

Bluefield to Cow Creek
(Okeechobee and St. Lucie Counties)

Less-than-Fee

Florida Forever Project Evaluation Report

Prepared by:
Division of State Lands
Office of Environmental Services

Submitted to the Acquisition and Restoration Council
October 2020



Proposed Land Manager: Landowners (monitored by DEP)
Acres: 10,942
Just Value: \$ 35,360,125
Application Date: May 12, 2020
Project Sponsor: SVN Saunders Ralston Dantzler Real Estate

Executive Summary

Bluefield to Cow Creek proposal encompasses 10,942 acres of land of ownerships in eastern Okeechobee County and western St. Lucie County approximately 12 miles northeast of the town of Okeechobee on SR 70. 7,628.56 acres of the subject property are located in St. Lucie County and 3,311 acres of land located in the Okeechobee County. The proposed area is being offered for less-than-fee simple sale to the state to maintain a landscape of agriculture and to help protect water quality of the Indian River Lagoon.

Local members of the Florida Forever project proposal site assessment team toured the property on Tuesday, August 4, 2020, as the Covid-19 pandemic has affected travel restrictions on state office staff who reside in Tallahassee.

The entire project is included in the Comprehensive Everglades Restoration Plan (CERP). The CERP was authorized by Congress in 2000 to protect South Florida's ecosystem and to provide water-related needs of the region. It is a Federal/State partnership with a 30+ year timeline. A component of the CERP is the Indian River Lagoon- South Restoration Plan. The entire Bluefield to Cow Creek project lies within the Cypress Creek/Trail Ridge Natural Storage and Water Quality Area, which is identified in the IRL-South plan as a natural water storage area. The area is targeted for conservation to preserve ecosystem services provided by the expansive, undeveloped area, thereby contributing to improvements to water quality in the Indian River Lagoon. The total proposed acreage for the IRL-S Cypress Creek NWSTA (as modified) is 30,328.

All lands within the project are working cattle ranches. As such, just under half of the acreage (47% and just over 5,100 acres) in the project is improved pasture. Large blocks of improved pasture occur on the eastern side of the project and in the northern portion of the project west of the topographic break that runs generally north/south through the project. Some portion of the improved pastures were previously in row crops and now contain extensive systems of ditches and dikes. Wetlands comprise approximately 35% of the project (approx. 3,800 acres) and include large forested swamps, isolated forested swamps, and isolated marshes scattered throughout improved pasture. Two notably large swamps occur within the project: one in the northern portion associated with Cow Creek and another in the southern portion associated with Cypress Creek. The core of the Cypress Creek swamp is located in the southwest portion of the project just east of Bluefield Road, extending north of SR 70. The swamp is picturesque and composed primarily of cypress with mixed hardwood. The owner reports cypress with large diameters, with several up to 5 feet in diameter, and that the swamp has not been harvested since the turn of the century.

The Bluefield to Cow Creek project provides habitat for a number of rare species. Crested caracara are commonly observed within the project. Large vigorous populations of air plants are present, including at least three rare species. Numerous bald eagles, wood storks, and other wading birds utilize the project area. A known wading bird rookery is located less than 0.5 miles south of the project boundary. In addition, a robust population of fox squirrels is present throughout the project.

If acquired as less-than-fee, the properties would continue to be managed by the landowners, with periodic monitoring by the Division of State Lands. The properties would be designated as essential and

appropriate for ranking in the Less-Than-Fee category of Florida Forever proposals, if recommended by ARC for the 2021 Priority List.

Purpose for Acquisition

The Bluefield to Cow Creek Florida Forever project 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; and, (d) Ensure that sufficient quantities of water are available to meet the current and future needs of natural systems and the citizens of the state. The project will also serve to reduce surface water and associated sediments nutrients within the IRL-S natural areas, thus reducing discharges to the canals and ultimately the St. Lucie River Estuary and Indian River Lagoon.

Location and Proximity to Other Managed Areas

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

The Bluefield to Cow Creek project is a large land area that is approximately midway between the Allapattah Flats Conservation Area and Ft. Drum Marsh Conservation Area. Several smaller conservation areas are adjacent to the project. St. Lucie County's Cypress Creek Preserve is adjacent to the southwest boundary, and St. Lucie Pinelands Preserve on the southeast boundary. The Triple S Ranch Conservation Easement held by FDACS is adjacent to the northwest, and two additional federally owned NRCS Conservation Easements adjoin the property to the north. Directly south of the project is the Bluefield Grove Water Farm, a SFWMD/private partnership.

Resource Description

Florida Natural Areas Inventory (FNAI)

This evaluation is based on information gathered from the proposal, historic and current aerial imagery, Florida Cooperative Land Cover data version 3.3, and information in the Florida Natural Areas Inventory (FNAI) database. A field survey was conducted on August 4, 2020, by FNAI biologist Kim Alexander, along with the project sponsor, landowner, and regional state agency staff representing FWC and FFS.

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

Creek and Cypress Creek watersheds, the boundary between which is located along the historic road that bisects the northern ownership (Cow Creek Ranch) from east to west. Cow Creek runs through the property on the northern end, but most drainage is through artificial ditching. The northern third of the proposal drains north and east to the C-24 canal. The southern two thirds drain to the southeast to the C-23 canal.

On 1944 aerial photographs of the area prior to most clearing, the western ridge appears to have been a mix of mesic and scrubby flatwoods, possibly with a high scrub patch where the first structures on the property were built. Along the toe of the escarpment, seepage from the higher ridge helped to form small patches of baygall, with the land adjacent to the slope occupied by a mosaic of wet flatwoods, hammock, and small swamps and marshes. The flatlands of the St. Johns Marsh Province on the eastern and southern portions of the proposal were a large, open dry prairie dotted with numerous herbaceous marshes. A strand-like swamp and hammock comprising Cypress Creek occupied much of the southwestern portion of the property south and east of SR 70.

Nearly all of the former prairies and flatwoods on Bluefield to Cow Creek have been converted to pasture and semi-improved/woodland pasture, which combined make up a little more than half of the total acreage. The properties are working cattle ranches. An extensive network of ditches is present to maintain the pasture and former crop fields (included in the improved pasture acreage in the table below). These pastures are mainly planted in bahiagrass (*Paspalum notatum*), although some fields are limpograss (*Hemarthria altissima*), particularly on the central-western portion of the proposal. Scattered old trees of South Florida slash pine (*Pinus elliottii* var. *densa*) are common in most of the pastures, and weedier areas have dogfennel (*Eupatorium capillifolium*) and smutgrass (*Sporobolus indicus*). There are numerous artificial cattle ponds throughout the pastures.

The unimproved and semi-improved areas are a mix of native vegetation and patches of grazed, weedy herbaceous species or pasture grasses. These often resemble mesic hammocks with a cleared understory and a patchy canopy of live oak (*Quercus virginiana*) and cabbage palm (*Sabal palmetto*) and a typically higher concentration of invasive exotic plants. On the west side of Cow Creek Ranch, the historic communities of mesic and scrubby pine flatwoods are still partially intact with clumps of South Florida slash pine, saw palmetto (*Serenoa repens*), and other native vegetation embedded in the matrix of pasture grasses. On the Carlton property south and west of SR 70, several small areas of hammock were cleared in the early part of the 20th century for citrus groves, some trees of which are still producing fruit. These old groves are included in the acreage of improved and semi-improved pasture in the table below.

The dominant natural feature of the Bluefield to Cow Creek proposal is the large system of basin swamp and hydric hammock that generally extends along the entire western boundary continuing to the north and south of proposal. This intact wetland complex along with embedded marshes and peripheral mesic hammocks covers approximately forty percent of the proposal. The largest area of swamp is located south and east of SR 70. This is a wide, somewhat linear swamp in excellent condition with a closed canopy of bald cypress (*Taxodium distichum*), American elm (*Ulmus americana*), red maple (*Acer rubrum*), and swamp laurel oak (*Quercus laurifolia*), and a subcanopy of cabbage palm and Carolina ash (*Fraxinus caroliniana*). There is an unusual amount of water hickory (*Carya aquatica*) growing around

the edge of the swamp, thought by the owner to be the result of a long history of human occupation on the site. Epiphytes are common, including Spanish moss (*Tillandsia usneoides*), golden polypody (*Phlebodium aureum*), long strap fern (*Campyloneurum phyllitidis*), wild Boston fern (*Nephrolepis exaltata*), and shoestring fern (*Vittaria lineata*). According to the owner the hydrology alterations caused by the widening of SR 70 have drastically reduced water levels. He has raised this issue with the state to prompt a remedy before there is further harm done to the swamp.

North and east of SR 70, basin swamps are more narrow and embedded in a matrix of hammock and pastures. These also had the typical swamp species composition, but were generally more disturbed by invasive exotic plants, particularly old world climbing fern (*Lygodium microphyllum*), which was observed in fairly high density on the edges of swamps near Cow Creek. Round, isolated dome swamps are also more common on the central and northern portions of the proposal. Most appear to be cypress-dominated, but at least one was observed to be primarily swamp tupelo (*Nyssa biflora*), and another an almost pure stand of Carolina ash.

The proposal has large areas of mesic and hydric hammock in association with the swamps on the property. These occupy slightly higher ground and are dominated by live oak in the more mesic hammocks or swamp laurel oak in the hydric hammocks, along with abundant cabbage palms that prefer the calcareous, shelly sand. Hammocks on the property do have a fair amount of disturbance from grazing, understory clearing, and hog damage, but they remain excellent habitat for dense populations of epiphytes, including shoestring fern, golden polypody, resurrection fern (*Pleopeltis michauxiana*), and southern needleleaf (*Tillandsia setacea*). The state-listed as endangered common wild-pine (*Tillandsia fasciculata*) and threatened Balbis' airplant (*Tillandsia balbisiana*) were observed in multiple areas, along with the commercially-exploited Florida butterfly orchid (*Encyclia tampensis*). Higher quality hammocks on the property have a diverse understory that includes woody species such as red mulberry (*Morus rubra*), common persimmon (*Diospyros virginiana*), and dahoon (*Ilex cassine*), as well as more tropical species like wild coffee (*Psychotria nervosa*), shortleaf wild coffee (*Psychotria sulzneri*), strangler fig (*Ficus aurea*), and myrsine (*Myrsine cubana*). Although not generally dense in any given area, invasive exotic species are common in hammocks on the property, especially at the interface with improved pastures and around ditches and vehicle trails. On the site visit we observed the FLEPPC Category I rosary pea (*Abrus precatorius*), Asian sword fern (*Nephrolepis brownii*), Mexican petunia (*Ruellia simplex*), Brazilian pepper (*Schinus terebinthifolia*), and Caesar's weed (*Urena lobata*), as well as the Category II elephant ear (*Xanthosoma sagittifolium*).

Scattered, isolated marshes are common on the proposal, embedded in open pastures, but also in hammocks and semi-improved areas. Most of the marshes observed are dominated by dense stands of alligatorflag (*Thalia geniculata*), at least near the center. The outer edges, which would have historically been a wet prairie community, are now commonly invaded with a solid cover of limpoglass. Other common species in marshes on the property include sawgrass (*Cladium jamaicense*), maidencane (*Panicum hemitomon*), pickerelweed (*Pontederia cordata*), starrush white-top (*Rhynchospora colorata*), narrowfruit horned beaksedge (*Rhynchospora inundata*), bulltongue arrowhead (*Sagittaria lancifolia*), and broadleaf cattail (*Typha latifolia*).

There are several small areas of baygall and wet flatwoods on the property, located on Cow Creek Ranch at the base of the ridge located at the western boundary. Seepage from the ridge creates small forested wetlands dominated by loblolly bay (*Gordonia lasianthus*) that are often connected to the broader areas of hammock just east. There is also a remnant wet flatwoods in the same general area with a canopy of South Florida slash pine. The area is long unburned and resembles an open hammock with subcanopy and shrub layers of live oak, cabbage palm, sweetbay (*Magnolia virginiana*), and red bay (*Persea borbonia*). Saw palmetto (*Serenoa repens*) clumps are occasional in a fairly grassy understory with blue maidencane (*Amphicarpum muehlenbergianum*), broomsedge bluestem (*Andropogon virginicus*), witchgrass (*Dichantheium sp.*), and toothed midsorus fern (*Telmatoblechnum serrulatum*).

Numerous drainage ditches run through the pastures between wetland areas and along elevated roads. These ditches often contain native marsh plants, but invasive exotic plants are abundant, including the FLEPPC Category I species water hyacinth (*Eichhornia crassipes*), West Indian marsh grass (*Hymenachne amplexicaulis*), Peruvian primrosewillow (*Ludwigia peruviana*), and torpedo grass (*Panicum repens*). Roads on the property are all unimproved vehicle trails, with invasive species relatively common including the FLEPPC Category I cogon grass (*Imperata cylindrica*). A gas pipeline traverses the Cow Creek Ranch. There are a few developed areas on the properties with barns and corrals as well as several historic homes.

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

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

Community or Landcover	Acres	Percent of Proposal
basin swamp	1980	18%
hydric hammock	1132	10%
mesic hammock	988	9%
depression/basin marsh	842	8%
dome swamp	68	1%
baygall	17	<1%
wet flatwoods	13	<1%
pasture-improved	5143	47%
woodland and semi-improved pasture	737	7%
ditch/canal	26	<1%
developed	25	<1%
artificial pond	22	<1%

Table Caption or Footnote

Florida Fish and Wildlife Conservation Commission (FWC)

This summary provides a resource assessment of the Bluefield to Cow Creek Florida Forever proposal based on field observations during the August 4, 2020 tour and results of the GIS analysis. The Bluefield to Cow Creek project is a Florida Forever less-than-fee proposal encompassing 10,942 acres in Okeechobee and St. Lucie counties. Lands within the project comprise four adjacent working cattle ranches. It is located approximately ten miles northeast of Okeechobee and is surrounded by a number of small conservation areas. Triple S Ranch Agricultural and Conservation Easement (soon to be established as Kissimmee Bend Wildlife Management Area) is to the northwest. Stormwater Treatment

Areas are located to the east and west. The Bluefield Ranch Mitigation Bank is to the south. There are also several Wetlands Reserve Program easements. The project is included in the Comprehensive Everglades Restoration Plan.

Just under half of the project area is improved pasture (47.27%), comprised of bahia grass primarily. Other significant landcover includes cypress, tupelo dome swamps (12.89%), mixed wetland hardwoods (11.72%), mixed hardwood-coniferous forest (11.24%), and marsh (6.7%). Several wading bird species were observed during the tour, including roseate spoonbill (*Platalea ajaja*) and little blue heron (*Egretta caerulea*). Landowners stated they have observed burrowing owls (*Athene cunicularia floridana*), Sherman's fox squirrel (*Sciurus niger shermani*) and Florida panther (*Puma concolor coryi*). Exotic plants were not widespread. A few problem areas with old world climbing fern (*Lygodium microphyllum*) and Caesar weed (*Urena lobata*) were observed, though canals were filled with West Indian marsh grass (*Hymenachne amplexicaulis*).

Timber sales have never occurred. One landowner has a small hunting lease (1,000 acre) for deer, turkey, and hog. Another landowner actively traps hogs. Other landowners only allow friends and family to hunt. Hog damage was not severe. Ranching has occupied the land for five generations. Lodges and barns were built in the 1930s and 40s, and a small shack is listed as the oldest building in Okeechobee County. During the field review, most of the uplands were in pasture or dominated by hardwood forests. The ecotones and transition zones between natural communities and pasture were abrupt with pasture occurring right to the edge of the forest and wetlands. Prescribed fire has not been applied to the area.

The forested wetlands and marshes are essentially unaltered, though water flow to the cypress in the southern part of the project has been impeded by S.R. 70. Canals and culverts keep the pasture drained and have likely altered the hydrology of natural upland areas. There are several historic citrus groves, which appear to have been planted by Native Americans.

Habitat for game species, such as white-tailed deer (*Odocoileus virginianus*) and wild turkey (*Meleagris gallopavo osceola*), and common non-game species is adequate. The Florida Natural Areas Inventory (FNAI) Element Occurrence database shows nine records for rare wildlife or plant species: blunt-leaved peperomia (*Peperomia obtusifolia*), crested caracara (*Caracara cheriway*), little blue heron, snowy egret (*Egretta thula*), tricolored heron (*Egretta tricolor*), white ibis (*Eudocimus albus*), wood stork (*Mycteria americana*), as well as a bird rookery and basin swamp. The GIS model shows the property as Potential Habitat for Eastern indigo snake (*Drymarchon couperi*), crested caracara, and Florida sandhill crane (*Grus canadensis pratensis*).

Goals, Measures and Criteria

GOAL A:

Enhance the coordination and completion of land acquisition projects

Measure A1:

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

All of the property included in the project proposal is within the footprint of the Cypress Creek Natural Water Storage and Treatment Area (NWSTA) identified in the IRL-S CERP project. The total proposed acreage for the IRL-S Cypress Creek NWSTA (as modified) is 30,328. As none of these parcels have yet been acquired, the acquisition of the Bluefield to Cow Creek under the Florida Forever program could be significant in achieving the goals of IRL-S CERP.

Measure A2:

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

Approximately 10,942 acres would be protected through less-than-fee acquisition.

GOAL B:

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

Measure B1:

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

This project will provide a total of 3,214 acres (29%) of Strategic Habitat Conservation Area (SHCA), as noted in Appendix A.

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 Bluefield to Cow Creek proposal. Overall, the site contains approximately 9,821 acres (89% of site) of rare species habitat. The habitat is mostly divided between Priority 6 (50% of site) and Priority 5 (25% of site), with the remainder in Priorities 4 and 3 (15% and < 1%, respectively).

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

Rare species habitat on the Bluefield to Cow Creek proposal based on FNAI Habitat Conservation Priorities for 281 species with the greatest conservation need.

Scientific Name	Common Name	Global Rank	Acres
Drymarchon couperi	eastern indigo snake	G3	341
Caracara cheriway	crested caracara	G5	6,996
Mycteria americana	wood stork	G4	4,144

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 5.7. Nearly 91% of the project is identified as Priority 1 or 2 (of 5) for the Critical Lands and Waters Identification Project. Approximately 29% lies within a designated FWC Strategic Habitat Conservation Area (SHCA) for species including the American swallow-tailed kite (*Elanoides forficatus*), Cooper’s hawk (*Accipiter cooperii*), and Florida burrowing owl.

Measure B3:

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

Approximately 8,334 acres (76%) of the proposal contributes to the acquisition of significant landscapes, linkages, and corridors, as noted in in Appendix A.

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 Bluefield to Cow Creek proposal contains 13 acres of wet flatwoods (< 1% of site).

Measure B5:

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

The Bluefield to Cow Creek proposal would not contribute to a contiguous landscape-sized protection area of >50,000 acres. However, it is adjacent to several conservation lands that include Triple S Ranch Agricultural and Conservation Easement, and the St. Lucie County-managed Cypress Creek and St. Lucie Pinelands.

Measure B6:

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

This site supports habitat for several rare species of conservation concern. The FNAI database has two records for crested caracara on the site. Additional species are likely present, including those reported in the proposal (see table below). Crested caracaras and Florida sandhill cranes are increasingly threatened by residential development and conversion to intensive agricultural uses. During the site visit, the Cow Creek Ranch owner also noted that Florida burrowing owls have been seen on the property. On the adjacent property, two male Florida panthers (*Puma concolor coryi*; G5T1, S1, E, FE*) have been filmed on game cameras.

The FNAI database has one record for blunt-leaved peperomia on the site in the high quality basin swamp located on the southern ownership. During the site visit, common wild pine, Balbis' airplant, and butterfly orchid, all state-listed epiphytes, were seen at multiple locations growing on live oaks in the large hammocks. More extensive surveys may reveal the occurrence of additional species of rare plants. Rarity rankings listed above are in the following order: FNAI global (G, T) and state (S) ranks, federal status, state status. Species ranks and conservation status are described at <https://www.fnai.org/ranks.cfm>.

The Florida Forever Measures table lists the number of Element Occurrences by Global Rank (G-rank) that are found on the proposal. Note that the number of occurrences does not necessarily match the number of species in the following table because a) some species may have more than one occurrence on the proposal site, or b) some species observed on site lack sufficient data to justify addition to the FNAI database at this time. The table below contains species falling into any of these observational

categories, as well as species gleaned from other sources (e.g., Florida Breeding Bird Atlas) with different degrees of locational precision.

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

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
Rare plants documented on site					
Encyclia tampensis	butterfly orchid	G4	SNR	N	CE
Peperomia obtusifolia	blunt-leaved peperomia	G5	S2	N	E
Tillandsia balbisiana	Balbis' airplant	G4	S3	N	T
Tillandsia fasciculata	common wild-pine	G5	SNR	N	E
Additional rare plants reported on site by applicant					
none					
Rare animals documented on site					
Caracara cheriway	crested caracara	G5	S2	T	FT
Additional rare animals reported on site by applicant					
Alligator mississippiensis	American alligator	G5	S4	SAT	FT(SA)
Crotalus adamanteus	eastern diamondback rattlesnake	G4	S3	N	N
Drymarchon couperi	eastern indigo snake	G3	S2	T	FT
Gopherus polyphemus	gopher tortoise	G3	S3	C	ST
Antigone canadensis pratensis	Florida sandhill crane	G5T2T3	S2S3	N	ST
Athene cunicularia floridana	Florida burrowing owl	G4T3	S3	N	ST
Egretta caerulea	little blue heron	G5	S4	N	ST
Haliaeetus leucocephalus	bald eagle	G5	S3	N	N
Mycteria americana	wood stork	G4	S2	T	FT
Pandion haliaetus	osprey	G5	S3S4	N	N
Plegadis falcinellus	glossy ibis	G5	S3	N	N
Rostrhamus sociabilis	snail kite	G4G5	S2	E	FE
Sciurus niger niger	southeastern fox squirrel	G5T5	S3	N	N

GOAL C:

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

Measure C1:

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

The property is offered for less-than-fee acquisition, intended to be utilized in a manner consistent with existing uses. The large basin swamp and some of the hammocks are mostly in good to excellent ecological condition, although work is needed to restore water flow to the large basin swamp south and east of SR 70. Further hydrology restoration would also benefit the other forested wetlands throughout the property. The large pastures and agricultural lands would require considerable long-term commitment to restore to native species and is outside the scope of restoration commitment for a working cattle ranch.

Invasive exotic plant control needs of the property are greatest in the forested wetlands on the northern portion of the property where old world climbing fern is becoming abundant. Cogon grass should be treated aggressively to halt further increases. The abundant West Indian marsh grass would likely be all but impossible to control in ditches, but some marshes in the more natural areas of the property would benefit from its removal along with invading pasture grasses. A baseline assessment to determine the full extent of invasive plant species, particularly old world climbing fern, is warranted if acquisition of the easement occurs.

Measure C3:

The percentage completion of targeted capital improvements in surface water improvement and management plans created under s. 373.453 (2), regional or master stormwater management system plans, or other adopted restoration plans.

All of the property included in the project proposal is within the footprint of the Cypress Creek Natural Water Storage and Treatment Area (NWSTA) identified in the IRL-S CERP project. The total proposed acreage for the IRL-S Cypress Creek NWSTA (as modified) is 30,328. As none of these parcels have yet been acquired, the acquisition of the Bluefield to Cow Creek properties (10,942 ac) under the Florida Forever program could be significant in achieving the goals of IRL-S CERP.

Measure C4:

The number of acres acquired that protect natural floodplain functions.

Approximately 3,812 acres (35%) provides for the protection of natural floodplain functions, as noted in Appendix A.

Measure C5:

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

Approximately 10,988 acres (100%) provides for the protection of surface waters, as noted in Appendix A.

Measure C8:

The number of acres of functional wetland systems protected.

Approximately 3,764 acres (34%) provides for the protection of functional wetlands, as noted in Appendix A.

GOAL D:

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

Measure 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 Bluefield to Cow Creek proposed project is located within the South Florida Water Management District's (SFWMD) IRL-South project which is split into two phases. Phase I is currently under design and construction and Phase II, called the Natural Lands Component, has not yet started. If Florida Forever acquisition occurs, the Division of State Lands will coordinate with the SFWMD when considering conservation easements to help ensure efforts to implement the IRL-S CERP and SFWMD's future efforts to acquire lands in fee, flowage easements or conservation easements within the proposed project areas are compatible.

Measure D3:

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

Approximately 11,000 acres, north east of Lake Okeechobee, located on the borders of Okeechobee and St Lucie Counties. The parcels are in the Lake Okeechobee BMAP and an TMDL waterbody.

Spatial Analysis for Potential Water Quality Benefits

Categories	Scoring Criteria	Project Score
FDEP High Profile Springs (in 1,2,3, or > spring sheds)	12, 24, 36	0
FDEP Select Agricultural Land Use (0-30%, >30-65%, >65%)	4,8,12	8
FDEP Florida Aquifer Vulnerability (FAVA)	4,7,10	7
FDEP Special Nutrient Impaired WBIDs	9	0
FDEP Distance to Major Lakes (100, 500, 1000 meters)	8,7,6	0
FDEP Springsheds or within 5 miles	10, 7	0
FDEP BMAPs	10	10
FDEP Distance to Major Rivers (100, 500, 1000 meters)	6,5,4	0
Total Possible	101	25

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

FINAL DEAR SCORE = 2 (low to medium Water Quality Protection Benefits)

GOAL E:

Increase natural resource-based public recreational and educational opportunities

Measure E2:

The miles of trails that are available for public recreation, giving priority to those that provide significant connections including those that will assist in completing the Florida National Scenic Trail.

Approximately 3 miles of recreational trail may be available, as noted in Appendix A.

GOAL F:

Preserve significant archaeological or historic sites

Measure F1:

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

The Bluefield to Cow Creek Florida Forever Project meets Measure F1 in that the conservation easement offers protection for recorded archaeological sites; however, these sites are not preserved for public use.

Measure F2:

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

Measure F2 would not be met as the land would not be in state ownership and therefore the State would not hold title to the historical and archaeological resources on that property.

CULTURAL RESOURCES:

This project contains 1 historic structure currently listed in the Florida Master Site File. The Eli Morgan House (SL284) is a frame vernacular house built in 1906 by Eli Morgan, a prominent cattle rancher and

early settler of St. Lucie County. The structure has not been evaluated for its significance by the State Historic Preservation Officer.

The property is bisected by a recorded Linear Resource, the Okeechobee Road (SL1658). It has been determined by the SHPO to be Ineligible for the National Register of Historic Places.

Western portions of the property have been subject to cultural resource assessment in advance of the Florida Southeast Connection Natural Gas Pipeline. Additionally, St. Lucie County completed a county-wide survey for known historic structures and sites in 1990. Further survey of the eastern areas of the project could potentially record additional pre-Columbian and historic sites. According to the applicant, several yet-recorded historic structures are present on the property.

The tract's location, topography, poorly drained soils, and proximity to freshwater, suggests a medium probability of holding potentially significant archaeological sites, although according to the applicant several unrecorded historical structures do exist on the project.

FIELD OBSERVATIONS:

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

GOAL G:

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

Measure G1:

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

Approximately 1,209 acres (11%) are available for sustainable forest management, as noted Appendix A.

Management

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

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

Funding Sources

Florida Forever

Funding for Mapping, Appraisal, Negotiations and Closing

Florida Forever

Ownership Pattern and Acquisition Planning

This project has four owners, who own various amounts of acreages.

Jurisdictional and Sovereignty Lands Issues

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

Government Planning and Development

Contribution to Recreation and Open Space Needs

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

Potential for Losing Significant Natural Attributes or Recreational Open Spaces

The dominant natural feature of the Bluefield to Cow Creek proposal is the large system of basin swamp and hydric hammock that generally extends along the entire western boundary continuing to the north and south of proposal. Much of the subject property is improved pasture (47%), unimproved pasture (6%), and a variety of other natural communities. Landcover information identifies small areas (total of 99 acres) of mesic flatwoods.

Refer to Table 2 provided by the Florida Natural Areas Inventory for a list of species documented on this project site. Additionally, the application reports that a large variety of other listed species have the potential to occur on or near the property.

Potential for Being Subdivided

The subject property has a low potential for being subdivided. The future land use designation is Agriculture for both Counties. This FLU-category allows residential use at a density of one dwelling unit per ten gross acres in Okeechobee County and five gross acres in St. Lucie County. The subject area is generally rural in character with an abundance of undeveloped land. According to the application, the property owners of both Counties do not have plans in place to subdivide for sale and there are no known threats of development that could harm or diminish the value of the property.

Zoning and Densities within the Project Boundaries

According to the application package the proposed project is included in the Comprehensive Everglades Restoration Plan.

- St. Lucie County: 7,628.56 acres of the subject property are designated as “Agriculture” (AG-5, Agricultural, 1 du/5) on the St. Lucie County Comprehensive Plan Future Land Use Map. This Agriculture future land use category allows agriculture use and residential density of one dwelling unit per 5 gross acres.

- Okeechobee County: 3,311.72 acres of land from the subject property are designated also as “Agriculture” on the Okeechobee County Comprehensive Plan Future Land Use Map. The Agriculture future land use category allows the following: agriculture use; residential density of one dwelling unit per ten gross acres; limited commercial uses that allow for recreational activities or use of public lands; educational uses; institutional uses, recreational and other public uses.

Transportation Issues

Located in FDOT’s District 1 (Okeechobee County) and District 4 (St. Lucie County), the proposed project would protect approximately 11,000 acres by conservation easement. The property would continue to be managed for timber/long leaf pine, and outdoor recreation. State Road 70 runs between the project parcels in St. Lucie County.

The FDOT Systems Implementation Office completed the SR 70 Existing Conditions Data Study in March 2019. This report should be reviewed prior to acquisition for any information that would be helpful to or impact the proposed project. A copy of the study has been provided to the DSL as background information to this report.

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.

Acknowledgements

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

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

Florida Forest Service - Cat Ingram and Calin Ionita

Department of Economic Opportunity - Dan Evans

Florida Fish and Wildlife Conservation Commission – Laramie Ferry and Carol Rizkalla

Florida Natural Areas Inventory – Kimberely Alexander and Dan Hipes

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

Florida Department of Transportation - Jennifer Carver

South Florida Water Management District – Jennifer Leeds

APPENDICES

Appendix A:

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

Bluefield to Cow Creek: Florida Forever Measure Evaluation 20200819

GIS ACRES = 10,996

MEASURES	Resource Acres ^a	% of project
B1: Strategic Habitat Conservation Areas		
Priority 1	0	0%
Priority 2	3	< 1%
Priority 3	1,720	16%
Priority 4	0	0%
Priority 5	1,491	14%
Total Acres	3,214	29%
B2: FNAI Habitat Conservation Priorities		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	16	< 1%
Priority 4	1,629	15%
Priority 5	2,712	25%
Priority 6	5,464	50%
Total Acres	9,821	89%
B3: Ecological Greenways		
Priority 1	0	0%
Priority 2	8,334	76%
Priority 3	0	0%
Priority 4	0	0%
Priority 5	0	0%
Priority 6	0	0%
Total Acres	8,334	76%
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)	13	< 1%
Upland Hardwood Forest (G5)	0	0%
Total Acres	13	< 1%
B6: Occurrences of FNAI Tracked Species		
G1	0	
G2	0	
G3	0	
G4	0	
G5	3	
Total	3	
C4: Natural Floodplain Function		
Priority 1	12	< 1%
Priority 2	1,866	17%
Priority 3	1,083	10%
Priority 4	617	6%
Priority 5	232	2%
Priority 6	2	< 1%
Total Acres	3,812	35%

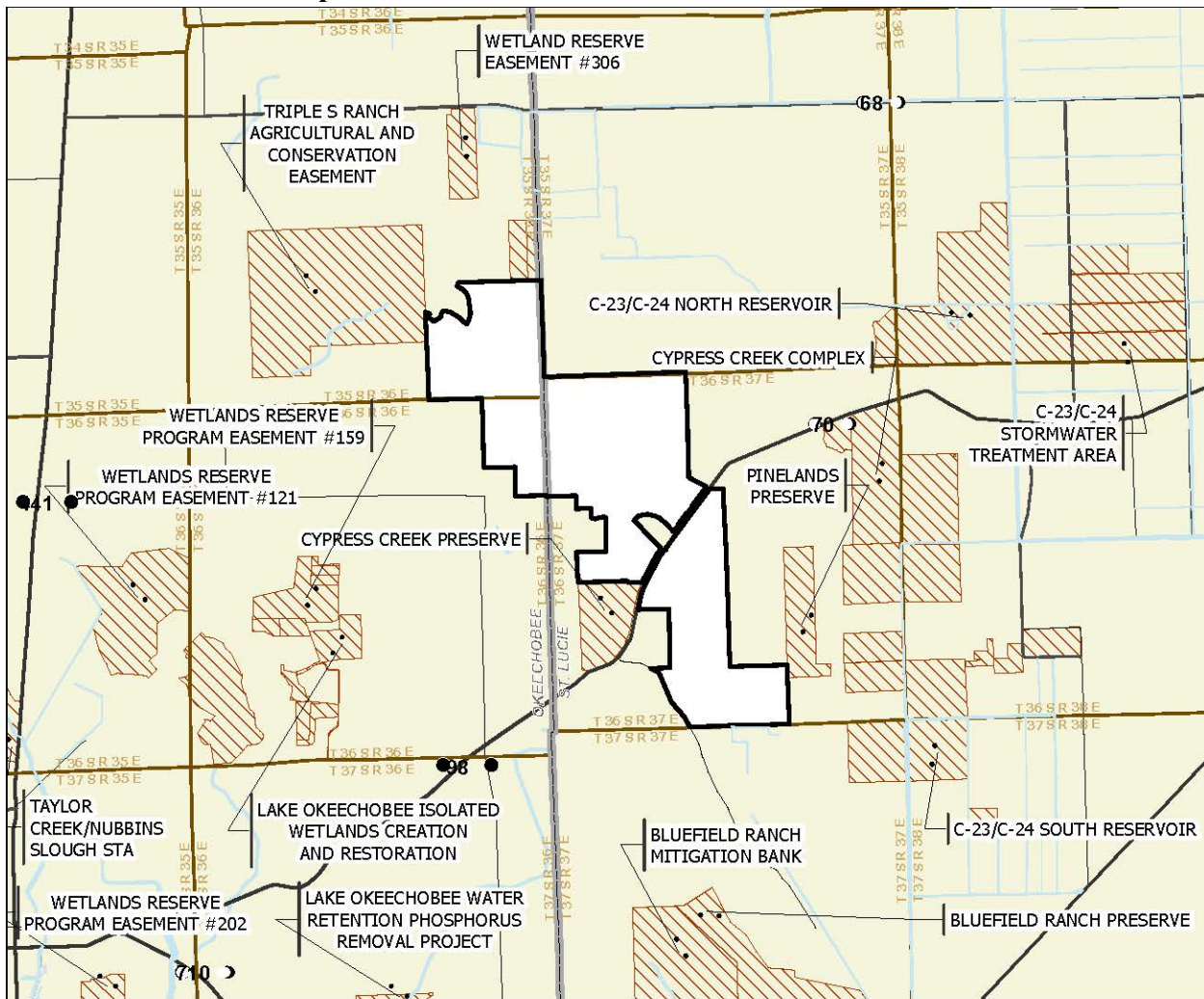
MEASURES (continued)	Resource Acres ^a	% of project
C5: Surface Water Protection		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	0	0%
Priority 4	0	0%
Priority 5	0	0%
Priority 6	10,988	100%
Priority 7	0	0%
Total Acres	10,988	100%
C7: Fragile Coastal Resources		
Fragile Coastal Uplands	0	0%
Imperiled Coastal Lakes	0	0%
Coastal Wetlands	0	0%
Total Acres	0	0%
C8: Functional Wetlands		
Priority 1	12	< 1%
Priority 2	1,823	17%
Priority 3	1,356	12%
Priority 4	468	4%
Priority 5	104	< 1%
Priority 6	0	0%
Total Acres	3,764	34%
D3: Aquifer Recharge		
Priority 1	0	0%
Priority 2	134	1%
Priority 3	1,335	12%
Priority 4	4,522	41%
Priority 5	3,776	34%
Priority 6	1,230	11%
Total Acres	10,996	100%
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	3.0	
Total Miles	3.0	
F2: Arch. & Historical Sites (number)		
	0	0 sites
G1: Sustainable Forestry		
Priority 1	0	0%
Priority 2	0	0%
Priority 3	17	< 1%
Priority 4	0	0%
Priority 5 - Potential Pinelands	1,192	11%
Total Acres	1,209	11%
G3: Forestland for Recharge		
	5	< 1%

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

Appendix B:

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

B1: Florida Forever map



BLUEFIELD TO COW CREEK FLORIDA FOREVER PROPOSAL

OKEECHOBEE AND ST. LUCIE COUNTIES

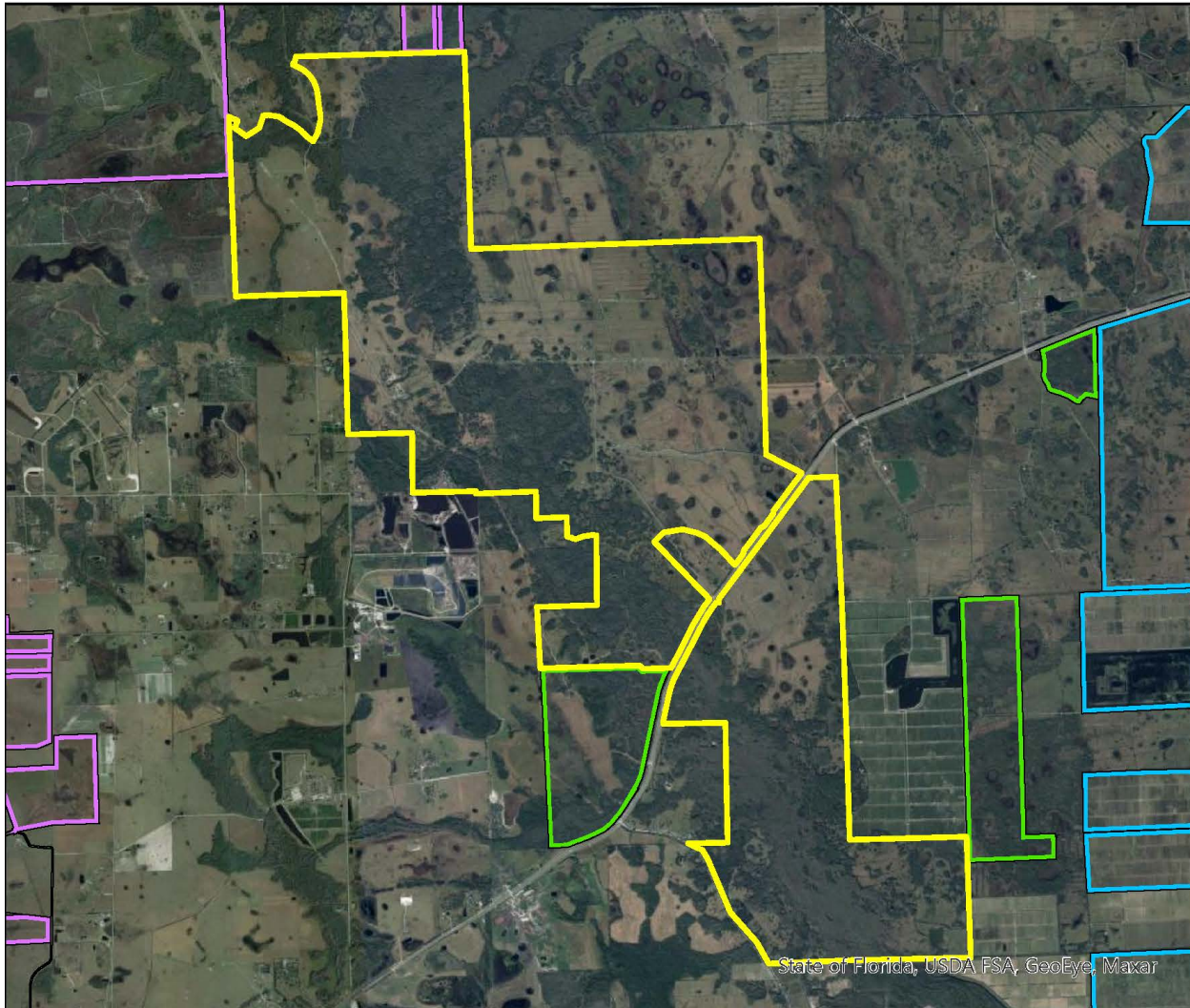
-  Proposed Florida Forever BOT Project
-  Other Conservation Lands



B2: Aerial map

Bluefield to Cow Creek Florida Forever Proposal

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



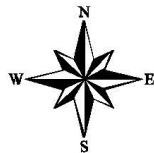
State of Florida, USDA FSA, GeoEye, Maxar





Map Produced by: N. Pasco, August 2020

Background: World Imagery Resolution = 0.3 meter



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	Florida Forever Proposal Boundary
	Existing Water Mangement District Conservation Lands
	Existing Local Conservation Lands
	Existing Private Conservation Lands



Appendix C:**PROPERTY ID #'S FOR FINAL RECOMMENDED BOUNDARY**

County	Parcel ID	Owner	Acres	Just (Market) Value
St. Lucie	3108-111-0002-000-5	Cow Creek Ranch Land LLC	18.36	\$67,014
St. Lucie	3108-332-0001-000-7	Joseph G. Miller	511.86	\$1,737,104
St. Lucie	3106-111-0001-000-2	Cow Creek Ranch Land LLC	621.82	\$1,736,277
St. Lucie	3107-111-0001-000-5	Cow Creek Ranch Land LLC	686.25	\$1,916,182
St. Lucie	3104-211-0001-000-3	Cow Creek Ranch Land LLC	2,155.37	\$6,707,720
St. Lucie	3116-111-0001-000-3	Ru-Mar Inc.	439.47	\$1,522,834
St. Lucie	3119-111-0001-000-2	Junior Louis Ranch LLC	399.2	\$1,403,631
St. Lucie	3120-111-0001-000-6	Ru-Mar Inc.	216.58	\$863,073
St. Lucie	3121-111-0001-000-9	Ru-Mar Inc.	655.54	\$2,197,367
St. Lucie	3128-111-0001-000-0	Ru-Mar Inc.	644.54	\$2,169,638
St. Lucie	3132-111-0001-000-3	Ru-Mar Inc.	44.55	\$206,124
St. Lucie	3133-111-0001-000-6	Ru-Mar Inc.	435.1	\$1,641,859
St. Lucie	3133-211-0001-000-3	Ru-Mar Inc.	163.87	\$777,132
St. Lucie	3134-111-0001-000-9	Ru-Mar Inc.	656.46	\$2,199,671
Okeechobee	1-26-35-36-0A00-00001-0000	Cow Creek Ranch Land LLC	332.09	\$935,134
Okeechobee	1-25-35-36-0A00-00001-0000	Cow Creek Ranch Land LLC	687.61	\$1,322,629
Okeechobee	1-36-35-36-0A00-00001-0000	Cow Creek Ranch Land LLC	696.36	\$2,255,231
Okeechobee	1-01-36-36-0A00-00001-0000	Cow Creek Ranch Land LLC	820.62	\$2,715,465
Okeechobee	1-35-35-36-0A00-00001-0000	Cow Creek Ranch Land LLC	589.82	\$2,280,751
Okeechobee	1-12-36-36-0A00-00001-0000	Cow Creek Ranch Land LLC	176.47	\$772,303
			10,951.94	\$35,427,139