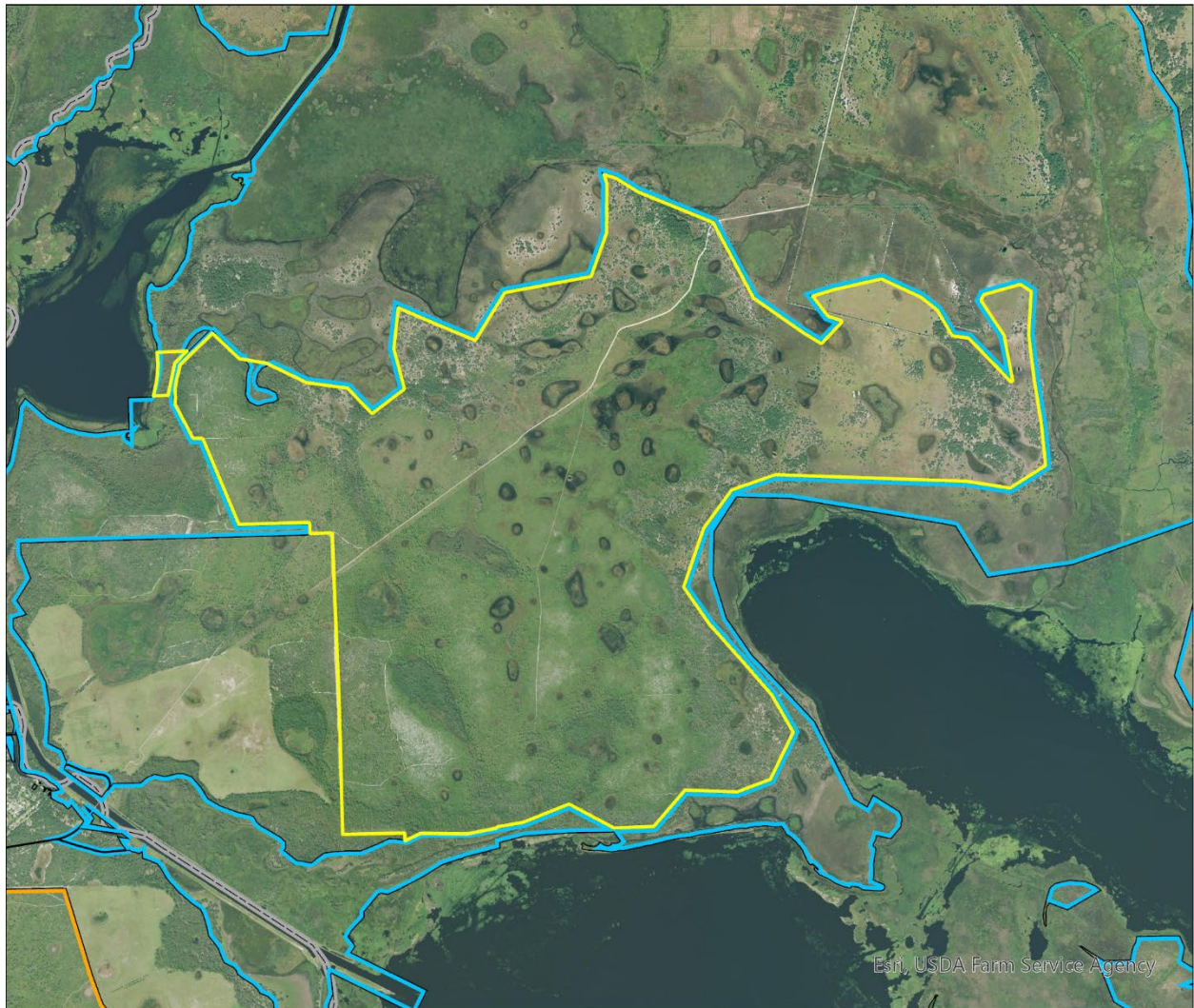
B1: Florida Forever map



B2: Aerial map

Gardner Marsh Conservation Easement Florida Forever Proposal

FLORIDA FOREVER BOARD OF TRUSTEES PROJECT PROPOSAL BOUNDARY AS OF JULY 2022

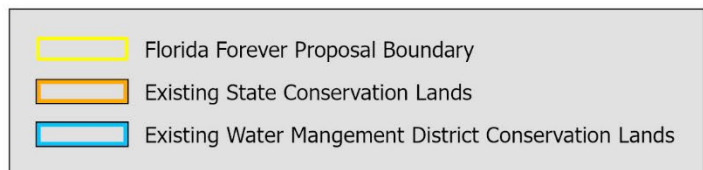


Map Produced by: N. Pasco, July 2022

Background: USA NAIP Imagery Resolution = 1.0 meter



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Appendix C:

PROPERTY ID #'S FOR FINAL RECOMMENDED BOUNDARY

COUNTY	PARCEL ID	OWNER	ACRES PER TAX CARD	JUST VALUE	ASSESSED VALUE	PARCEL DESIGNATION
Osceola	03-29-30-0000-0010-0000	Bronsons LLP	170.9	\$683,600	\$12,100	Essential
Osceola	04-29-30-0000-0010-0000	Bronsons LLP	646.9	\$2,587,600	\$46,100	Essential
Osceola	05-29-30-0000-0010-0000	Bronsons LLP	578.31	\$2,313,200	\$38,800	Essential
Osceola	08-29-30-0000-0010-0000	Bronsons LLP	432.14	\$1,728,500	\$31,900	Essential
Osceola	09-29-30-0000-0010-0000	Bronsons LLP	451.89	\$1,807,600	\$31,500	Essential
Osceola	10-29-30-0000-0010-0000	Bronsons LLP	227.48	\$909,900	\$16,700	Essential
Osceola	25-28-30-0000-0010-0000*	Bronsons LLP	13.68	\$54,703	\$1,072	Essential
Osceola	26-28-30-0000-0010-0000	Bronsons LLP	114	\$456,000	\$14,200	Essential
Osceola	27-28-30-0000-0010-0000	Bronsons LLP	238.68	\$954,700	\$17,700	Essential
Osceola	28-28-30-0000-0010-0000	Bronsons LLP	309.01	\$1,236,000	\$21,500	Essential
Osceola	29-28-30-0000-0010-0000	Bronsons LLP	38.45	\$153,800	\$2,900	Essential
Osceola	30-28-30-0000-0020-0000*	Bronsons LLP	7.18	\$19,796	\$449	Essential

COUNTY	PARCEL ID	OWNER	ACRES PER TAX CARD	JUST VALUE	ASSESSED VALUE	PARCEL DESIGNATION
Osceola	31-28-30-0000-0010-0000*	Bronsons LLP	188.02	\$752,012	\$13,009	Essential
Osceola	31-28-30-0000-0040-0000	Bronsons LLP	155.48	\$621,900	\$11,000	Essential
Osceola	32-28-30-0000-0010-0000	Bronsons LLP	518.58	\$2,074,300	\$37,000	Essential
Osceola	32-28-30-0000-0020-0000	Bronsons LLP	38.9	\$155,600	\$2,500	Essential
Osceola	33-28-30-0000-0010-0000	Bronsons LLP	632.82	\$2,531,200	\$42,800	Essential
Osceola	34-28-30-0000-0010-0000	Bronsons LLP	566.7	\$2,266,800	\$40,100	Essential
Osceola	35-28-30-0000-0010-0000	Bronsons LLP	523.93	\$2,095,700	\$37,300	Essential
Osceola	36-28-30-0000-0010-0000	Bronsons LLP	67.63	\$270,500	\$4,900	Essential
			5711.8	\$23,673,412	\$423,531	

*Partial or prorated parcel

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

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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. Wet prairie and depression marsh



2. Flatwoods



3. Flatwoods and dry prairie



4. Scrub habitat bordering road



5. Remnant rosemary scrub



6. Improved pasture



7. Mesic hammock