



9730 Orange River Blvd
Section 3; Township 44 South; Range 25 East
Lee County, Florida

Environmental Assessment

March 2018

Project No. 2018-7

11000 Metro Parkway Suite 4 Fort Myers, Florida 33966
Phone (239) 418-0671 Fax (239) 418-0672

INTRODUCTION

An environmental scientist from Boylan Environmental Consultants, Inc. conducted a field investigation on the 12.29± acre property on March 16, 2018. The site is located in portions of Section 3, Township 44 South, Range 25 East, in Lee County, Florida. Specifically, it is situated directly east of I-75, directly south of Orange River Boulevard, and west of Lakeside Club Boulevard. Please see the attached Project Location Map (Exhibit A).

This report is for the exclusive use of Sanjay Amin/Cone & Graham and their consultants. No other person or agency may rely upon the information, analysis, or conclusions contained herein without their consent.

The purpose of the field investigation was to identify the potential for either U.S. Army Corps of Engineers (Corps) and / or South Florida Water Management District (SFWMD) jurisdictional wetlands. This field investigation was also conducted to determine the potential of listed (endangered, threatened, etc.) species inhabiting the site that are regulated by the U.S. Fish & Wildlife Service (FWS) and the Florida Fish & Wildlife Conservation Commission (FWC).

BACKGROUND

The Corps and the SFWMD are the agencies that regulate development activities in wetlands. In general, to be considered wetlands by the Corps and/or SFWMD, the area should exhibit wetland hydrology, wetland vegetation, and hydric soils. Because hydric soils, wetland hydrology, and wetland vegetation should be present for an area to be considered wetlands, the property was reviewed for indicators of these parameters. Hydric soils are identified by certain characteristics that are unique to wetland soils. Wetland hydrology is normally present if the soil is saturated or inundated for duration typically from May through November; the rainy season in Southwest Florida. In the absence of visual signs of saturation or inundation, the regulating agencies use hydrologic indicators such as adventitious rooting, lichen lines, or algal matting. Wetland vegetation is present if the majority of the plants that are present are those that are adapted to saturated soil conditions.

Generally, the Corps does not regulate isolated wetlands or excavation in wetlands. They regulate navigable waters and adjacent wetlands. In making the determination on whether wetlands are isolated, they look at how water leaves the wetland (i.e. sheet flow or a ditch connection). The Corps would not make this determination until a Joint Environmental Resource Permit (ERP) and Dredge & Fill Permit (D&F) application is received.

The FWS and FWC are the primary agencies that review potential impacts to listed species. The FWS reviews potential impacts and provides comments to the Corps

during the permitting process, while the FWC provides comments to the SFWMD. In general, the wildlife agency concerns need to be addressed in order for the permits to be authorized by the Corps and the SFWMD.

EXISTING SITE CONDITIONS

Site Description – The boundary is approximate and based upon Lee County GIS. The site is assumed to be 12.29± acres. The site was undeveloped, but appears to have a long history of disturbance. In general, the property is composed of native and exotic plants species. The site is bordered by residential homes and roadways. Please see the attached Project Boundary with Aerial Map (Exhibit B).

Soil Type - The soils on the property have been mapped by the National Resource Conservation Service (NRCS, formerly the Soil Conservation Service). These mappings are general in nature, but can provide a certain level of information about the site as to the possible extent of wetland area. The agencies commonly use these mappings as justification for certain wetland determinations. According to these mappings, the parcel is underlain by Myakka Fine Sand (11; Non-hydric) and Myakka Fine Sand, Depressional (53; Hydric). Please see the attached NRCS Soils Map (Exhibit C).

Vegetation Communities – Each community was mapped in the field according to the system in use by the agencies, the Florida Land Use Cover and Forms Classification System (FLUCFCS). See Florida Land Use, Cover and Forms Classification System (Department of Transportation 1985) for definitions. Listed below are the vegetation communities or land-uses identified within the project boundary. Vegetation is one parameter utilized in determining the presence of potential wetlands. These mappings are general in nature, but could reflect whether an area would be considered as wetlands by the regulatory agencies. Wetland communities typically include the presence of wetland hydrology, wetland vegetation, and hydric soils. There were approximately 0.42± acres of potential jurisdictional wetland communities and 1.46 acres of other surface waters identified on-site. The following descriptions correspond to the mappings on the attached FLUCFCS Map (Exhibit D) and FLUCFCS Map with Aerial (Exhibit E). In addition, the National Wetland Inventory Map was obtained for the parcel and is attached as (Exhibit F).

FLUCFCS CODES/DESCRIPTION

211 Improved Pasture 10.41± ac.

This habitat type occupies approximately 10.41± acres of the site. The canopy contains cabbage palm (*Sabal palmetto*), laurel oak (*Quercus laurifolia*), Indian laurel (*Ficus microcarpa*), and Java plum (*Syzygium cumini*). The sub-canopy included Slash pine (*Pinus elliottii*), Brazilian Pepper (*Schinus terebinthifolia*), and Wax myrtle (*Morella cerifera*). The ground cover is dominated by Greenbriar (*Smilax auriculata*), Paspalum (*Paspalum* spp.), Caesar weed (*Urena lobata*),

cabbage palm (*Sabal palmetto*), finger grass (*Eustachys floridana*), Eastern poison ivy (*Toxicodendron radicans*), Canadian horseweed (*Coryza canadensis*), bahia grass (*Paspalum notatum*), blackberry (*Rubus cuneifolius*), paw paw (*Asimina pulchella*), American beautyberry (*Callicarpa americana*), and Virginia creeper (*Parthenocissus quinquefolia*). Due to the dominance of upland vegetation, lack of hydrology and that it is underlain by non-hydric soils, this community should be considered uplands by regulatory agencies.

211H Improved Pasture 0.42± ac.

This habitat type occupies approximately 0.42± acres of the site. The canopy and sub-canopy absent. The ground cover is dominated by torpedo grass (*Panicum repens*), frog fruit (*Phyla spp.*), Marsh pennywort (*Hydrocotyle umbellata*), and dewflower (*Aneilema spp.*). This portion of the site is underlain by hydric soils, is dominated by vegetation found in wetlands, and exhibited signs of hydrology, including algal matting and would therefore be considered as wetlands by the agencies.

500 Water 1.12± ac.

This habitat type occupies approximately 1.12± acres of the property. Located in the southwest corner of the site, other surface waters such as this may be considered jurisdictional. This area appears to be a historic wetland that may have been excavated resulting in the lack of wetland vegetation or aquatic species observed resulting in a surface water codification.

510 Ditch 0.34± ac.

This habitat type occupies approximately 0.34± acres of the property. These man-made drainage features (small ditches and swales) found throughout the site. These other surface water areas are primarily man-made excavated ditches in upland soils, and exhibit signs of hydrology and prevalence of wetland vegetation.

TABLE 1: FLUCFCS COMMUNITY TABLE

FLUCFCS Code	Community Description	Acres
211	Improved Pasture	10.41± Ac.
211 H	Improved Pasture, Hydric	0.42± Ac.
500	Water	1.12± Ac.
510	Ditch	0.34± Ac.
Total		12.29± Ac.

POTENTIAL LISTED SPECIES

A formal protected species survey has not been conducted on the site at this time. However, the site does contain habitat that may be utilized by listed species.

During the initial site investigation, one nest-like structure in a laurel oak, and two tree cavities in a slash pine were observed. It is recommended that a formal protected species survey be conducted on-site prior to development in order to confirm the presence or absence of protected species on the property.

The property was cross referenced with the Florida Natural Areas Inventory Biodiversity Matrix which tracks rare species and natural communities tracked by FNAI. Please see the attached Florida Natural Areas Inventory Biodiversity Matrix (Exhibit G). No documented species were noted. In general, the following listed species have the potential to occur onsite or may affect the potential development of the parcel due to their proximity to the site.

Bald Eagle (*Haliaeetus leucocephalus*)

Despite delisting under the Endangered Species Act, the bald eagle remains protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The FWS regulates construction activities within 660' of a bald eagle nest. There are no recorded bald eagle nest located within 660' of the subject property. Therefore, there are no anticipated issues regarding this species on this site.

Big Cypress Fox Squirrel (*Sciurus niger avicennia*)

There is a potential that Big Cypress Fox Squirrels may be present on-site. Two potential nests were observed during the initial inspection. If Big Cypress Fox Squirrels are determined to be actively nesting, the nest tree and a buffer surrounding the active nest tree will be protected until nesting is completed. Once nesting is completed construction in the area may occur.

Florida Scrub Jay (*Aphelocoma coerulescens*)

This parcel is located within the scrub jay consultation area. During permitting, the federal agencies may require a survey to confirm presence or absence of scrub jay usage on the site. However, no foraging or nesting habitat is present, and no issues are anticipated as a result of this species.

Florida Panther (*Puma concolor coryi*)

The Project is not located within any Florida Panther Habitat Zones by the FWS/FWC. The FWS and Corps could issue a "may affect" on any project located within 2 miles of panther telemetry data. As part of the FWS review process, a Biological Opinion would need to be completed. This report would require additional time and cost to the project.

Gopher Tortoise (*Gopherus polyphemus*)

The gopher tortoise is listed as threatened by the FWC. No Gopher tortoise burrows were found during the site assessment, however the site does contain potential habitat for the tortoise. A formal species survey is recommended to determine presence or absence of this species.

Florida Bonneted Bat (*Eumops floridanus*)

This area is located within the Florida Bonneted at consultation area. In addition, two tree cavities were noted onsite. These could be potential roosting sites. The Florida Bonneted Bat was listed as endangered by the USFWS in October of 2013. A draft protocol has been issued by the agency in which bat surveys are recommended using peeping and acoustic methods. This survey along with coordination with the federal authorities would require additional time and cost to the project. A formal protected species and peeping survey into the cavities is recommended.

Listed Wading Bird Species

Various species of wading birds could utilize the wetland areas as foraging habitat throughout the year. No signs of nests or potential rookeries were noted during this preliminary site assessment. There is a potential for the site to be utilized by wood stork. The site is located the Core Foraging Area of a roosting colon.

The FWS has created a matrix to determine the value of wetlands on-site to foraging wood stork. If the FWS determines that wood storks may be affected by the project a wood stork foraging biomass assessment would be required. Impacts to foraging biomass would require mitigation adding time and cost to the project.

Red-cockaded Woodpecker (*Picoides borealis*)

This parcel is not located within the red-cockaded woodpecker (RCW) occurrence area. Therefore, a protected species survey specifically targeting the RCW may not be required prior to development.

Eastern Indigo Snake (*Drymarchon couperi*)

There are no burrows present, no species observed found during the site assessment. The "Standard Protection Measures for the Eastern Indigo Snake" should be adhered to avoid potential impacts to this species.

Florida Sandhill Crane (*Grus canadensis pratensis*)

Foraging and nesting habitat is present.

DISCUSSION

In general, this site does contain native, undisturbed community types in which protected species would typically inhabit. Because of the disturbed nature of the site, the

abundance of exotic plant species, and the historic land-use of the site, it is likely that this site does not support habitat for protected species. Other wildlife observed on the site visit were great blue heron (*Ardea herodias*), and little egret (*Egretta garzetta*).

In general, this site contains habitat which could be utilized by listed species. A formal protected species survey would be required in order to confirm the presence or absence of protected species.

An artesian well (flowing well) was also located on site. No historic information was found regarding the depth of the well or usage. Permits may be required to plug the well.

Wetland locations were surveyed by/GPS located and drawn using non-rectified aerial images with approximate property boundaries, hence their location, aerial extent, and acreage is approximate. Before any detailed site planning, it is recommended that the wetland lines be approved by the regulatory agencies and that professional land surveyors survey the wetland lines.

The SFWMD does not require mitigation for impacts to isolated wetlands not used by listed (protected) species that are less than $0.50\pm$ acres in size. Impacts to wetlands greater than $0.50\pm$ acres or those utilized by protected species would require mitigation.

Generally, the Corps does not regulate isolated wetlands or excavation in wetlands where there is only incidental fall back of fill material. The recent U.S. Supreme Court decision in the Solid Water Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC) provides that the Corps does not have jurisdiction over isolated wetlands. Since this ruling, there has been no guidance regarding how the Corps should define an isolated wetland. In making the determination on whether the wetlands are isolated, the Corps considers if water leaves the site, (i.e. ditches) or whether the wetlands are completely contained on-site or extend off-site. If the wetlands extend off-site, they will more than likely assert jurisdiction. Currently, the Corps position on most all wetlands is that they have jurisdiction. The Corps regulates navigable waters and adjacent wetlands. However, the agencies would not make this determination until a Dredge & Fill Permit (D&F) application is received.

Since these are man-made open-cut ditches in upland soils, no mitigation should be required for SFWMD. The ACOE may require mitigation for these impacts.

With the Corps, impacts to wetlands that are less than $0.50\pm$ acres, the activity can usually be processed as a Nationwide Permit application. For projects with greater than $0.50\pm$ acres of impacts, the application will be processed as an Individual Permit application. The permitting process involves a public notice and coordination with other federal agencies such as the EPA and the FWS.

There are three steps that are required to be addressed when requesting an ERP permit with the SFWMD and/or the Corps for impacted to regulated wetlands

- 1) Avoidance (i.e. can these wetland impacts be completely avoided)
- 2) Minimization (i.e. can the amount of wetland impact be reduced while maintaining a feasible project)
- 3) Mitigation (i.e. the loss of wetland function must be replaced)

It should be noted that avoidance and minimization must first be substantiated, before mitigation will be considered by the agencies. When wetlands are proposed to be impacted, the impacts cannot result in any loss of wetland function. In order to prevent net loss in wetland function, wetland mitigation must be provided.

Mitigation is a way to offset impacts to natural resources such as wetlands and may consist of wetland enhancement, wetland creation, wetland preservation, upland compensation, or off-site mitigation. Mitigation costs usually increase with the quantity of proposed impacts. The actual amount of mitigation required would be finalized during the Environmental Resource Permit review process with the SFWMD and Corps. There are two main categories of wetland mitigation, onsite or offsite.

On-site mitigation would include preserving a portion of the on-site wetlands, treating and removing the exotics, potentially providing supplemental plantings, and placing the preserve areas under a Conservation Easement. Preserve areas are required to be maintained in perpetuity.

Off-site mitigation requires the purchase of wetland credits at an approved mitigation bank within the service area of the site. A conservative estimate would result in a 1:1 ratio of wetland impacts to credits required. The parcel is located within the service area of several banks including Little Pine Island Mitigation Bank. As of January 2015, off-site mitigation at Little Pine Island Mitigation Bank costs approximately \$72,000 to \$130,000 per credit depending upon the type of credit (ie. freshwater herbaceous or freshwater forested; saltwater herbaceous or saltwater forested.) Herbaceous freshwater credits were approximately \$72,000. These credits would be appropriate for mitigation the hydric pasture areas on this site.

The determination of ecological system classifications, functions, values, and boundaries, is an inexact science, and different individuals and agencies may reach different conclusions. It is not possible for Boylan Environmental Consultants, Inc. to guarantee the outcome of such determinations. Therefore, the conclusions of this report are preliminary in nature and would require a full review by the appropriate regulatory agencies.

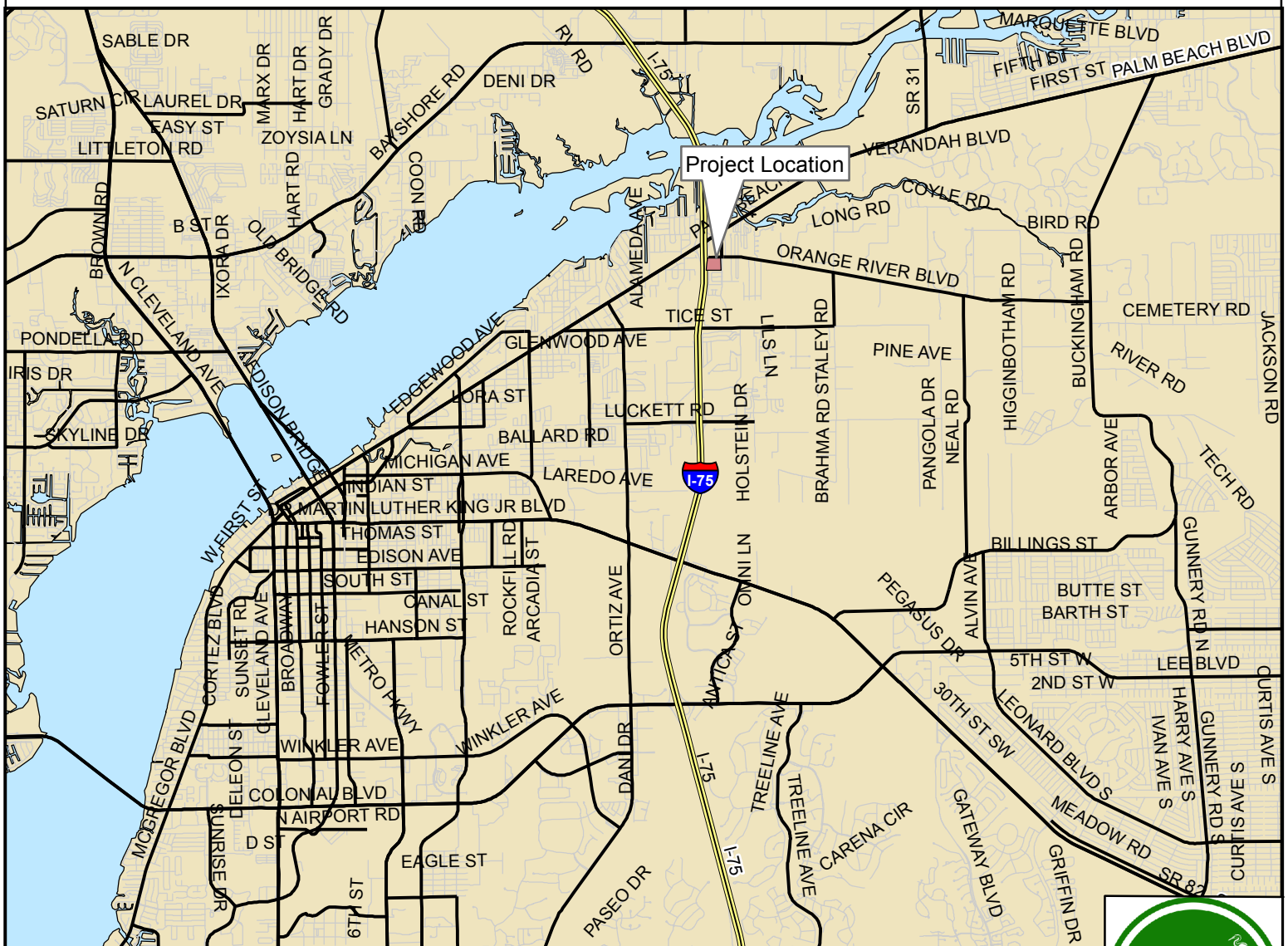
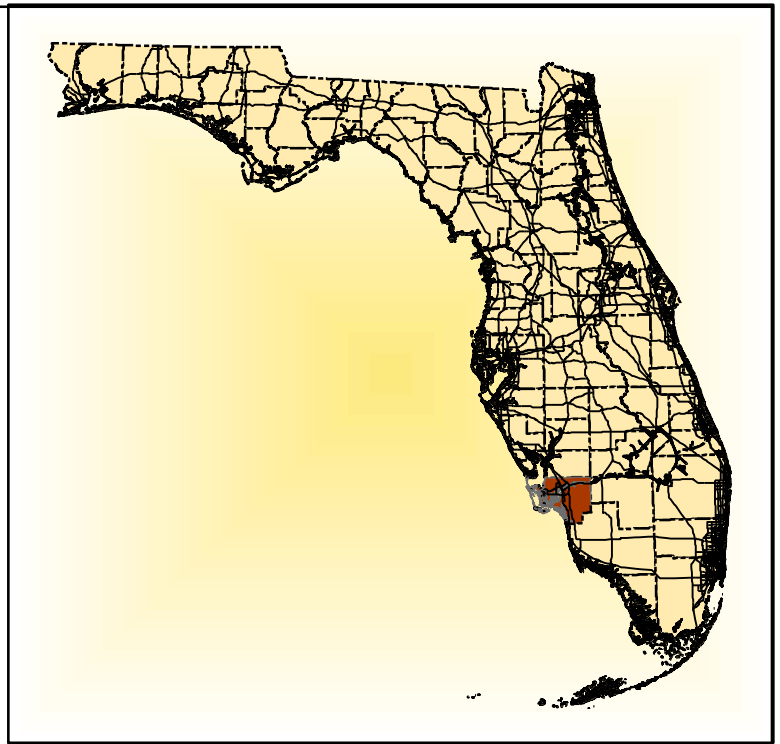
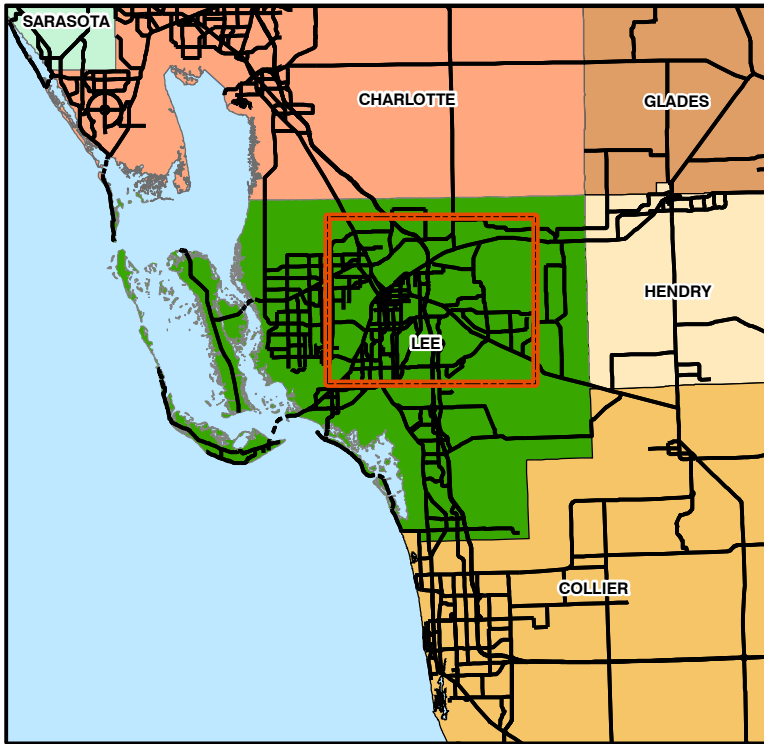
The information contained and the work performed as part of this initial assessment, conforms to the standards and generally accepted practices in the environmental field, and was prepared substantially in accordance with then-current technical guidelines and

criteria. The conclusions of this report represent the results of our analysis of the information provided by the client and their consultants, together with information gathered in the course of the study. No other guarantee, expressed or implied, is made.





**Exhibit A
Project Location Map**



Orange River Blvd 12.11 ac

Location Map

11000 Metro Pkwy
 Suite 4
 Fort Myers, FL 33966
 Phone: (239)418-0671
 Fax: (239)418-0672
 www.boylanenv.com



Category	Created by:	Date:
Location Map	BKM	3/9/18
Agency	Project Number	County
--	2018-7	Lee
Application/Permit Number	SEC/TWP/RNG	
--	3/44S/25E	



Exhibit B

Project Boundary with Aerial Map



NOTES:
 Aerial photographs were acquired through Lee County Property Appraiser's office with a flight date of January, 2017.



Category	Aerial
Agency	---
Application/Permit Number	***

Drawn By:	BKM	Date:	3/20/18
	BEC Number		2018-7
		Revision	

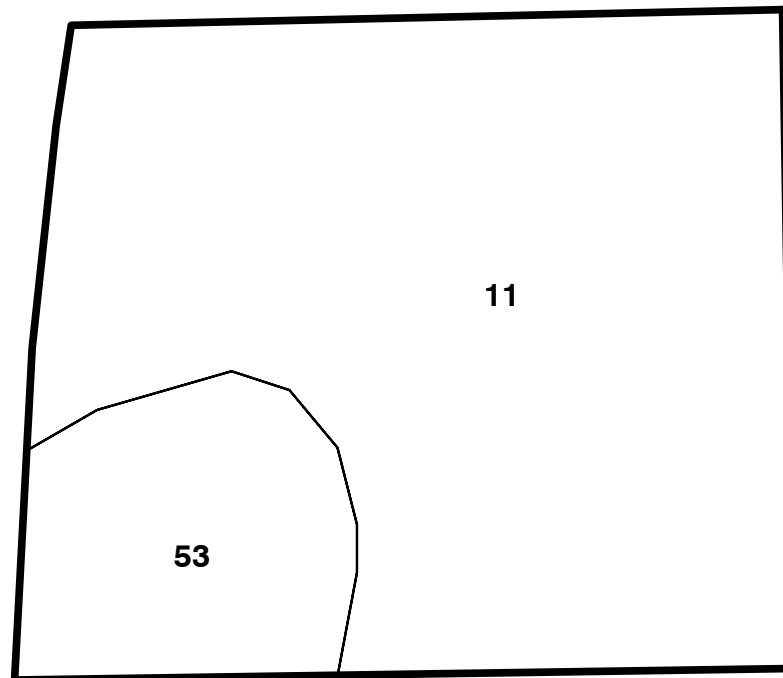
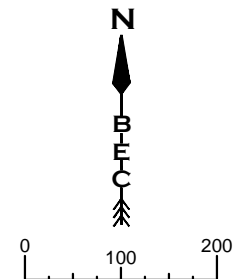
9730 Orange River Blvd
2017 Aerial With Boundary

Scale:	1" = 200'
County	Lee
	S/T/R
	3/44S/25E

11000 Metro Parkway
 Suite 4,
 Ft. Myers, FL 33966
 Phone: (239) 418-0671
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**Exhibit C
NRCS Soils Map**



NRCS Soils Legend		
Soil No	Description	Status
11	Myakka Fine Sand	Non-Hydric
53	Myakka Fine Sand, Depressional	Hydric

NOTES:

Soils were acquired from the FGDL and are from the NRCS Soils Maps.



Category	Drawn By:	Date:
Soils	BKM	3/20/18
Agency	BEC Number	
---	2018-7	
Application/Permit Number	Revision	

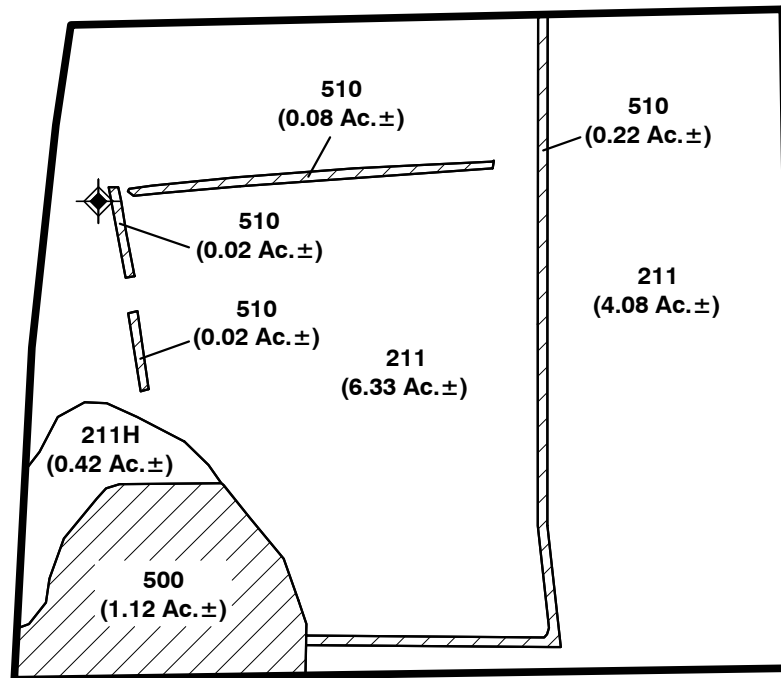
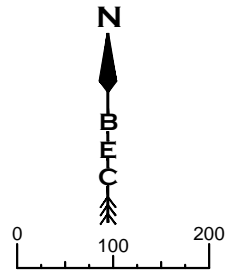
9730 Orange River Blvd
NRCS Soils Map

Scale:
1" = 200'
County
Lee
S/T/R
3/44S/25E




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Exhibit D
FLUCFCS Map



LEGEND

-  **Wetlands**
(0.42± Ac.)
-  **Other Surface Waters**
(1.46± Ac.)
-  **Artesian (Flowing Well)**

FLUCFCS Legend			
FLUCFCS Code	Community	Total	%
211	Improved Pasture	10.41± Ac	84.70%
211 H	Improved Pasture, Hydric	0.42± Ac	3.42%
500	Water	1.12± Ac	9.11%
510	Ditch	0.34± Ac	2.77%
Total		12.29± Ac	100%

NOTES:

FLUCFCS lines estimated from 1"=200' aerial photographs and locations approximated.

FLUCFCS per Florida Land Use, Cover and Forms Classification System (FLUCFCS) (FDOT 1999).

Category	Drawn By:	Date:
FLUCFCS	BKM	3/20/18
Agency	BEC Number	
---	2018-7	
Application/Permit Number	Revision	

9730 Orange River Blvd
FLUCFCS Map

Scale:
1" = 200'
County
Lee
S/T/R
3/44S/25E

11000 Metro Parkway
Suite 4,
Ft. Myers, FL 33966
Phone: (239) 418-0671
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Exhibit E

FLUCFCS Map with Aerial



NOTES:

FLUCFCS lines estimated from 1"=200' aerial photographs and locations approximated.

FLUCFCS per Florida Land Use, Cover and Forms Classification System (FLUCFCS) (FDOT 1999)

Aerial photographs were acquired through Lee County Property Appraiser's office with a flight date of January, 2017.



FLUCFCS Legend			
FLUCFCS Code	Community	Total	%
211	Improved Pasture	10.41± Ac	84.70%
211 H	Improved Pasture, Hydric	0.42± Ac	3.42%
500	Water	1.12± Ac	9.11%
510	Ditch	0.34± Ac	2.77%
Total		12.29± Ac	100%

LEGEND

Wetlands (0.42± Ac.)

Other Surface Waters (1.46± Ac.)

Artesian (Flowing Well)

Category	Drawn By:	Date:
FLUCFCS	BKM	3/20/18
Agency	BEC Number	
---	2018-7	
Application/Permit Number	Revision	

9730 Orange River Blvd

Aerial FLUCFCS Map

Scale:
1" = 200'
County
Lee
S/T/R
3/44S/25E

11000 Metro Parkway
Suite 4,
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Exhibit F

National Wetlands Inventory Map



March 22, 2018

Wetlands

- | | | | | | |
|---|--------------------------------|---|-----------------------------------|---|-------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland |  | Lake |
|  | Estuarine and Marine Wetland |  | Freshwater Forested/Shrub Wetland |  | Other |
|  | Freshwater Pond |  | Riverine | | |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



Exhibit G

FNAI Matrix



1018 Thomasville Road
 Suite 200-C
 Tallahassee, FL 32303
 850-224-8207
 850-681-9364 fax
 www.fnai.org

FLORIDA
Natural Areas
 INVENTORY

Florida Natural Areas Inventory

Biodiversity Matrix Query Results

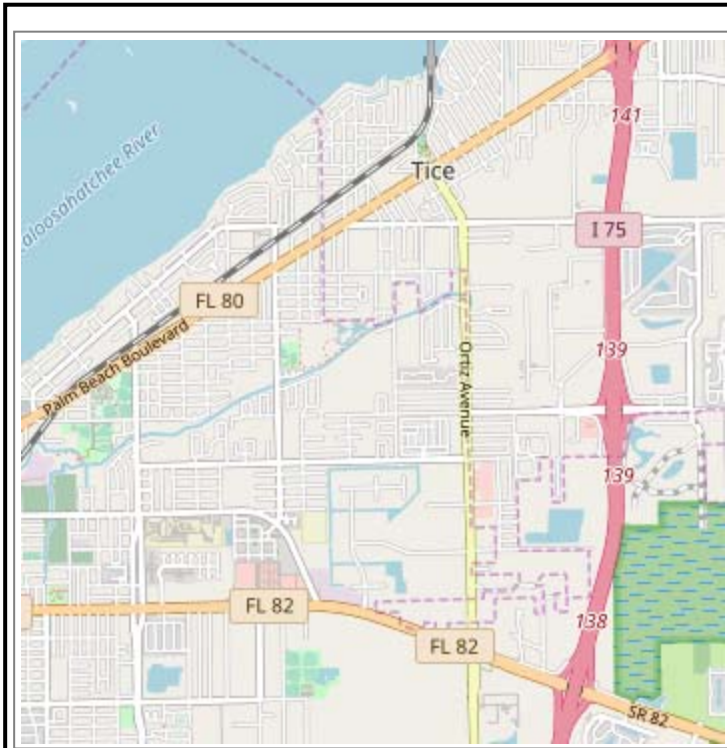
UNOFFICIAL REPORT

Created 3/22/2018

(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 1 Matrix Unit: 38377



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: 38377

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
<i>Mesic flatwoods</i>	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	LT	FT
Sciurus niger avicennia Mangrove Fox Squirrel	G5T2	S2	N	ST

Matrix Unit ID: 38377

23 Potential Elements for Matrix Unit 38377

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Athene cunicularia floridana</i> Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calopogon multiflorus</i> Many-flowered Grass-pink	G2G3	S2S3	N	T
<i>Centrosema arenicola</i> Sand Butterfly Pea	G2Q	S2	N	E
<i>Deeringothamnus pulchellus</i> Beautiful Pawpaw	G1	S1	LE	E
<i>Drymarchon couperi</i> Eastern Indigo Snake	G3	S3	LT	FT
<i>Elytraria caroliniensis</i> var. <i>angustifolia</i> Narrow-leaved Carolina Scalystem	G4T2	S2	N	N
<i>Eumops floridanus</i> Florida bonneted bat	G1	S1	LE	FE
<i>Gopherus polyphemus</i> Gopher Tortoise	G3	S3	C	ST
<i>Grus canadensis pratensis</i> Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Lechea cernua</i> Nodding Pinweed	G3	S3	N	T
<i>Linum carteri</i> var. <i>smallii</i> Small's Flax	G2T2	S2	N	E
<i>Lithobates capito</i> Gopher Frog	G3	S3	N	SSC
<i>Mustela frenata peninsulae</i> Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Mycotrupes pedester</i> Southwest Florida Mycotrupes Beetle	G1G2	S1S2	N	N
<i>Nemastylis floridana</i> Celestial Lily	G2	S2	N	E
<i>Nolina atopocarpa</i> Florida Beargrass	G3	S3	N	T
<i>Peucaea aestivalis</i> Bachman's Sparrow	G3	S3	N	N
<i>Platanthera integra</i> Yellow Fringeless Orchid	G3G4	S3	N	E
<i>Pteroglossaspis ecristata</i> Giant Orchid	G2G3	S2	N	T
<i>Puma concolor coryi</i> Florida Panther	G5T1	S1	LE	FE
<i>Rostrhamus sociabilis</i> Snail Kite	G4G5	S2	LE	N
<i>Setophaga discolor paludicola</i> Florida Prairie Warbler	G5T3	S3	N	N
<i>Ursus americanus floridanus</i> Florida Black Bear	G5T2	S2	N	N

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.



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FLORIDA
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Florida Natural Areas Inventory

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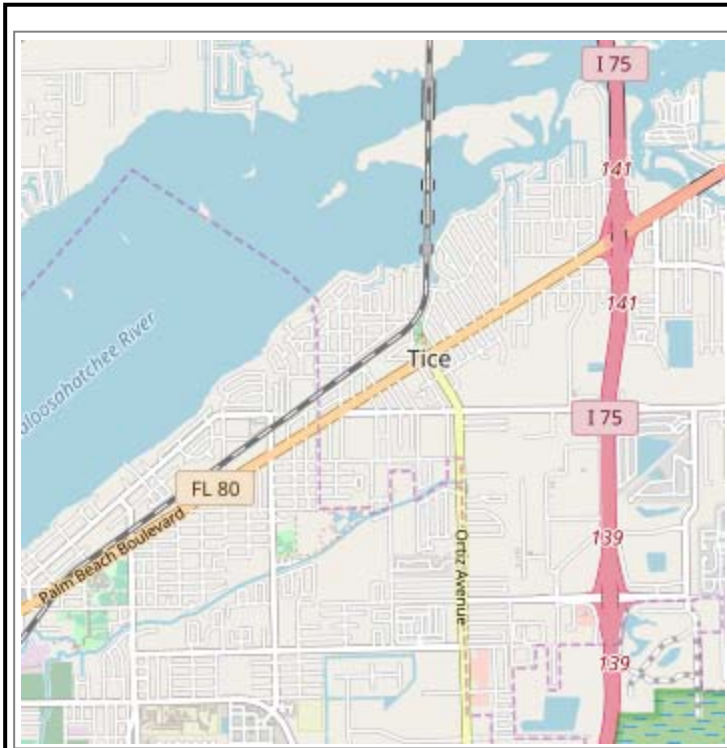
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Created 3/22/2018

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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: 38378

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

2 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Mycteria americana Wood Stork	G4	S2	LT	FT
Trichechus manatus West Indian Manatee	G2	S2	LE	FE

Matrix Unit ID: 38378

29 **Potential** Elements for Matrix Unit 38378

Scientific and Common Names	Global	State	Federal	State
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	Rank	Rank	Status	Listing
<i>Acipenser oxyrinchus desotoi</i> Gulf Sturgeon	G3T2	S2	LT	FT
<i>Athene cunicularia floridana</i> Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Calopogon multiflorus</i> Many-flowered Grass-pink	G2G3	S2S3	N	T
<i>Centrosema arenicola</i> Sand Butterfly Pea	G2Q	S2	N	E
<i>Deeringothamnus pulchellus</i> Beautiful Pawpaw	G1	S1	LE	E
<i>Dermochelys coriacea</i> Leatherback Sea Turtle	G2	S2	LE	FE
<i>Drymarchon couperi</i> Eastern Indigo Snake	G3	S3	LT	FT
<i>Eretmochelys imbricata</i> Hawksbill Sea Turtle	G3	S1	LE	FE
<i>Eumops floridanus</i> Florida bonneted bat	G1	S1	LE	FE
<i>Forestiera segregata</i> var. <i>pinetorum</i> Florida Pinewood Privet	G4T2	S2	N	N
<i>Gopherus polyphemus</i> Gopher Tortoise	G3	S3	C	ST
<i>Grus canadensis pratensis</i> Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Gymnopogon chapmanianus</i> Chapman's Skeletongrass	G3	S3	N	N
<i>Lechea cernua</i> Nodding Pinweed	G3	S3	N	T
<i>Linum carteri</i> var. <i>smallii</i> Small's Flax	G2T2	S2	N	E
<i>Lithobates capito</i> Gopher Frog	G3	S3	N	SSC
<i>Mustela frenata peninsulæ</i> Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Mycotrupes pedester</i> Southwest Florida Mycotrupes Beetle	G1G2	S1S2	N	N
<i>Nemastylis floridana</i> Celestial Lily	G2	S2	N	E
<i>Neofiber alleni</i> Round-tailed Muskrat	G3	S3	N	N
<i>Nolina atopocarpa</i> Florida Beargrass	G3	S3	N	T
<i>Peucaea aestivalis</i> Bachman's Sparrow	G3	S3	N	N
<i>Platanthera integra</i> Yellow Fringeless Orchid	G3G4	S3	N	E
<i>Pteroglossaspis ecristata</i> Giant Orchid	G2G3	S2	N	T
<i>Rallus longirostris scottii</i> Florida Clapper Rail	G5T3?	S3?	N	N
<i>Rivulus marmoratus</i> Mangrove Rivulus	G4G5	S3	SC	SSC
<i>Rostrhamus sociabilis</i> Snail Kite	G4G5	S2	LE	N
<i>Setophaga discolor paludicola</i> Florida Prairie Warbler	G5T3	S3	N	N
<i>Ursus americanus floridanus</i> Florida Black Bear	G5T2	S2	N	N

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.