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October 18, 2022

BY EMAIL:

walker@douglaspd.com

Walker Douglas
Douglas Property & Development, Inc.
145 City Place, Suite 300
Palm Coast, FL 32164

SUBJECT: Environmental Assessment
Douglas - Cascades
Palm Coast, Flagler County, Florida
PINs: 29-12-31-0000-01010-0021, 29-12-31-0000-01010-0025, 30-12-31-0000-01020-0040, 31-12-31-0000-01070-0030, 32-12-31-0650-000B0-0020, 31-12-31-0000-01070-0000, & 30-12-31-0000-01020-0050

Dear Mr. Douglas,

Thank you for contacting Carter Environmental Services (CES). We appreciate the opportunity to be of service to you. The purpose of our work on the referenced property was to determine if there are any natural resource concerns that could potentially affect future development of the site. Specifically, this environmental assessment was focused on assessing the presence of or potential utilization by any threatened, endangered, or species of special concern (SSC) as listed by the U.S. Fish and Wildlife Service (FWS) or the Florida Fish and Wildlife Conservation Commission (FWC). CES also assessed the onsite wetlands from August through October of 2021. The results of this environmental assessment follow. Additionally, note that from 2006 to 2012, the site was permitted by the St. Johns River Water Management District (SJRWMD) under Permit No. 103071, sequences 1-4. All permit modifications have since expired, and no construction ever took place.

I trust that this information will be helpful in your preliminary planning. Please contact me if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink that reads "Ryan A. Carter". The signature is stylized with a large, sweeping initial "R" and a cursive "A".

Ryan A. Carter, PWS
Vice President



Enclosures: Location Map – Figure 1
Soils Map – Figure 2
FLUCFCS Map – Figure 3
FWC Bald Eagle Nest Locator Map – Figure 4
FNAI Biodiversity Matrix

1.0 CURRENT SITE CONDITIONS

The site appears to have been managed for silviculture for at least the past three decades, with pines growing on the northeastern portion of the site most recently harvested around 2015. From 2006 to 2012, the site was permitted by SJRWMD under Permit No. 103071, sequences 1-4. All permit modifications have since expired, and no construction ever took place.

The subject property totals approximately 379.85 acres and is generally bound by timberland and vacant commercial land to the north; wooded Flagler County-owned wetlands and timberland to the west; timberland and vacant land to the east; and Flagler County-owned timberland as well as Seminole Woods Boulevard, followed by single-family-home neighborhoods to the south (Figure 1). More specifically, the property is located in Sections 29, 30, & 32, Township 12 South, Range 31 East in Flagler County, Florida. On inspection, the property was observed to be comprised of both uplands and wetlands, with two upland community types and one wetland community, as documented by CES biologists. The species observed within the onsite communities were consistent with what is frequently found in pine plantations and hydric flatwoods in the area.

1.1 Wetlands

The site was previously permitted by SJRWMD under Permit No. 103071, sequences 1-4. We have a current application under review for wetland impacts at a portion of the site. That application has been assigned sequence 5 of this same permit number (103071-5).

1.2 Soils and Hydrology

Following a literature review, seven (7) soil types were mapped on-site (Figure 2). CES biologists were able to verify the presence and general extent of these soils on-site and they are consistent with the soil types found in the vicinity.

1.3 Vegetative Communities

CES characterized the habitat types on-site using the Florida Department of Transportation's *Florida Land Use Cover Form Classification System* (FLUCFCS). The locations and acreages of each type are depicted on the enclosed FLUCFCS Map (Figure 3).



CES staff noted two upland habitat types occurring on the property. Descriptions of these communities are as follows:

Pine Plantation (FLUCFCS 441) – This dominant community has a canopy of planted slash pine (*Pinus elliottii*) with an understory and groundcover of bitter gallberry (*Ilex glabra*), saw palmetto (*Serenoa repens*), and bracken fern (*Pteridium aquilinum*). On the subject property, large portions on the northeast section were more recently harvested (circa 2015).

Graded & Drained Roadway (FLUCFCS 8145) – This land classification category falls under the broader transportation category, which includes roads and highways. On the subject property, a semi-maintained dirt road spans the property from north to south on the eastern portion site.

CES staff noted one wetland habitat type occurring on the property. A description of this community is as follows:

Hydric Pine Flatwoods (FLUCFCS 625) – This community has a canopy of slash pine. The understory and groundcover are vegetated with scattered dahoon holly (*Ilex cassine*), loblolly bay (*Gordonia lasianthus*), fetterbush (*Lyonia lucida*), highbush blueberry (*Vaccinium corymbosum*), Virginia chain fern (*Woodwardia virginica*), and pipewort (*Eriocaulon* spp.).

2.0 PROTECTED SPECIES

A preliminary detailed characterization of the project site was conducted to identify probable habitat types and conditions on the site. References included the *Soil Survey of Flagler County, Florida*, aerial photographs, and the U.S. Geological Survey topographic map.

A review of federally and state-listed wildlife species was conducted using the most recent lists of endangered and threatened species for Flagler County, Florida. The lists were obtained from the following references:

- **U.S. Fish and Wildlife Service (FWS)**
Flagler County Federally Listed Species, 2022.
- **Florida Fish and Wildlife Conservation Commission (FWC)**
FWC 2018 list of Imperiled Species. Accessed online 2022.
- **Florida Natural Areas Inventory (FNAI)**
Biodiversity Matrix online database. 2022. (See attached)



Based on these sources, a preliminary list of potentially occurring wildlife species was developed by understanding the preferred habitat for each of the species and the probability of the habitat occurrence in the project area. Biologists then conducted a limited pedestrian survey of the property to look for the presence of or potential utilization by any threatened, endangered or species of special concern (SSC) as listed by the U.S. Fish and Wildlife Service (FWS) or the Florida Fish and Wildlife Conservation Commission (FWC).

2.1 Protected Animal Species

2.1.1 Gopher Tortoise (*Gopherus polyphemus*)

CES determined it possible for gopher tortoises to exist on portions of the site based on the mapped soils, and during a site visit several burrows were identified near the northwestern boundary of the project area. Prior to initiation of any construction, CES will identify and map all potential gopher tortoise habitat on the site based on aerial photographs, soils maps, NWI maps, and other in-house resources. We will then conduct a pedestrian survey covering 100 percent of the project site's potential habitat pursuant to the methodologies of FWC to determine the extent of the on-site tortoise population. CES will ultimately relocate all tortoises to an FWC-permitted recipient site per permit requirements.

2.1.2 Wading Birds

A review of the current FWC internet database of wading bird colonies (FWC Wading Bird Rookeries, 2022) revealed no known colonies within a one-mile radius of the on-site wetlands. Also, the site is not located within an FWC-recognized wood stork (*Mycteria americana*) foraging area, with the nearest mapped wood stork colony located 13.7 miles to the southwest, at Lake Disston.

2.1.3 Bald Eagle (*Haliaeetus leucocephalus*)

Using the FWC Eagle Nest Locator Database (2022), CES found two bald eagle nests on record within a 5-mile radius the property, with the nearest nest located approximately 2.3 miles east of the property boundary (Figure 4). Further, no nests were located by CES biologists, and the likelihood of any bald eagles utilizing this site is low. While the bald eagle is not listed as threatened, endangered or as an SSC, it is protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Based on these acts, certain activities are regulated by FWS when they occur near an active nest during nesting season (1 October to 15 May).

2.2 Protected Plant Species

In addition to protected animal species, CES biologists reviewed the site for protected plant species, none of which were observed. No coordination would be required with any



regulatory agency if protected plant species were observed in the future. Currently no regulations exist for protected plant species occurring on privately owned land, unless the landowner is harvesting and engaging in the commercial sale of the protected plant species.

3.0 FUTURE DEVELOPMENT

3.1 Federal Permitting

3.1.1 U.S. Army Corps of Engineers (ACOE)

Per the state (DEP) assumption on December 22, 2020, ACOE retains jurisdiction over navigable and coastal waters, including wetlands less than 300 feet from navigable/tidal waters. CES asserts that the wetlands on this property do not fall under current ACOE jurisdiction. **No coordination will be required with ACOE at this time.**

3.1.2 U.S. Fish and Wildlife Service (FWS)

FWS handles permitting associated with adverse impacts to federally listed wildlife or its habitat. Generally, separate coordination is required with FWS and federal permits are contingent upon receiving authorization from FWS. **There are no anticipated impacts to any federally listed species at this time, and no coordination will be necessary with FWS.**

3.2 State Permitting

3.2.1 St. Johns River Water Management District (SJRWMD)

Most new developments require a permit from SJRWMD. The type of permit required varies with the project acreage and acreage of wetland impact proposed. Many new developments that entail less than one acre of wetland impact will require a Standard Environmental Resource Permit. This permit is typically staff approved and frequently takes three to five months to process.

Developments that entail more than one acre of wetland impact will require an Individual Environmental Resource Permit. This permit is approved by SJRWMD staff and frequently takes seven months or more to process.

Additionally, SJRWMD requires that the applicant provide reasonable assurance that the proposed development will not cause adverse secondary impacts to the remaining wetlands on-site. An undisturbed upland buffer (minimum 15-foot width and 25-foot average width) around the remaining wetlands on-site is commonly used to provide assurance to SJRWMD that secondary impacts will not occur. On March 22, 2022, CES applied to SJRWMD for an Environmental



Resource Permit on your behalf, and the application has been assigned no. 103071-5 through the permitting process. **Based on wetlands being present on the site and expectations of impacts, a permit will be required for the proposed project on the site, requiring continued coordination with SJRWMD.**

3.2.2 Florida Department of Environmental Protection (DEP)

As of December 2020, DEP assumed authority to issue permits in the state under Section 404 of the federal Clean Water Act. Generally speaking, FDEP now has permitting responsibility for non-navigable and non-coastal waters, including wetlands more than 300 feet from navigable/tidal waters. **As impacts to DEP jurisdictional wetlands are proposed, coordination with DEP and a State 404 permit will be required.**

3.2.3 Florida Fish and Wildlife Conservation Commission (FWC)

FWC handles permitting associated with adverse impacts to state listed wildlife or its habitat. Generally, separate coordination is required with FWC and state permits are contingent upon receiving authorization from FWC. **As gopher tortoise burrows have been observed on the site, a relocation permit will be required and all tortoises within 25 feet of proposed construction will be relocated prior to construction.**

3.3 Local Permitting

3.3.1 City of Palm Coast

In addition to any State and Federal permitting required for the project, coordination will be required with the City of Palm Coast. Wetland impacts are typically assessed by the City, with emphasis placed on avoiding impacts to higher-quality wetlands and concentrating any wetland impacts to areas that provide a lesser ecological value. Impacts to higher-quality wetlands may not be allowed. Figure 3 depicts the onsite wetlands. **Because wetland impacts are proposed in conjunction with this project, a wetland quality assessment will be prepared for the City.**

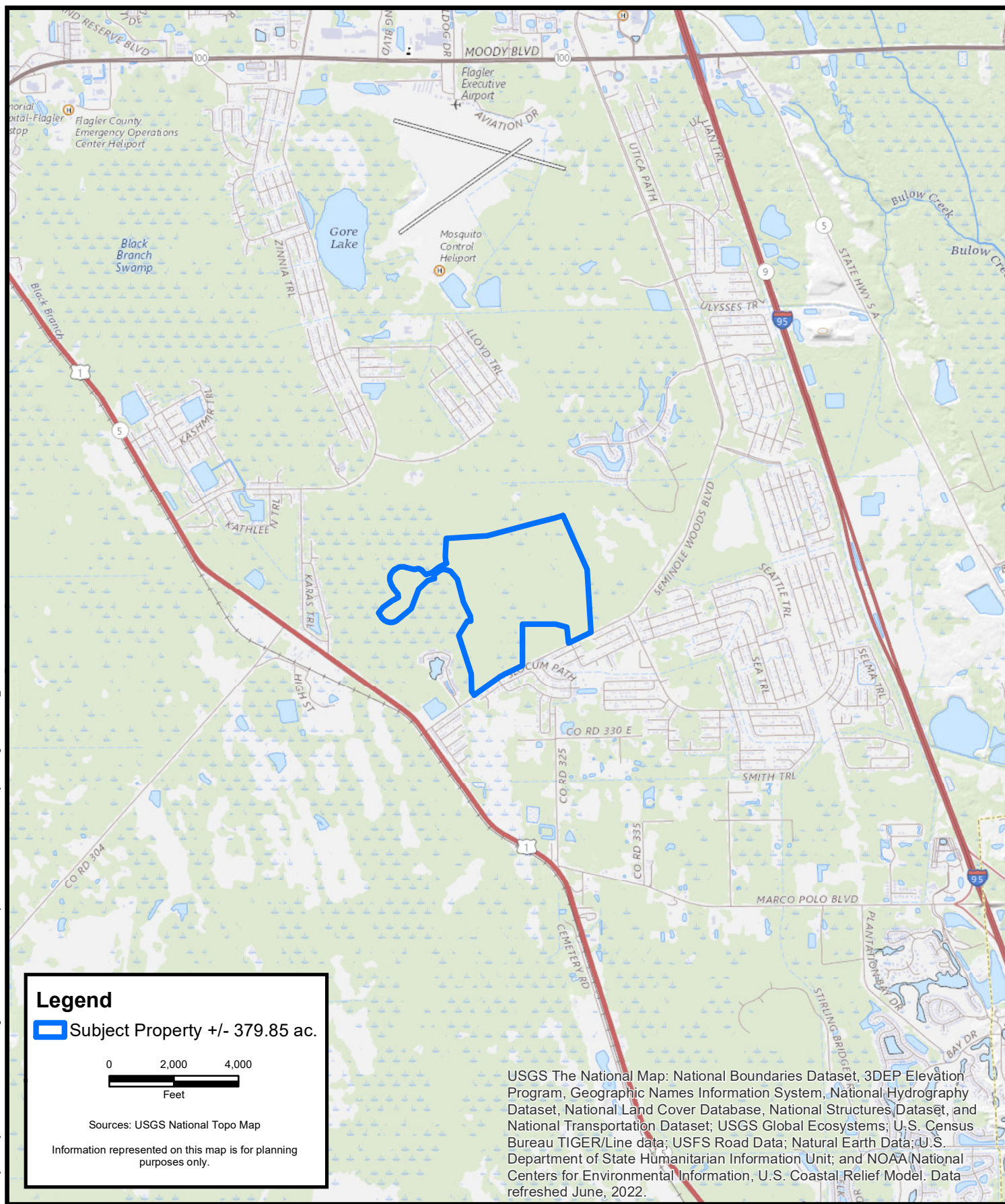
4.0 RECOMMENDATIONS

Based on the assessment outlined above, this project has avoided many of the environmental issues associated with new developments and demonstrates responsible development practices by avoiding impacts to the majority of on-site wetlands. Gopher tortoise was the sole protected species located on the site; per the description above, all tortoise burrows on site will be mapped and all tortoises on site within 25 feet of proposed construction will be relocated to an FWC-



approved recipient site. No other protected species have been identified onsite, and the likelihood of any occurring is low.

Please call me at (904) 540-1786 if you have any questions or need additional information.



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Location Map

Douglas - Cascades

Project: 5.21253

Palm Coast, Florida

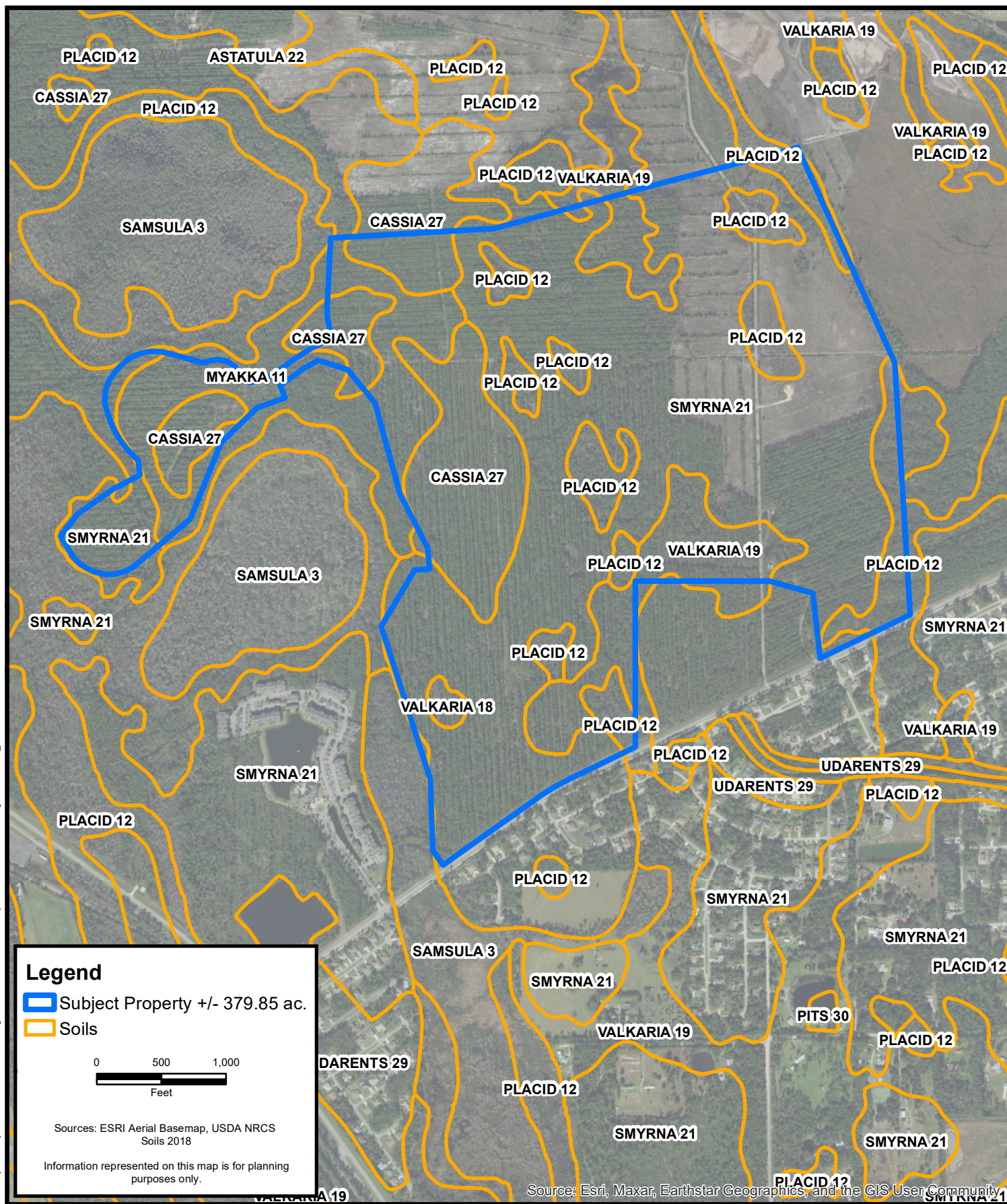
Date: Oct 18 2022

Figure:

1



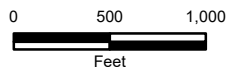
F:\CES Projects\Project Files\Active\Projects\City of Douglas Cascades\GIS\MXD\City PESA 10-17-22\02-DouglasCascades_Soils 10-17-22.mxd



Legend

 Subject Property +/- 379.85 ac.

 Soils



Sources: ESRI Aerial Basemap, USDA NRCS
Soils 2018

Information represented on this map is for planning
purposes only.

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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Soils Map

Douglas - Cascades

Project: 5.21253

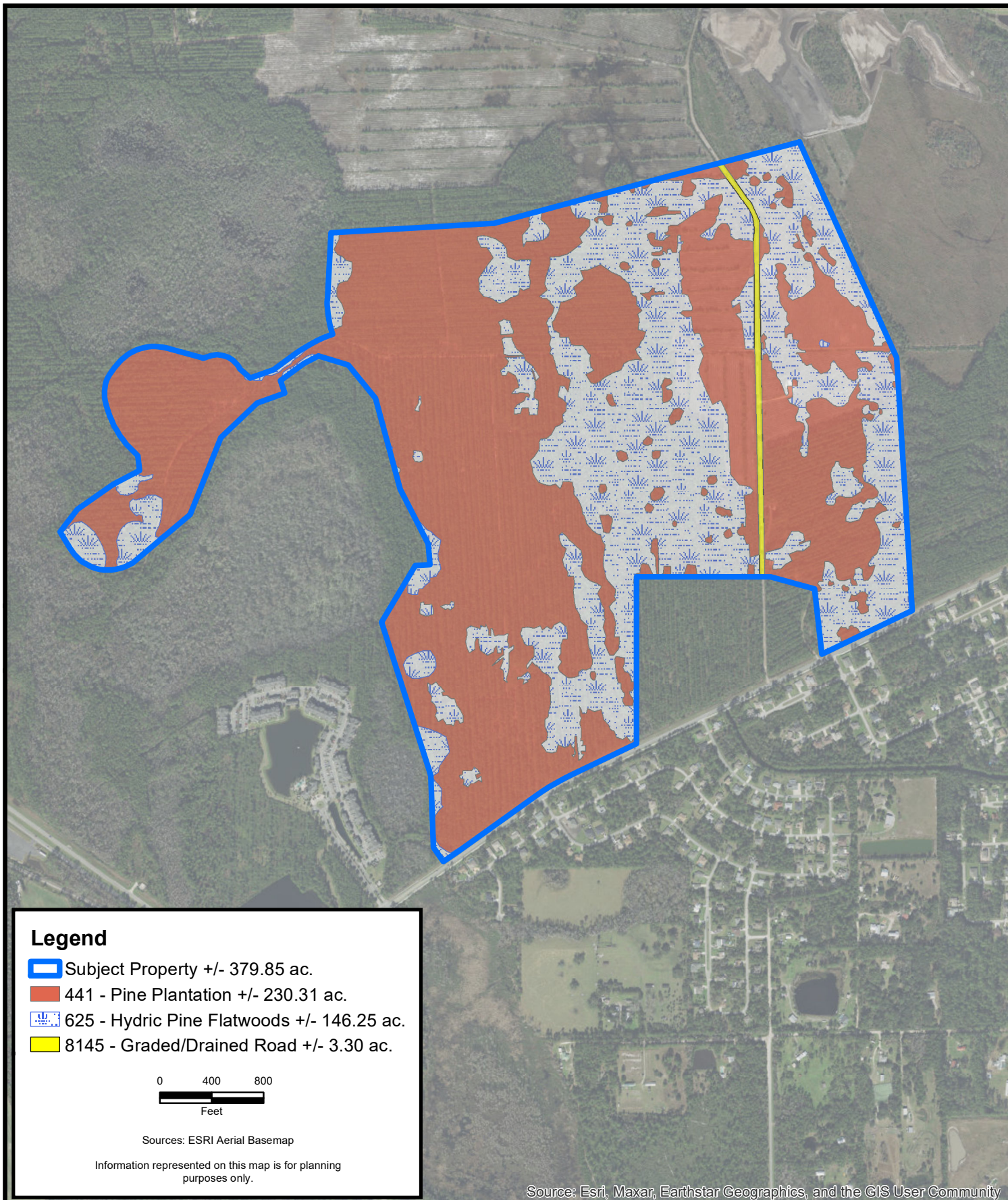
Palm Coast, Florida

Date: Oct 18 2022

Figure:

2





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FLUCFCS/Existing Conditions Map

Douglas - Cascades

Project: 5.21253

Palm Coast, Florida

Date: Oct 18 2022

Figure:

3





Legend

-  Subject Property +/- 379.85 ac.
-  FWC Eagle Nests, 2022

0 2,500 5,000
Feet

Sources: ESRI Aerial Basemap, FWC Bald Eagle Nests 2022

Information represented on this map is for planning purposes only.

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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FWC Bald Eagle Nests Douglas - Cascades

Project: 5.21253

Palm Coast, Florida

Date: Oct 18 2022



Figure: 4



Florida Natural Areas Inventory

Biodiversity Matrix Query Results

UNOFFICIAL REPORT

Created 10/18/2022

(Contact the FNAI Data Services Coordinator at 850.224.8207 or kbrinegar@fnai.fsu.edu for information on an official Standard Data Report)

NOTE: The Biodiversity Matrix includes only rare species and natural communities tracked by FNAI.

Report for 4 Matrix Units: 50194 , 50195 , 50524 , 50525



Descriptions

DOCUMENTED - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit.

DOCUMENTED-HISTORIC - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit; however the occurrence has not been observed/reported within the last twenty years.

LIKELY - The species or community is *known* to occur in this vicinity, and is considered likely within this Matrix Unit because:

1. documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; or
2. there is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit.

POTENTIAL - This Matrix Unit lies within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and landcover.

Matrix Unit ID: 50194

0 Documented Elements Found

0 Documented-Historic Elements Found

3 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Mesic flatwoods	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	T	FT
Ursus americanus floridanus Florida Black Bear	G5T4	S4	N	N

Matrix Unit ID: 50195

0 Documented Elements Found

0 Documented-Historic Elements Found

3 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Mesic flatwoods	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	T	FT
Ursus americanus floridanus Florida Black Bear	G5T4	S4	N	N

Matrix Unit ID: 50524

0 Documented Elements Found

0 Documented-Historic Elements Found

3 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Mesic flatwoods	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	T	FT
Ursus americanus floridanus Florida Black Bear	G5T4	S4	N	N

Matrix Unit ID: 50525

0 Documented Elements Found

0 Documented-Historic Elements Found

3 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Mesic flatwoods	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	T	FT
Ursus americanus floridanus Florida Black Bear	G5T4	S4	N	N

Matrix Unit IDs: 50194, 50195, 50524, 50525

20 Potential Elements Common to Any of the 4 Matrix Units

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Alligator mississippiensis American Alligator	G5	S4	SAT	FT(S/A)
Antigone canadensis pratensis Florida Sandhill Crane	G5T2	S2	N	ST
Arnoglossum diversifolium variable-leaved Indian-plantain	G2	S2	N	T
Asplenium x heteroresiliens Morzenti's spleenwort	G2	S1	N	N
Calopogon multiflorus many-flowered grass-pink	G2G3	S2S3	N	T
Centrosema arenicola sand butterfly pea	G2Q	S2	N	E
Conradina grandiflora large-flowered rosemary	G3	S3	N	T
Corynorhinus rafinesquii Rafinesque's Big-eared Bat	G3G4	S1	N	N
Deeringothamnus rugelii Rugel's pawpaw	G1	S1	E	E
Floodplain swamp	G4	S4	N	N
Gopherus polyphemus Gopher Tortoise	G3	S3	C	ST
Gymnopogon chapmanianus Chapman's skeletongrass	G3	S3	N	N
Lechea cernua nodding pinweed	G3	S3	N	T
Litsea aestivalis pondspice	G3?	S2	N	E
Matelea floridana Florida spiny-pod	G2	S2	N	E
Nemastylis floridana celestial lily	G2	S2	N	E
Neofiber alleni Round-tailed Muskrat	G2	S2	N	N
Nolina atopocarpa Florida beargrass	G3	S3	N	T
Pteroglossaspis ecristata giant orchid	G2G3	S2	N	T
Rudbeckia nitida St. John's blackeyed susan	G3	S2	N	E

Disclaimer

The data maintained by the Florida Natural Areas Inventory represent the single most comprehensive source of information available on the locations of rare species and other significant ecological resources statewide. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. FNAI shall not be held liable for the accuracy and completeness of these data, or opinions or conclusions drawn from these data. FNAI is not inviting reliance on these data. Inventory data are designed for the purposes of conservation planning and scientific research and are not intended for use as the primary criteria for regulatory decisions.

Unofficial Report

These results are considered unofficial. FNAI offers a [Standard Data Request](#) option for those needing certifiable data.