



October 5, 2021

Bruce Hage
Bruce Hage Irrigation
425 Gaston Foster Road, #A
Orlando, Florida 32807

Proj: 2545 Connection Point Road Site – Seminole County, Florida
Section 29, Township 21 South, Range 31 East
(BTC File #527-06)
Re: Environmental Assessment Report

Dear Mr. Hage:

During October of 2021 Bio-Tech Consulting, Inc. (BTC) conducted an environmental assessment and wildlife survey of the approximately 3.76-acre 2545 Connection Point Road Site. This site is located at the physical address 2545 Connection Point Road within Section 29, Township 21 South, Range 31 East; Seminole County, Florida (Figures 1, 2 & 3). This environmental assessment includes the following elements:

- Review of soil types mapped within the site boundaries;
- Evaluation of land use types/vegetative communities present;
- Feld review for occurrence of protected species of flora and fauna;
- Delineation of wetlands/surface waters.

SOILS

According to the Soil Survey of Seminole County, Florida, prepared by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), four (4) soil types occur within the subject property boundaries (Figure 4). These soils include the following:

Orlando: Main Office
3025 East South Street
Orlando, FL 32803

Vero Beach Office
4445 N A1A
Suite 221
Vero Beach, FL 32963

Jacksonville Office
1157 Beach Boulevard
Jacksonville Beach, FL 32250

Tampa Office
6011 Benjamin Road
Suite 101 B
Tampa, FL 33634

Key West Office
1107 Key Plaza
Suite 259
Key West, FL 33040

Aquatic & Land
Management Operations
3825 Rouse Road
Orlando, FL 32817

407.894.5969
877.894.5969
407.894.5970 fax

- **Basinger, Samsula and Hontoon soils, depressional (#10)**
- **Myakka and EauGallie fine sands (#20)**
- **Paola-St. Lucie sands, 0 to 5 percent slopes (#24)**
- **Tavares-Millhopper fine sands, 0 to 5 percent slopes (#31)**

The following presents a brief description of the soil types mapped for the subject property:

Basinger, Samsula and Hontoon soils, depressional (#10) are nearly level, very poorly drained soils found in swamps and depressions. Typically, the surface layer of Basinger soil consists of very dark gray mucky fine sand about 6 inches thick. Typically, the surface layer of Samsula soil is muck about 30 inches thick. Typically, the surface layer of Hontoon soil consists of dark reddish brown muck about 18 inches thick. During most years, the undrained areas of the soils in this map unit are ponded for 6 to 9 months or more. The permeability of this soil unit is rapid.

Myakka and EauGallie fine sands (#20) are nearly level, poorly drained soils found on broad plains on the flatwoods. Typically, the surface layer of Myakka soil consists of black fine sand about 5 inches thick. Typically, the surface layer of EauGallie soil consists of dark gray fine sand about 5 inches thick. During most years the seasonal high table for this soil type is within 12 inches of the surface for 1 to 4 months. The permeability of Myakka soil is rapid in the surface and subsurface layers and in the substratum and moderate or moderately rapid in the subsoil. The permeability of EauGallie soil is rapid in the surface and subsurface layers, moderate or moderately rapid in the sandy part of the subsoil and moderately slow in the loamy part of the subsoil.

Paola-St. Lucie sands, 0 to 5 percent slopes (#24) are nearly level to gently sloping, excessively drained soils on upland ridges. Typically the surface layer of Paola soil consists of dark gray sand about 3 inches thick. Typically the surface layer of St. Lucie soil consists of dark gray sand about 2 inches thick. The soils in this mapping unit have a seasonal high water table at a depth of 80 inches or more. The permeability of these soils is very rapid.

Tavares-Millhopper fine sands, 0 to 5 percent slopes (#31) are nearly level to gently sloping, moderately well drained soils found on low ridges and knolls on the uplands. Typically, the surface layer of Tavares soil consists of very dark grayish brown fine sand about 6 inches thick. Typically, the surface layer of Millhopper soil consists of gray fine sand about 7 inches thick. The soils in this map unit have a seasonal high table at a depth of 36 to 60 inches for 2 to 6 months. The permeability of Tavares soil is rapid or very rapid. The permeability of Millhopper soil is rapid in the surface and subsurface layers and moderately slow in the subsoil.

The Florida Association of Environmental Soil Scientists (FAESS) considers the main components of the Basinger, Samsula and Hontoon soils, depressional (#10) soil type associated with the subject site to be hydric. Furthermore, the FAESS considers inclusions present in Myakka and EauGallie fine sands (#20) and Tavares-Millhopper fine sands, 0 to 5 percent slopes (#31) soil types associated with the subject site to be hydric. This information can be found in the Hydric Soils of Florida Handbook, Fourth Edition (March 2007).

LAND USE TYPES/VEGETATIVE COMMUNITIES

The 2545 Connection Point Road Site currently supports three (3) land use types/vegetative communities within the subject property boundaries (Figure 5). These land use types/vegetative communities were identified utilizing the Florida Land Use, Cover and Forms Classification System, Level III (FLUCFCS, FDOT, January 1999). The upland land use types/vegetative communities within the subject property consists of Commercial and Services (140) and Xeric Oak (421). The wetland/surface water land use type/vegetative community consist of Wetland Forested Mixed (630). The following provides a brief description of the land use types/vegetative communities identified on the site:

Uplands:

140 – Commercial and Services

The southern portion of the subject site contained a office building and storage areas for a commercial business and is best classified as Commercial and Services (140), per the FLUCFCS. Vegetative species identified within this area consists of scattered oaks (*Quercus virginiana*, *Q. laurifolia*), ragweed (*Ambrosia artemisiifolia*), dogfennel (*Eupatorium capillifolium*), cudweed (*Gamochaeta* spp.), broomsedge (*Andropogon virginicus*), Mexican clover (*Richardia* spp.), Spanish needles (*Bidens alba*), grapevine (*Vitis rotundifolia*), var. sedges (*Cyperus* spp.), common persimmon (*Diospyros virginiana*), bahiagrass (*Paspalum notatum*), and hastateleaf dock (*Rumex hastatulus*).

421 – Xeric Oak

The northeastern portion of the site is comprised of a densely canopied forest community most consistent with the Xeric Oak (421) FLUCFCS classification. The vegetative species identified within this community includes live oak (*Quercus virginiana*), laurel oak (*Quercus laurifolia*), southern magnolia (*Magnolia grandiflora*), southern red cedar (*Juniperus virginiana*), saw palmetto (*Serenoa repens*), winged sumac (*Rhus copallinum*), fetterbush (*Lyonia lucida*), common ragweed (*Ambrosia artemisiifolia*), American pokeweed (*Phytolacca americana*), dog

fennel (*Eupatorium capillifolium*), American beautyberry (*Callicarpa americana*), Virginia creeper (*Parthenocissus quinquefolia*), caesarweed (*Urena lobata*), bromeliads (*Tillandsia* spp.), sword fern (*Nephrolepis brownii*), bracken fern (*Pteridium aquilinum* var. *pseudocaudatum*), and muscadine grapevine (*Vitis rotundifolia*).

Wetlands/Surface Waters:

630 – Wetland Forested Mixed

The northwestern portion of the subject site contained a forested wetland and this area is best classified as Wetland Forested Mixed (630), per the FLUCFCS. Vegetative species identified within this area consisted of red maple (*Acer redrum*), sweetgum (*Liquidambar styraciflua*), oaks (*Quercus nigra*, *Q. laurifolia*), elderberry (*Sambucus nigra*), sedges (*Carex* spp. and *Cyperus* spp.), grapevine (*Vitis* spp.), cinnamon fern (*Osmunda cinnamomeum*), marsh pennywort (*Hydrocotyle umbellata*), common ragweed (*Ambrosia artemisiifolia*) and Chinese tallow (*Sapium sebiferum*).

All on-site wetland/surface water areas were flagged utilizing pink BTC flagging tape (Figure 6). The limits of these on-site wetlands/surface waters can only be verified through a field review by the pertinent regulatory agencies.

WILDLIFE AND PROTECTED SPECIES

Using methodologies outlined in the Florida’s Fragile Wildlife (Wood, 2001); Measuring and Monitoring Biological Diversity Standard Methods for Mammals (Wilson, et al., 1996); and Florida Fish and Wildlife Conservation Commission’s (FFWCC’s) Gopher Tortoise Permitting Guidelines (April 2008 - revised May 2017); an assessment for “listed” floral and faunal species was conducted at the site in October 2021. This assessment included both direct observations and indirect evidence, such as tracks, burrows, tree markings and vocalizations that indicated the presence of species observed. The assessment focused on species that are “listed” by the FFWCC’s Official Lists - Florida’s Endangered Species, Threatened Species and Species of Special Concern (June 2021) that have the potential to occur in Seminole County (Table 1).

One (1) fern species, cinnamon fern (*Osmunda cinnamomeum*), was identified on-site that is listed as “commercially exploited” by the Florida Department of Agriculture and Consumer Services (FDACS). The harvesting of cinnamon fern (*Osmunda cinnamomeum*) for commercial gain prohibited. However, the listing of these species poses no restrictions towards the development of the site. The following is a list of those wildlife species identified during the evaluation of the site:

Reptiles and Amphibians

brown anole (*Anolis sagrei*)
eastern black racer (*Coluber constrictor*)
green anole (*Anolis caroliniana*)
green tree frog (*Hyla cinerea*)
southern toad (*Bufo terrestris*)

Birds

Common Grackle (*Quiscalus quiscula*)
Mourning Dove (*Zenaida macroura*)
Northern Mockingbird (*Mimus polyglottos*)
Northern Cardinal (*Cardinalis cardinalis*)
Red-shouldered Hawk (*Buteo lineatus*)

Mammals

eastern gray squirrel (*Sciurus carolinensis*)
nine-banded armadillo (*Dasypus novemcinctus*)
common raccoon (*Procyon lotor*)
Virginia opossum (*Didelphis virginiana*)

None of the above identified species are listed in the FFWCC's Official Lists - Florida's Endangered Species, Threatened Species and Species of Special Concern (December 2018).

Bald Eagle (*Haliaeetus leucocephalus*)

State Protected by F.A.C. 68A-16.002 and federally protected by both the Migratory Bird Treaty Act (1918) and the Bald and Golden Eagle Protection Act (1940)

In August of 2007, the USFWS removed the Bald Eagle from the list of federally endangered and threatened species. Additionally, the Bald Eagle was removed from FFWCC's imperiled species list in April of 2008. Although the Bald Eagle is no longer protected under the Endangered Species Act, it is still protected under the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act and FFWCC's Bald Eagle rule (Florida Administrative Code 68A-16.002 Bald Eagle (*Haliaeetus leucocephalus*)).

In May of 2007, the USFWS issued the National Bald Eagle Management Guidelines. In April of 2008, the FFWCC adopted a new Bald Eagle Management Plan that was written to closely follow the federal guidelines. In November of 2017, the FFWCC issued "A Species Action Plan for the Bald Eagle" in response to the sunset of the 2008 Bald Eagle Management Plan. Under

the USFWS’s management plans, buffer zones are recommended based on the nature and magnitude of the project or activity. The recommended protective buffer zone is 660 feet or less from the nest tree, depending on what activities or structures are already near the nest. As provided within the above referenced Species Action Plan, the USFWS is the regulating body responsible for issuing permits for Bald Eagles. In 2017, the need to obtain a State permit (FFWCC) for the take of Bald Eagles or their nests in Florida was eliminated following revisions to Rule 68A-16.002, F.A.C. A USFWS Bald Eagle “Non-Purposeful Take Permit” is not needed for any activity occurring outside of the 660-foot buffer zone. No activities are permitted within 330 feet of a nest without a USFWS permit.

In addition to the preliminary on-site review for “listed” species, BTC conducted a review for any FFWCC recorded Bald Eagle nests on or in the vicinity of the subject property (see attached). This review revealed no recorded Bald Eagle nests site within 660 feet of the subject property.

The environmental limitations described in this document are based on observations and technical information available on the date of the on-site evaluation. This report is for general planning purposes only. The limits of any on-site wetlands/surface waters can only be determined and verified through field delineation and/or on-site review by the pertinent regulatory agencies. The wildlife surveys conducted within the subject property boundaries do not preclude the potential for any listed species, as noted on Table 1 (attached), currently or in the future.

Should you have any questions or require any additional information, please do not hesitate to contact our office at (407) 894-5969. Thank you.


Regards,

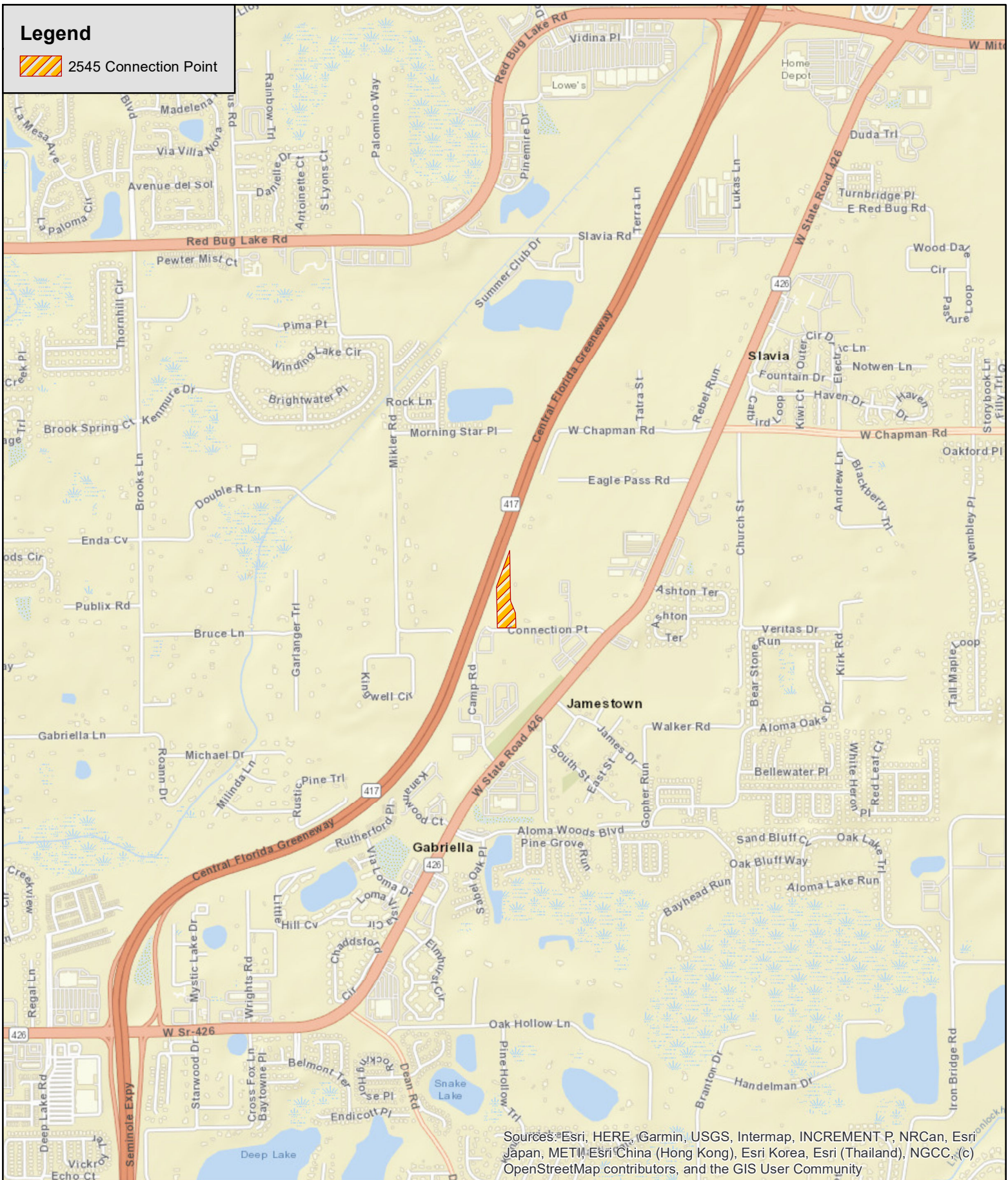


Daniel Gough
Project Manager

attachments

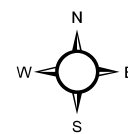
Legend

 2545 Connection Point



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

2545 Connection Point
Seminole County, Florida
Figure 1
Location Map



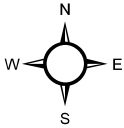
1,800 Feet

Project #: 527-06
Produced By: DBG
Date: 10/5/2021



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


2545 Connection Point
Seminole County, Florida
Figure 2
2020 Aerial Photograph



150
Feet

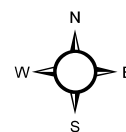
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Produced By: DBG
Date: 10/5/2021

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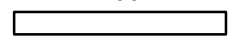
 2545 Connection Point



2545 Connection Point
Seminole County, Florida
Figure 3
USGS Topographic Map



460






 Feet

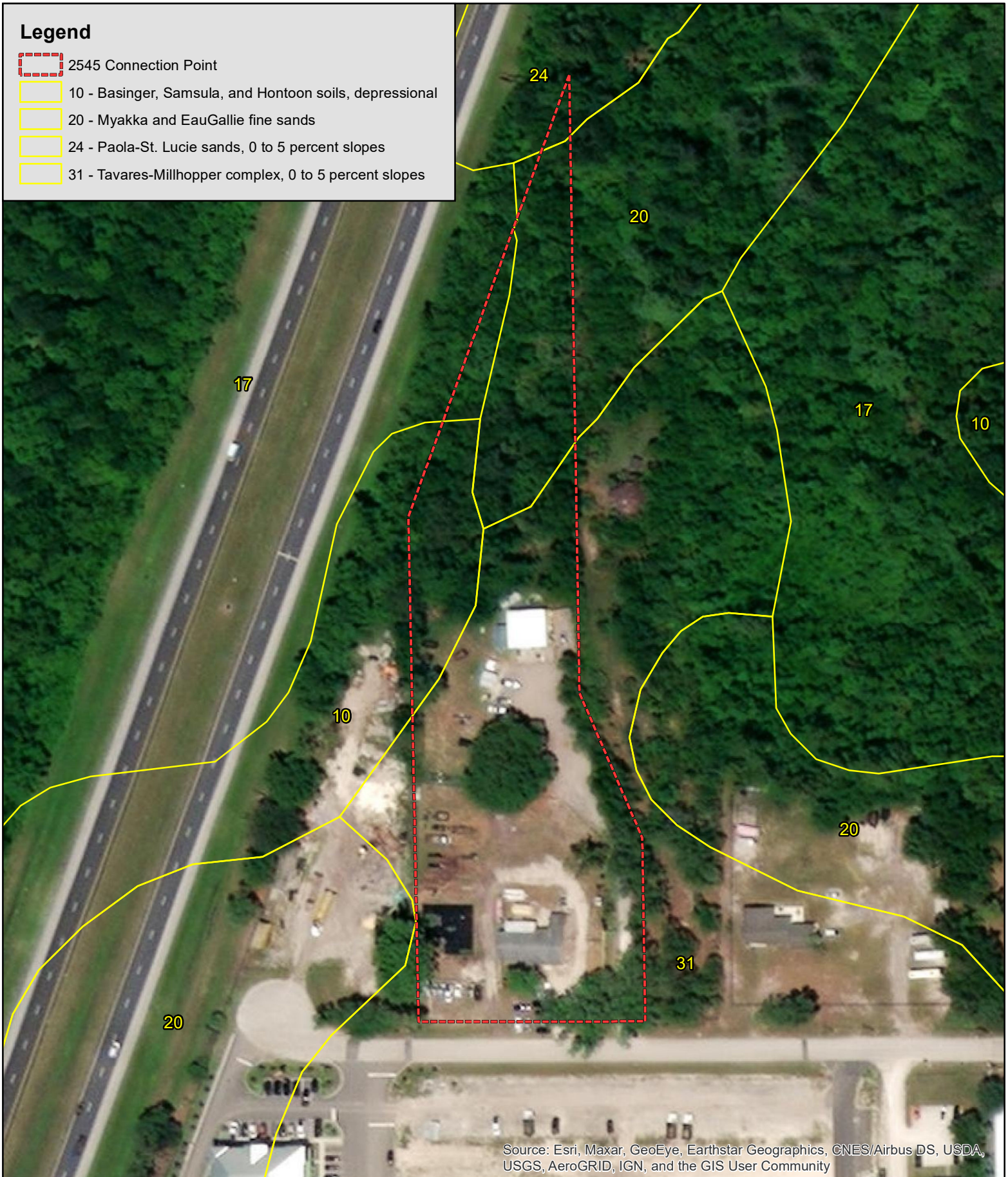
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Produced By: DBG

Date: 10/5/2021

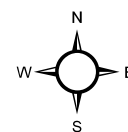
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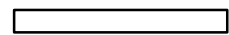
-  2545 Connection Point
-  10 - Basinger, Samsula, and Hontoon soils, depressional
-  20 - Myakka and EauGallie fine sands
-  24 - Paola-St. Lucie sands, 0 to 5 percent slopes
-  31 - Tavares-Millhopper complex, 0 to 5 percent slopes



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

2545 Connection Point
Seminole County, Florida
Figure 4
USDA-NRCS Soils Map



150
 Feet

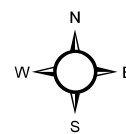
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Produced By: DBG
Date: 10/5/2021

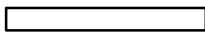
Legend

-  2545 Connection Point
-  140, Commercial and Services
-  421, Xeric Oak
-  630, Wetland Forested Mixed





2545 Connection Point
Seminole County, Florida
Figure 5
FLUCFCS Map

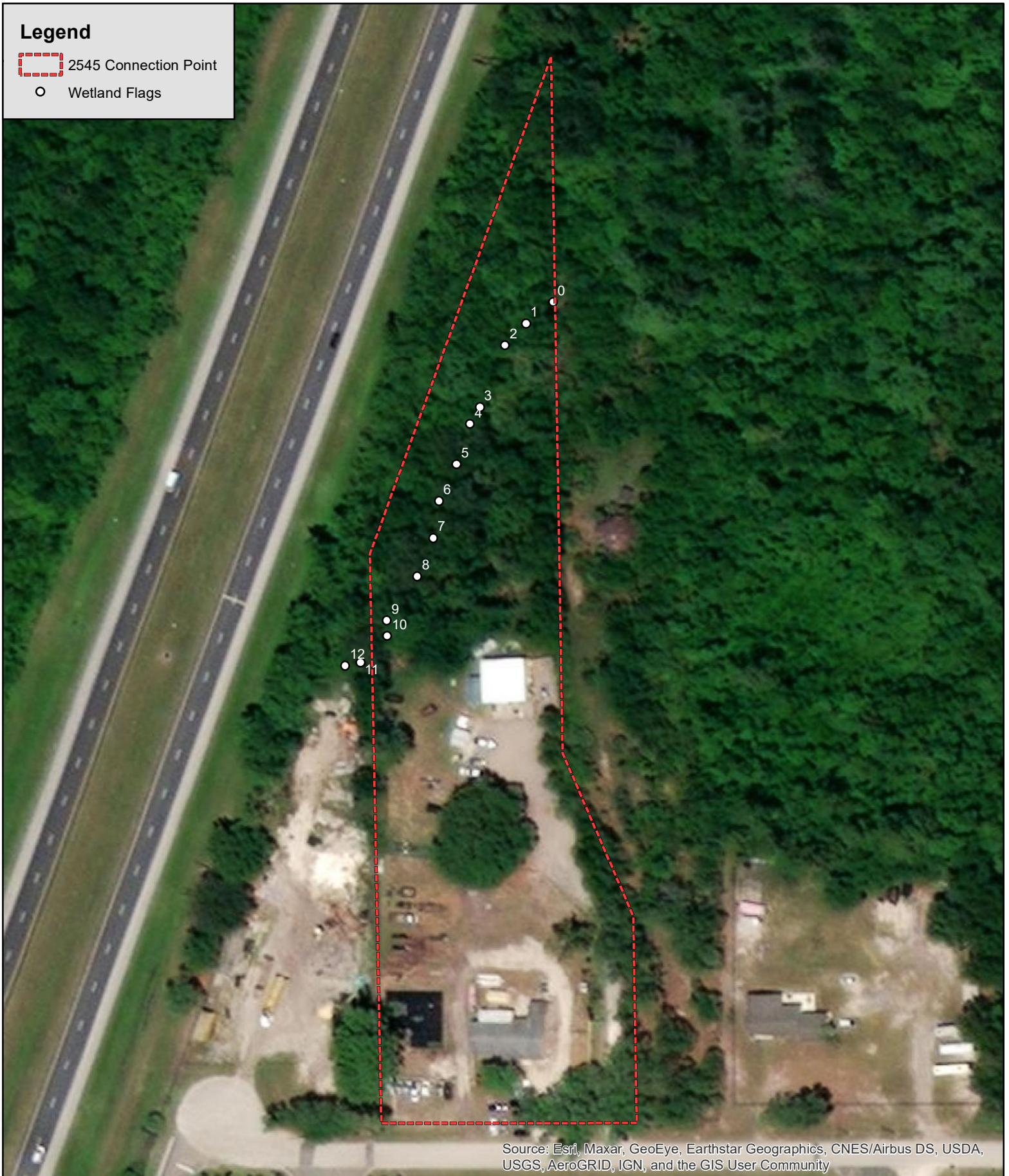


130
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Project #: 527-06
Produced By: DBG
Date: 10/5/2021

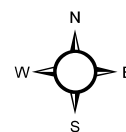
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 2545 Connection Point

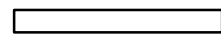
 Wetland Flags



2545 Connection Point
Seminole County, Florida
Figure 6
Wetland Flag Map



130

 Feet

Project #: 527-06

Produced By: DBG

Date: 10/5/2021

Table 1:		Potentially Occuring Listed Wildlife and Plant Species in Seminole County, Florida	
Scientific Name	Common Name	Federal Status	State Status
<u>FISH</u>			
<i>Pteronotropis welaka</i>	bluenose shiner	N	ST
<u>REPTILES</u>			
<i>Alligator mississippiensis</i>	American alligator	SAT	FT(S/A)
<i>Drymarchon corais couperi</i>	Eastern indigo snake	LT	FT
<i>Gopherus polyphemus</i>	gopher tortoise	C	ST
<i>Lampropeltis extenuata</i>	short-tailed snake	N	ST
<i>Pituophis melanoleucus mugitus</i>	Florida pine snake	N	SSC
<u>BIRDS</u>			
<i>Aphelocoma coerulescens</i>	Florida scrub-jay	LT	FT
<i>Egretta caerulea</i>	little blue heron	N	ST
<i>Egretta tricolor</i>	tricolored heron	N	ST
<i>Falco sparverius paulus</i>	southeastern American kestrel	N	ST
<i>Grus canadensis pratensis</i>	Florida sandhill crane	N	ST
<i>Haliaeetus leucocephalus</i>	bald eagle	N	**
<i>Mycteria americana</i>	wood stork	LT	FT
<i>Pandion haliaetus</i>	osprey	N	SCC*
<u>MAMMALS</u>			
<i>Puma concolor coryi</i>	Florida Panther	LE	FE
<i>Sciurus niger shermani</i>	Sherman's fox squirrel	N	SSC
<i>Trichechus manatus</i>	West Indian manatee	LE	FE
<u>PLANTS</u>			
<i>Carex chapmanii</i>	Chapman's Sedge	N	T
<i>Centrosema arenicola</i>	Sand Butterfly Pea	N	E
<i>Cucurbita okeechobeensis</i>	Okeechobee Gourd	LE	E
<i>Dennstaedtia bipinnata</i>	hay scented fern	N	E
<i>Illicium parviflorum</i>	star anise	N	E
<i>Lechea cernua</i>	nodding pinweed	N	T
<i>Nolina atopocarpa</i>	Florida Beargrass	N	T
<i>Ophioglossum palmatum</i>	Hand Fern	N	E
<i>Pecuma plumula</i>	Plume Polypody	N	E
<i>Pteroglossaspis ecristata</i>	Giant Orchid	N	T
<i>Pycnanthemum floridanum</i>	Florida Mountain-mint	N	T
<i>Salix floridana</i>	Florida willow	N	E

FEDERAL LEGAL STATUS

LE-Endangered: species in danger of extinction throughout all or a significant portion of its range.

LT-Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.

SAT-Endangered due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.

C-Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.

XN-Non-essential experimental population.

N-Not currently listed, nor currently being considered for listing as Endangered or Threatened.

STATE LEGAL STATUS - ANIMALS

FE- Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service

FT- Listed as Threatened Species at the Federal level by the U. S. Fish and Wildlife Service

FXN- Federal listed as an experimental population in Florida

FT(S/A)- Federal Threatened due to similarity of appearance

ST- State population listed as Threatened by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.

SSC-Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. (SSC* for *Pandion haliaetus* (Osprey) indicates that this status applies in Monroe county only.)

N-Not currently listed, nor currently being considered for listing.

*** State protected by F.A.C. 68A-16.002 and federally protected by both the Migratory Bird Treaty Act (1918) and the Bald and Golden Eagle Protection Act (1940)*

STATE LEGAL STATUS - PLANTS

E-Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act.

T-Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered.

N-Not currently listed, nor currently being considered for listing.