



**375 Acre Micco Village North Property
Palm Bay, Brevard County
Environmental Assessment Report**

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**375 Micco Village North Property
Environmental Assessment Report
Brevard County – Sections 12 & 13, Township 30S, Range 37E
May 25, 2022**

INTRODUCTION

The intent of this Environmental Assessment report is to provide a preliminary assessment of natural features located within the boundaries of the project site (assessment area) including wetlands, upland habitat, protected trees and other vegetation, and potential for threatened and endangered species (flora and fauna). As part of this report, a summary of potential impacts to site plan design, agency permitting and history, and wetland mitigation opportunities and costs will be discussed.

The project site is 375 acres in size and is comprised of 3 parcels of land (Parcel ID: 0-37-12-00-500, 30-37-13-00-2, 30-37-12-00-751). The project site is located on the north-east intersection of Interstate 95 and Micco Road and between Micco Scrub Sanctuary to the west and Grant Flatwoods Sanctuary to the east, Palm Bay, Brevard County. See Exhibit A, Location Map.

METHODOLOGY

This Environmental Assessment report is based on aerial (2022) photographic interpretation (Google Earth ®), review of Soil Survey of Brevard County Area (USDA, Natural Resource Conservation Service, (Web Soil Survey) and field investigations. Ecotone Services, Inc. (ESI) staff performed a site visit on May 23, 2022. An aerial photograph (Scale: 1" = 400') was used to attain a general assessment of the natural features of the parcel and to indicate specific points of interest. An on-site review of the subject property conditions was performed by driving a 4 wheel drive vehicle and walking transects through the site while noting plant species, upland and wetland ecosystems and habitats, and potential use by listed animal and plant species.

SITE CONDITIONS

The project site is 375 acres in size and is comprised of mostly agricultural land that is currently used as an active cattle ranch operation. There are 2 large man-made lakes located in the center of the project site along the north-south axis, and were part of a previously permitted mining operation with the St. Johns River Water Management District (SFRWMD). According to current site conditions and review of historic aerial maps, it appears the project site was constructed for operation as a citrus grove several decades ago (not date certain) and was operational until the mid-1990's. Additionally, there are several man-made drainage/water management canals and swales, and farm access roads throughout the project site. The vast majority of the project site has a visible furrow irrigation and drainage infrastructure system throughout. The condition of this remnant furrow system varies throughout the property, but for the most part is still mostly intact. Some areas have been horizontally regraded to be suitable for the ongoing cattle ranch operation. An active artesian irrigation well was identified in the north-central section of the project site that appears to be used to provide drinking water for the cattle. It was free flowing at the time of this site investigation.



For the most part, the overall project site is void of natural, native vegetation as it was cleared and graded for the citrus grove operation decades ago. There are numerous native trees, palms, and understory along the east, west, and north project boundaries many of which are growing along the top of bank and downward slopes of the extensive perimeter drainage canal system, most of which appears to be offsite. This vegetation includes live oak, laurel oak, slash pine, cabbage palm, saw palmetto, beautyberry, and variety of exotic and invasive species (Brazilian pepper, primrose willow).

The vast majority of the cattle ranch operation and former citrus grove has a vegetative cover typical of agricultural lands left fallow for a number of years, but it appears to be periodically mowed to help keep weed growth under control. The groundcover is comprised of a variety of field grasses including native broom sedge, blackberry, nicker bean, and a variety of exotic and invasive plant species such as smut grass, Bahia grass, cogon grass, Caesar's weed, and others. Brazilian pepper and wax myrtle continue to become more established as the farm field continues to transition into more woody plant species. There are also several dense stands of Brazilian pepper that have established since the once active citrus grove was left to go fallow. Most of these dense Brazilian pepper stands are located in the western section of the project site.

There do not appear to be any wetlands on the project site as the entire property has been altered many years ago for an intensive agricultural operation. For the most part, the larger, man-made drainage ditches have been cut in upland (non-hydric) soils, although wetland like vegetation is growing at the bottom in some areas of these structures. Similar conditions exist with regards to the bottom of some of the furrows, where wetland vegetation (bulrush, smart weed) is growing along with upland vegetation (dog fennel, Caesar's weed). Again, most of the project site is not comprised of hydric/wetland like soils. It may be possible that the artesian (flow) well is influencing (has influenced) the proliferation of hydric vegetation in the bottom of some of these furrows.

Please refer to the Florida Land Use Cover Classification System (FLUCCS) map included with this report. See Exhibit C, FLUCCS Map.

UPLAND ECOSYSTEM

For the most part, the project site is upland in character having been created into an intensive and completely furrowed agricultural production site several decades ago. Since then, 2 large lakes have been constructed in the center of the project site as part of a previously active sand mining operation that does not currently appear to be operational. There are several larger drainage canals and swales throughout the project site that may be considered surface waters, most of which run parallel and adjacent to the internal road network for site access.

For the most part, the overall project site is void of natural, native vegetation having been cleared decades ago for development of an intensive agricultural operation. There are numerous native trees, palms, and understory along the east, west, and north project boundaries many of which are growing along the top of bank and downward slopes of the extensive perimeter drainage canal system that appears to be offsite for the most part. The vegetative cover in these



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areas include live oak, laurel oak, slash pine, cabbage palm, saw palmetto, beautyberry, and variety of exotic and invasive species (Brazilian pepper, primrose willow). The remainder of the assessment area is an active cattle ranch operation and former citrus grove with a vegetative cover comprised of a variety of field grasses including native broom sedge, blackberry, nicker bean, and a variety of exotic and invasive species such as smut grass, Bahia grass, cogon grass, Caesar's weed, and others. Brazilian pepper and wax myrtle continue to become more established in the open farm fields and Brazilian pepper monocultures are becoming more prominent as the once active citrus grove continues to go fallow.

The following descriptions include the FLUCCS incorporated by the Florida Department of Transportation (FDOT).

211 – Improved Pasture (308.15 acres)

This FLUCCS assessment area comprises the land area that currently is the active cattle ranch operation. Historically, the project site was developed as a citrus grove and appears to have been left to go fallow at some point in the 1990's based on aerial photographic interpretation. The natural vegetative cover was cleared several decades ago in order to develop the project site as a citrus grove. As part of this land use development, the project site was completely furrowed to provide flood irrigation to the citrus trees supplied by an artesian well located at the north-central area of the project site. Eventually, this assessment area was transitioned into a cattle ranching operation, and the vegetative cover transitioned to mostly native and non-native pasture grasses. There are a few native and non-native trees scattered throughout this assessment area including slash pine, cabbage palm, wax myrtle, and Brazilian pepper. A few areas on the more western section of the project site have become taken over by small pockets of Brazilian pepper as a monoculture due to lack of cattle grazing and/or mowing to suppress this vegetative transition.

The following is a list of the prevalent native and non-native plant species identified on the project site located within this assessment area:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Location</u>	<u>Designation</u>
Blackberry	<i>Rubus</i> spp.	Groundcover	Native
Broom sedge	<i>Andropogon virginiana</i>	Groundcover	Native
Gray nickerbean	<i>Caesalpinia bonduc</i>	Groundcover	Native
Wax myrtle	<i>Myrica cerifera</i>	Shrub	Native
Cabbage palm	<i>Sabal palmetto</i>	Sub-canopy/shrub	Native
Yellow joyweed	<i>Alternanthera flavescens</i>	Groundcover	Non-native
Smut grass	<i>Sporobolus indicus</i>	Groundcover	Non-native
Bahia grass	<i>Paspalum notatum</i>	Groundcover	Non-native
Cogon grass	<i>Imperata cylindrica</i>	Groundcover	Non-native
Caesar weed	<i>Urena lobata</i>	Groundcover	Non-native
Brazilian pepper	<i>Schinus terebinthifolius</i>	Canopy/shrub	Non-native



WETLAND ECOSYSTEM

Wetland protection is mandated under both federal and state regulations. The U. S. Army Corps of Engineers (USACE) regulates activities in Waters of the United States (WOTUS) pursuant to U. S. Environmental Protection Agency (EPA) the Clean Water Act (PL92-500, Section 404) as further defined in the USACE regulatory program (33 CFR 320-330). Also, the Navigable Waters Protection Act implemented by the federal government on June 22, 2020 is adhered to in order to assist in the determination of WOTUS.

The State of Florida Department of Environmental Protection (FDEP) has established wetland identification and permitting processes as part of Chapters 62-330, 62-340, and 62-312 of the Florida Administrative Code (FAC). Current federal and state wetland definitions are derived from the original definition found in 33 CFR 328.3, identifying wetlands as “those areas that are inundated, or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions”.

Delineation of federally regulated jurisdictional wetlands is determined by the *Corps of Engineers Wetlands Delineation Manual* (USACE Waterways Experiment Station Environmental Laboratory, 1987).

Delineation of state wetlands regulated by FDEP and St. Johns River Water Management District (SJRWMD) is done according to Chapter 62-340 FAC, Delineation of the Landward Extent of Wetlands and Surface Waters. The *Florida Wetlands Delineation Manual* (Gilbert et al, 1995) serves as a guide to Chapter 62-340. Both manuals, which emphasize the identification of hydric soils, hydrophytic vegetation, and wetland hydrologic conditions in making wetland determinations, were used as a guide in this investigation.

The Navigable Waters Protection Act (NWPR) was implemented by USACE on June 22, 2020. On December 22, 2020, FDEP assumed delegation of the State 404 Program and will manage this program was overturned by the Supreme Court of Arizona on August 30, 2021. However, the State of Florida reinstated NWPR late September 2021 and continues to be in place at this time.

This report does not constitute a wetland jurisdictional determination, and no agency applications have been prepared or submitted for review.

A Consumptive Use Permit (CUP) was issued by SJRWMD on July 12, 2005 to North Cypress Reserve, Inc. for a sand mining operation. According to SJRWMD ePermit application history, the permit (Project No. 63691-2) was issued a modification on 2008 to expand the facility. A permit transfer was issued to the current land owner and operator Peat Holding, LLC in 2013. The project currently appears to be in compliance with SJRWMD.

The following descriptions include the FLUCCS incorporated by the FDOT.



160 – Extractive (59.45 acres)

This FLUCCS assessment area is comprised of the 2 large surface water lakes that were part of a previously active sand mining operation that was permitted by SJRWMD and is still an active permit according to application information archived in the SJRWMD ePermit web portal. The northern most lake area is approximately 13.36 acres in size, and the southern most lake area is approximately 46.09 acres in size. These mining lake areas are open water bodies and the shorelines of each are lined with mostly cattail with scattered emergent aquatic vegetation, primarily spikerush.

The following is a list of the more prevalent native and non-native plant species identified on the project site located within this assessment area:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Location</u>	<u>Designation</u>
Cattail	<i>Typha</i> spp.	Shoreline	Native
Spikerush	<i>Eleocharis interstincta</i>	Shoreline	Native

534 – Reservoirs less than 10 acres (7.4 acres)

This FLUCCS assessment area is comprised of the several surface water ditches and swales, for the most part located immediately adjacent to the site access roads that traverse the project site. None of these ditches or swales appear to be connected to offsite surface water management features. Some of these ditches appear to be excavated deeper than others and as a result some sporadic water dependent vegetation is present including pickerelweed, smart weed, spoon flower, bulrush, and coin wort. Some exotic and invasive plant species are also established including Brazilian pepper, primrose willow, and cattail.

The following is a list of the more prevalent native and non-native plant species identified on the project site located within this assessment area:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Location</u>	<u>Designation</u>
Pickerelweed	<i>Pontederia cordata</i>	Groundcover	Native
Arrow arum	<i>Peltandra virginica</i>	Groundcover	Native
Smart weed	<i>Polygonum hydropiperoides</i>	Groundcover	Native
Coin wort	<i>Hydrocotyle bonariensis</i>	Groundcover	Native
Bulrush	<i>Scirpus</i> spp.	Groundcover	Native
Wax myrtle	<i>Myrica cerifera</i>	Shrub	Native
Cattail	<i>Typha</i> spp.	Groundcover	Native
Brazilian pepper	<i>Schinus terebinthifolius</i>	Canopy/shrub	Non-native
Torpedo grass	<i>Panicum repens</i>	Groundcover	Non-native
Primrose willow	<i>Ludwigia</i> spp.	Shrub	Non-native



SOILS

The following are the soil types and their descriptions found throughout the project site according to the Brevard County Soil Survey. Please see Exhibit B, Soils Map.

17 – Eau Gallie sand: This is a nearly level, poorly drained soil is on broad, low ridges in the flatwoods. In most years, under natural conditions, the water table is within a depth of 10 inches for 1 to 4 months and between 10 and 40 inches for more than 6 months. The natural vegetation is open forest of second-growth slash pine and an understory of saw-palmetto, runner oak, native grass, some galberry, and scattered cabbage palm.

19 – Riviera sand: This is a nearly level, poorly drained soil that has a thick sandy subsurface layer that tongues into a loamy subsoil at a depth of 20 to 40 inches. This soil is in broad, low areas. Under natural conditions, the water table is within 10 inches of the surface for 2 to 4 months in most years and within 10 to 30 inches for most of the remaining year, except during extreme dry periods. The natural vegetation is saw palmetto, slash pine, pineland three-awn, inkberry, blue maidencane, tooth-achegrass, chalky bluestem, scattered cabbage palm, and cypress trees.

47 – Pineda sand: This soil is nearly level, poorly drained, sandy soils on broad hammocks and in low sloughs. The water table is within a depth of 10 inches for 1 to 2 months in most years and between 10 and 40 inches for more than 6 months. In dry periods it is at a depth of more than 40 inches. A large part of the acreage is in natural vegetation of open forest of scattered pine and cabbage palm and an understory of native grasses. Some areas are covered with thick stands of mixed pine and palm and a few live oak.

THREATENED AND ENGANGERED SPECIES

The State of Florida Fish and Wildlife Conservation Commission (FWC) regulates protected species according to Rule 68A-27.001(3), Florida Administrative Code (FAC). The plant and animal species regulated by FWC are managed according to the federal Endangered Species Act of 1973. On the federal level, the U. S. Fish and Wildlife Service (FWS) is the regulatory agency that oversees this program.

According to the FWS Information for Planning and Consultation (IPaC) web database (<https://ecos.fws.gov/ipac/>), the following table is a list of potential species that may inhabit the region that the subject property is located, but do not necessarily inhabit the subject property due to historic land alterations, current site conditions, and the surrounding environment and adjacent property conditions.

A. Amphibian

Common Name	Scientific Name	Protected Species	
		State	Federal
NA			



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B. Birds

Common Name	Scientific Name	Protected Species	
		State	Federal
Audubon's Crested Caracara	<i>Polyborus plancus audubonii</i> (2)		T
Everglades Snail Kite	<i>Rosthamus sociabilis plumbeus</i> (3)	FE	E
Wood Stork	<i>Mycteria americana</i> (4)	FE	E
Red-cockaded woodpecker	<i>Picoides borealis</i> (3)	FE	E

C. Mammals

Common Name	Scientific Name	Protected Species	
		State	Federal
NA			

D. Reptiles

Common Name	Scientific Name	Protected Species	
		State	Federal
American alligator	<i>Alligator mississippiensis</i> (1)	FT	T
Eastern indigo snake	<i>Drymarchon corais couperi</i> (2)	FT	T
Gopher tortoise	<i>Gopherus polyphemus</i> (2)	ST	

E. Plants

Common Name	Scientific Name	Protected Species	
		State	Federal
NA			

*: Observed on site

FT: Federally-designated Threatened

FE: Federally-designated Endangered

FT(S/A) Federally-designated Threatened species due to similarity of appearance

ST: State-designated Threatened

SSC: Species of Special Concern

Occurrence probability:

(1) = likely, (2) = minimal, (3) = highly unlikely, (4) = transient (pond/canal, wading birds and foraging raptors)

No species specific surveys were performed as part of this report, and no listed species or their habitat was identified during this site visit.

The following is a summary of potential listed species that may utilize the project site for nesting, roosting, and/or foraging according to the FWS iPaC database.



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A. Audubon Crested Caracara (*Polyborus plancus audubonii*)

The Audubon crested caracara (ACC) is listed as Threatened by FWS, and imperiled by the State of Florida (FWC). ACC is a large species of raptor that can reach a body length of 19.7-25.2 inches (50-64 centimeters). It has a dark brown-black belly, wings, back, and crown; and a white lower belly, head, and throat. The ACC also has a bluish-gray to light bluish dark yellow to white bill, red cere (facial skin), and a white tail with dark crossbars. The diet of Audubon's crest caracara primarily consists of carrion (dead animal carcass), amphibians, reptiles, mammals, eggs, and other birds.

A survey should be conducted during the months of January through April in order to determine the territory existence of caracara as this is the peak of the nesting season (adults are foraging to feed the nesting young). Surveys are best conducted early in the morning or late in the afternoon. Caracaras are most actively nest building, foraging, and feeding young between sunrise and about 1100 hours, and again, between about 1600 hours and sunset. Caracaras are rarely active during the heat of midday, especially in the summer months. They roost in trees that are often far from the nest site; thus they are rarely visible.

When surveying for caracaras in areas where the nest site is not known, observers should remain in the vehicle and watch for caracaras over a wide area of suspected habitat. Observations may be made on consecutive days, but ideally should be conducted at least 2 weeks apart and during the months of January through April. If the entire territory cannot be surveyed from a road, areas containing sabal palm trees should be searched by foot if access is feasible. Observations should be conducted in an area at least twice a month for at least 3 consecutive months before it is considered to be unoccupied by caracara.

There are 2 zones of potential influence and impact on caracara in South Florida:

- Primary Zone - is 985 feet outward from the nest tree, and protection of the primary zone is required during the nesting season (January through April). Impacts during the active nesting period can be avoided by timing of activities near the nest site. During non-nesting season (May to October), nest trees and other potential perching and roosting trees should be protected. The nest and the nest tree are protected year-round by both Federal and State law and removal or other means of physical damage is prohibited. Typical land management practices, such as, cattle grazing, burning, and mowing are allowed during the non-nesting season. Man-made wetlands, such as, ditches and canals, are important feeding sites and also should be maintained. New construction that will increase the level of disturbance and may adversely affect caracaras.
- Secondary Zone – encompasses an area extending outward from the end of the primary zone 4,920 feet. This zone is generally defined as the foraging territory in which the nest site is located. This secondary zone is used by caracaras for the collection of nest material, roosting, and feeding. This amount of suitable habitat contiguous to the nest site may be required to maintain the ecologic function of the nesting territory. Conservation measures for this zone are directed at maintaining the foraging capacity of the area.



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B. Everglades Snail Kite (*Rostrhamus sociabilis plumbeus*)

The Everglades snail kite are listed as federally endangered according to FWS. They are a large raptor that utilizes freshwater wetlands and adjacent upland areas for nesting, roosting, and foraging (wetlands). Shallow water wetlands with emergent vegetation (spike rush, bulrush) that is not too dense and has an appropriate water depth no greater than 10-12 inches. Apple snails are a significant part of their diet.

The project does not appear to have any jurisdictional wetlands but there are 2 large lakes and several large to medium sized canals and swales that are periodically inundated with surface water. All of these structures provide shallow water and herbaceous habitat for foraging. A surface water management plan for a project development will more than likely require and provide needed foraging habitat for snail kite at or above what is currently provided.

C. Wood stork (*Mycteria americana*)

Wood storks are listed as Threatened according to FWS, and imperiled by the State of Florida (FWC). Wood storks are large, long-legged wading birds, about 45 inches tall, with a wingspan of 60 to 65 inches. Wood storks nest in mixed hardwood swamps, sloughs, mangroves, and cypress domes/strands in Florida (Florida Natural Areas Inventory 2001). They forage in a variety of wetlands including both freshwater and estuarine marshes, although limited to depths less than 10-12 inches. Impacts to wood stork foraging habitat may require compensatory mitigation including but not limited to the purchase of wetland mitigation credits of similar habitat at an approved wetland mitigation bank.

The project does not appear to have any jurisdictional wetlands but there are 2 large lakes and several large to medium sized canals and swales that are periodically inundated with surface water. All of these structures provide shallow water and herbaceous habitat for foraging. The surface water management plan for any project development will more than likely be required and would provide more shallow water foraging habitat than currently exists on site.

D. Red-cockaded woodpecker (*Picoides borealis*)

The red-cockaded woodpecker (RCW) is listed as Endangered by FWS, and as Threatened by FWC. The RCW is a black and white bird that can reach lengths of 9 inches (22.9 centimeters) and a weight of 1.8 ounces. RCWs have a large white patch located on their cheek, a black head and neck, a white belly, and a barred black and white back. The red-cockade, which is only found on the male, consists of a small red streak above the cheek and is rarely visible. The diet of RCWs mainly consists of insects, arthropods, and seeds.

The primary habitat of RCW is pine stands, pine dominated pine/hardwood stands, with a low or sparse understory and ample old-growth pines for nesting and roosting. RCW will abandon otherwise suitable nesting and roosting habitat when the understory approaches cavity height. RCW prefer large mature pine species especially long leaf pine for construction of their nesting cavities, but do not prefer sand pine or spruce pine. South of the long leaf range in Florida, RCW's can only excavate cavities in slash pine, particularly those that are typically shorter and smaller in diameter at breast height. Understory vegetation surrounding cavity trees should also be very sparse. Mature pines constitute the primary foraging substrate for RCW, but hardwood,



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bayhead and cypress dome trees may also be utilized for foraging. Typical territory range sizes for RCW in central and south Florida range between 140 to 160 hectares (XX acres).

Based on the current site conditions and lack of any onsite nesting trees due to historic site development for intensive agricultural use, RCW's should not be impacted by further development of this project site.

E. American alligator (*Alligator mississippiensis*)

The American alligator is a federally threatened species. The project does not appear to have any jurisdictional wetlands but there are 2 large lakes and several large to medium sized canals and swales that are periodically inundated with surface water that may provide habitat for alligators.

No alligators or their nests (it is breeding season) were identified during the site visit. Avoidance of this species during any site development activities or potentially relocation of an individual alligator post development of the project site should suffice in avoiding any negative impacts to this species.

F. Eastern Indigo Snake (*Drymarchon corais couperi*)

Eastern Indigo Snake (EIS) is a species that has recently attained an increase in protective measures throughout the state of Florida. Adhering to the Protection Measures For The Eastern Indigo Snake (FWS, 2013) during construction activity should be sufficient to avoid impacts to this species.

The eastern indigo snake (EIS) is classified as a Threatened species according to FWS and is protected by the Endangered Species Act of 1973. The Eastern indigo snake is a non-venomous, bluish-black colored snake that can reach lengths of eight feet. Its chin, cheek, and throat are mostly red or brown, but can also be white or black. Most indigo snakes have smooth scales, although adults do have keels (ridges) on the front of some of their scales. When approached, the EIS shows no aggression. They are also exothermic species – their body temperature is externally regulated. The EIS diet primarily consists of a variety of species, including small mammals, birds, toads, frogs, turtles and their eggs, lizards, and small alligators. EIS begin breeding between the months of November and April and nest between the months of May and August.

According to an August 1, 2017 memo from FWS to USACE, the consultation key for the EIS has been revised providing additional protection measures. There is no protocol for conducting a species specific survey for EIS. Instead, if 25 acres or more of potential EIS habitat will be impacted for project development, then a Section 7 Biological Consultation may be required by FWS as it is perceived that impact to female breeding habitat may be affected. Land that is deemed potential habitat is not limited to high quality uplands (pine flatwood, sand pine scrub, scrub oak) that are traditionally EIS habitat, but may also include agricultural lands and other disturbed lands according to the revised key. If an incidental take permit is required for the EIS from FWS, then a monetary contribution (i.e., mitigation) may be required to off-set for female



habitat loss. The current rate of the monetary contribution is not confirmed, but based on past experience, it is estimated that approximately \$5,000 per 46 acres of female EIS habitat would be required, or a percentage thereof.

G. Gopher tortoise (*Gopherus Polyphemus*)

The gopher tortoise is listed as a threatened Species in the State of Florida, and is protected according to the Florida Administrative Code, Wildlife Code, Chapter 39 (Rule 39-4.001, 39-25.002, and 39-27). The project site is not typical, although agricultural lands are often utilized by gopher tortoises for foraging and burrow construction. A gopher tortoise burrow survey will be required as part of agency review and the land entitlement process. No gopher tortoise burrows, scat or other signs of their inhabitation were observed during the site investigation as part of the preparation of this report.

CONCLUSION

The project site is 375 acres in size and is comprised of mostly agricultural land that is currently used as an active cattle ranch operation. There are 2 large man-made lakes located in the center of the project site along the north-south axis, and were part of a previously permitted mining operation with the St. Johns River Water Management District (SFRWMD). The project site was constructed for operation as a citrus several decades ago and virtually no native/natural habitat exists on the project site today.

Wetlands

SJRWMD issued a CUP in July 2005 for the construction of a sand mining operation. No wetlands were identified as part of the application review and permit issuance (or identified in the online ePermit file history). An ERP will be required to develop this project site from a land use different than its current agricultural and mining application. No wetlands were identified as part of the onsite review in preparation of this environmental assessment report. Any modification of existing surface waters will need to be addressed as part of the designed surface water management plan.

A State 404 permit will be required by FDEP unless it can be determined that this project site is not connected to federal waters. Based on the site investigation provided to date by ESI staff, it does not appear there is offsite connection to Waters Of The U. S., and therefore this project site should qualify for a No Permit Required based on NWPR.

Listed Species

Based on the current site conditions, the field investigation by ESI biologist, and the FWS iPAC database search, it appears that the site may be utilized by wood stork and snail kite for foraging in the 2 onsite mining lakes and surface water canals and swales. The surface water management plan for any project development will more than likely require and would provide more shallow water foraging habitat than currently exists on site, resulting in a “no effect” for either of these 2 species.



Audubon crested caracara are prevalent in some sections of western Brevard County area. Open agricultural fields with cabbage palms are prime nesting and foraging habitat for this species. Based on the most current data from FWS, there are no documented caracara nests within 8-10 miles of the project site. A survey will more than likely be required during the nesting season as part of the land development and entitlement process to ensure avoidance of impacts to any identified nests and the project would meet all required setbacks within Zones 1 or 2 of the project site.

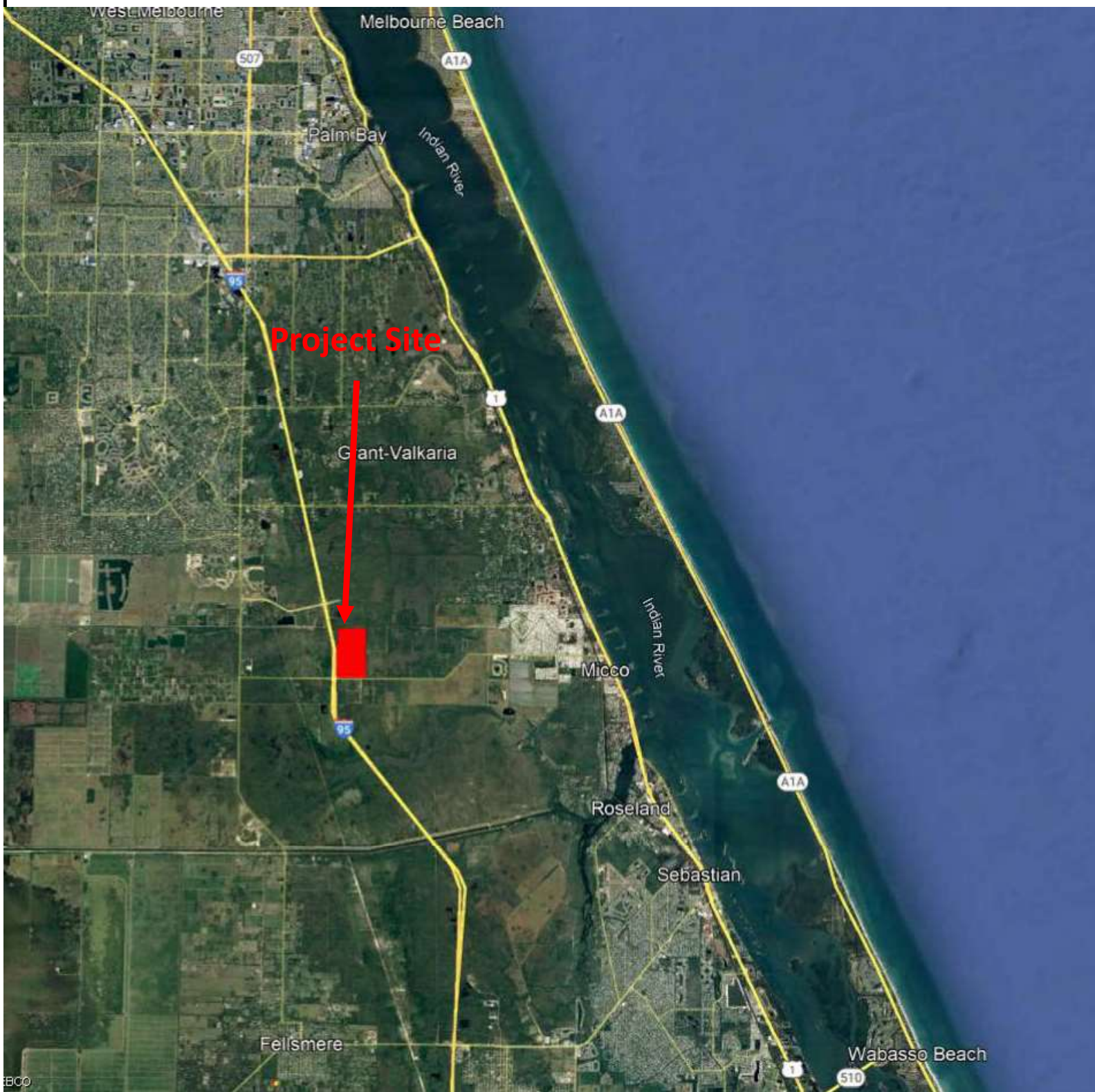
A gopher tortoise survey will be required as part of the entitlement and land development process. Based on the findings of this survey, it will be determined if a taking permit is required by the Florida Fish and Wildlife Conservation Commission.

There is no specific survey protocol for the eastern indigo snake, but it is possible that an incidental take permit will be required from the FWS and a monetary contribution (i.e., mitigation) for habitat loss will need to be provided. The current rate of the monetary contribution is not confirmed, but based on past experience, it is estimated that approximately \$5,000 per 46 acres of female EIS habitat would be required.

Tree Protection

Any protected tree proposed to be impacted that has a diameter at breast height of 6" or greater will require a Tree Removal Permit from the City of Palm Bay according to Chapter 180 of the code of ordinances.





Ecotone Services
13945 89th Street
Fellsmere, FL
32948
(772) 453-3339

Exhibit A

Location Map

375 Acre Micco Village North Property
Palm Bay, Brevard County, Florida

Project No: 2145

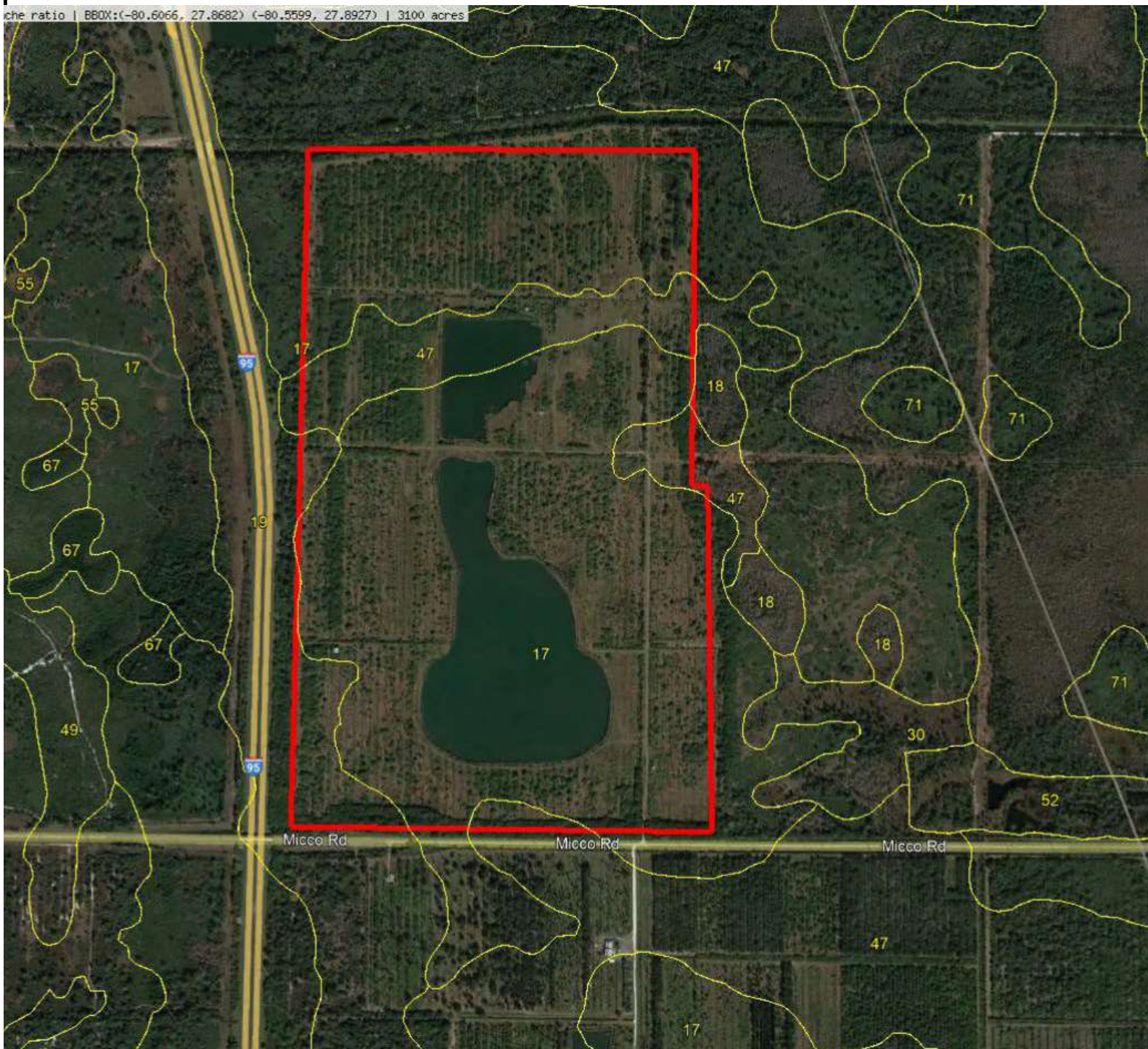
Date: 4/28/2022

Drawn by: JWR
Checked by:
Date: 4/28/2022

Scale: Not To Scale



Scale ratio | BBOX:(-80.6066, 27.8682) (-80.5599, 27.8927) | 3100 acres



17 – Eau Gallie sand

19 – Riviera sand

47 – Pineda sand



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Exhibit B

Soils Map

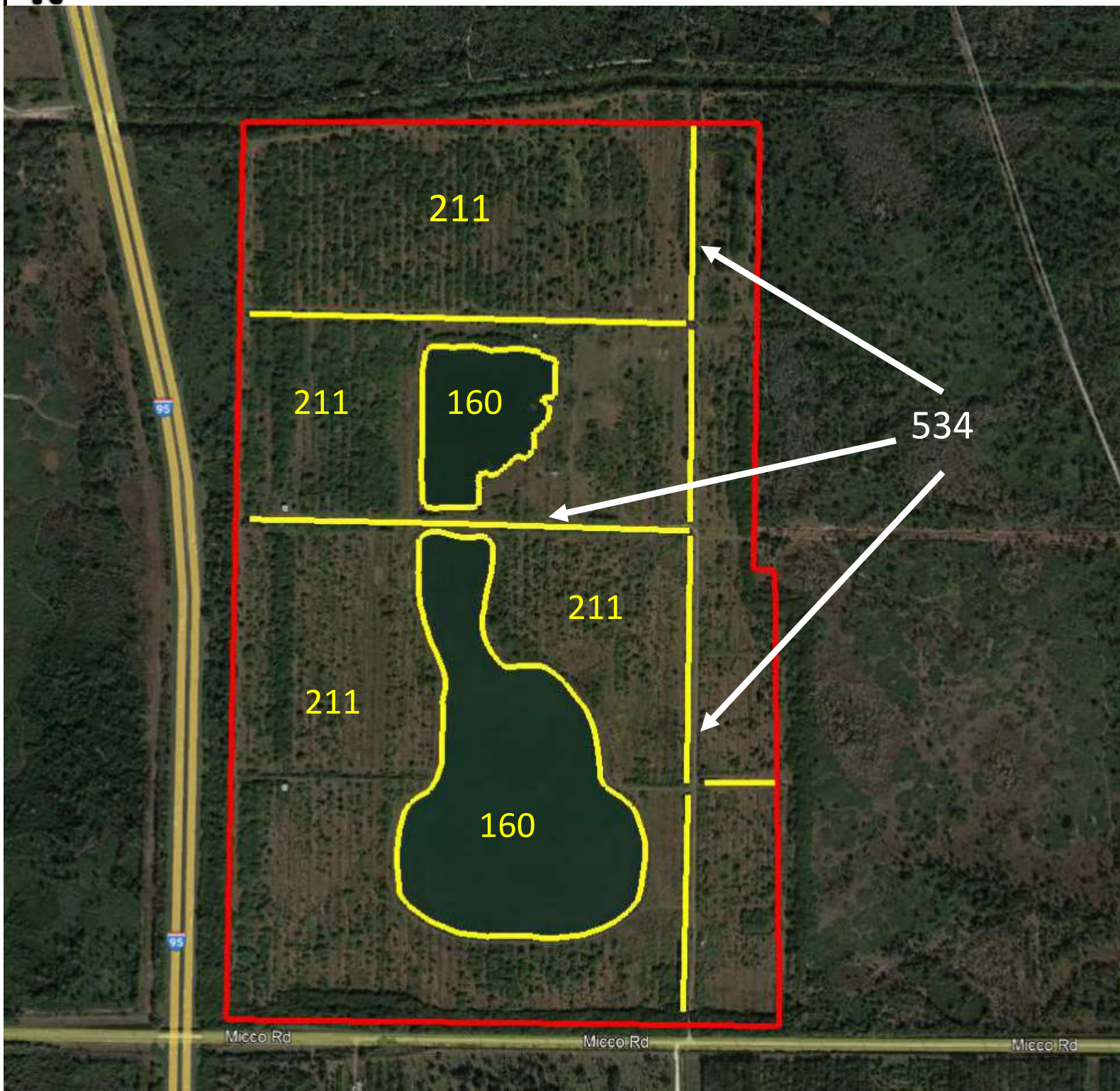
375 Acre Micco Village North Property
Palm Bay, Brevard County, Florida

Project No: 2145

Date: 4/28/2022

Drawn by: JWR
Checked by:
Date: 4/28/2022

Scale: Not To Scale



160-Extractive (59.45 ac)

211-Improved Pasture (308.15 ac)

534-Reservoir (7.4 ac)



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Exhibit C

FLUCCS Map

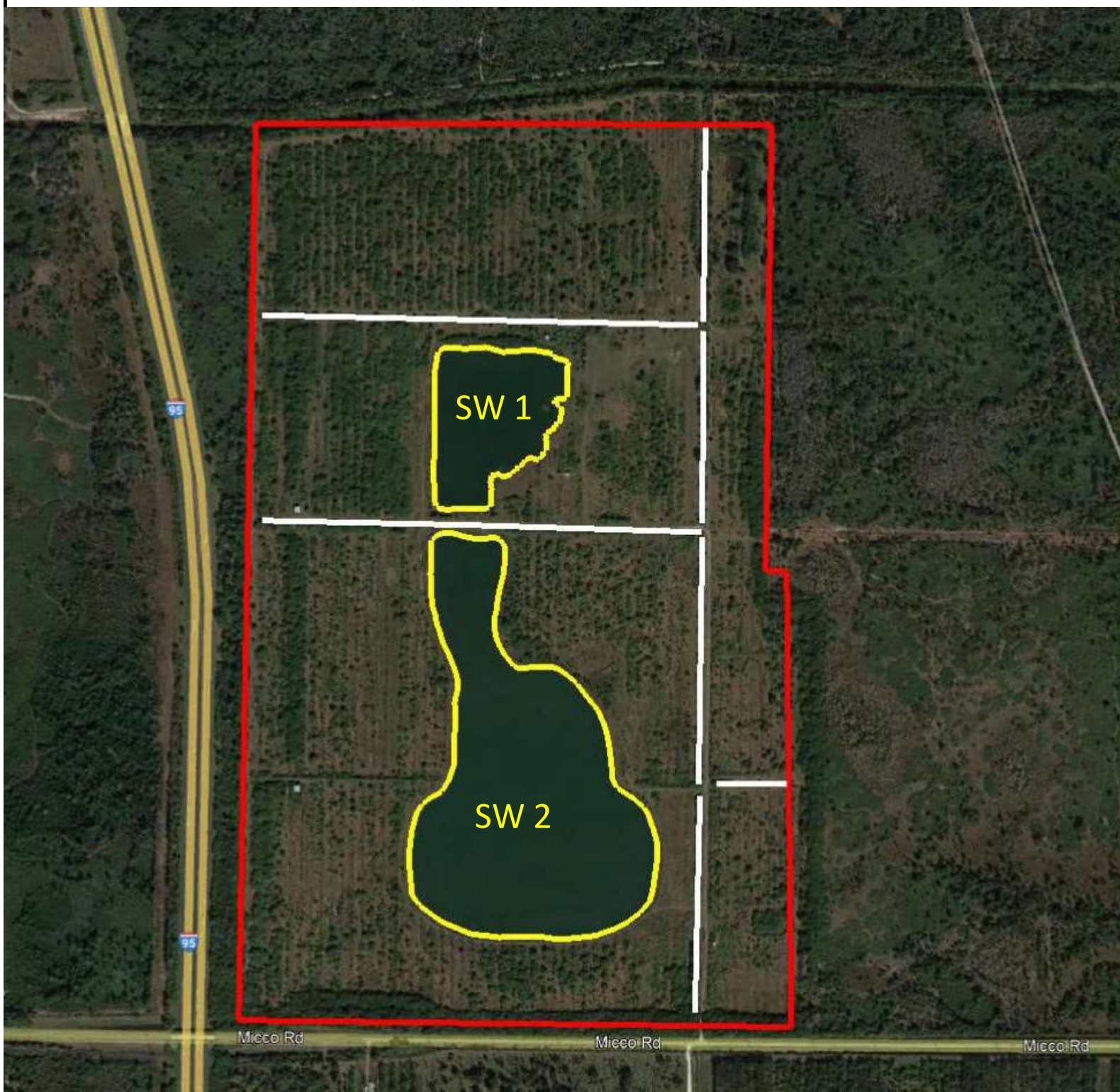
375 Acre Micco Village North Property
Palm Bay, Brevard County, Florida

Project No: 2145

Date: 5/24/2022

Drawn by: JWR
Checked by:
Date: 5/24/2022

Scale: Not To Scale



Surface Water 1 = 13.36 ac

Surface Water 2 = 46.09 ac



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Exhibit D Wetland & Surface Water Map

375 Acre Micco Village North Property
Palm Bay, Brevard County, Florida

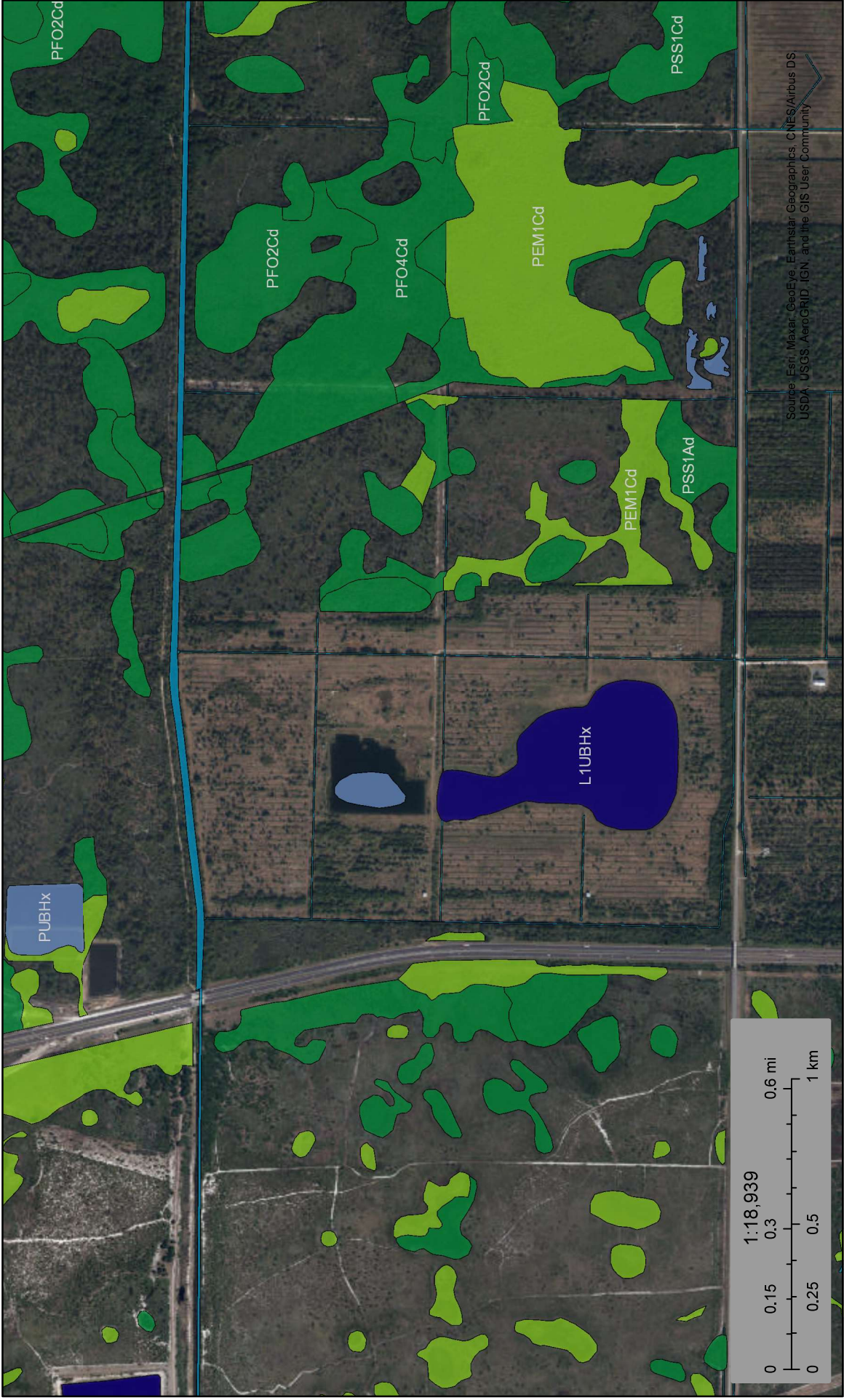
Project No: 2145

Date: 5/24/2022

Drawn by: JWR
Checked by:
Date: 5/24/2022

Scale: Not To Scale

Micco North



April 25, 2022
 This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

SITE PHOTOGRAPHS – Exhibit G



North view from south end of main access road just inside gated entrance



North view of deep swale along west side of access road with aquatic plant coverage





East view of northeast pasture area with invasive cogon grass as dominant groundcover



East view of adjacent property to the east wooded with native upland habitat





North view of north end of project site of recently mowed field and feral hog ruts

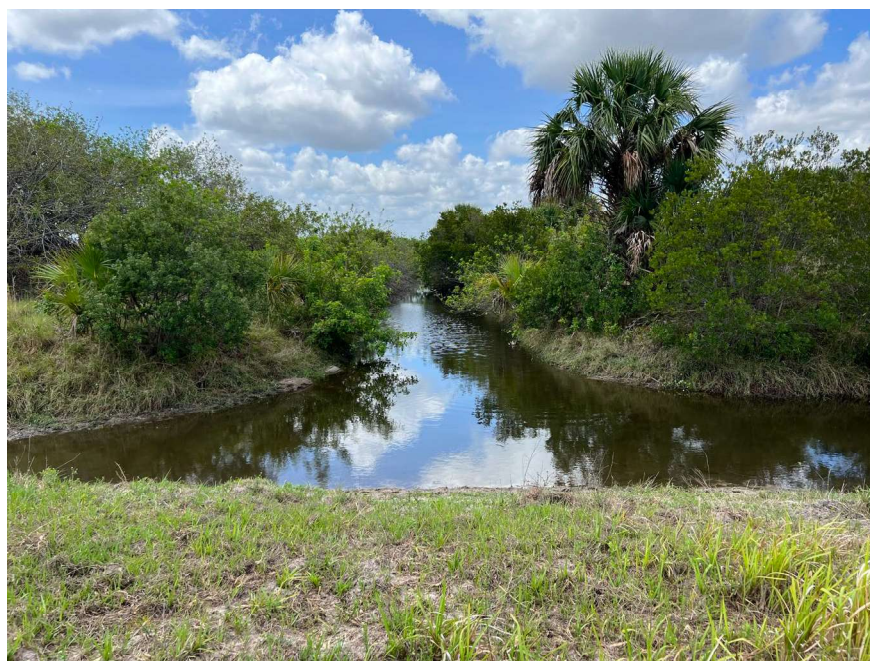


East-west drainage swale on north side of northern most lake area





Artesian well flowing in center of property in ditch north side of north lake area



Water ponding in swale adjacent to flowing artesian well





South view across northern most lake



South view of south lake area towards Micco Road



SITE PHOTOGRAPHS



Live oaks, saw palmetto and other native vegetation within west property line buffer area



South view of west buffer towards Micco Road





A group cabbage palms in the agricultural field



Swath of cogon grass mowed between a dense stand of Brazilian pepper





Top of remnant furrow of previous agricultural operation



Remnant wetland plants in bottom of dry furrow swale





South view of south-central section of project site towards Micco Road



East view of south-east corner field of project site, near gated entrance

