



May 9, 2016

Carl Como Tuter  
**Oates Creek, LLC**  
357 Ocean Shore Blvd.  
Ormond Beach, FL 32716

**Proj: Oates Creek; Orange County, Florida**  
**Parcel ID: 21-22-29-5844-00-090**  
**Section 21, Township 22 South, Range 29 East**  
**(BTC File # 878-01)**  
**Re: Preliminary Environmental Assessment**

Dear Mr. Tuter:

In November of 2015, Bio-Tech Consulting, Inc. (BTC) conducted an environmental assessment of the approximately 9.73-acre Oates Creek site. The site is located west of US-441 and north of SR 408, southwest of the intersection of John Young Parkway and Princeton Street, within Section 21, Township 22 South, Range 29 East, Orange County, Florida, (Figures 1, 2, and 3). This environmental assessment included the following elements:

- **review of soil types mapped within the site boundaries;**
- **evaluation of land use types/vegetative communities present;**
- **field review for occurrence of protected flora and fauna; and,**
- **overview of potential development constraints.**

### **SOILS**

According to the Soil Survey of Orange County, Florida, prepared by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), two (2) soil types occur within the subject property boundaries (Figure 4). These soil types include the following:

**Orlando Office**  
2002 East Robinson St.  
Orlando, FL 32803

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

**Jacksonville Office**  
2036 Forbes St.  
Jacksonville, FL 32204

**Tampa Office**  
6011 Benjamin Rd.  
Suite 101 B  
Tampa, FL 33634

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

**Aquatic & Land  
Management Operations**  
3825 Rouse Rd.  
Orlando, FL 32817

**Native Plant Nursery**  
DCC Farms  
8580 Bunkhouse Rd.  
Orlando, FL 32832

407.894.5969  
877.894.5969  
407.894.5970 fax

- **Basinger fine sand, depressional (#3)**
- **Samsula-Hontoon-Basinger association, depressional (#41)**

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

**Basinger fine sand, depressional (#3)** is a poorly drained, nearly level sandy soil found mainly in depressions and in a few poorly drained waterways in the flatwoods and sandhills. Typically, the surface layer is gray fine sand about 5 inches. The water table is above the surface for several months in most years. The rest of the time it is within 30 inches except for very dry periods. Permeability is very rapid throughout.

**Samsula-Hontoon-Basinger association, depressional (#41)** are nearly level, very poorly drained soils found in freshwater swamps, depressions, sloughs and broad poorly defined drainageways. Typically the surface layer of Samsula soil is black and dark reddish brown muck about 34 inches thick. Typically the surface layer of Hontoon soil consists of black muck about 16 inches thick. Typically the surface layer of Basinger soil consists of black fine sand about 6 inches thick. During most years, the undrained areas of the soils in this map unit are ponded for 6 to 9 months or more except during extended dry periods. The permeability of Samsula and Hontoon soils is rapid. The permeability of Basinger soil is very rapid.

The Florida Association of Environmental Soil Scientists (FAESS) considers the main components of the Basinger fine sand, depressional (#3) and the Samsula-Hontoon-Basinger association, depressional (#41) soil types associated with the property to be hydric in nature. This information can be found in the Hydric Soils of Florida Handbook, Third Edition (March 2000).

## **LAND USE TYPES/VEGETATIVE COMMUNITIES**

The Oates Creek site currently supports four (4) distinct land use types/vegetative communities within its boundaries (Figure 5). These areas were identified utilizing the Florida Land Use, Cover Forms Classification System, Level III (FLUCFCS, FDOT, January 1999). These land use types/vegetative communities include uplands and wetlands. The upland area consists of Upland Hardwood Forest (420) and Disturbed Lands (740). The wetland/surface water areas are classified as Streams and Waterways (Ditch) (510) and Wetland Forested Mixed (630). The following provides a brief description of these land use types/vegetative communities identified on the site:

## **Uplands:**

### **420 Upland Hardwood Forest**

The western portion of the subject site is comprised of upland forested community dominated by hardwoods and this land use type is best classified as Upland Hardwood Forest (420), per the FLUCFCS. Vegetative species identified within this community type include laurel oak (*Quercus laurifolia*), laurel cherry (*Prunus caroliniana*), Chinese tallow (*Triadica*



*sebifera*), camphor tree (*Cinnamomum camphora*), paper mulberry (*Broussonetia papyrifera*), water oak (*Quercus nigra*), laurel oak (*Quercus hemisphaerica*), slash pine (*Pinus elliottii*), saw palmetto (*Serenoa repens*), poison ivy (*Toxicodendron radicans*), American beautyberry (*Callicarpa americana*), muscadine grapevine (*Vitis rotundifolia*), caesarweed (*Urena lobata*), air potato (*Dioscorea bulbifera*), tuberous sword fern (*Nephrolepis cordifolia*), greenbrier (*Smilax* spp.), Virginia creeper (*Parthenocissus quinquefolia*) and blackberry (*Rubus cuneifolius*).

### **740 Disturbed Lands**

There is one (1) area located along this eastern portion of the site which is comprised of glass bottles, concrete and other general trash items. This area appears to have been disturbed by past activities associated with historical dumping. The understory contains little vegetation and contains depressions and mounds of disturbed soils and this land use type is best classified as



Disturbed Lands (740), per the FLUCFCS. Vegetative species identified within this community type include ear-pod tree (*Enterolobium contortisliquum*), paper mulberry (*Broussonetia*

*papyrifera*), muscadine grapevine (*Vitis rotundifolia*), air potato vine (*Dioscorea bulbifera*), blackberry (*Rubus cuneifolius*), camphor tree (*Cinnamomum camphora*), saw palmetto (*Serenoa repens*) and greenbrier (*Smilax* spp.).

### **Wetlands/Surface Waters:**

#### **510 Streams and Waterways (Ditch)**

One (1) ditch system exists along the southern boundary of the subject site. The primary ditch is named Fairvilla Canal, which has contributed significantly towards altering the hydrology and soils within the subject site, as well as adjacent sites. This surface water is best classified as Streams and Waterways (510), per the FLUCFCS. Vegetation observed within



this ditch includes water hyacinth (*Eichhornia crassipes*), duckweed (*Lemna minor*), nutsedge (*Cyperus rivularis*), smartweed (*Polygonum punctatum*), pennywort (*Hydrocotyle umbellata*), Peruvian primrosewillow (*Ludwigia peruviana*) and torpedograss (*Panicum repens*).

#### **630 Wetland Forested Mixed**

There is one (1) wetland system located in the central portion of the site which exhibits poor conditions with various exotic and invasive species present. This wetland system has been significantly altered due to the large drainage ditch that runs along the southern boundary of the subject site. The historic drainage of this system has deteriorated the hydrological conditions of the wetland. The wetland exhibits decaying cypress trees due to extensive soil subsidence (Approximately 2-4 feet). This wetland system is best classified as Wetland Forested



Mixed (630), per the FLUCFCS. Vegetation observed within this wetland includes red maple (*Acer rubrum*), bald cypress (*Taxodium distichum*), camphor tree (*Cinnamomum camphora*), Chinese tallow (*Triadica sebifera*), loblolly bay (*Gordonia lasianthus*), elderberry (*Sambucus canadensis*), broomsedge (*Andropogon virginicus*), tuberous sword fern (*Nephrolepis cordifolia*), swamp fern (*Blechnum serrulatum*), cinnamon fern (*Osmunda cinnamomea*), blackberry (*Rubus cuneifolius*), Peruvian primrosewillow (*Ludwigia peruviana*), poison ivy (*Toxicodendron radicans*), old world climbing fern (*Lygodium microphyllum*), air potato vine (*Dioscorea bulbifera*), caesarweed (*Urena lobata*), wild taro (*Colocasia esculenta*), greenbriar (*Smilax* spp.), muscadine grape (*Vitis rotundifolia*) and maidencane (*Panicum hemitomon*).

## 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); Wildlife Methodology Guidelines (1988); and Florida Fish and Wildlife Conservation Commission's Gopher Tortoise Permitting Guidelines (revised September 2015); an assessment for "listed" floral and faunal species was conducted at the site on November 30, 2015. This assessment, which covered approximately 100% of the subject site's developable area, included both direct observations and indirect evidence, such as tracks, burrows, tree markings and vocalizations which 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 (January 2013) that have the potential to occur in Orange County.

### Reptiles and Amphibians

black racer (*Coluber constrictor*)  
brown anole (*Norops sagrei*)  
southern leopard frog (*Rana sphenoccephala*)  
green anole (*Anolis caroliniana*)

### Birds

Mourning Dove (*Zenaida macroura*)  
Northern Mockingbird (*Mimus polyglottos*)  
Red-bellied Woodpecker (*Melanerpes carolinus*)  
Red-shouldered Hawk (*Buteo lineatus*)  
Turkey Vulture (*Cathartes aura*)

### Mammals

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

None of the above wildlife species is identified in the FFWCC's Official Lists - Florida's Endangered Species, Threatened Species and Species of Special Concern (Updated January 2013).

**Bald Eagle (*Haliaeetus leucocephalus*)**  
USFWS Listed as “Threatened”

In addition to the on-site review for “listed” species, BTC conducted a review of the FFWCC’s recorded Bald Eagle (*Haliaeetus leucocephalus*) nest sites on or in the vicinity of the subject property. This review revealed no Bald Eagle nests, through the 2014-2015 nesting season, within one (1.0) mile of the subject site. As such, there should be no further action pertaining to Bald Eagle nests and the subject property.

**USFWS CONSULTATION AREAS**

The U.S. Fish and Wildlife Service has established “consultation areas” for certain listed species. Generally, these consultation areas only become an issue if USFWS consultation is required, which is usually associated with permitting through the U.S. Army Corps of Engineers. The reader should be aware that species presence and need for additional review are often determined to be unnecessary early in the permit review process due to lack of appropriate habitat or other conditions. However, the USFWS makes the final determination.

Consultation areas are typically regional in size, often spanning multiple counties where the species in question is known to exist. Consultation areas by themselves do not indicate the presence of a listed species. They only indicate an area where there is a potential for a listed species to occur and that additional review might be necessary to confirm or rule-out the presence of the species. The additional review typically includes the application of species-specific criteria to rule-out or confirm the presence of the species in question. Such criteria might consist of a simple review for critical habitat types. In other cases, the review might include the need for species-specific surveys using established methodologies that have been approved by the USFWS.

The Oates Creek site is located within three (3) USFWS Consultation Areas which include the Everglade Snail Kite (*Rostrhamus sociabilis*), Florida Scrub-Jay (*Aphelocoma coerulescens*) and Sand Skink (*Neoseps reynoldsi*). The following provides a brief description of this respective species, its habitat and the potential for additional review:

**Everglade Snail Kite (*Rostrhamus sociabilis*)**  
Federally Listed as “Endangered” by USFWS

The subject site falls within the USFWS Consultation Area for the Everglade Snail Kite. Currently the Snail Kite is listed as “Endangered” by the USFWS. Snail Kites are similar in size to Red-shouldered Hawks. All Snail Kites have deep red eyes and a white rump patch. Males are slate gray, and females and juveniles vary in amounts of white, light brown, and dark brown, but the females always have white on their chin. Kites vocalize mainly during courtship and nesting. They may occur in nearly all of the wetlands of central and southern Florida. They regularly occur in lake shallows along the shores and islands of many major lakes, including Lakes Okeechobee, Kissimmee, Tohopekaliga (Toho) and East Toho. They also regularly occur

in the expansive marshes of southern Florida such as Water Conservation Areas 1, 2, and 3, Everglades National Park, the upper St. John's River marshes and Grassy Waters Preserve.

No Snail Kites were observed within the subject site during the wildlife survey conducted by BTC. A formal survey may be required by the USFWS or another agency to determine if any Snail Kites utilize any portions of the site.

***Florida Scrub-Jay (Aphelocoma coerulescens)***  
*Federally Listed as "Threatened" by USFWS*

Currently the Florida Scrub-Jay is listed as threatened by the USFWS. Florida Scrub Jays are largely restricted to scattered, often small and isolated patches of sand pine scrub, xeric oak, scrubby flatwoods, and scrubby coastal stands in peninsular Florida (Woolfenden 1978a, Fitzpatrick et al. 1991). They avoid wetlands and forests, including canopied sand pine stands. Optimal Scrub-Jay habitat is dominated by shrubby scrub, live oaks, myrtle oaks, or scrub oaks from 1 to 3 m (3 to 10 ft.) tall, covering 50% to 90 % of the area; bare ground or sparse vegetation less than 15 cm (6 in) tall covering 10% to 50% of the area; and scattered trees with no more than 20% canopy cover (Fitzpatrick et al. 1991).

No Scrub Jays were observed during the wildlife survey conducted by BTC and no suitable habitat exists on the subject property. As such, it is anticipated that no further action should be required pertaining to scrub Jays.

***Sand Skink (Neoseps reynoldsi)***  
*Federally Listed as "Threatened" by USFWS*

The subject site falls within the Sand Skink Consultation Area for the United States Fish and Wildlife Service (USFWS). The sand skink is listed as "Threatened" by the USFWS. The sand skink exists in areas vegetated with sand pine (*Pinus clausa*) - rosemary (*Ceratiola ericoides*) scrub or a long leaf pine (*Pinus palustris*) - turkey oak (*Quercus laevis*) association. Habitat destruction is the primary threat to this species' survival. Citrus groves, residential, commercial and recreational facilities have depleted the xeric upland habitat of the sand skink. All properties within the limits of this consultation area that are located at elevations greater than 80' and contain suitable (moderate-to-well drained soils) soils are believed by USFWS to be areas of potential sand skink habitat.

The results of the pedestrian survey in November 2015 show no evidence (i.e. sinusoidal tracks) that indicate the presence of the sand skink. The site is within the USFWS Sand Skink Consultation Area and all of the uplands on the site remain 80 feet above sea level. However, the soils associated with the subject property do not contain suitable soils for the Sand Skink. As such, it is anticipated that no further action should be required pertaining to Sand Skinks.

## **DEVELOPMENT CONSTRAINTS**

All wetlands and surface waters on the site have been delineated by BTC in accordance with local, state and federal guidelines utilizing pink “Bio-Tech Consulting” flagging tape (Figure 6). All wetland/surface water flag locations will need to be approved by the appropriate regulatory agencies. The on-site wetlands/surface waters are located within the Wekiva River Nested drainage basin. Development of the property is constrained by the presence of one (1) wetland system and one (1) surface water system on the subject site.

### **St. Johns River Water Management District**

An Environmental Resource Permit (ERP) will be required through the St. Johns River Water Management District (SJRWMD) for all wetland and/or other surface water impacts (both direct and secondary). Impacts to the project’s wetland and/or other surface water communities would be permissible by SJRWMD as long as the issues of elimination and reduction of wetland impacts have been addressed and as long as the mitigation offered is sufficient to offset the functional losses incurred via the proposed impacts.

### **U.S. Army Corps of Engineers**

Permitting may also be required for the project’s wetland and/or other surface water impacts by the US Army Corps of Engineers (USACOE). As the ERP is a joint application between the SJRWMD and the USACOE, the Corps will automatically be notified/copied upon submittal of the ERP application to the District. As with the District, it is anticipated that all impacts to the project’s wetlands and/or other surface water communities would be permissible by the USACOE as long as the issues of elimination and reduction of wetland impacts have been addressed and as long as the mitigation offered is sufficient to offset the functional losses incurred via the proposed impacts. It is our position based upon our preliminary review that the onsite wetlands are regulated by the Army Corps of Engineers (ACOE). Although, involvement by the ACOE will have to be resolved prior to site development.

### **City of Orlando**

Coordination with the City of Orlando will be required pertaining to all on-site wetlands. A Q-WET rating system form was completed for the wetland system within the limits of the property. Please find these attached Q-WET form for the project site. Per the attached photographs and Q-WET forms, the on-site wetland (W-1) and surface water ditch (SW-1) rate low on the scale. This is due to the historically altered hydrology, proximity to major roadways, functional isolation, surrounding development and higher percent coverage of invasive/ exotic vegetation. The overall functionality of the on-site wetland and surface water systems are low according to the observations and results of the environmental assessment.

## **WETLAND ANALYSIS**

A wetland analysis was performed during the Level C Environmental Assessment criteria. The on-site wetland area was analyzed by groundtruthing and soils sampling. A Q-WET rating system form was completed for the wetland area and for the surface water ditch on the southern boundary of the subject site. Please find the attached forms (Appendix A). Per the attached photographs and Q-WET Rating System Forms the on-site wetland rates low on the scale; with Wetland 1 achieving a total score of 3 out of 20 and Surface Water 1 achieving a total score of 4 out of 20. This is due to the relatively small size of the wetland and surface water, their altered hydrology (ditch), the adjacent development (industrial, residential, commercial), lack of significant connectivity (vegetative or hydrologic), vegetative characteristics (exotics and opportunistic species) and the lack of utilization by listed wildlife species (habitat, foraging, protection, nesting, etc.). Therefore, based on the above and the Q-Wet Rating System Forms, it can be stated that the overall functionality of the on-site wetland surface water systems are low according to the observations and results of the environmental assessment.

## **AQUIFER RECHARGE**

Based upon a review of Section 63.234 of the City of Orlando's Code of Ordinances, more specifically "Figure III-19A: Primary Groundwater Recharge Areas", the subject site is not located within a primary groundwater recharge area (see attached Figure III-19A).

## **FLOODPLAIN**

The property is located within the 100-year floodplain as identified by FEMA FIRM Map Panel 02354F. Any impacts to floodplain will be compensated at a 1:1 ratio as dictated by the St. Johns River Water Management District (SJRWMD).

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.

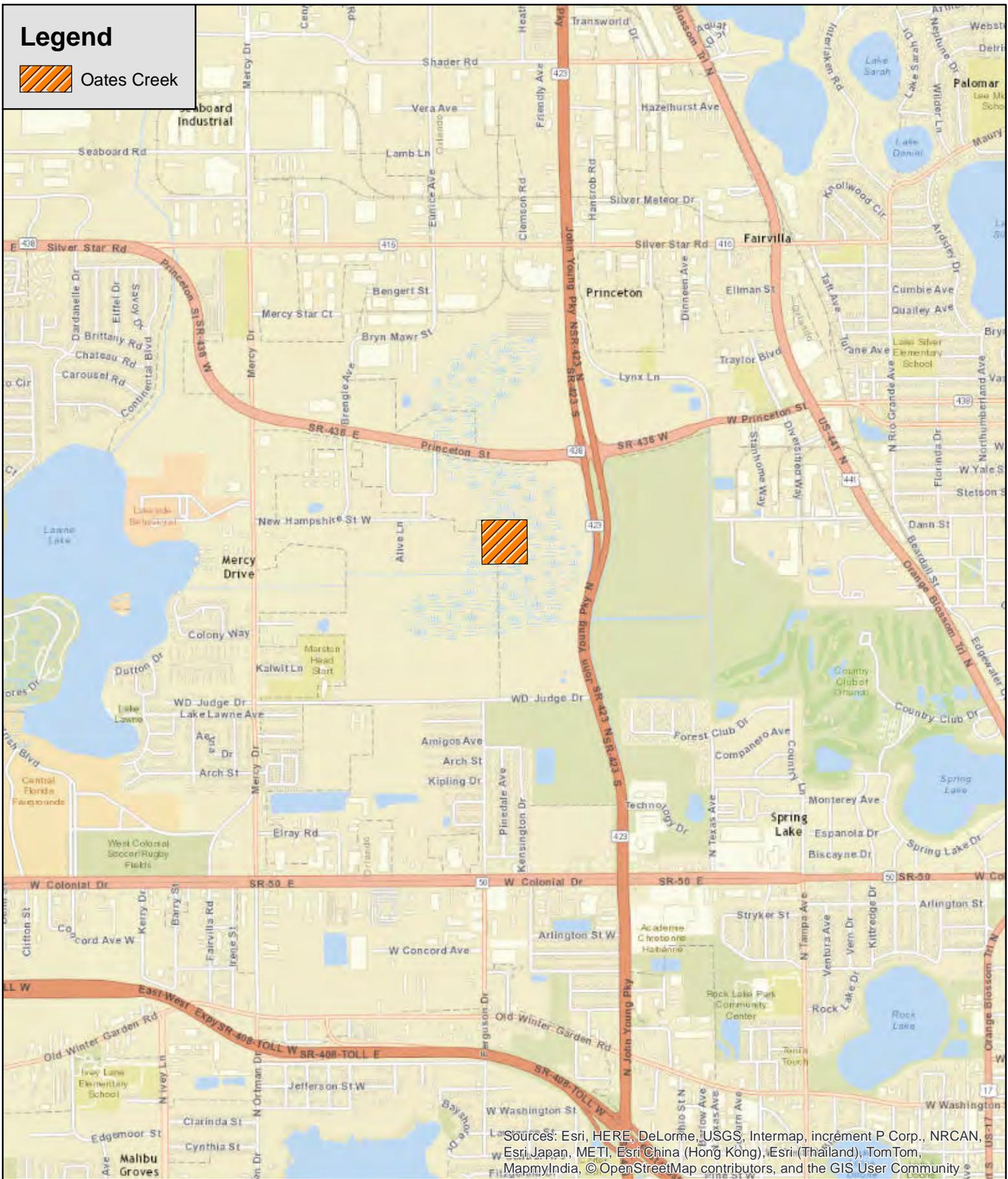
Regards,



Mark Ausley  
Project Manager

# Legend

 Oates Creek



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Oates Creek  
Orange County, Florida  
Figure 1  
Location Map

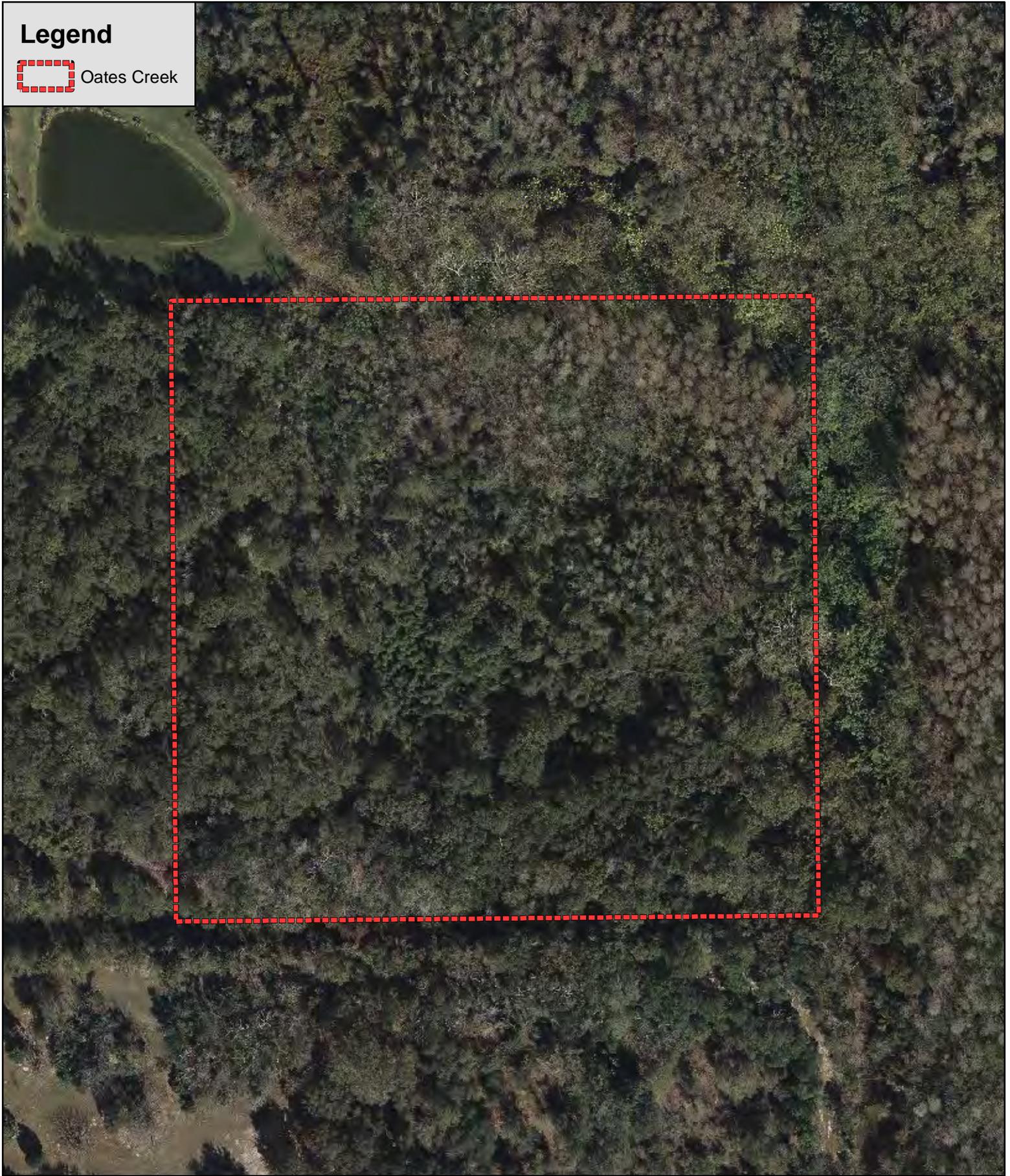
0 0.1 0.2  
Miles



Project #: 878-01  
Produced By: DPH  
Date: 10/19/2015

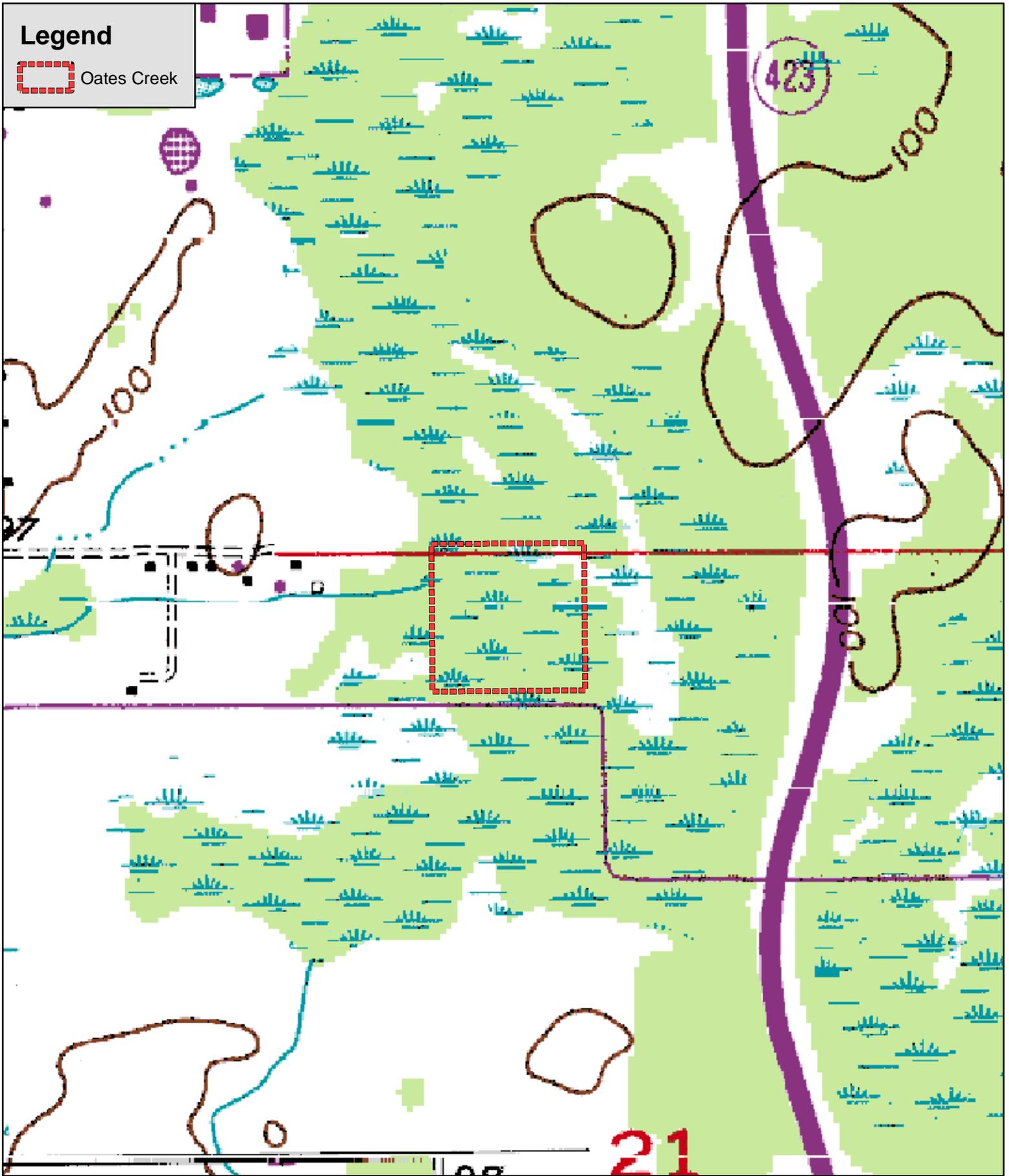
# Legend

 Oates Creek



**Legend**

 Oates Creek

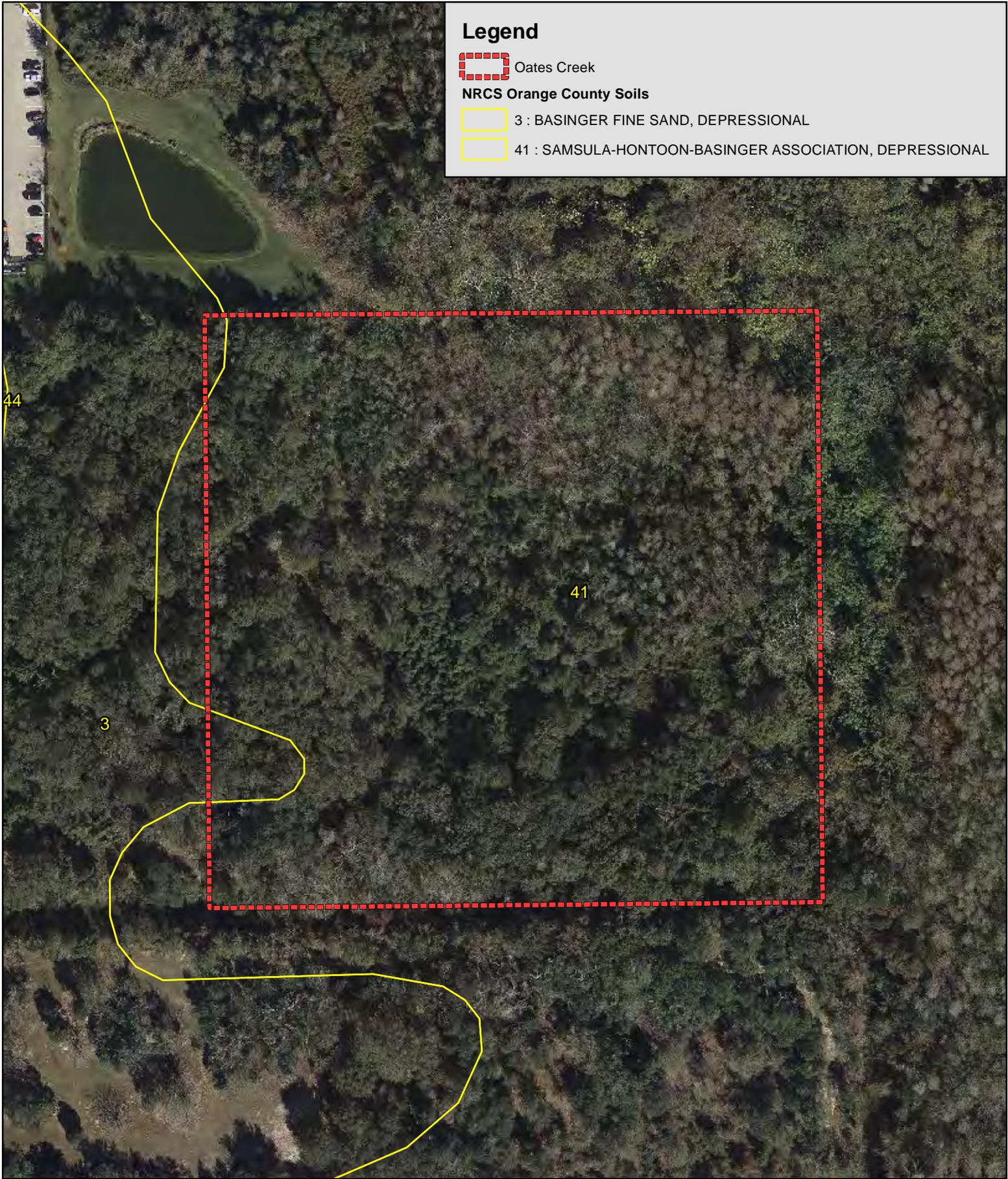


Oates Creek  
Orange County, Florida  
Figure 3  
USGS Topographic Map

0 250 500  
Feet



Project #: 878-01  
Produced By: DPH  
Date: 10/19/2015



**Legend**



Oates Creek

**NRCS Orange County Soils**



3 : BASINGER FINE SAND, DEPRESSIONAL



41 : SAMSULA-HONTOON-BASINGER ASSOCIATION, DEPRESSIONAL

44

3

41





**Legend**

-  Oates Creek
-  420, Upland Hardwood Forests
-  510, Streams and Waterways
-  630, Wetland Forested Mixed
-  740, Disturbed Lands

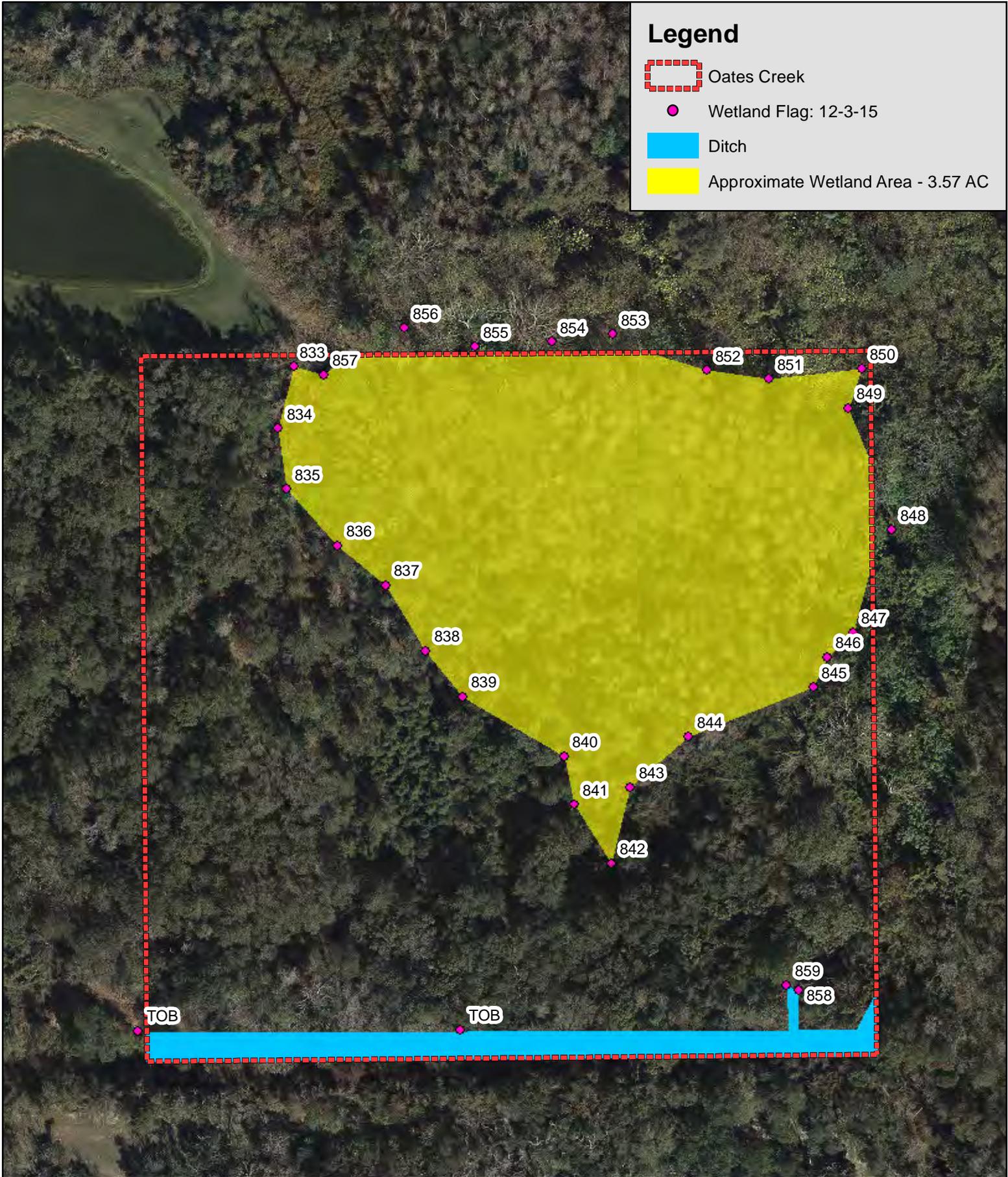
Oates Creek  
 Orange County, Florida  
 Figure 5  
 FLUCFCS Map



0 50 100  
 Feet  
 Project #: 878-01  
 Produced By: DPH  
 Date: 12/14/2015

**Legend**

-  Oates Creek
-  Wetland Flag: 12-3-15
-  Ditch
-  Approximate Wetland Area - 3.57 AC



Oates Creek  
Orange County, Florida  
Figure 6  
Wetland Delineation Map

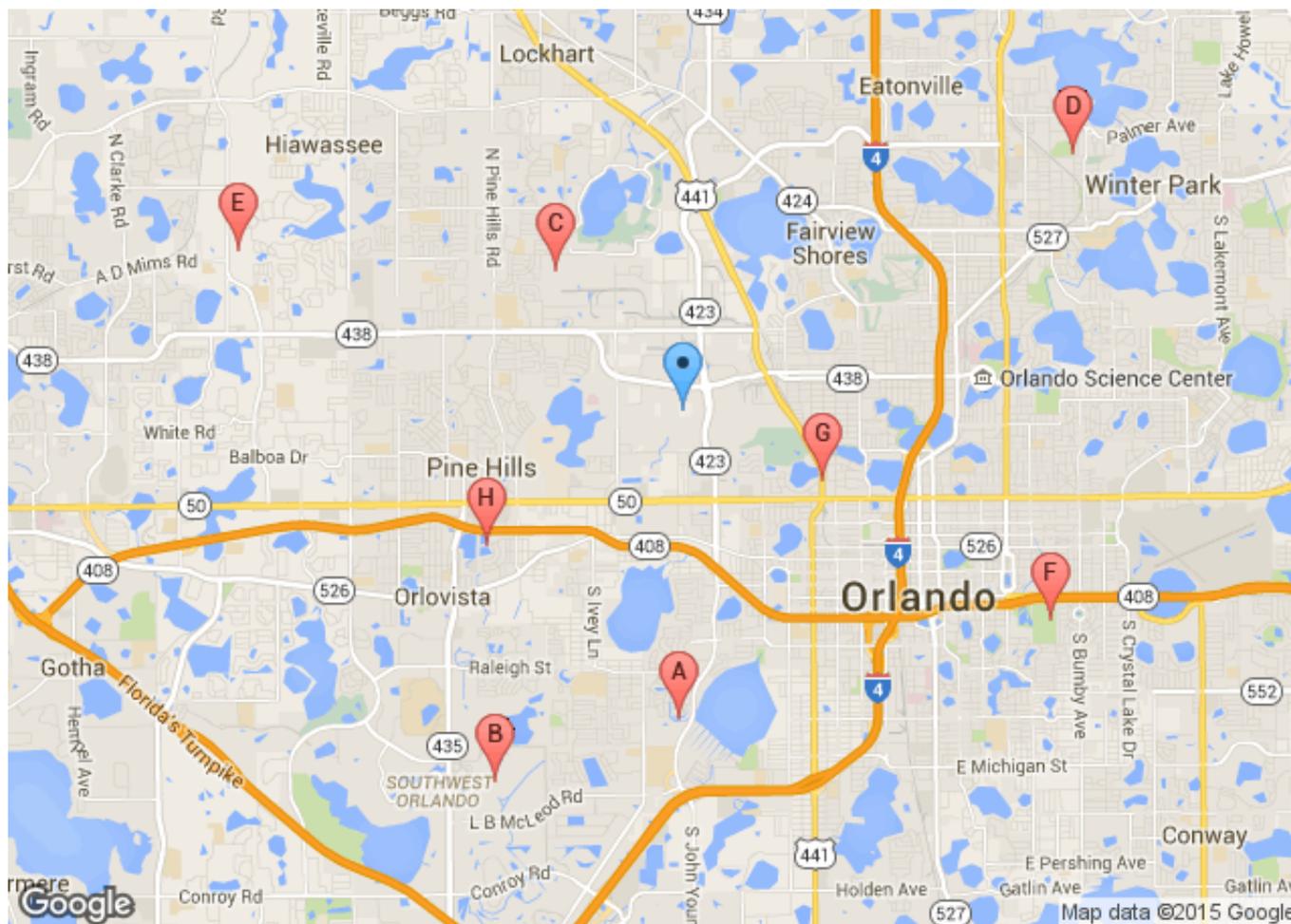


This report was generated using the bald eagle nest locator at <https://public.myfwc.com/FWRI/EagleNests/nestlocator.aspx> on 12/7/2015 5:02:13 PM.

Search Entered: Within 5 miles of latitude 28.5663 and longitude -81.4193; All Search Results

8 record(s) were found; 8 record(s) are shown

Bald Eagle Nest Map:



Bald Eagle Nest Data Search Results:

Results per page:

All ▼

Letter	Nest ID	County	Latitude	Longitude	Township	Range	Section	Gaz Page	Last Known Active	Last Surveyed	Act 10	Act 11	Act 12	Act 13	Act 14	Dist. (Mi)
A	OR013	Orange	28 31.20	81 25.20	23S	29E	04	80	1987	2014	*	*	*	*	-	3.20
B	OR015	Orange	28 30.65	81 27.08	23S	29E	06	80	2011	2014	*	Y	*	*	-	4.29
C	OR021	Orange	28 35.22	81 26.45	22S	29E	08	80	2014	2014	*	Y	*	*	Y	1.94
D	OR023	Orange	28 36.28	81 21.18	22S	30E	06	80	2008	2014	*	-	*	*	-	4.81
E	OR034	Orange	28 35.40	81 29.70	22S	28E	10	80	1998	2014	*	-	*	*	-	4.87
F	OR042	Orange	28 32.10	81 21.42	22S	30E	31	80	2014	2014	*	Y	*	*	Y	4.35
G	OR076	Orange	28 33.35	81 23.75	22S	29E	22	80	2014	2014	*	*	Y	*	Y	1.60
H	OR082	Orange	28 32.77	81 27.17	22S	29E	30	80	2014	2014	-	*	*	Y	Y	2.46

"Y" denotes an active nest  
 "N" denotes an inactive nest

"U" denotes a nest that was visited but status was undetermined  
 "\*" denotes a nest that was not surveyed

"-" denotes an unobserved nest

<b>Table 1:</b>		<b>Potentially Occuring Listed Wildlife and Plant Species in Orange County, Florida</b>	
<b>Scientific Name</b>	<b>Common Name</b>	<b>Federal Status</b>	<b>State Status</b>
<b>FISH</b>			
<i>Cyprinodon variegatus hubbsi</i>	Lake Eustis pupfish	N	SSC
<b>AMPHIBIANS</b>			
<i>Lithobates capito</i>	gopher frog	N	SSC
<b>REPTILES</b>			
<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	FT
<i>Lampropeltis extenuata</i>	short-tailed snake	N	ST
<i>Pituophis melanoleucus mugitus</i>	Florida pine snake	N	SSC
<i>Plestiodon reynoldsi</i>	sand skink	LT	FT
<b>BIRDS</b>			
<i>Aphelocoma coerulescens</i>	Florida scrub-jay	LT	FT
<i>Aramus guarana</i>	limpkin	N	SSC
<i>Athene cunicularia floridana</i>	Florida burrowing owl	N	SSC
<i>Caracara cheriway</i>	Crested Caracara	LT	FT
<i>Egretta caerulea</i>	little blue heron	N	SSC
<i>Egretta thula</i>	snowy egret	N	SSC
<i>Egretta tricolor</i>	tricolored heron	N	SSC
<i>Eudocimus albus</i>	white ibis	N	SSC
<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	SSC*
<i>Picoides borealis</i>	red-cockaded woodpecker	LE	FE
<i>Platalea ajaja</i>	roseate spoonbill	N	SSC
<i>Sterna antillarum</i>	least tern	N	ST
<b>MAMMALS</b>			
<i>Podomys floridanus</i>	Florida mouse	N	SSC
<i>Sciurus niger shermani</i>	Sherman's fox squirrel	N	SSC
<b>VASCULAR PLANTS</b>			
<i>Bonamia grandiflora</i>	Florida bonamia	LT	E
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	N	T
<i>Centrosema arenicola</i>	Sand Butterfly Pea	N	E
<i>Chionanthus pygmaeus</i>	Pygmy Fringe Tree	LE	E
<i>Centrosema arenicola</i>	sand butterfly pea	N	N
<i>Coelorachis tuberculosa</i>	piedmont jointgrass	N	N
<i>Deeringothamnus pulchellus</i>	beautiful pawpaw	LE	E
<i>Eriogonum longifolium</i> var <i>gnaphalifolium</i>	scrub buckwheat	LT	E
<i>Helianthus debilis</i> ssp <i>tardiflorus</i>	beach sunflower	N	N
<i>Ilex opaca</i> var <i>arenicola</i>	scrub holly	N	N
<i>Illicium parviflorum</i>	star anise	N	E
<i>Lechea cernua</i>	nodding pinweed	N	T
<i>Lupinus aridorum</i>	scrub lupine	LE	E
<i>Matelea floridana</i>	Florida spiny-pod	N	E
<i>Monotropa hypopithys</i>	piresap	N	E
<i>Najas filifolia</i>	Narrowleaf Naiad	N	T
<i>Nemastylis floridana</i>	Celestial Lily	N	E
<i>Nolina atopocarpa</i>	Florida beargrass	N	T
<i>Nolina brittoniana</i>	Britton's beargrass	LE	E
<i>Ophioglossum palmatum</i>	hand fern	N	E
<i>Panicum abscissum</i>	cutthroat grass	N	E
<i>Paronychia chartacea</i> ssp <i>chartacea</i>	paper-like nailwort	LT	E
<i>Persea humilis</i>	scrub bay	N	N
<i>Pecluma plumula</i>	Plume Polypody	N	E
<i>Polygonella myriophylla</i>	Small's jointweed	LE	E
<i>Prunus geniculata</i>	scrub plum	LE	E
<i>Pteroglossaspis ecristata</i>	Giant Orchid	N	T
<i>Stylisma abdita</i>	scrub stylisma	N	E
<i>Warea amplexifolia</i>	clasping warea	LE	E
<i>Zephyranthes simpsonii</i>	redmargin lily	N	T

## **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.