



June 11, 2021

Karali Associates, LLC
2642 Fawnlake Trail
Orlando, Florida 32828

**RE: Range Road Subdivision
Brevard County, Cocoa, Florida
Listed Species Report
ECS Project No. 875.01.20**

To whom it may concern:

On March 24th, 2021, ECS biologists conducted a listed species survey of the proposed project site located immediately east of N Range Road, west of E Stetson Circle, and north of Kathi Kim Street in Cocoa, Florida. More specifically the project site is located in Section 19 & 30, Township 24 South, and Range 36 East in Brevard County, Florida (Figure 1).

The subject property consists of mostly forested habitat. There is a dirt roadway through the center of the property. Two large wetland systems are present within the property boundary as well as a man-made ditch and three additional small wetlands.

A survey of the property boundaries was conducted to assess the potential occurrence of flora and fauna listed as threatened or endangered by the United States Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FWC), and the Florida Department of Agriculture (FDA). Tables 1 and 2 provide a listing of the species known to occur within Brevard County and their expected occurrence of the project site. The findings and conclusions of the survey are reported in this letter.

The survey was conducted by Ecological Consulting Solutions Inc (ECS) for the purpose of evaluating the site for the presence or absence of wetland habitat and protected flora and fauna or their habitat. The survey was conducted by means of pedestrian transects in the early morning to assure the potential of observing listed fauna as recommended by the FWC and the USFWS.

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The following resources were used for supporting information during the site assessment and letter preparation:

- Color aerial photographs (1" = 300), 2020, Google Earth, Volusia County, Florida.
- United States Geological Survey (USGS) 7.5-minute quadrangle map, Volusia County, Florida, (ArcGIS).
- National Wetlands Inventory Mapping, U.S. Fish and Wildlife Service.
- Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida (USFWS and FWC).

Pedestrian and vehicular surveys of the proposed project site were conducted in order to qualitatively document the existing vegetation and to assess the present land use patterns according to *the Florida Land Use, Cover and Forms Classification System, Department of Transportation* (FLUCFCS; DOT 1999). Six (06) land-use types were determined for the project site (Figure 2). A brief description of each FLUCFCS community is provided below.

420 – Upland Hardwood Forests

Located in the western portion of the project site this is the only upland habitat located on site. This habitat has a dense canopy cover, species observed consist of slash pine (*Pinus elliottii*), laurel oak (*Quercus laurifolia*), live oak (*Quercus laurifolia*), cabbage palms (*Sabal palmetto*), loblolly bay (*Gordonia lasianthus*), and camphor tree (*Cinnamomum camphora*). The shrub layer species include Brazilian pepper (*Schinus terebinthifolia*), American beauty berry (*Callicarpa americana*), and American elm (*Ulmus americana*). Groundcover species observed were greenbriar (*Smilax rotundifolia*), blackberry (*Rubus fruticosus*), bracken fern (*Pteridium aquilinum*), saw palmetto (*Serenoa repens*), broomsedge (*Andropogon virginicus*), and some cogon grass (*Imperata cylindrica*).

513 – Ditch

Found through the center of the property is a man-made ditch that runs offsite in both directions. Vegetation observed within the ditch and along the edge consists of Brazilian pepper, wax myrtle (*Myrica cerifera*), primrose willow (*Ludwigia peruviana*), soft rush (*Juncus effuses*), and arrowhead (*Sagittaria lancifolia*).

617 – Mixed Wetland Hardwoods

Found in two places in the southern portion of the property this habitat type is heavily forested. Vegetation observed includes Brazilian pepper, beak rush (*Rhynchospora crinipes*), soft rush, wax myrtle, water hyssop (*Bacopa monnieri*), gall berry (*Ilex glabra*), red maple (*Acer rubrum*), swamp fern (*Blechnum serrulatum*), royal fern (*Osmunda regalis*), American elm, poison ivy (*Toxicodendron radicans*), cabbage palm, laurel oak, and cinnamon fern (*Osmunda cinnamomea*).

619 – Exotic Wetland Hardwoods

Adjacent to the onsite ditch this habitat is densely vegetated with Brazilian pepper. Other species observed include swamp fern, cinnamon fern, cabbage palm, and sugar berry.

641 – Freshwater Marshes

The largest wetland habitat type found onsite, is located in the north eastern portion of the property. This habitat is densely vegetated, species observed include giant leather fern (*Acrostichum danaeifolium*), cattails (*Typha spp.*), sawgrass (*Cladium jamaicense*), marsh pennywort (*Hydrocotyle umbellata*), primrose willow, Carolina willow (*Salix carolinianna*), Brazilian pepper, cabbage palm, sugar berry (*Celtis laevigata*), poison ivy, live oak, water oak (*Quercus nigra*), and wax myrtle.

643 – Wet Prairie

Located in the north west portion of the property is an isolated wetland defined by a low-lying area within the uplands. Vegetation found within this habitat consists of soft rush, blackberry, gall berry, little blue maiden cane (*Amphicarpum muehlenbergianum*), St. john wort (*Hypericum perforatum*), marsh pennywort, and primrose willow.

Listed Species Survey

A survey was conducted using pedestrian transects throughout the site to assess the occurrence, or potential for occurrence, of flora and fauna listed as threatened, endangered, or as species of special concern (SSC) by the Florida Fish and Wildlife Conservation Commission (FWC), United States Fish and Wildlife Service (USFWS), and Florida Department of Agriculture (FDA).

ECS biologists searched the USFWS database at <http://endangered.fws.gov> for the presence of critical habitats within the proposed project site. There are no critical habitats within the project boundaries.

On January 11, 2017, the FWC State listing status changes, originally proposed back in 2010, became official after the approval of Florida's Imperiled Species Management Plan by FWC Commissioners.

- 15 species were removed from Florida's Endangered and Threatened Species List: Eastern chipmunk, Florida mouse, brown pelican, limpkin, snowy egret, white ibis, peninsula ribbon snake (Lower Keys population), red rat snake Lower Keys population), striped mud turtle (Lower Keys population), Suwannee cooter, gopher frog, Pine Barrens tree frog, Lake Eustis pupfish, mangrove rivulus, and Florida tree snail.

- 23 species changed from State-designated Species of Special Concern to State-designated Threatened species: Sherman's short-tailed shrew, Sanibel rice rat, little blue heron, tricolored heron, reddish egret, roseate spoonbill, American oystercatcher, black skimmer, Florida burrowing owl, Marian's marsh wren, Worthington's Marsh wren, Scott's seaside sparrow, Wakulla seaside sparrow, Barbour's map turtle, Florida Keys mole skink, Florida pine snake, Georgia blind salamander, Florida bog frog, bluenose shiner, saltmarsh top minnow, Southern tessellated darter, Santa Fe crayfish, and Black Creek crayfish.

- 14 species keep their State-designated Threatened status: Everglades mink, Big Cypress fox squirrel, Florida sandhill crane, snowy plover, least tern, white-crowned pigeon, Southeastern American kestrel, Florida brown snake (Lower Keys population), Key ringneck snake, short-tailed snake, rim rock crowned snake, Key silverside, blackmouth shiner, and crystal darter.

- Five species listed as State-designated Species of Special Concern: (list species): Homosassa shrew, Sherman's fox squirrel, osprey (Monroe County population), alligator snapping turtle, and harlequin darter.

On December 23, 2018, the State listing status changes that were proposed in 2011 as part of the newly implemented imperiled species management system became official after the approval of Florida's Imperiled Species Management Plan by FWC Commissioners.

- Four species were removed from Florida's Endangered and Threatened Species List as State Species of Special Concern: Harlequin darter, Osprey (Monroe County population), Homosassa shrew, and Sherman's fox squirrel.

- The Alligator snapping turtle was taxonomically reclassified into three subspecies. The Suwannee alligator snapping turtle was listed as a State-designated Threatened species. • Two species were listed as Federally-designated Threatened species: Giant manta ray and Nassau grouper. • Four species had changes in their scientific names: Short tailed snake, Bluetail mole skink, Florida Keys mole skink, and sand skink.

Birds

Approximately 35 species (and sub-species) of birds found in Florida are protected by the FWC and/or the USFWS. Overall, about fifteen (15) are expected to occur in central Florida.

Approximately 35 species (and sub-species) of birds found in Florida are protected by the FWC and/or the USFWS. For Brevard County, the USFWS federally lists five (5) bird species. Only about fifteen (15) are expected to occur in central Florida. No listed birds were observed at this site (Table 1).

Red-cockaded woodpeckers (*Picoides borealis*) are listed as endangered (USFWS) and endangered (FWC). No red-cockaded woodpeckers were observed and the upland habitat type is not suitable.

There was no open pine flatwood habitat with old-growth pines that characterize RCW nesting and foraging habitat.

Listed wading birds such as limpkin (*Aramus guarauna*), little blue heron (*Egretta caerulea*), tricolored heron (*Egretta tricolor*), white ibis (*Eudocimus albus*) and wood stork (*Mycteria americana*) were not observed. The onsite ditch and wetlands do provide wading bird habitat. Wading birds likely use the interior of the marsh habitat due to the dense vegetation throughout the remainder of the site.

Florida Scrub-Jay

Brevard County contains the Florida scrub-jay (*Aphelocoma coerulescens*) which is listed as threatened by the USFWS.

A 1993 statewide census documented about 4,000 breeding pairs of Florida scrub-jays remaining in Florida, including 374 pairs in mainland Brevard County. In addition, an estimated 850 breeding pairs of scrub-jays are on the Federal lands of Kennedy Space Center, Merritt Island National Wildlife Refuge, and Cape Canaveral Air Force Station. Brevard County's 1993 Florida scrub-jay population was the highest of any county in the state.

The onsite habitat is not suitable for the presence of the Florida scrub jay as there is no scrub habitat available. As previously discussed, the upland habitats are densely vegetated with pine and oak dominated canopy cover.

The survey methodology per the prescribed guidelines established by the USFWS which were adapted from the "*Ecology and development-related habitat requirements of the Florida scrub-jay, Florida Game and Freshwater Fish Commission, Nongame Wildlife Program Technical Report No. 8*" were reviewed prior to the site visits. No Florida scrub jays were seen or vocalizations heard.

Bald Eagle

Bald eagles (*Haliaeetus leucocephalus*) or their nests were observed on the site. Bald eagles are protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The USFWS has established a 660 foot protection zone around a bald eagle nest.

ECS searched the Audubon's Eagle Watch website to determine if any documented bald eagle nests are within 660 feet of the site. There are no FWC verified nest located on or adjacent to the project site. For current nesting data, ECS also checked with Audubon Eagle Watch which collects bald eagle nesting data for the FWC, no nests were documented on site or nearby.

No other listed raptors such as Southeastern American kestrels (*Falco sparverius paulus*) or Arctic peregrine falcons (*Falco peregrinus tundrius*) were observed on or around the site. There is no foraging habitat for kestrels. No birds were observed on or offsite at the time of the survey.

Florida sandhill cranes (*Grus canadensis pratensis*), a Threatened Species, were not observed within the project boundaries.

Amphibians and Reptiles

About thirty (30) species of Florida's amphibians and reptiles are protected. For Brevard County, the USFWS federally lists eight (8) reptile species. Five ae species of sea turtles which are not of concern for this property. No listed reptile or amphibian species were observed within the project boundaries.

Gopher Tortoise

Surveys were conducted throughout the property for gopher tortoises (*Gopherus polyphemus*), a species listed by the FWC as a Threatened species. No gopher tortoises or their burrows were observed. The property is densely forested with a dense shrub layer. The onsite habitats are considered poor for the gopher tortoise.

Several commensal species associated with gopher tortoise burrows, including the gopher frog (*Rana capito*) and eastern indigo snake (*Drymarchon corais couperi*) also receive protection, but were not observed.

Eastern Indigo Snake

Concerning the eastern indigo snake, ECS conducted survey transects to identify potential aboveground and underground refugia, which eastern indigo snakes may inhabit. Underground refugia includes active or inactive gopher tortoise burrows, mammal burrows, hollows at the base of trees and other similar formations. Above ground refugia includes thick shrub formations, stumps, the base of thick palmetto, ground litter, brush piles, trash piles, and abandoned structures, and crevices of rock-lined ditch walls and other similar refugia.

Surveys for eastern indigo snakes are recommended by the USFWS during the time of October 01st through April 30th. There were little suitable refugia for the eastern indigo snake onsite. No eastern indigo snakes were observed.

The USFWS has established new programmatic effect determination key (Key) as part of the eastern indigo snake management. The Key allows the USFWS to require mitigation for eastern indigo snake habitat if 25 or more acres of suitable habitat will be impacted for development.

The USFWS has established a fund that a developer can pay into for mitigation.

A developer can pay up front and then no surveys for the eastern indigo snakes are required. The survey is a minimum 5-day survey. To save time and monies associated with the surveys, the developer can pay a fee and expedite the permitting process.

To determine if the site has eastern indigo snake habitat will be up to the USFWS reviewer assigned to the project.

The Key only applies if a project has Army Corps of Engineers jurisdictional wetlands. It was designed to speed up the permitting process for indigo snakes when there are Army Corps of Engineers jurisdictional wetlands onsite. The idea is a developer pays into the fund and gets a permit quickly.

If a project site does not have Army Corps of Engineers jurisdictional wetlands, then the programmatic key cannot be used. Under this circumstance, formal consultation with the USFWS would have to be conducted which can take up to 6 months to obtain a permit to impact eastern indigo snake habitat.

The USFWS requires the developer to notify the local field office via email at least **30 days prior** to any clearing/land alteration activities.

The notification has to include an eastern indigo snake protection/education plan. This notification can occur via email with the protection/education plan attached.

As long as the signatory of the e-mail certifies compliance with the protection/education plan (including use of the USFWS informational poster and brochure), no further written confirmation or “approval” from the USFWS is needed and the applicant may move forward with the project.

Mammals

Thirty-three (33) mammals are currently protected in Florida. For Brevard County, the USFWS federally lists two (2) mammal species.

ECS searched for the presence of Southern fox squirrels (*Sciurus niger niger*) and the Florida mouse (*Podomys floridanus*) and their possible den or nest sites. The absence of gopher tortoise burrows decreases the likelihood for the Florida mouse.

No mammal species were observed.

Listed Plants

There were no protected plant species found on the project site (Table 2).

Currently, there are no technical reports available by the state or federal agencies mentioned in this letter report for the survey of the nearly 400 protected plant species. None of the agencies require relocation or mitigation for protected plant species.

The Department of Agriculture and Consumer Services (DACS) designates and regulates plants listed as “endangered”, “commercially exploited” and “threatened”.

There is no statutory prohibition against a landowner from harvesting an endangered or threatened plant from his property. However, it is unlawful for an individual to harvest an endangered or threatened species from the private land of another or any public land without first obtaining written permission of that landowner and a permit from DACS. Additionally, harvesting three or more commercially exploited plants from the private land of another or any public land will also require a DACS permit.

Wetlands

There are five wetlands and one surface water within the boundaries of the project site.

St. Johns River Water Management District

The St. Johns River Water Management District (SJRWMD) regulates any proposed development including alterations to wetlands and surface waters. Any proposed development of the site will require a review of the wetland delineation and a submittal of an Environmental Resource Permit (ERP) application to the SJRWMD.

If the onsite wetland is larger than 0.5 acres in size, then mitigation will be required for any proposed wetland impacts. The SJRWMD operates on 30 day timeframes.

Florida Department of Environmental Protection

The Florida Department of Environmental Protection (DEP) now has federal authority over this project and not the U.S. Army Corps of Engineers (ACOE). According to DEP, if no wetland impacts are proposed, then a federal permit will not be necessary.

There is no separate permit application for the DEP. All of the water management districts now have a joint permit application form. The permit application is to be submitted to SJRWMD, who will then provide a copy to the local office of the DEP. Both agencies will attempt to conduct wetland reviews at the same time. Currently DEP is taking longer than the SJRWMD to review flagged wetland lines and is averaging around three months to get a site visit scheduled.

As part of the wetland review process, wetland and upland data forms must be submitted to DEP for review. DEP will also require an alternative site analysis should wetland impacts be proposed. The alternative site analysis must demonstrate why the proposed property was chosen to develop and that other properties with less wetlands were not available. DEP also requires the applicant to provide self-addressed envelopes, with postage, for every adjacent property owner. The envelopes are necessary so that DEP can send out public notice as part of the permit process. DEP will also require mitigation for any proposed wetland impacts.

DEP is typically taking 150 to 240 days to complete the permitting process.

Summary

In summary, no listed species were observed within the project site.

Prior to any land clearing or construction activities, the USFWS must be provided with an eastern indigo snake protection/education plan. The USFWS must approve the protection/education plan prior to construction. There were no other environmental concerns observed for this project.

Ecological Consulting Solutions Inc. appreciates the opportunity to provide you with our services. Should you have any questions or require additional information, please do not hesitate to contact me.

Sincerely,

ECOLOGICAL CONSULTING SOLUTIONS INC



Chris Krack

PHOTOGRAPH OF THE SUBJECT PROPERTY

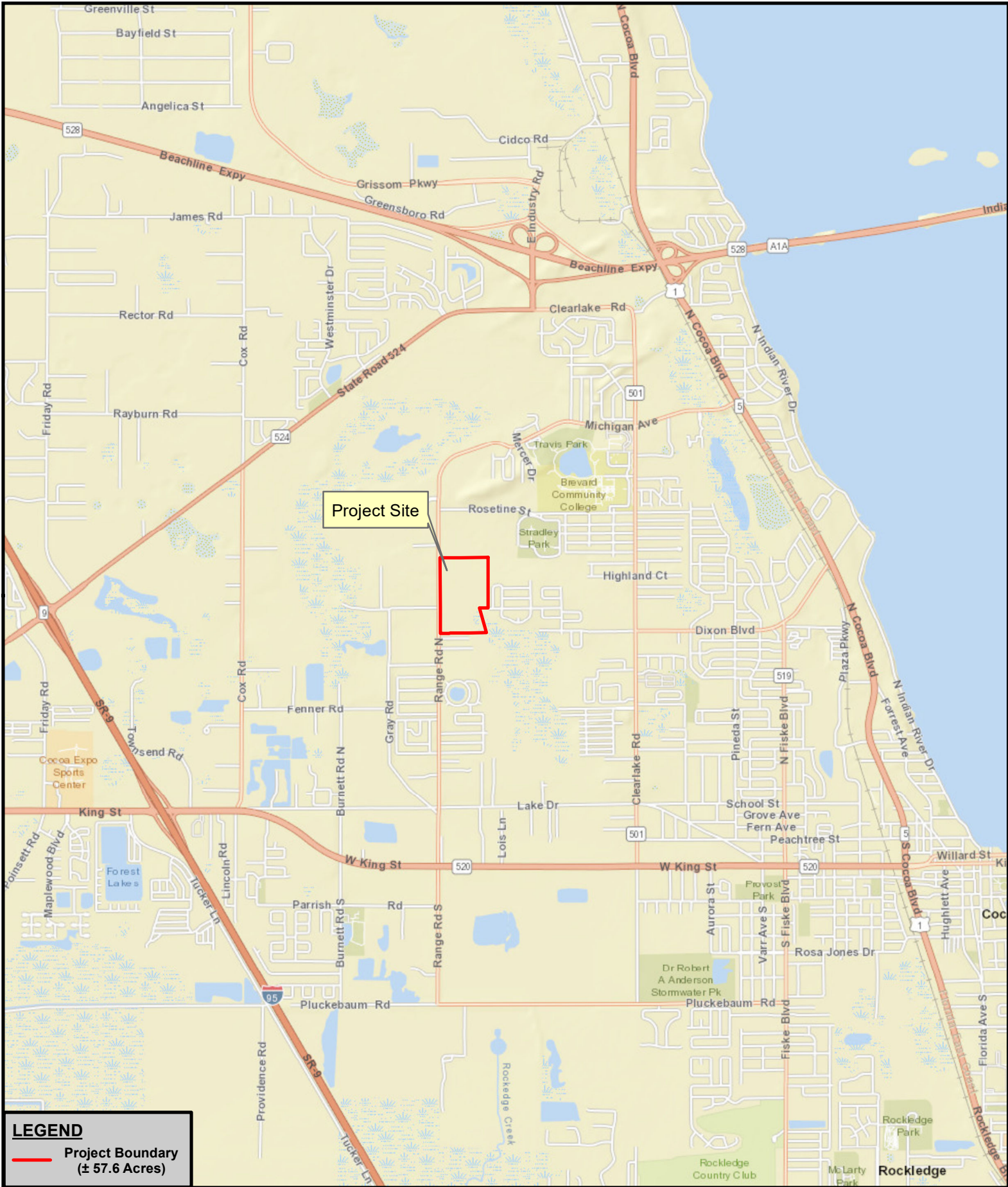


Ditch Habitat Located Onsite.



Wetland Habitat Located Onsite.

FIGURES



LEGEND
 Project Boundary
 (± 57.6 Acres)



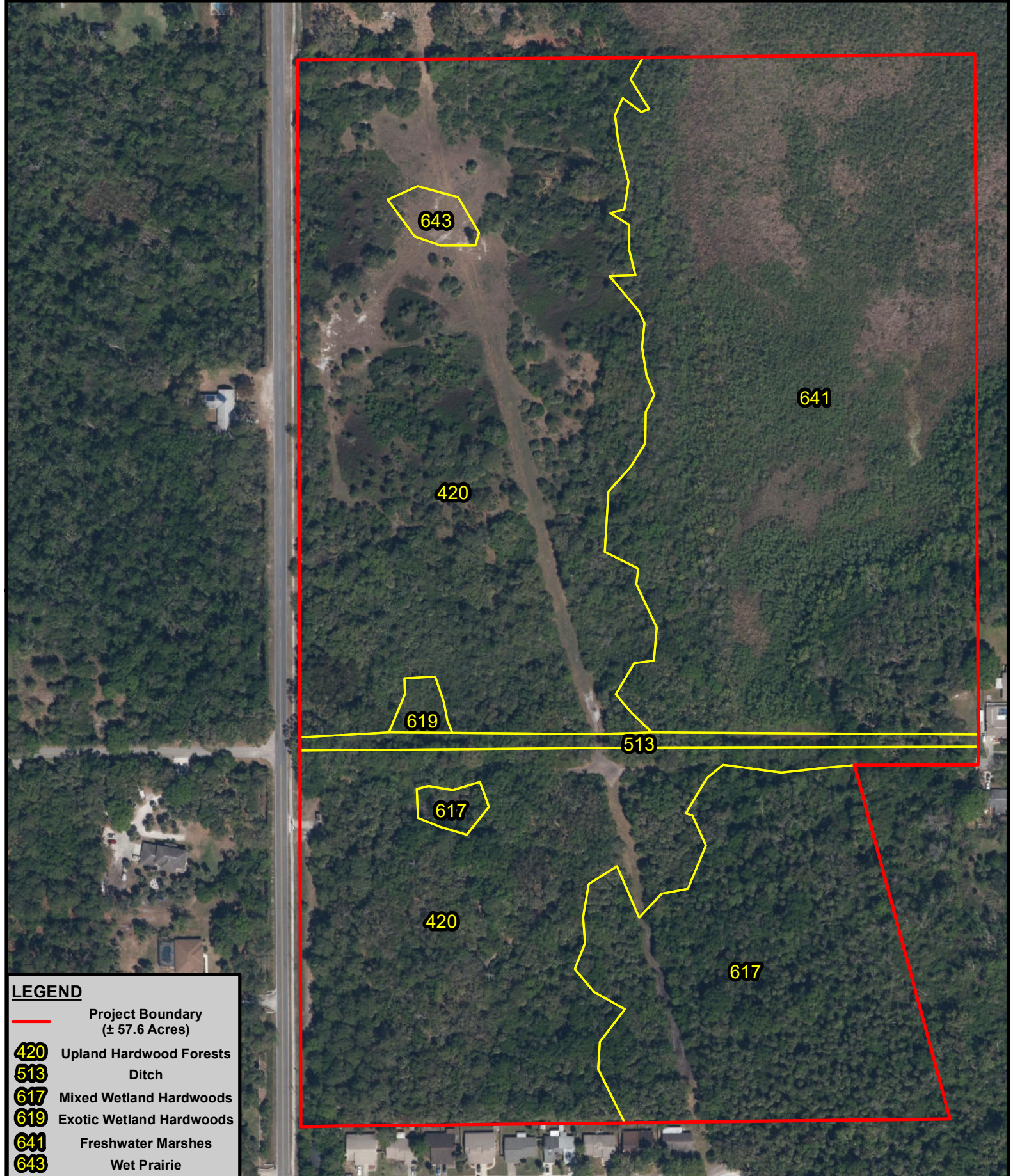
**RANGE ROAD
 BREVARD COUNTY, FLORIDA
 LOCATION MAP**

PROJECT #: 875.01.20 DATE: 03/23/21 FIGURE #: 1




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LEGEND


	Project Boundary (± 57.6 Acres)
420	Upland Hardwood Forests
513	Ditch
617	Mixed Wetland Hardwoods
619	Exotic Wetland Hardwoods
641	Freshwater Marshes
643	Wet Prairie




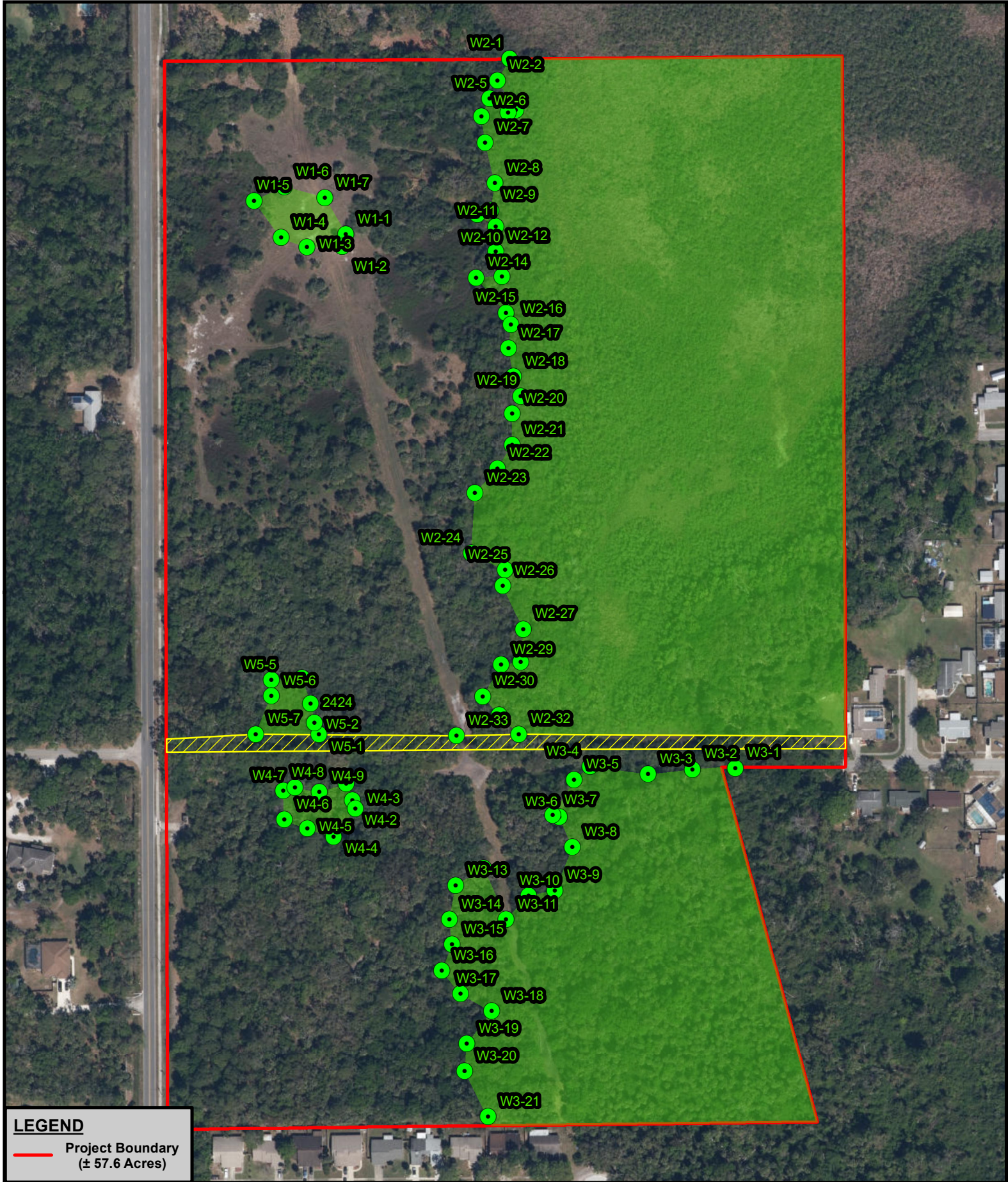
**RANGE ROAD
BREVARD COUNTY, FLORIDA
FLUCFCS MAP**

PROJECT #: 875.01.20 DATE: 03/23/21 FIGURE #: 2

0 100 200 400 600 Feet

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LEGEND

— Project Boundary
(± 57.6 Acres)

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Ecological
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**RANGE ROAD
BREVARD COUNTY, FLORIDA
WETLAND MAP**

PROJECT #: 875.01.20 DATE: 03/23/21 FIGURE #: 3

0 100 200 400 600 Feet



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- Landowner Tools
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- Habitat Conservation Plans
- IPaC: Federally-listed Species in Florida
- Related Sites of Interest

Federally Listed Species in Brevard County, Florida

This information is provided as a guide to project planning, and is not a substitute for site-specific surveys. Such surveys may be needed to assess species' presence or absence, as well as the extent of project effects on listed species and/or designated critical habitat.

The following table lists those federally-listed species known to be present in the county.
Code Key: E = Endangered, T = Threatened, CH = Critical Habitat Designated, C=Candidate Note 1

Category	Species Common Name	Species Scientific Name	Code
Mammals	West Indian (Florida) Manatee	<i>Trichechus manatus latirostris</i>	E/CH
	Southeastern Beach Mouse	<i>Peromyscus polionotus nineiventris</i>	T
Birds	Audubon's Crested Caracara	<i>Polyborus plancus audubinii</i>	T
	Florida Scrub-jay	<i>Aphelocoma coerulescens</i>	T
	Piping Plover	<i>Charadrius melodus</i>	T
	Wood Stork	<i>Mycteria americana</i>	T
	Red-cockaded Woodpecker	<i>Picoides borealis</i>	E
Fish	None		
Reptiles	Atlantic Salt Marsh Snake	<i>Nerodia clarkii (=fasciata)taeniata</i>	T
	Eastern Indigo Snake	<i>Dymarchon corais couperi</i>	T
	Green Sea Turtle	<i>Chelonia mydas</i>	E
	Hawksbill Sea Turtle	<i>Eremochelys imbricata</i>	E
	Leatherback Sea Turtle	<i>Dermochelys coriacea</i>	E
	Kemp's ridley Sea Turtle	<i>Lepidochelys kempii</i>	E
	Loggerhead Sea Turtle	<i>Caretta caretta</i>	T
	Gopher Tortoise	<i>Gopherus polyphemus</i>	C
Amphibians	None		
Mollusks	None		
Crustaceans	None		
Plants	Carter's Mustard	<i>Warea carteri</i>	E

► [Home](#) ► [Species: North Florida County](#) ► [Species: South Florida County](#) ► [Species: Panhandle County](#)

For a list of State species by county use the Florida Natural Areas Inventory's Tracking Lists at <http://www.fnai.org/trackinglist.cfm>

For State listed species details, please go to <http://myfwc.com/imperiledspecies/>

Note 1. Candidate species receive no statutory protection under the ESA. The FWS encourages cooperative conservation efforts for these species because they are, by definition, species that may warrant future protection under the ESA.

NOTE: Bald eagles were removed from the endangered species list in June 2007 because their populations recovered sufficiently. However, the protections under the Bald and Golden Eagle Act (Eagle Act) continue to apply. Please see the eagle information on our [Landowner Tools](#) page or our national website at <http://www.fws.gov/migratorybirds/baldeagle.htm> for information regarding new permit requirements under the Eagle Act.

Key North Florida Species

- Bald Eagle
- Florida Manatee
- Eastern Indigo Snake
- Florida Scrub-Jay
- Sand Skinks
- Sea Turtles
- Whooping Crane
- Wood Stork