Buck Island Ranch

Less-than-Fee

Florida Forever Project Evaluation Report

Highland County

prepared by

Division of State Lands Staff

Acquisition and Restoration Council Liaison Staff

and

Florida Natural Areas Inventory

DRAFT for June 12, 2020 ARC meeting

Proposed Land Manager	Landowner (DSL monitors)
Acres	6,560
Just Value	$10.8 million
Application Date	October 30, 2019
Sponsor	Archbold Expeditions

Executive Summary

The Buck Island Ranch less-than-fee proposal (BIR) is located in Highlands County. It is calculated to be 6,560 GIS acres, and 6,533 for county tax purposes and has a just value of $10.3 million. Sponsored by Dr. Hilary Swain, Executive Director for Archbold Expeditions, Inc., based at Archbold Biological Station (ABS), Part of the MacArthur Agro-Ecology Research Center, it has been managed by the ABS since 1988 as a full-scale cow-calf operation and was fully acquired by ABS in 2018. The entire ranch is comprised of 10,504 acres however, 3,783 acres of the ranch is encumbered by conservation easements acquired by the U.S. Department of Agriculture, Natural Resources Conservation Service Wetland Reserve Easement (WRE)/Wetland Reserve Program Easement (WRP).

Buck Island Ranch is bordered by several WRP easements including the Fisheating Creek easement (Lykes Brothers), Fisheating Creek Wildlife Management Area (WMA), and the Turkey Run (Smoak Ranch) conservation easement and other proposed lands. Approximately 92% of Buck Island Ranch lies within a designated FWC Strategic Habitat Conservation Area for the Coopers Hawk and the Short-tailed Hawk and provides habitat for , crested caracara, Florida burrowing owl, Florida sandhill crane, snail kite, mottled duck, short-tailed hawk, Southeastern American kestrel, swallow tail kite, Florida black bear and Florida panther.

Acquisition of Buck Island Ranch would increase the amount of protected area and connectivity between established conservation lands in the greater landscape. It is one of 18 partners in the Long-term Agro-ecosystem Research Network nationwide, and Florida's only site. Three-thousand head of beef cows with calves are managed on this land. Research is conducted on the operations and management employed at the ranch. The research done here is multifaceted, addressing protecting environmental quality and the quality of life in rural areas in concert with the improved agricultural productivity and efficiency goals of basic agricultural research. They provide educational programs and research internships, but general public access would not be compatible with either the research or the cow-calf operation.

Buck Island Ranch lies at the southern end of the Istokpoga Prairie Province. It is accessed by JC Durrance Road which intersects State Road 70; the access road and 134 acres of developed area use are excluded from the proposal.

About 4,000 acres is in improved pasture and 1,500 acres in semi-improved pasture. The semi-improved pasture is located in one block in the western of the western portion of Buck Island Ranch. Its most extensive natural feature is the more than one-hundred depression marshes that can be found throughout the property. About 70 acres of unaltered wet prairie with a high diversity of wetland plants is present in broad flats surrounding some marshes. A 177-acre block that was once a citrus grove is now used as a

hayfield and is part of the irrigation project with the South Florida Water Management District's phosphorous reduction program. Woodland pasture covers approximately 1% of the parcel.

In addition to the ranch's location within designated FWC Strategic Habitat Conservation Area, for the Coopers hawk and the Short-tailed hawk, the FNAI database includes records on the site for caracara, woodstork, round tailed muskrat, burrowing owls, and abundant Florida black bear. Kestrels and limpkins were observed during the field assessment, though no evidence of nesting was found. Eastern indigo snake, Snail kite, and Florida panther have also been documented or reported.

Acquiring this proposal would protect 20 recorded archaeological sites.

Buck Island Ranch is a wealth of partnerships for agricultural research and resource protection with the water management district, other regional agencies, with universities, with other Agro-ecosystem partners, with local ranchers, with the U.S. Department of Agriculture and many others. Outreach to other potential partners is ongoing.

This proposal is a one-of-a-kind research and cow-calf operation in Florida. It would ideally be considered as a standalone project in the Partnerships and Regional incentives category for ranking purposes. As a single ownership, it should be designated essential.

If acquired as a less-than-fee proposal, Buck Island Ranch would continue to be managed by the ABS, with periodic oversight of the Division of State Lands.

Purpose for Acquisition

Buck Island Ranch is proposed for the following public purposes:

(a) enhance the coordination and completion of land acquisition projects;
(b) increase the protection of Florida's biodiversity at the species, natural community, and landscape levels;
(c) protect, restore, and maintain the quality and natural functions of land, water, and wetland systems of the state;
(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;
(e) increase natural resource-based public recreation or educational opportunities;
(f) preserve significant archaeological or historic sites and;
(g) increase the amount of forest land available for sustainable management of natural resources.

Location and Proximity to Other Managed Areas

The Buck Island Ranch proposal comprises 6,560 GIS acres (6,533 acres per application) in southcentral Highlands County on the south side of State Road 70 approximately seven miles east of U.S. Highway 27. The eastern boundary of the proposal abuts Glades County. This acreage represents the portion of the larger ownership that is not under a conservation easement. The rest of the ranch, an additional 3,783 acres (total acres is 10,504 acres), has conservation easements held by the U.S. Department of Agriculture. WRP #167 and #201 and WRE #302, make up most of the southern third of the ranch as well as a block on the east side; both areas are contiguous with the proposal area. An access road from S.R. 70 and 134 acres of developed area within the ranch are excluded from the proposal acreage.

The proposal is connected to a complex of conservation lands and lands proposed for conservation including Fisheating Creek FF BOT Project, Hendrie Ranch FF Proposal and Archbold Biological Station to the west, and Fisheating Creek/Lykes Brothers Conservation Easement (CE) and Fisheating Creek/Smoak Groves CE to the south. The C41 Harney Pond Canal wraps around the north and west boundaries and continues along the southern boundary of the proposal; it divides the proposal area from the southern WRP parcels within the ranch.

Resource Description

Florida Natural Areas Inventory (FNAI)

This evaluation is based on information gathered from the proposal, Florida Cooperative Land Cover data version 3.2 and information in the FNAI database. A field survey was conducted on February 19,

2020 by FNAI staff Dan Hipes and Katy NeSmith, along with the Acquisition and Restoration Council (ARC) liaison staff and representatives for the landowner.

Buck Island Ranch lies at the southern end of the Istokpoga Prairie Province, a broad gentle erosion swale that slopes southward to Lake Okeechobee (Brooks 1981). Plio-Pleistocene sand and sandy shell occur below shallow organic soils. The relatively recent historic landscape was dry and wet prairies with imbedded hammocks and marshes. Beginning in the 1940s the prairies were converted to improved (to a varying degree) pasture and row crops. The C41 Harney Pond Canal was dug during the 1950s as part of the U.S. Army Corps of Engineers expansion of canals flowing into Lake Okeechobee. Archbold Biological Station (ABS) began managing the ranch in 1988 and established the MacArthur Agro-ecology Research Center. In November 2018, ABS acquired the ranch, and is conducting ecological and conservation research related to cattle ranching while providing educational programs and research internships. ABS has received numerous environmental awards for their work on the ranch.

The ranch is a commercial scale working cattle ranch with an approximately 3,000-head beef cow-calf operation, making it among the top 400 producers in the country. About 4,000 acres (61%) of the proposal is in improved pasture, and about 1,500 acres (23%) is semi-improved. Several small areas within the improved pasture have some component of cabbage palm or oak and are classified as woodland pasture. A multitude of relatively small depression marshes are scattered throughout the site and make up the vast majority of natural vegetation on the ranch. Several prairie hammocks with well-developed canopies are associated with some of the clusters of marshes. Although considerably modified from its natural condition, the ranch provides important habitat for a suite of grassland birds characteristic of central Florida including Florida sandhill crane, caracara, burrowing owl, and meadowlark.

More than a hundred depression marshes account for approximately 10 percent of the proposal area making it the most extensive natural feature. The individual marshes vary in condition, with those found in the semi-improved pasture having vegetation most characteristic of natural marshes. Typical species in these include maidencane (*Panicum hemitomon*), lance-leaved arrowhead (*Sagittaria lancifolia*), pickerelweed (*Pontedaria cordata*), and peelbark St. John's wort (*Hypericum fasciculatum*). Sawgrass (*Cladium jamaicense*) is present in some of the depressions. Disturbed marshes, which are for the most part within the improved pasture, tend to be dominated by bushy bluestem (*Andropogon glomeratus*), and common (soft) rush (*Juncus effusus*), often with a transition area dominated by weedy species including big carpetgrass (*Axonopus furcatus*), broomsedge bluestem (*Andropogon virginicus*), Egyptian panicgrass (*Paspalidium geminatum*), dogfennel (*Eupatorium capillifolium*) and turkey tangle fogfruit (*Phyla nodiflora*). Depression marshes are vital habitat for reptiles and amphibians (mostly treefrogs) in

the area. They also serve as important feeding areas for a multitude of wading birds including wood stork (currently federally listed as threatened). Snail kites were not observed during the field assessment, but reportedly use the marshes on the ranch at least seasonally.

Wet prairie is present in broad flats surrounding some of the depression marshes within semi-improved pasture. These unaltered prairies have a high diversity of wetland plants; a quick survey during the field assessment revealed pink sundew (*Drosera capillaris*), spadeleaf (*Centella asiatica*), tenangle pipewort (*Eriocaulon decangulare*), roundpod St. John's wort (*Hypericum cistifolium*), blue maidencane (*Amphicarpum muhlenbergianum*), redroot, (*Lacnanthes caroliana*), bog white violet (*Viola lanceolata*), little bluestem (Schizachyrium scoparium), bottlebrush threeawn (*Aristida spiciformis*), tall threeawn grass (*Aristida patula*), Gulf hairawn muhly (*Muhlenbergia sericea*), sand cordgrass (*Spartina bakeri*) and Edison's ascyrum (*Hypericum edisonianum*) a local endemic. Approximately 70 acres of wet prairie was mapped within the proposal. The quality of the full extent of these areas was not confirmed during the field assessment.

Prairie (mesic) hammocks are present in association with several of the marshes, developing in fire shadows or areas of long-term fire exclusion. These have a well-developed canopy of live oak (*Quercus virginiana*), cabbage palm (*Sabal palmetto*) with abundant epiphytes including Tillandsia species and golden polypody (*Phlebodium aureum*). These hammocks are highly used by cattle, resulting in an open weedy shrub and herb layer dominated by beauty berry (*Calicarpa americana*), tropical soda apple (*Solanum viarum*; FLEPPC category I), Caesar's weed (*Urena lobata*; FLEPPC category I), dogfennel (*Eupatorium capillifolium*), bahia grass (*Paspalum notatum*), and big carpet grass.

Improved pasture covers the greatest area within the proposal, accounting for more than sixty percent based on aerial imagery and confirmed to a large extent during the field assessment. These pastures were planted primarily in bahia grass and are limed and fertilized to maximize forage production. Other pastures grasses that were historically planted include Pangola grass (*Digitaria eriantha*), limpograss (*Hemarthria altisimma*), and torpedo grass (*Panicum repens*). These species persist as occasional or subdominant grasses, particularly in wet soils. The improved pastures are occasionally mowed and chopped to control weeds and woody vegetation. The invasive exotic tropical soda apple is common in the improved pastures and is actively controlled by mowing and bicontrol (beetle).

Semi-improved pasture covers approximately 1,500 acres, most of which is located in one block in the western third of the ranch. The balance of native prairie vegetation versus pasture grasses ranges considerably from essentially native to almost entirely weedy species and pasture grasses. These areas are nevertheless managed as native pastures with prescribed fire and roller chopping to control sabal palmetto. The semi-improved pastures are not limed or fertilized. The following species were observed

at one stop in an exceptionally natural portion of the semi-improved pasture: dwarf live oak (*Quercus minima*), fetterbush (*Lyonia lucida*), coastalplain staggerbush (*Lyonia fruticosa*), wax myrtle (*Morella cerifera*), meadow beauty (*Rhexia sp*), little bluestem, bahia grass, crown grass (*Paspalum sp*), panicum (*Panicum longifolium*), big carpetgrass, spring ladies'-tresses (*Spiranthes vernalis*), milkweed (*Aesclepias pedicellata*), beaksedges (*Rhynchospora spp*), slender flattop goldenrod (*Euthamia caroliniana*), yellow milkwort (*Polygala rugelii*), procession flower (*Polygala incarnata*), candyroot (*Polygala nana*), redtop panicum (*Panicum rigidulum*). Less natural portions of the semi-improved pasture were generally dominated by big carpetgrass, broomsedge bluestem, bushy bluestem, dog fennel and other weedy grasses and forbs.

A 177-acre block at the southern end of the proposal was identified as "agricultural." The block is a former citrus grove that is now used as a limpograss hayfield. The hayfield is part of an irrigation project with South Florida Water Management District to reduce phosphorus in water moving down the Harney Pond Canal.

Woodland pasture covers approximately 1 percent of the proposal. These are for the most part within the improved pasture matrix. They are essentially improved pasture with a canopy of either sabal palm and/or live oak.

Natural communities and landcover types within Florida Forever proposal

Community or Landcover	Acres	Percent of Proposal
Depression marsh	660	10
Wet prairie	73	1
Mesic hammock	51	1
Pasture – improved	4009	61
Pasture – semi-improved	1506	23
Agriculture	177	3
Woodland pasture	83	1
Total	6,560	100

Source: Florida Natural Areas Inventory

Florida Fish and Wildlife Conservation Commission (FWC)

This summary provides a resource assessment of the Buck Island Ranch (BIR) Florida Forever proposal based on field observations during the February 19, 2020 tour and results of the GIS analysis. The proposal includes one property comprised of approximately 6,533 acres in southcentral Highlands County. An additional 3,783 acres is already under a conservation easement acquired by the U.S. Department of Agriculture, bringing the total size of Buck Island Ranch to 10,504 acres. Buck Island Ranch is located approximately seven miles east of U.S. Highway 27 on the south side of State Road 70.

The acreage of Buck Island Ranch under proposal for this conservation easement (CE) is within a complex of conservation lands, existing CEs, and lands proposed for conservation. The proposal area abuts Glades County on the eastern boundary and the Fisheating Creek Ecosystem Florida Forever (FF) BOT Project is on the south eastern boundary. The Hendrie Ranch FF proposal and Archbold Biological Station (ABS) are connected to the west, and the Fisheating Creek/Lykes Brothers CE and Fisheating Creek/Smoak Groves CE to the south. Buck Island Ranch is surrounded on the north, west, and part of the south boundary by the C41 Harney Pond Canal, which is a significant feature moving water to the south. This canal divides the proposal area from Wetland Reserve Program Easements to the south, which are part of the ranch.

Buck Island Ranch historically contained large acreages of dry and wet prairie, hammocks, and scattered wetlands. Beginning in the 1940s, BIR was converted to improved pasture and row crops through ditching and draining. In the 1950s, the C41 Harney Pond Canal was built to move water off the area south towards Lake Okeechobee. In 1988, ABS established the MacArthur Agro-ecology Research Center for agroecology research and began managing the ranch. Archbold Biological Station acquired BIR in 2018 and continues to conduct ecological and conservation research, as well as providing outreach and education about intensively modified Florida ranchland.

Buck Island Ranch is primarily comprised of improved pasture (5,304 acres; 81%). Of this, approximately 1,506 acres are less intensively managed as pasture and have pockets of native vegetation within them. Prairies and bogs (350 acres), marshes (289 acres) and isolated freshwater marsh (80 acres) comprise 5%, 4%, and 1% respectively. The remaining acreage contains 177 acres (3%) of cropland (a former orange grove) and less than 1% of rural, cultural, and transportation land covers. Pastures on BIR are ditched, and water control structures are present, allowing managers to control water levels within some ditches and marshes. Dominant non-native pasture grasses observed include limpograss (*Hemarthria altissima*) and bahiagrass (*Paspalum notatum*).

There are very few fire-dependent native landcover types on Buck Island Ranch, but there is an active prescribed fire program that burns the pastures and depression marshes. This improves forage for cattle, but also maintains early-successional grassland habitat that is essential for many wildlife species in Florida. Frequent fire in depression marshes provides excellent habitat for pond-breeding amphibians and various wading bird species. Exotic invasive plant species do not appear to be a major issue on BIR, aside from the non-native pasture grasses. Tropical soda apple (*Solanum viarum Dunal*) was observed within the pastures and climbing fern was observed in several ditches.

The cattle program on Buck Island Ranch consists of approximately 3,000 cows in a cow/calf operation and is among the top 400 producers in the country. The property has several cattle pens and other

infrastructure for cows. As a leader in agroecology research, managers at BIR have developed programs for tracking cows throughout their lifespans at the ranch, and have dedicated impressive resources towards establishing a working cattle ranch that also strives to manage impacts to water quality, be an example to other ranching partners, and provide a landscape that supports a working cattle ranch but also provides habitat for use by wildlife.

Wildlife species observed during the tour included wood stork (*Mycteria Americana*), eastern meadowlark (*Sturnella magna*), northern crested caracara (*Caracara cheriway*) great blue heron (*Ardea herodias*), red-shouldered hawk (*Buteo lineatus*), and many other species. The property manager also reports that Florida burrowing owls (*Athene cunicularia*) have been observed on the property, as well as Florida black bear (*Ursus Americana floridanus*), snail kite (*Rostrhamus sociabilis*), and Florida panther (*Puma concolor coryi*).

During the field tour, listed wildlife species observed included Florida sandhill crane (*Grus canadensis pratensis*), and the manager reports frequent nesting in depression marshes on BIR. Crested caracara were observed multiple times during the tour, including a likely nesting area. American alligator (*Alligator mississippiensis*) were also observed, as was a southeastern American kestrel (*Falco sparverius paulus*). The semi-improved pastures on BIR are highly suitable for use by wildlife and provide open grassland areas interspersed with cabbage palm (*Sabal palmetto*)/oak hammocks and depression marshes. Species such as the crested caracara have been found to inhabit pastures almost exclusively in Florida, as so much of their original habitat (dry prairie) was converted to pastures in the 1900s. This species, and other such as the Florida sandhill crane and southeastern American kestrel, have adapted well to utilizing well-managed semi-improved pasture and BIR contributes significantly to the amount of habitat available for these species in this area. Furthermore, many non-listed grassland bird species are experiencing declines in Florida, and the preservation of pastures on BIR will continue to provide habitat for grassland birds. Finally, this area also contributes to habitat connectivity that is necessary for panthers and other wide-ranging species, given its location within a mosaic of existing and proposed conservation lands and private ranches.

The FWC GIS analysis of the Cooperative Land Cover v3.3 indicates that BIR is primarily improved pasture (5,304 acres; 81%). Prairies and bogs, marshes and isolated freshwater marsh comprise 5%, 5%, and 1% respectively. The remaining acreage contains 177 acres (3%) of cropland (a former orange grove) and approximately 4% of rural, cultural, and transportation land covers. Approximately 12% of the proposal is classified as wetland based on the National Wetlands Inventory.

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 to10; a

rank of 10 being of greatest value. The mean FLAM score for this property is 6.5. All the project is identified as Priority 1 or 2 (of 5) for the Critical Lands and Waters Identification Project. Approximately 12% of the proposal is classified as wetland based on the National Wetlands Inventory.

Approximately 92% of BIR lies within a designated FWC Strategic Habitat Conservation Area (SHCA) for two species, the Coopers hawk (*Accipiter Cooperii*) and Short-tailed hawk (*Buteo brachyurus*). The FWC GIS Environmental Resources Analysis containing more detailed information has been provided under separate cover.

In summary, establishment of a conservation easement on the BIR would increase the amount of protected area and connectivity between established conservation lands in the greater landscape. A habitat management program that continues to incorporate routine prescribed fire will continue to provide early successional grassland habitat and benefit many imperiled wildlife species.

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 6,560 acres (100%) will contribute to the enhancement of essential natural resources and connecting linkage corridors.

Measure A2:

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

If acquired 6,560 acres (100%) of the proposal will be protected through less than fee acquisition.

Goal B:

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

Measure B1:

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

Approximately 6,039 acres (92%) of the project will contribute to significant Strategic Habitat Conservation Areas, as noted in the FFME table prepared by FNAI. (See appendix for more detail.)

Measure B2:

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

An analysis of priority conservation areas based on Florida Forever Conservation Needs Assessment data may be found in the Florida Forever Measures table. Habitat conservation priorities for 281 of Florida's rarest species were mapped and divided into six priority classes. The Florida Forever Measures table shows the acres for each priority class found on the Buck Island Ranch proposal. As summarized in the evaluation table, most of the site (91% or more) contributes to Ecological Greenways, Surface Water Protection, Aquifer Recharge, Strategic Habitat Conservation Areas, Natural Floodplain Function, and FNAI habitat conservation priorities.

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

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

Scientific Name	Common Name	Global Rank	Acres
Caracara cheriway	Crested caracara	G5	6,106
Mycteria americana	Wood stork	G4	716
Puma concolor coryi	Florida panther	G5T1	164
Ursus americanus floridanus	Florida black bear	G5T2	6,560

Source: Florida Natural Areas Inventory (FNAI)

Measure B3:

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

Approximately 6,383 acres (97%) of the project will contribute to significant Strategic Habitat Conservation Areas, as noted in the FFME table prepared by FNAI. (See appendix for more detail.)

Measure B4:

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

The Florida Forever natural community analysis includes only those communities that are under-represented on existing conservation lands. This analysis provides a conservative estimate of the extent of these communities, because it identifies only relatively undisturbed portions of these communities that occur within their historic range. The Florida Forever Measures table lists the acreages of under-represented natural communities found on the site. Based on this analysis, the Buck Island Ranch proposal contains 0 acres of under-represented natural communities. The site nevertheless contains some dry prairie-like areas that are beneficial to native species.

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.

Although the Buck Island Ranch proposal helps to fill in gaps within conservation areas it does not contribute to a contiguous landscape-sized protection area of more than 50,000 acres. Other gaps remain to be filled.

Measure B6:

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

The Florida Natural Areas Inventory database includes records for caracara, wood stork and round-tailed muskrat. Burrowing owl is known to occur on site; records for this species will be added as soon as source documents are received. The site is within a general region where the Florida black bear is considered by the Florida Fish and Wildlife Conservation Commission to be abundant. Although limpkin were observed on site during the field assessment, evidence of nesting is required for occurrence

records for that species. Kestrels were observed on site during the field assessment; however, because of the time of year it is not known whether the individuals were migrants or our rare Southeastern American kestrel.

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

Rare plants and animals documented or reported to occur within the Florida Forever proposal conservation need

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
Caracara cheriway	Crested caracara	G5	S2	T	FT
Ursus americanus floridanus	Florida black bear	G5T4	S4	N	N
Drymarchon couperi	Eastern indigo snake	G3	S3	T	FT
Athene cunicularia floridana	Florida burrowing owl	G4T3	S3	N	ST
Mycteria americana	Wood stork	G4	S2	E	FE
Rostrhamus sociabilis	Snail kite	G4G5	S2	E	FE
Puma concolor coryi	Florida panther	G5T1	S1	E	FE

Source: Florida Natural Areas Inventory (FNAI)

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.

ABS is an active partner in regional plans for hydrologic restoration and nutrient mitigation. There are more than 20 water control structures on Buck Island Ranch to regulate water levels and maintain wetlands. Holding water on site also helps to reduce the amount of nutrients leaving the ranch. Although no active natural community restoration is planned, the regular use of prescribed fire helps to maintain the remnant native vegetation as habitat for the region's characteristic species. Several invasive exotic

plant species occur on the ranch. They are actively controlled using mechanical means, herbicide, and biocontrol.

Measure C4:
The number of acres acquired that protect natural floodplain functions.

Approximately 5,961 acres (91%) provides for the protection of natural floodplain functions, as noted in the FFME table prepared by FNAI. (See appendix for more detail.)

Measure C5:
The number of acres acquired that protect surface waters of the State.

Approximately 6,545 acres (100%) provides for the protection of surface waters of the state, as noted in the FFME table prepared by FNAI. (See appendix for more detail.)

Measure C8:
The number of acres of functional wetland systems protected.

Approximately 719 acres (11%) provides for the protection of functional wetlands, as stated in the FFME table prepared by FNAI. (See appendix for more detail.)

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

Measure D3:
The number of acres acquired of groundwater recharge areas critical to springs, sinks, aquifers, other natural systems, or water supply.

Approximately 6,559 acres (100%) provides for the protection of groundwater recharge areas, as noted on the FFME table prepared by FNAI. (See appendix for more detail.)

Property is ~10,024 acres, north west of Lake Okeechobee and just southeast of Lake Placid. This property is in the Lake Okeechobee BMAP. The property would provide water protection and ground water protection for the region. It should be noted the proposal is located in Northern Everglades BMAP's, and while based on the scoring may not be considered high priority, this area is of particular interest and focus for restoration efforts.

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

Goal E:
Increase natural resource-based public recreational and educational opportunities

Measure E1:
The number of acres acquired that are available for natural resource-based public recreation or education.

The Buck Island Ranch is a 10,504-acre property located in Highlands County. The Buck Island Ranch is a working cattle ranch and is owned and operated by Archbold Biologic Station. The property is

currently used for ranching and natural-resource-based education including tours, educational outreach for Highlands County and surrounding school district, and continuing education classes for the general public. As the proposed acquisition is a less-than-fee, it is anticipated that the ranch will remain in private ownership and will continue to provide these compatible uses. No other public access is proposed.

Goal F:

Preserve significant archaeological or historic sites

Buck Island Ranch is a working cattle ranch managed and run by the Archbold Biological Station as a platform for agroecology research. Originally consisting largely of Florida dry prairie along with seasonal wetlands, wet prairies, scattered hammocks, and bay swamp. Today's Buck Island Ranch is comprised of a matrix of improved and semi-native pasture interspersed with seasonal wetlands and hammocks.

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 project would meet Measure F1 as it would protect 20 recorded archaeological sites and one recorded Resource Group.

Measure F2:

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

Cultural Resources:

This tract holds 20 archaeological sites and one Resource Group currently listed in the Florida Master Site File. The applicant states that there is one structure on the property that is older than 50 years old. The ranch manager was not aware of any archaeological sites on the property.

A number of cultural resource assessment surveys have been conducted on Buck Island Ranch property. In 2013, one of these surveys was conducted by Environmental Services, Inc. in advance of USDA – Natural Resource Conservation Service (NRCS) acquisition of the Wetlands Reserve Easement (WRE) on Buck Island Ranch. The USDA – NRCS is a federal agency that provides technical and financial assistance to landowners for natural resource conservation. All USDA – NRCS WRE Projects must undergo archaeological survey prior to any restoration or construction activities in order to satisfy Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR Part 800.4. Recently, in 2018 an USDA – NRCS cultural resource coordinator returned to Buck Island Ranch in order to determine impacts to the recorded cultural resources on the property. As a result of the latest survey, a 50 ft avoidance area around all archaeological sites has been recommended to ensure there is no adverse effects during ground disturbing activities. Survey contracted or carried out by USDA –

NRCS did not occur across the entire Florida Forever Project proposal area; however, based upon their results, we would expect other as yet unrecorded archaeological sites to exist on the property.

Field Observations:
No substantial ground disturbance was observed during field review of the property. None of the archaeological sites were specifically visited during the field review so the condition of these sites were not assessed by the author. When asked, the ranch manager was not aware of any sites within the project boundaries.

Goal G:
Increase the amount of forestland available for sustainable management of natural resources

The proposal has a moderate to high potential for contributing to recreation and open space needs. The proposal is for less than fee simple acquisition, and thus, the opportunity for public access recreation would depend on the terms of the acquisition. The property could function as a wildlife corridor. Potential recreational activities could include bicycling, camping, dog walking, environmental education and interpretation, fishing, hiking/jogging, horseback riding, wildlife observation and photography. These recreational uses would likely be compatible with the future land use designation of Agriculture.

Criteria
Section 259.105 (9), Florida Statutes

(a) The project meets multiple goals described in subsection (4).
(b) The project is part of an ongoing governmental effort to restore, protect, or develop land areas or water resources.
(c) The project enhances or facilitates management of properties already under public ownership.
(d) The project has significant archaeological or historic value.
(e) The project has funding sources that are identified and assured through at least the first 2 years of the project.
(f) The project contributes to the solution of water resource problems on a regional basis.
(g) 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.
(h) The project implements an element from a plan developed by an ecosystem management team.
(i) The project is one of the components of the Everglades restoration effort.
(j) The project may be purchased at 80 percent of appraised value.

(k) 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.

(l) The project is a joint acquisition, either among public agencies, nonprofit organizations, or private entities, or by a public-private partnership.

(m) The Acquisition and Restoration Council shall give increased priority to those projects for which matching funds are available and to project elements previously identified on an acquisition list pursuant to this section that can be acquired at 80 percent or less of appraised value.

Management

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

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

Funding Sources

Florida Forever Funds

Funding for Mapping, Appraisal, Negotiations and Closing

Florida Forever Funds

Ownership Pattern and Acquisition Planning

Title information was not provided. Based on information from the property appraisers web sites, the property is owned by Amtel Farm Inc. The map attached to the application does not include the outline of the 20 acres located along the subject's south perimeter.

Title and Legal Access Issues

Title issues that may be significant in the negotiation process would be determined during the preparation of the appraisal map and title information review. Access to the property is via S.R. 70, an improved public road.

Jurisdictional and Sovereignty Lands Issues
There do not appear to be any sovereignty lands associated with this project. The property appears to be mostly pasture, some agricultural fields and wetlands. There may be jurisdictional wetlands located on the property. The limits and area of the jurisdictional wetlands and uplands would be determined during the appraisal mapping.

Known Encumbrances (Easement, Long-Term Leases, Restrictive Covenants, Etc.)
The potential easements and encumbrances are currently unknown. Easements and encumbrances of record associated with the project would be identified in the title information and reported in the appraisal map accordingly.

Description and Location of Hazardous Waste Sites, Dumps, Borrow Pits
There are no apparent contamination sites within the project based on the application and research of the property appraiser's website information.

Legal Issues
BSM noted no legal issues at this time.

Acquisition Phases
The proposal is for acquisition of the easement in a single transaction.

Government Planning and Development

Contribution to Recreation and Open Space Needs
This project is proposed in the less-than-fee category for the purchase of a conservation easement which would not provide public access or public recreational use. However, Archbold Research center does host swamp buggy tours and provides educational outreach opportunities as determined by the landowner.

Potential for Losing Significant Natural Attributes or Recreational Open Spaces
The subject property contains an abundance of natural resource features that provide habitat for an array of plants and animals. The property provides significant watershed and water quality protection. Because the potential for urban development is low to moderate in this area, there is low to moderate potential for losing the natural attributes located on the subject property.

The proposal has a moderate to high potential for contributing to recreation and open space needs. The proposal is for less than fee simple acquisition, and thus, the opportunity for public access recreation would depend on the terms of the acquisition. The property could function as a wildlife corridor. Potential recreational activities could include bicycling, camping, dog walking, environmental education

and interpretation, fishing, hiking/jogging, horseback riding, wildlife observation and photography. These recreational uses would likely be compatible with the future land use designation of Agriculture.

Potential for Being Subdivided

The subject property has a low to moderate potential for being subdivided because it is not in close proximity to existing urban type uses, the future land use designation has a maximum residential density of one dwelling unit per five acres, and Highlands County has a relatively low rate of population growth. The subject property is surrounded predominantly by the Agriculture future land use designation. The surrounding existing land uses are predominantly rural and agriculture in character, which pose only a low/moderate threat of conversion of the subject property to non-agricultural use.

Zoning and Densities within the Project Boundaries

The subject property is zoned OUA in Glades County and RG1 in Hendry County. The open use agricultural (OUA) district is intended for agricultural uses and to preserve for agricultural uses those lands with productive agricultural development potential. Open spaces, parklands, watersheds and water recharge areas are also intended to be protected in this district. The regulations discourage or prohibit nonagricultural oriented residential development and generally prohibit commercial and industrial development. Certain recreational activities that are appropriate to the district are permitted.

Residential/Low Density (RG1) zoning is intended for low density residential uses. Lands classified as Residential - Low Density are primarily lands within the rural areas of Hendry County that have been or may utilized for rural residential purposes. Residential-Low Density shall be defined as residential development with the following characteristics: single-family units, low density, sporadic, and generally isolated from the urban zones and in areas not planned for public infrastructure. Uses permitted within this category are conventional single-family residential uses with customary accessory structures. Mobile home units are not permitted. Institution and recreation facilities are permitted within this category. Agricultural activities in existence at the time of the adoption of this Comprehensive Plan Amendment may continue, but may not be enlarged, nor may new agricultural activities occur except in compliance with the Land Development Code.

Estimated Cost of Appraisal Mapping

The project contains 6,500 acres +/- based on the parcel information included with the application and FNAI Evaluation. The property lies within parts of 18 land sections.

Estimated costs for appraisal mapping of project could be $10,000.00. If there were boundary surveys available or other survey information available this cost would be reduced significantly, or the appraisal mapping could be prepared in-house by BSM.

Existing Land Uses and Future Land Use Designations

The existing land use on the subject property is agriculture (cattle operation, sod, and MacArthur Agro-ecology Research Center) and limited hunting. The existing land use on the surrounding area is: (North) agriculture; (South) agriculture; (East) agriculture; (Southwest) Miccosukee Tribe of Indians; and (West) agriculture.

Development Potential

Buck Island Ranch cattle operations and other agricultural activities are operated at a commercial scale. With a 3,000-head beef cow-calf operation, the ranch is among the top-twenty beef cattle operations in Florida (based on the number of head) and among the top 400 producers in the country. Agricultural operations and the land serve as a platform for agroecology research. This essential living laboratory, on a ranch landscape, is the basis for studies of Florida biodiversity, and of cycles of fire, water, nutrients, and carbon in working landscapes.

Existing Land Uses and Future Land Use Designations

The subject is currently being used for cattle ranching as well as environmental and agricultural research.

Transportation Issues

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

Ongoing Governmental Efforts

To assist in the mission of providing for better water supply, aquifer recharge, stormwater management, and other challenges in fresh and saltwater bodies in this area of the state, many strategic properties have been acquired in recent years by various governmental agencies through local, regional, state, and federal land acquisition programs.

ACKNOWLEDGEMENTS

Consensus among the FNAI, ARC Liaison staff, and the staff of the Division of State Lands (DSL) determined the final project recommendations. Paula L. Allen, and Zachariah Barton, Office of Environmental Services, were responsible for the overall coordination of this report, with participation and contributions from the following:

Archaeological and Historical-Division of Historical Resources, Josh Goodwin

Forestry-Florida Forest Service, Cat Ingram and Calin Ionita

Government Planning- Department of Economic Opportunity, Dan Evans

Government Planning-DEP DSL Bureau of Survey and Mapping, Steve Kellogg

Government Planning-DEP DSL Bureau of Appraisal, Frances Alford

Government Planning-DEP Division of Recreation and Parks, Diane Martin and Justin Baldwin

Government Planning-DEP Office of Greenways and Trails, Samantha Browne

Biodiversity-Fish and Wildlife Conservation Commission, Larame Ferry and Jennifer Myers

Biodiversity-Florida Natural Areas Inventory, Dan Hipes, Katy Nesmith and Nathan Pasco

Water Resources-DEP Division of Evaluation, Assessment and Restoration, Kevin Coyne

Transportation-Florida Department of Transportation, Jennifer Carver

Appendix A:

Buck Island Ranch: Florida Forever Measures Evaluation 20200309

GIS ACRES = 6,560

MEASURES	Resource Acres[a]	% of project
B1: Strategic Habitat Conservation Areas		
Priority 1	0	0%
Priority 2	5,905	90%
Priority 3	0	0%
Priority 4	0	0%
Priority 5	135	2%
Total Acres	6,039	92%
B2: FNAI Habitat Conservation Priorities		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	531	8%
Priority 4	5,701	87%
Priority 5	36	< 1%
Priority 6	291	4%
Total Acres	6,559	100%
B3: Ecological Greenways		
Priority 1	0	0%
Priority 2	6,383	97%
Priority 3	0	0%
Priority 4	0	0%
Priority 5	0	0%
Priority 6	0	0%
Total Acres	6,383	97%
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)	0	0%
Upland Hardwood Forest (G5)	0	0%
Total Acres	0	0%
B6: Occurrences of FNAI Tracked Species		
G1	0	
G2	1	
G3	0	
G4	2	
G5	1	
Total	4	
C4: Natural Floodplain Function		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	0	0%
Priority 4	32	< 1%
Priority 5	4,083	62%
Priority 6	1,846	28%
Total Acres	5,961	91%

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	826	13%
Priority 5	0	0%
Priority 6	5,300	81%
Priority 7	419	6%
Total Acres	6,545	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	0	0%
Priority 3	0	0%
Priority 4	4	< 1%
Priority 5	645	10%
Priority 6	70	1%
Total Acres	719	11%
D3: Aquifer Recharge		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	1,478	23%
Priority 4	3,145	48%
Priority 5	1,697	26%
Priority 6	239	4%
Total Acres	6,559	100%
E2: Recreational Trails (miles)		
(prioritized trail opportunities from Office of Greenways and Trails & Univ. Florida)		
Land Trail Priorities	0.0	
Land Trail Opportunities	10.8	
Total Miles	10.8	
F2: Arch. & Historical Sites (number)	1 sites	
G1: Sustainable Forestry		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	0	0%
Priority 4	0	0%
Priority 5 - Potential Pinelands	0	0%
Total Acres	0	0%
G3: Forestland for Recharge	0	0%

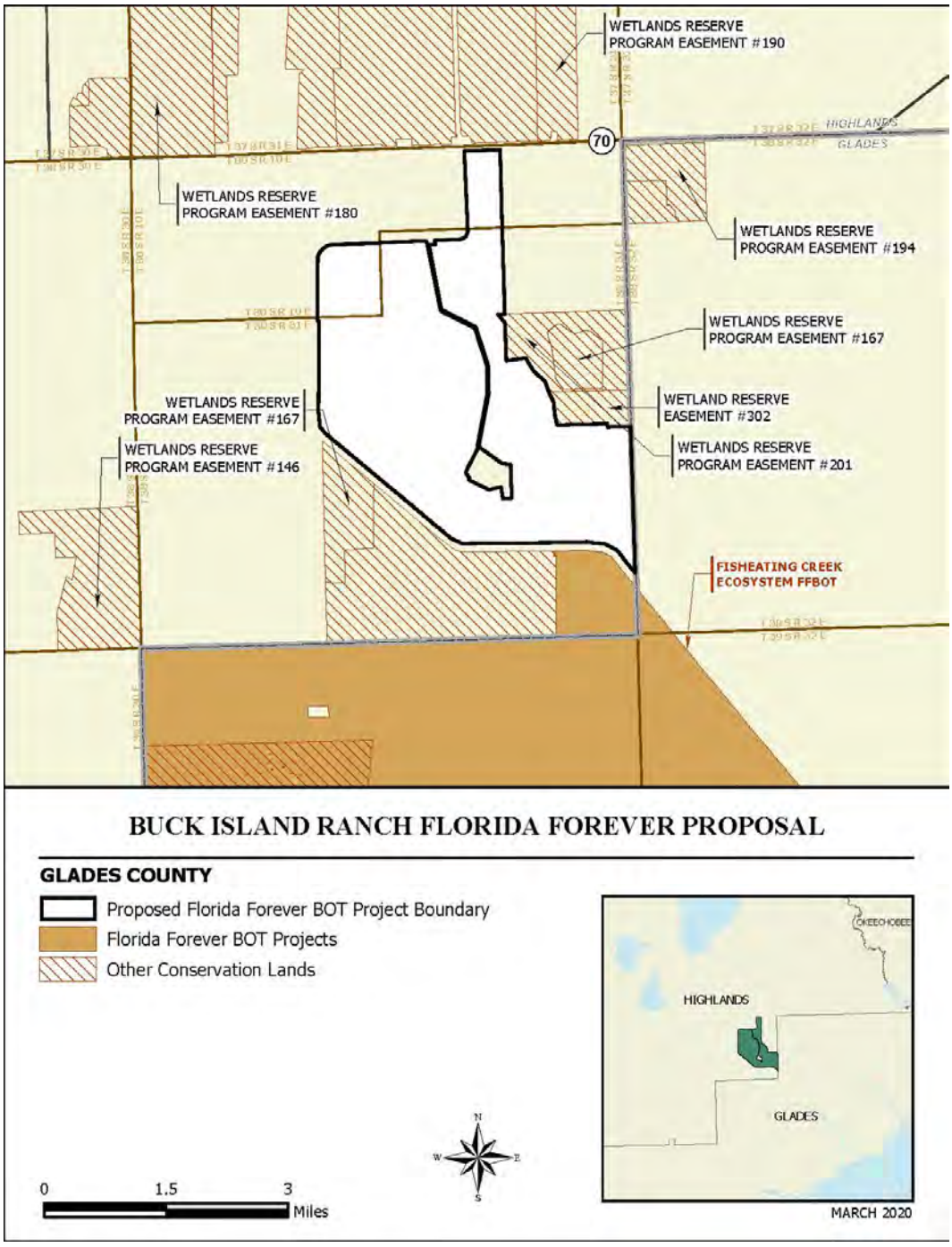
[a]Acres of each resource in the project and percentage of project represented by each resource are listed except where noted.
Acres and precentages are based on rasters of the resources and are rounded.

Table 1 Final FF measures table: Report requirement 259.105 (15)d, prepared by Florida Natural Areas Inventory

Appendix B:

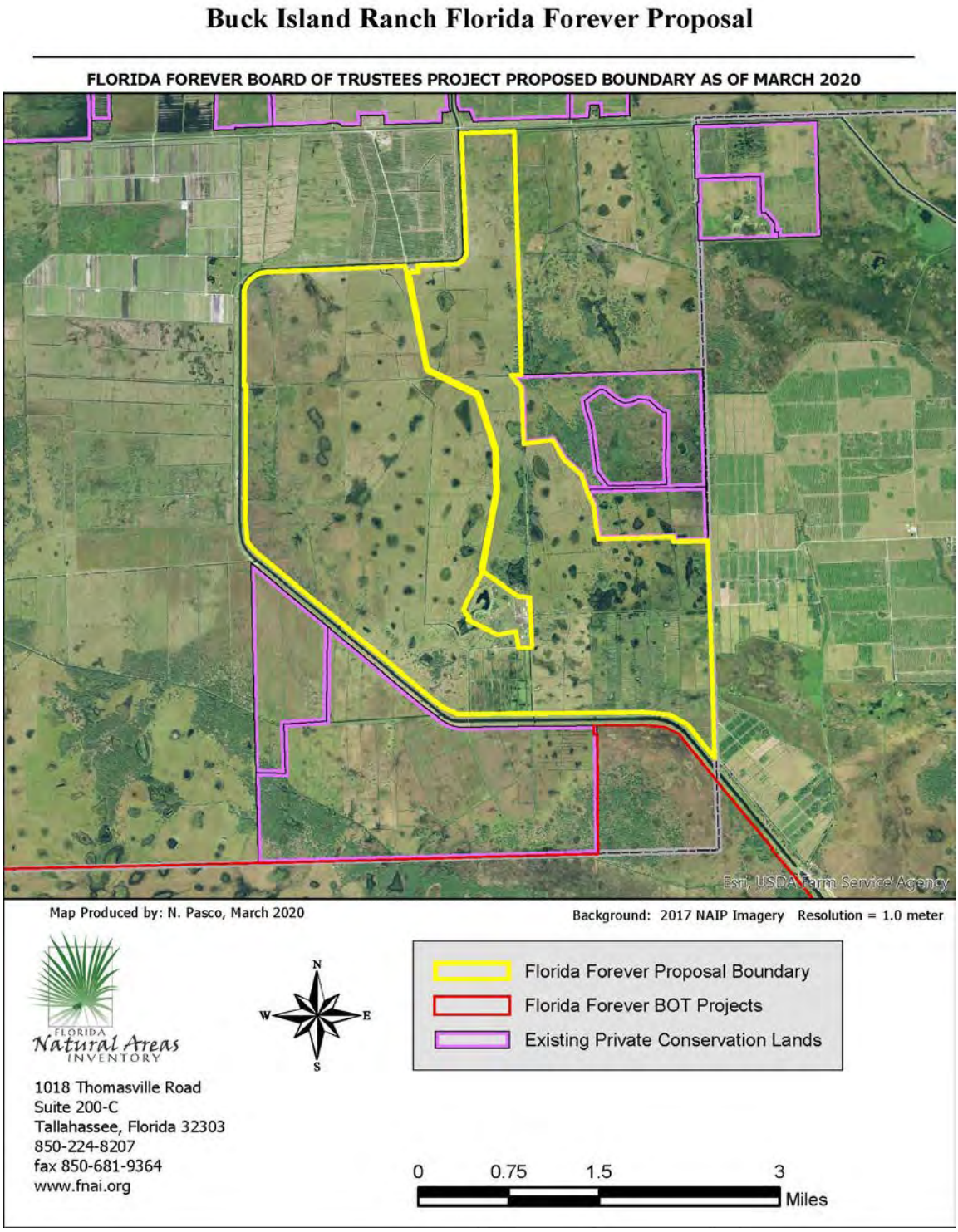
Final FF proposal boundary maps: Report requirement 259.105 (15)k, prepared by Florida Natural Areas Inventory

B1:



Map 1 Proposal Boundaries

B2:



Map 2 Aerial map

Property ID Numbers for Final Recommended Boundary

County	Parcel ID	Owner	Acres	Assessed Value	Just (Market) Value
Highlands	C023831A0000110000	Macarthur J D, Catherine T	278.8	$280,000	$280,000
Highlands	C093831A0000100000	Macarthur J D, Catherine T	435.9	$435,890	$435,890
Highlands	C10383101000100000	Macarthur J D, Catherine T	571.9	$585,290	$585,290
Highlands	C11383101000200000	Macarthur J D, Catherine T	318.5	$318,510	$318,510
Highlands	C133831A0000100000	Macarthur J D, Catherine T	4,036.5	$6,894,605	$7,707,903
Highlands	C133831A0000100000	Macarthur J D, Catherine T	515.0	$514,910	$514,910
Highlands	C213831A0000100000	Macarthur J D, Catherine T	387.0	$474,470	$474,470
Highlands	C283831A0000200000	Macarthur J D, Catherine T	2.1	$490,640	$490,640
Highlands	C363831A0000200000	Macarthur J D, Catherine T	15.0	$31,510	$31,510
		Total	**6,560.2**	$**10,025,825**	$**10,839,123**

Source: Application