

DUE DILIGENCE REPORT

PREPARED FOR:

[Cheney Highway / Titusville]

PROJECT LOCATION:
2305 Cheney Highway, Titusville, Florida

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PREPARED BY:

Ida Meehan, Gaston Hayworth, Bill Lites, Michelle Widick

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1.0 PROJECT INFORMATION

The Hillpointe project site is located in the City of Titusville, Brevard County, Florida, in Section 20 & Section 21, Township 22 South, and Range 35 East. The property is approximately 14.2 acres and is bound by single family, low density residential to the south and east, Cheney Highway to the north, and commercial services to the west (**Aerial Map**). The latitude and longitude coordinates for the approximate center of the project are 28° 33' 24.45"N, 80° 49' 46.14"W (WGS84/NAD83) as determined on the USGS Favoretta Quad.

The property owner for this project is:

Mr. Nick Everly
Senior Director of Land Planning & Entitlements
Hillpointe, LLC
1031 West Morse Boulevard, Suite 240
Winter Park, FL 32789

The environmental scientists for this project are:

Gaston Hayworth
Zev Cohen and Associates, Inc.
300 Interchange Boulevard
Ormond Beach, FL 32174

Zev Cohen & Associates, Inc. (ZCA) Environmental Department staff has conducted an Environmental Assessment (EA) of the subject property with an associated site visit on July 22, 2022. ZCA reviewed previous environmental reports for the subject property, characterized habitat types, verified the presence and delineated the extent of wetlands, assessed wetland impacts and mitigation, and documented the potential of occurrence of federal and state protected species. This EA report includes survey methodology, results, and supplementary materials.

2.0 SOILS

A review of the soil types present was conducted to characterize the existing conditions on the subject property. The soil review used soils surveys conducted by the United States Department of Agriculture (USDA) Natural Resources Conservation Services (NRCS). Data are presented in accordance to Official Soil Series Descriptions (**Soils Map**).

10 – Canaveral-Urban Land Complex: This soil consists of Canaveral sand and Urban land. This soil can be a mixture of sand and shells that have been dredged and deposited on tidal marshes and swamps then smoothed level. Shells make up 10 to 80 percent of the fill material in the upper 28 inches of soil. The Canaveral soil is nearly level and gently undulating, moderately well drained sandy soil mixed with shell fragments. These soils are on low dune like ridges bordering depressions and sloughs. In wet seasons the water

table is at a depth of 40 to 60 inches, and the rest of the year it is below a depth of 60 inches.

43 – Paola Fine Sand, 0 to 8 percent slopes: This soil is nearly level to strongly sloping, excessively drained sandy soils on the tops and sides of ridges. The surface layer is typically dark gray fine sand about 5 inches thick with a subsurface of light gray fine sand about 24 inches thick. Available water capacity is very low with very rapid permeability

52 – Quartzipsamments, smoothed: This is a nearly level to steep sandy soil that have been reworked with earthmoving equipment. They are commonly near urban centers or along major highways. The water table is generally within 50 inches, though it will vary. Permeability is variable but generally very rapid, as available water capacity is also variable but generally very low.

91 – Anclothe Sand: This is a nearly level, very poorly drained sandy soil in marshy depressions in the flatwoods, in broad areas on flood plains, and in poorly defined drainageways. The surface layer is black sand about 19 inches thick. In most years the water table is within a depth of 10 inches for more than 6 months. In dry seasons it is deeper, but seldom below a depth of 40 inches. The soil is occasionally flooded 2 to 7 days following heavy rains. The water table is at a depth of 80 inches for most years. The available water capacity is moderate in the surface with rapid permeability and high runoff.

3.0 LAND USE AND VEGETATIVE COMMUNITY

The subject property is composed of uplands consistent with upland hardwood forests and wetland hardwood forests (**Habitat Map**). Land use of the subject property was classified according to the Florida Department of Transportation (FDOT) (1999) *Florida Land Use, Cover and Forms Classification System* (FLUCFCS). The land use and vegetative communities observed on the subject property are described in detail below.

420 – Upland Hardwood Forests (8.2 ac) – The uplands on the project site are composed of live oaks (*Quercus virginiana*), cabbage palms (*Sabal palmetto*), hackberry (*Celtis occidentalis*), laurel oak (*Quercus laurifolia*), with scattered slash pine (*Pinus elliotii*), southern magnolias (*Magnolia grandiflora*), and a queen palm (*Syagrus romanzoffiana*). The subcanopy is dominated by cabbage palm (*Sabal palmetto*), black cherry (*Prunus serotina*), laurel oak, live oak, and loquat (*Eriobotrya japonica*), with areas of yaupon holly (*Ilex vomitoria*), Simpson's stopper (*Myrcianthes gragrans*), and sour orange (*Citrus x aurantium*). The ground cover was fairly open but contains a large amount of young black cherry; there was also muscadine grape (*Vitis rotundifolia*), catbriar (*Smilax spp.*), wild coffee (*Psychotria nervosa*), pinguin (*Bromelia pinguin*) and American beauty berry (*Callicarpa Americana*).

610 – Wetland Hardwood Forests (4.55 ac) – This habitat is characterized as hardwood species that are tolerant to hydric conditions, however this habitat in the field is significantly drained. The canopy consists of laurel oak, cabbage palm, hackberry, and red maple (*Acer rubrum*). The subcanopy is dominated by cabbage palm, laurel oak, hackberry, and black cherry, with pockets of red maple, dahoon holly, and Brazilian pepper (*Schinus terebinthifolia*). The groundcover is very open but contains large amounts of black cherry growth with cabbage palm. The significant amount of black cherry that exists within the wetlands suggests that the wetlands are significantly drained from normal conditions.

810 – Transportation (1.28 ac) – This habitat encompasses both the paved sidewalk and sodded edge of Cheney Highway and the field road along the ditch to the south of the property.

4.0 WETLANDS AND OTHER SURFACE WATERS

Hardwood forested wetlands were observed on the subject property. A total of **4.55 acres** of wetlands were delineated in the field (**Wetlands Map**). Criteria used to determine the presence of wetlands and surface waters and delineate their boundaries were in accordance with Chapter 62-340 F.A.C. and the 1987 *Corps of Engineers Wetlands Delineation Manual*.

These wetland habitats are significantly drained by the canal running along the western and southern boundaries of the property. The wetland habitats do not exhibit strong wetland vegetation and are invaded with upland species, mainly black cherry. Even the soils showed signs of significant drainage by signs of soil oxidation and subsidence through visibly exposed roots. There was little to no hydrologic indicators above the surface with lichens down to the ground, organic coatings less than 60%, and friable soils.

4.1 SJRWMD Jurisdictional Wetlands

Wetlands were delineated in the field by ZCA biologists resulting in a total of approximately **4.55 acres (Wetlands Map)**. All wetlands onsite are jurisdictional to St. Johns River Water Management (SJRWMD) and will require an Environmental Resource Permit (ERP) for any impacts to the onsite wetlands or their upland buffers.

Wetland 1 is less than 0.5 acres and will not require any mitigation, however, if any impacts are proposed for Wetland 2 those will require mitigation through the purchase of offsite mitigation credits from a regionally significant mitigation bank. Secondary impacts will be calculated wherever a 25 feet average/15 feet minimum upland buffer cannot be maintained.

4.2 FDEP (State Section 404) Jurisdictional Wetlands

It has been determined by ZCA staff scientists, that the onsite wetlands are not connected to the Waters of the United States (WOTUS) and are not jurisdictional to the FDEP (under the Federal 404 program). These wetlands are considered isolated and non-adjacent to WOTUS as multiple natural and man-made uplands and various systems disconnect the wetlands from WOTUS. The surface water ditch that runs along the western and southern boundary of the property do feed into the St. Johns River, however, there are portions of the existing ditch that was cut through uplands. This ditch does not replace a tributary nor was in cut within a tributary.

No additional FDEP permitting is anticipated under the current NWPR.

4.3 Wetland Mitigation

Mitigation credits are available for purchase at offsite regionally significant mitigation banks that service this drainage basin, including: TM-ECON Mitigation Bank, East Central Mitigation Bank, Lake X Ranch Mitigation Bank, Farmton Mitigation Bank, and Colbert Cameron Mitigation Bank. However, because Wetland 1 is isolated and less than 0.5 acres no mitigation will be required for impact.

5.0 PROTECTED SPECIES

Prior to visiting the site, a background literature search was also conducted to compile a list of state and federally protected animal and plant species that could occur on-site. The three primary sources of literature reviewed include the Florida Fish and Wildlife Conservation Commission's (FWC) *Florida's Endangered Species, Threatened Species, And Species of Special Concern*, the United States Fish and Wildlife Service's (USFWS) Threatened and Endangered Species System (TESS) database, and the Audubon Florida Eagle Watch Eagle Nest Locator web site.

5.1 Protected Wildlife Species

The state and federally protected animal species with the potential to occur on the project site are listed in Figure 5.1.1, below. The estimated likelihood of occurrence of each species is noted in the table and those species with at least a moderate likelihood of occurrence are discussed following the table.

Figure 5.1.1. Federally and Florida state protected wildlife species with the potential to occur on the subject property, in Volusia County, Florida.

Species Name	Common Name	Agency Listing		Likelihood of Occurrence	Habitat
		FWC/USFWS			
<i>Caracara cheriway</i>	Crested Caracara	FT	Low		Wet prairies with cabbage palms
<i>Rostrhamus sociabilis plumbeus</i>	Everglade snail kite	FE	Low		Freshwater marshes, shallow grassy lake
<i>Amphelocoma coerulescens</i>	Florida scrub-jay	FT	Low		Scrub, xeric oak
<i>Drymarchon corais couperi</i>	Eastern indigo snake	FT	Low		Wide variety of habitats
<i>Egretta caerulea</i>	Little blue heron	ST	Low		Shallow water bodies in FL
<i>Puma concolor coryi</i>	Florida Panther	FE	Low		Forested areas with dense understory
<i>Egretta tricolor</i>	Tricolored heron	ST	Low		Coastal ponds, marshes, swamps
<i>Falco sparverius paulus</i>	Southeastern American kestrel	ST	Low		Open habitats with scattered trees
<i>Gopherus polyphemus</i>	Gopher tortoise	ST	Low		Sandhills, scrub, flatwoods
<i>Haliaeetus leucocephalus</i>	Bald eagle	BE	Low		Common adjacent to water
<i>Laterallus jamaicensis</i>	Eastern Black Rail	FPT	Low		Salt, brackish, and fresh wetlands
<i>Mycteria americana</i>	Wood stork	FT	Low		Shallow open waters
<i>Egretta rufescens</i>	Reddish egret	ST	Low		Estuaries, mangroves, and lagoons
<i>Picoides borealis</i>	Red-cockaded woodpecker	FE	Low		Mature pine forests with regular burn
<i>Pituophis melanoleucus</i>	Florida pine snake	ST	Low		Upland areas adjacent to wetlands
<i>Platalea ajaja</i>	Roseate spoonbill	ST	Low		Coastal ponds, marshes, swamps

FE= Federally Endangered; FT= Federally Threatened; FPT= Federally Proposed Threatened; BE= Bald and Golden Eagle Protection Act; ST= State Threatened; SSC= Species of Special Concern; BCR= Bear Conservation Rule

Gopher Tortoise (*Gopherus Polyphemus*) – The gopher tortoise is a state-designated Threatened Species due to habitat loss associated with development. Gopher tortoises require uplands that have a high enough elevation to allow for the construction of underground burrows that would not be below the groundwater table. These conditions are present on the subject property. Other commensal species may utilize these burrows such as the Gopher frog (*Lithobates capito*), Florida mouse (*Peromyscus floridanus*), and the Eastern indigo snake (*Drymarchon couperi*). During the site visit, no gopher tortoise burrows were observed onsite. However, a 100% gopher tortoise survey will need to be performed prior to any construction activities. If any gopher tortoise burrows are identified on site, burrow excavation and tortoise relocation will be required prior to construction for all identified burrows and a gopher tortoise relocation permit will need to be obtained from FWC.

Bald Eagle (*Haliaeetus leucocephalus*) – In 2007, the USFWS removed the Bald Eagle from the list of federally endangered and threatened species. They were additionally removed from the FWC's imperiled species list in 2008. Bald Eagles are no longer protected under the Endangered Species Act, however, they are still protected under the Bald and Golden Eagle Protection Act. This act restricts development adjacent to known Bald Eagle nests.

According to the Audubon's Florida Eagle Watch Nest Locator database, there are two eagle nests located approximately 1.97 miles east and 2.15 miles southwest of the project. Please note that the location provided by this website is provided only to allow the user to view the general location of a nest and to confirm that an appropriate area of interest was targeted by the user's search. Since these nests do not occur within 660' of the site, development of the site will not be constrained by these nests.

Wood Stork (*Mycteria Americana*) – The wood stork is a federally Threatened Species. It is primarily associated with freshwater and estuarine habitats that offer an abundance of prey sources. Using USACE Jacksonville District, USFWS Jacksonville Ecological Services Field Office and State of Florida Effect Determination Key of Wood Stork in Central and North Peninsular Florida, the project is more than 2,500 feet away from an active nesting colony but within the core foraging zone. The project site does contain suitable foraging habitat (SFH) as there are surface water ditches bordering the property and, though severely drained, wetlands onsite. The amount of wetland and surface water impacts will be less than 0.5 acres, therefore the project is Not Likely to Adversely Affect wood storks.

Florida Sandhill Crane (*Grus canadensis*) – The Florida sandhill crane is a state-designated threatened species. They inhabit areas with freshwater marshes, prairies, and pastures and are often seen alongside roads and in yards in housing developments. They lay their nests on mats of vegetation in shallow water. These are threatened species in Florida due to habitat loss associated with wetland drainage or conversion to prairie for development or agricultural use. They are protected by the US Migratory Bird Treaty Act and Florida's Endangered and Threatened Species Rule. This property does not consist of suitable habitat as it is a dense upland hardwood forest with severely drained wetlands. It is expected that development will no effect Florida sandhill cranes.

Eastern Indigo Snake (*Drymarchon couperi*) – The eastern indigo snake is a federally threatened species found in a wide variety of habitats including pine flatwoods, scrubby flatwoods, dry prairies, tropical hardwood hammocks, freshwater marshes, agricultural fields, and disturbed sites. The project site is composed mostly of upland and wetland hardwood forests. Using the Amended 2010 USFWS Concurrence in USACE Use of Eastern Indigo Snake Programmatic Effect Determination Key, the project is not located in open water or salt marsh, the permits will be conditioned for use of the Service's *Standard Protection Measures for the Eastern Indigo Snake*, and there are no observed gopher tortoise burrows, cavities or other refugia within the project limits where a snake could be buried or trapped during construction, therefore, the project is Not Likely to Adversely Affect (NLAA) the eastern indigo snake.

5.2 Wildlife Survey

A preliminary site review was conducted to assess the potential presence of protected wildlife species on the subject property. No federally or state protected species were observed on the project site during the initial site visit. A 100% gopher tortoise survey will be required for the property within 90 days prior to construction to be conducted by an Authorized Gopher Tortoise Agent. A gopher tortoise relocation permit will be

required depending upon the amount of burrows located. Any tortoise burrows identified during the survey will require excavation and relocation of tortoises to an Authorized Gopher Tortoise Recipient Site.

Wildlife observed onsite included the osprey (*Pandion haliaetus*), downy woodpecker (*Picoides pubescens*), red-bellied woodpecker (*Melanerpes carolinus*), nine-banded armadillo (*Dasypus novemcinctus*), and raccoon (*Procyon lotor*). The presence of these species is not expected to impact development of the site.

6.0 SUMMARY

Zev Cohen and Associates, Inc. has conducted a site review on the proposed project site for the purposes of determining the presence or potential presence wetlands and state and federally protected wildlife. Two wetland areas were observed totaling 4.55 acres. Permitting through SJRWMD will be required, while no permitting with FDEP is expected. Mitigation banking credits will be purchased to offset wetland impacts.

Any proposed direct or secondary impacts can be mitigated at a regionally significant mitigation bank in this drainage basin. The wetlands were determined to not be jurisdictional to the State Section 404 governed by FDEP, because they are not connected to WOTUS. Based on soil observations and the upland vegetation within the wetlands, it is clear these wetlands are significantly drained.

A wildlife survey was conducted to evaluate the potential presence of state and federally protected wildlife species. The gopher tortoise was the only listed species with possible presence on the subject property. A 100% gopher tortoise survey will be required for the property within 90 days prior to construction to be conducted by an Authorized Gopher Tortoise Agent.

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Appendices

Appendix A – Exhibits

- Aerial Map
- Soils Map
- Habitat Map
- Wetlands Map

 Boundary



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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Aerial Map Cheney Highway Titusville, FL

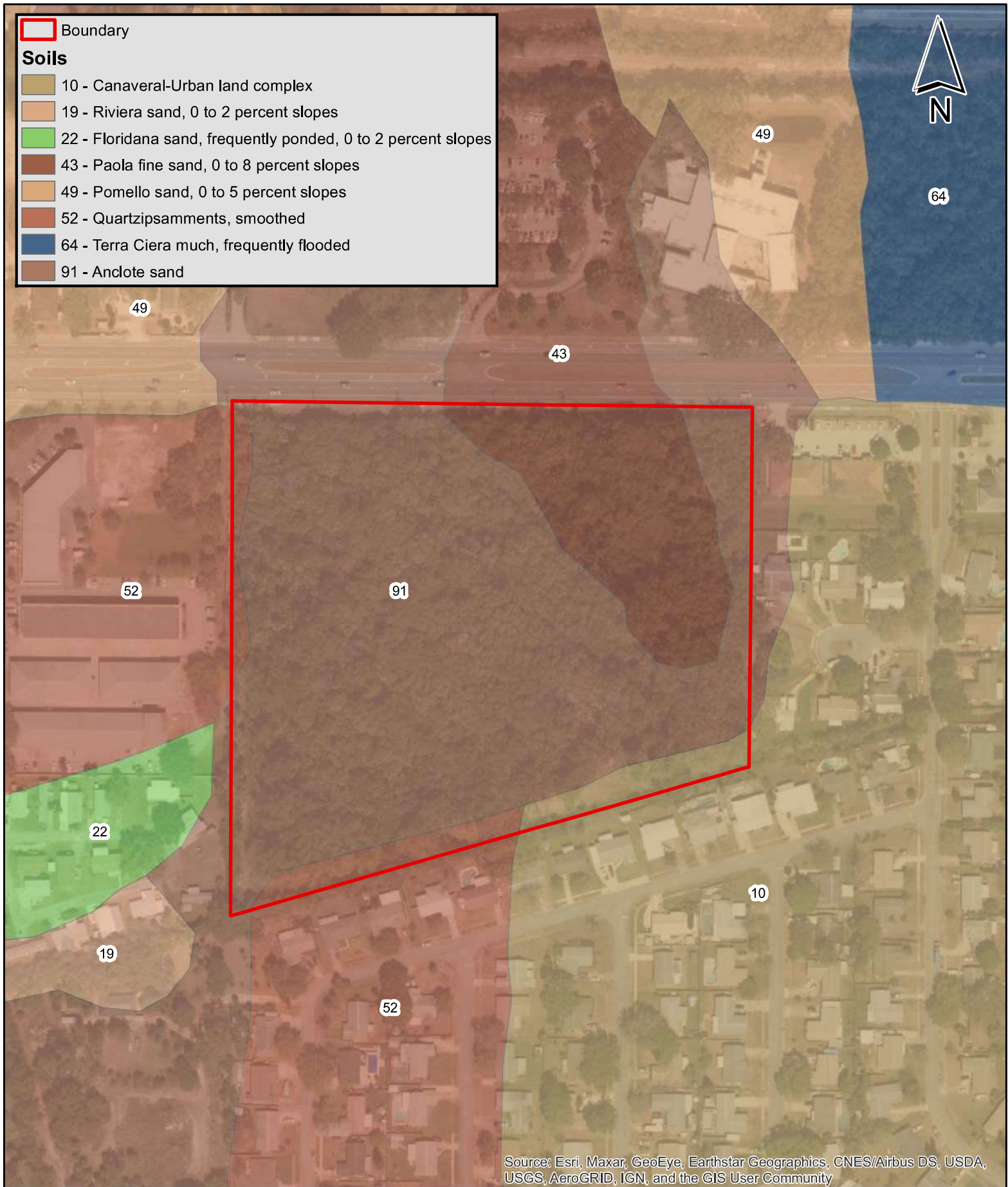


300 Interchange Blvd
Ormond Beach, FL 32174
ph 386-677-2482

 Boundary

Soils

-  10 - Canaveral-Urban land complex
-  19 - Riviera sand, 0 to 2 percent slopes
-  22 - Floridana sand, frequently ponded, 0 to 2 percent slopes
-  43 - Paola fine sand, 0 to 8 percent slopes
-  49 - Pomello sand, 0 to 5 percent slopes
-  52 - Quartzipsamments, smoothed
-  64 - Terra Ciera much, frequently flooded
-  91 - Andote sand



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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200 100 0 200 Feet

Soils Map Cheney Highway Titusville, FL



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Habitat

- 420 - Upland Hardwood Forests
- 610 - Wetland Hardwood Forested
- 810 - Transportation
- Boundary



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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Habitat Map Cheney Highway Titusville, FL



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 ZCA Flagged Wetlands (4.55 ac)
 Boundary



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Wetlands Map Cheney Highway Titusville, FL



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