Environmental Assessment

Sewall's Point Land Company – Subdivision
A Portion of LOTS 65, 66 & 67,
Unassigned SE Indian Street
City of Stuart, Martin County, Florida

Parcel Identification Number:
38-38-41-002-065-00010-3 (±9.43 acres)

Prepared For:

Meritage Homes

City of Stuart

Prepared By:

Jennifer Acevedo

Jennifer Acevedo

ENVIRONMENTAL CONSULTING DEPARTMENT
Aquatic RESEARCH Monitoring, Equipment, & Deployment, LLC.

October 2020

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Introduction

An environmental site assessment was conducted by the qualified biologists with Aquatic Research Monitoring Equipment, & Deployment, LLC (Aquatic Research) on October 14th, 2020. The site was reviewed in accordance with City of Stuart Land Development Regulations Section 5.02.00. – Environmental Assessment Report for Site Greater Than One Acre. As required in the LDR for properties of greater than one acre, an application for site plan approval or plat approval shall include an environmental assessment report prepared by a qualified environmental professional. The assessment must include a site description, vegetative description, wetland information, a wildlife evaluation, and preserve area and upland buffer calculations.

Site Description

The property is ±9.43 acres and is located at the southeast corner of SE Indian St. and SE Commerce Ave., Lots 65, 66 & 67 in the Sewall's Point Land Development Company Subdivision, within the City of Stuart, Martin County, Florida. Please see Appendix A, Figure 1 for the site location map. The parcel is further by identified by the Martin County Property Appraisers office as 38-38-41-002-065-00010-3.

The property is a mixture of lands that have experienced partial development via construction of an access road, associated clearing and undeveloped disturbed lands that have been impact by human activity (dumping and transient encampments) as well as intrusion of invasive exotic vegetation. The parcel is bordered on the west and southwest by SE Commerce Avenue, SE Indian Street and a commercial strip mall complex to the north, Florida East Coast Railway (FEC) to the east, and an undeveloped lot undergoing active site clearing adjacent to the perimeter ditch to the south (Appendix A Figure 2). The immediate surrounding area generally consists of a mixture of commercial, industrial, low-density residential development, and undeveloped lands. The onsite habitat is best classified as inactive lands with street patterns without structures and disturbed lands. The inactive open land area consists of a partially constructed asphalt access road the traverses the property in a northwest to southeast direction, interspersed with weedy grasses and vegetation due to the cessation of further development and a lack of active maintenance. The disturbed lands are heavily impacted from the presence of transients and are dominated by invasive exotic vegetation.

Conveyance ditches border the east and south perimeters. A review of historic aerials shows the on-site conveyance ditches and the site almost entirely cleared in 1966 (Appendix A, Figure 3). The conveyance ditches appear to have been associated with

development within the surrounding area. Plat records of the Sewall's Land Development Company indicates a 50ft easement that includes the ditch along the eastern border. Additionally, there is a 25ft easement along the southern border of which also encompasses half of the southern perimeter ditch. The remnants of an historic interior located ditch still partially remain as well and is currently connected to the south ditch as shown in Figure 3.

Prior to the site visit, the property was assessed via a desktop review utilizing aerials as well as reviews of agency databases to estimate potential habitat, reported soil types, documented listed plant or animal species on or adjacent to the property, along with habitat areas that have the potential to support listed species. Information gathered during the desktop review was then used to create transects throughout the property. The transects were designed to allow for sufficient ground truthing covering all potential representative habitat areas as well as focusing on areas that may support listed species.

On October 14th, 2020, Aquatic Research's team of qualified biologists conducted a site assessment on the property for the purposes of collecting data for an environmental site assessment, wildlife survey, and a 15% minimum habitat survey for gopher tortoise (*Gopherus Polyphemus*) burrows. Results of the gopher tortoise survey indicated no utilization by gopher tortoises, nor any gopher tortoise burrows on the property.

Based on the Florida Fish and Wildlife Conservation Commission (FFWCC) formula for estimating gopher tortoise population during a partial habitat survey, the site is estimated to contain 0 gopher tortoises (0 burrows). No further state or Federal listed species burrows, nests, dens, or roosting areas were observed on site. See Appendix B for the 15% minimum Gopher Tortoise Survey Report.

No native upland habitat was observed on the property. Additionally, the South Florida Water Management District (SFWMD) has conducted an informal wetland jurisdictional determination on the subject property in February 2019. No jurisdictional wetlands were determined to exist on the subject property. The enclosed SFWMD letter references several parcels, the subject property is indicated as Site #2 (See Appendix C).

Vegetation and Habitat Description

As part of the assessment conducted on the subject property vegetation and habitat types were reviewed. This was accomplished utilizing a multi-faceted approach, first reviewing recent and historic aerials and comparing visible topographic signatures to available agency recorded data. Agency reported data such as Florida Land Use Cover Classification System (FLUCCS)/Habitat assigned classifications as well as reported soil types were researched.

For depictions of state and Federal reported FLUCCS classifications and soil types see Appendix A, Figures 4 and 7. After a comprehensive review of the above mentioned data and aerials, transects were established based on expected variations in habitats. Locations and sizes of habitat types as indicated in this report are approximate, based on a combination of desktop review and field truthing. See Appendix D for site photographs.

Upland Habitat

The upland portions of the property consist of Inactive Land with Street Patterns Devoid of Structures and Disturbed Lands. See Appendix A, Figure 5 for observed upland habitat types and approximate location and acreage.

Existing Upland Habitat FLUCCS Classifications Observed are as Follows:

Upland Habitat 1920: Inactive Lands with Street Patterns (±3.47 acres)
This category includes undeveloped land within urban areas and inactive land with street patterns but without structures. Open Land normally does not exhibit any structures or any indication of intended use. Often, urban inactive land may be in a transitional state and ultimately will be developed into one of the typical urban land uses.

The inactive open land area mainly includes lands located within the north - northwest quadrant. It includes a partially constructed asphalt access road that traverses through the property in a general north – south direction emanating from SE Indian St. and terminating near Commerce Ave. This area is mainly cleared as a result of the construction of the entrance road. Vegetation within these areas consists mainly weedy vegetation and non-descript grasses. A small cluster of native vegetation is present along the northern perimeter.

Representative Vegetation:
Non-descript grasses
Wedelia (*Wedelia trilobata*)
Slash pines (*Pinus elliotti*)
Oak trees (*Quercus spp.*)
Cabbage palms (*Sabal palmetto*)

Upland Habitat 7400: Disturbed Lands (±5.50 acres)
Remaining upland areas on the property consist of disturbed lands. The lands identified as disturbed consist of 90% exotic vegetation with 10% native vegetation interspersed. No significant native vegetative associations were observed within the

southern portion of this habitat type are scattered abandoned and active transient encampments. Large quantities of human related trash and debris were also observed in association with the onsite transient populations. The onsite uplands classified as disturbed lack in maintenance and natural fire regime and are heavily impacted by the transient population, and intrusion of invasive exotic vegetation. This has resulted in a fragmented or disturbed habitat lacking in the vegetative associations seen in native Florida upland habitats.

Representative Vegetation:
Earleaf acacia (*Acacia auriculiformis*)
Australian pines (*Casuarina equisetifolia*)
Brazilian pepper (*Schinus terebinthifolia*)
Melaleuca trees (*Melaleuca quinquenervia*)
Slash pines (*Pinus elliotti*)
Cabbage palms (*Sabal palmetto*)
Oak trees (*Quercus spp.*)
Tuberous sword Fern (*Nephrolepis cordifolia*)
Inch plant (*Tradescantia zebrina*)
Snake plant (*Sansevierias spp.*)

Preserve area and upland buffer evaluation

No native upland habitat is present on the subject property. No upland preserve area will be required.

Tree Preservation

As required in the City of Stuart Land Development Regulations all sites over one (1) acre in size are required to conduct a survey for specimen and champion trees. All specimen and champion trees must be identified and mapped. During site planning avoidance and minimization of impacts to protected trees and native vegetation must be demonstrated to the greatest extents possible. Per the City of Stuart LDR a specimen tree means a slash pine tree which has achieved a DBH of ten inches; or any other tree as referenced in chapter V of the City of Stuart LDR which has achieved a DBH of 4.5 inches. This also includes any other tree which has achieved a DBH of 6 inches which is listed on the City of Stuart flowering tree list; or any other tree which has achieved a DBH of ten inches or at least 25 percent of the DBH of a species identified in the Florida Champion Trees of Florida database, maintained by the Forest Service.

As part of the site plan approval process a protected tree survey for specimen and protected trees will need to be conducted. Trees that must be impacted as a part of site development will require mitigation in accordance with the City LDR. Specimen trees, excluding slash pine trees, for which relocation is not possible or is not expected to be successful, must be replaced with like species on site. Replacement trees shall have a combined diameter at breast height (DBH) of two and one-half times the DBH of the trees replaced. The minimum size for replacement trees is four and one-half inches DBH. Slash pines, for which relocation is not possible or is not expected to be successful, must also be replaced with like species on site. Replacement trees shall have a combined DBH of one and one-half times the DBH of the trees replaced. The minimum size for replacement trees in slash pine mitigation is two and one-half inches DBH. Total number of trees required for replacement is calculated in accordance with the following table. 50% of tree mitigation may also be done via payment into the City's Tree Fund.

Tree Replacement Formula—Slash Pine:														
Total # inches to remove	×	1.5	=	Total # inches to be replaced	/	Minimum size to replace 2.5"	=	Total # trees to plant	×	50% mitigation to pay into city tree fund	×	175% of plant finder wholesale	=	Total $ amount to pay into city tree fund
Tree Replacement Formula—All Trees Less Slash Pine:														
Total # inches to remove	×	2.5	=	Total # inches to be replaced	/	Minimum size to replace 4.5"	=	Total # trees to plant	×	50% mitigation to pay into city tree fund	×	175% of plant finder wholesale	=	Total $ amount to pay into city tree fund

Table1: City of Stuart Tree Mitigation Calculation Formula.

Wetland Habitat

To classify an area as a wetland two of the following three criteria must be met: 1. 80 percent or more dominate coverage of wetland plants. 2. Indicators of hydrology 3. Presence of hydric soil. The South Florida Water Management District (SFWMD) conducted an informal wetland jurisdictional determination on the subject property in February 2019. No jurisdictional wetlands were determined to exist on the subject property. See the enclosed SFWMD letter and associated exhibits (See Appendix C). The wetland jurisdictional was conducted on several properties, the subject property is referenced as Site #2.

Other Habitat Areas

Other Surface Waters 5100: Artificial Ditches (±0.60 acre)

There are artificial ditches on the east and south perimeter. A review of historic aerials shows the existence of the artificial ditches with the site almost entirely cleared in 1966 (Appendix A, Figure 3). The artificial ditches appear to have been associated with development within the surrounding area. Plat records of the Sewall's Land Development Company indicates a 50ft easement including the ditch on the eastern border and a 25ft easement including ½ of the ditch on the southern border. Remnants of an interior ditch remain on site and is currently connected to the existing southern ditch.

Wildlife Evaluation

As was done with regards to analysis of vegetation and habitat types, a similar approach was taken with regards to evaluation of onsite wildlife, with the focus being the presence of listed species. Prior to conducting the site field work regulatory databases such as U.S. Fish and Wildlife Information Planning, and Conservation System (IPAC), Florida Natural Areas Inventory (FNAI), and Florida Department of Environmental Protection (FDEP) maps direct, were consulted with regards to any known, documented or likely occurrences of listed species. The IPAC report is located in Appendix E. Special note was taken with regards to listings of lands being within consultation areas for specific species, as well as any recorded documentations of listed species within or directly adjacent to the parcel. Habitat types on, adjacent, and within the general area or region were also closely reviewed to determine potential locations with increased likelihood of the occurrence of listed species.

During the field assessment pedestrian transects were made throughout the subject parcel to observe for the presence of wildlife in general as well as any state or Federal listed plant species, animal dens, burrows, rooting areas, or nests. Please see the Wildlife Transect Map in Appendix A, Figure 6. The wildlife population was documented in the field by visual observation of plants and animals as well as, tracks, scat, dens, foraging and nesting.

Additionally, a 15% minimum habitat survey for gopher tortoise (*Gopherus polyphemus*) burrows was conducted. Survey report is located within Appendix B**.** The wildlife population was documented in the field by visual observation of plants and animals as well as, tracks, scat, dens, foraging and nesting. Thirty-eight percent (38%) of suitable gopher tortoise habitat was surveyed, indicated no utilization by gopher tortoises, or any gopher tortoise burrows on the property. Based on the Florida Fish and Wildlife Conservation Commission (FFWCC) formula for estimating gopher tortoise population during a partial

habitat survey, the site is estimated to contain 0 gopher tortoises (0 burrows). The gopher tortoise is listed as a threatened species in the State of Florida. Gopher tortoise surveys are valid for a period of three (3) months.

Wildlife Observation(s)

The following species were observed during the site visit:

Reptiles: Cuban anoles (*Anolis spp.*)
Amphibians: None Observed
Mammals: Mammal burrows, eastern gray squirrels (*Sciurus carolinensis*), and rabbits (*Sylvilagus spp.*)
Fish: None Observed
Aves: None Observed

Consultation Area(s)

Based on the assessment it was determined that the entire project area lies within the U.S. Fish and Wildlife Service (USFWS) Section 7 Consultation area for the Everglades snail kite (*Rostrhamus sociabilis*), Scrub-jay (*Aphelocoma coerulescens*) and the crested caracara *(Caracara cheriway*). However, based on the field assessment the subject property does not appear to provide suitable foraging or nesting habitat for the Everglades snail kite, Scrub-jay, or the crested caracara.

Soils

Based on a review of the Soil Survey Geographic Database (SSURGO) upland and wetland soil types exist on the site. No soil borings or geotechnical analysis was conducted as part of this assessment. See Appendix A, Figure 7 for depiction of onsite soil mapping units.

Soil types are as follows:

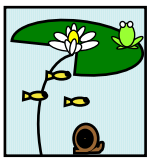
Waveland and Immokalee fine sands (non-hydric) - 04
Waveland and Lawnwood fine sands, depressional (hydric) - 05

Summary

On October 14th, 2020, an environmental site assessment was conducted by the qualified biologists with Aquatic Research Monitoring and Deployment, LLC (Aquatic Research). The site was reviewed in accordance with the City of Stuart Regulations for environmental assessments. The assessment indicates that a SFWMD informal jurisdictional determination was conducted on the property in February 2019. No wetlands were deemed to exist on the property. Additionally, no native upland habitat is on the property. Based on this no preservation areas will be required. The site does contain trees that will qualify for protection under the City of Stuart LDR. A tree survey and applicable mitigation plan will be required as part of site development.

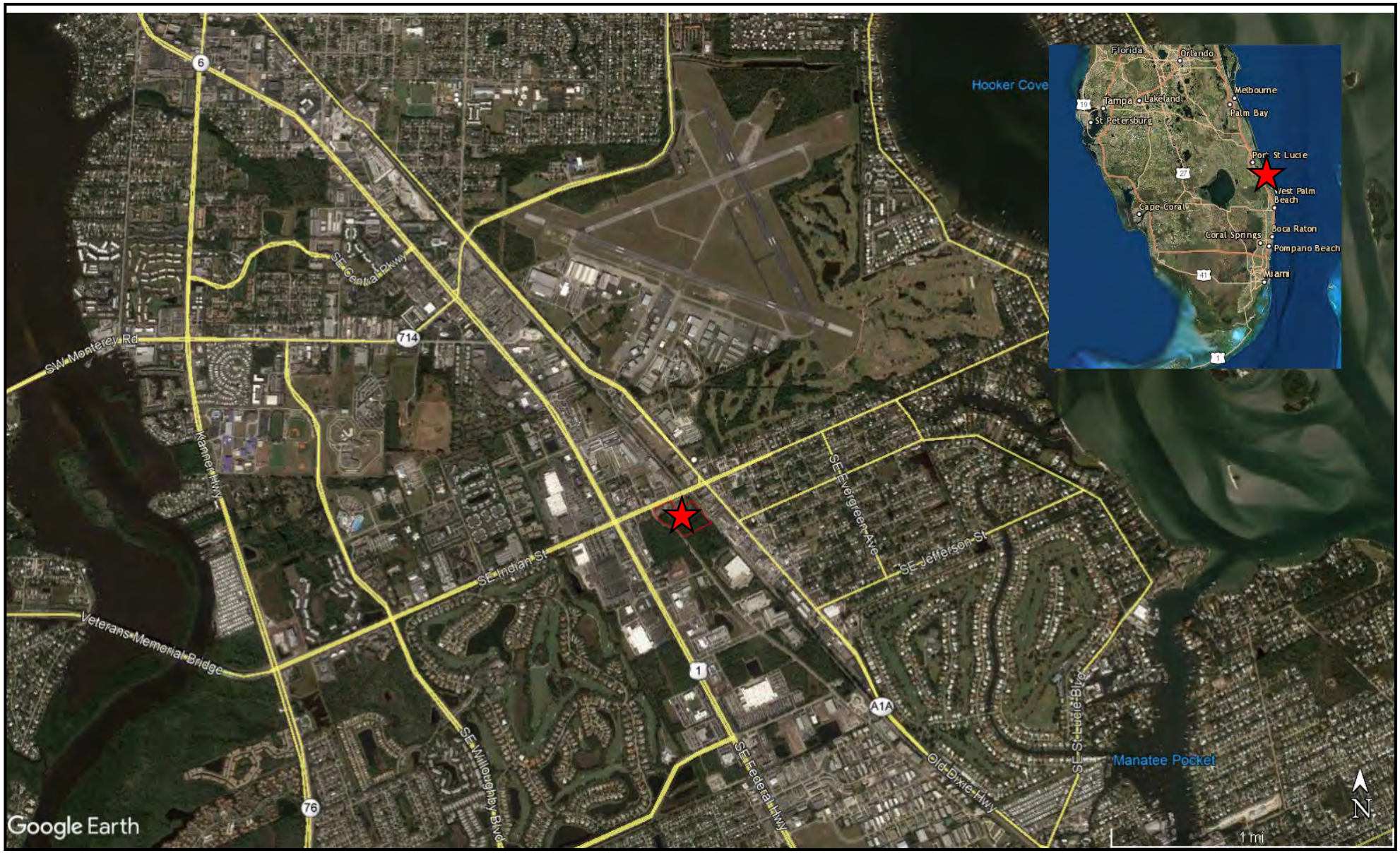
Results of the wildlife and gopher tortoise survey conducted indicates no state or Federal listed flora or fauna including no gopher tortoise burrows or indications of use by gopher tortoises.

Appendix A
Site Maps



ENVIRONMENTAL CONSULTING DEPARTMENT

Aquatic RESEARCH Monitoring, Equipment, & Deployment, LLC.



Aquatic RESEARCH
Monitoring, Equipment, & Deployment, LLC
AquaticResearchFl.com
Environmental Consulting Department

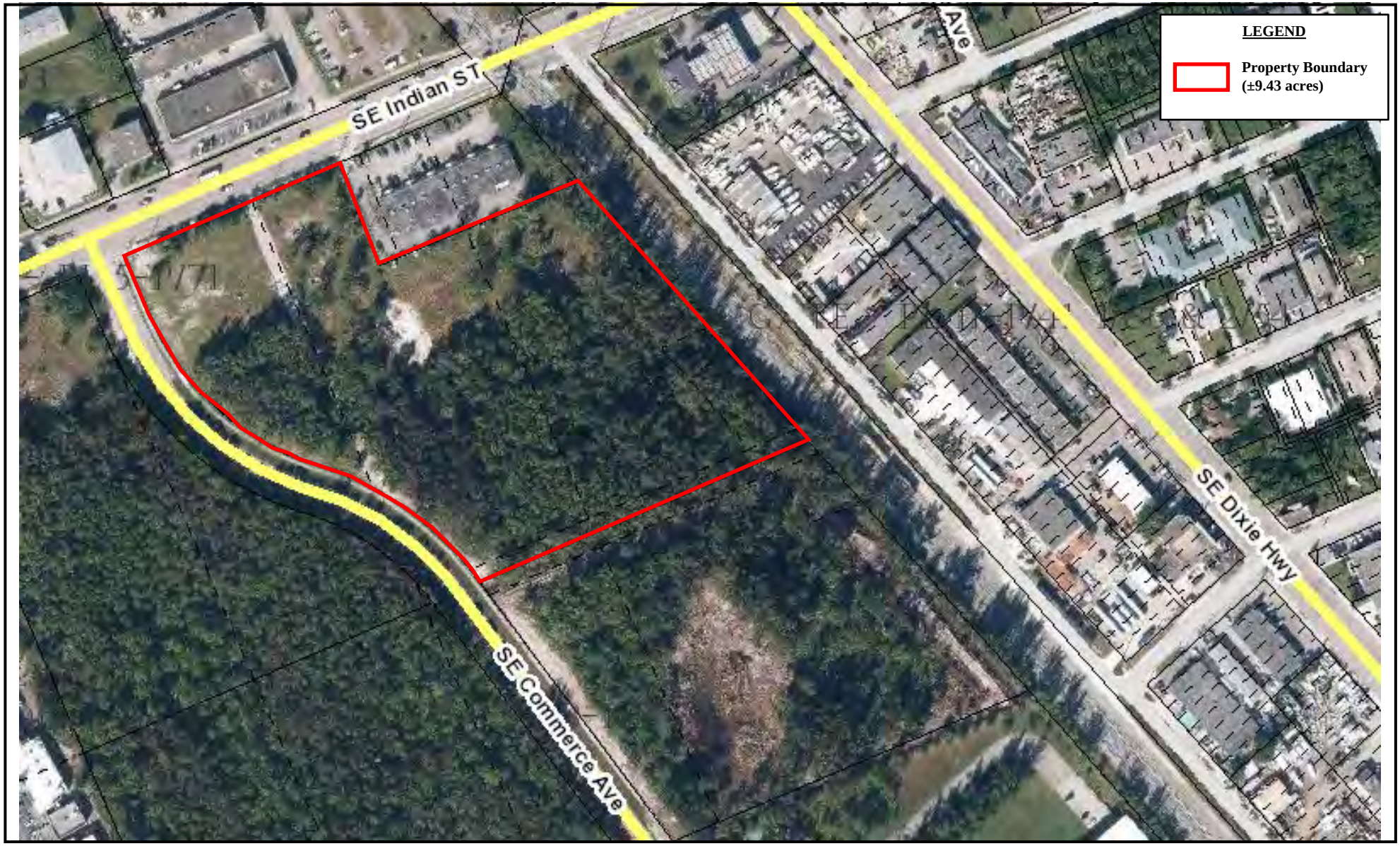
Location Map

Sewall's Point Land Company – Subdivision
A Portion of LOTS 65, 66 & 67, Unassigned SE Indian Street
City of Stuart, Martin County, Florida
PIN: 38-38-41-002-065-00010-3

Figure 1

Image: Google Earth Date 01/03/2018

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Monitoring, Equipment, & Deployment, LLC
AquaticResearchFl.com
Environmental Consulting Department

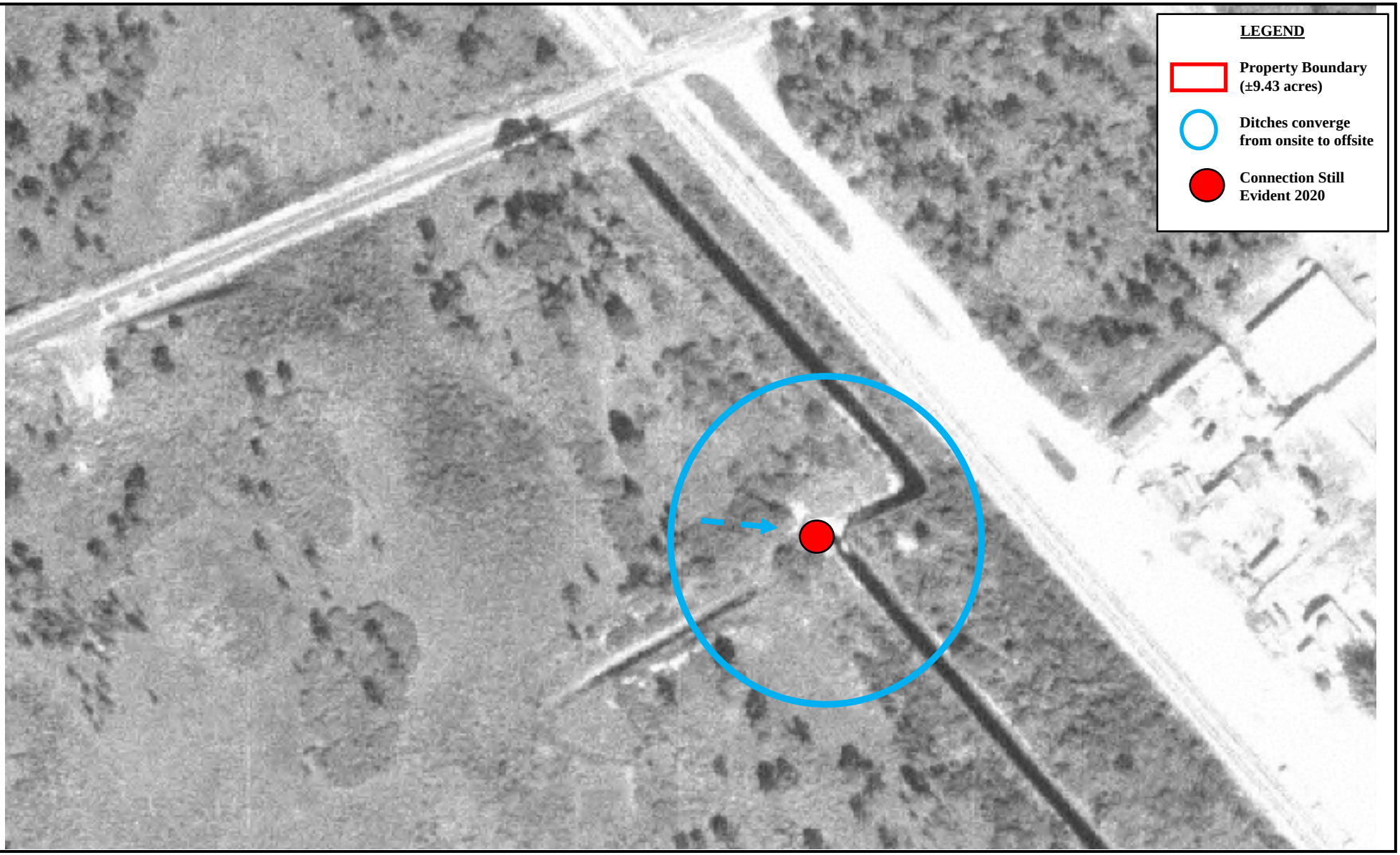
Site Map

Sewall's Point Land Company – Subdivision
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PIN: 38-38-41-002-065-00010-3

Figure 2

Image & Data: Martin County Property Appraisers

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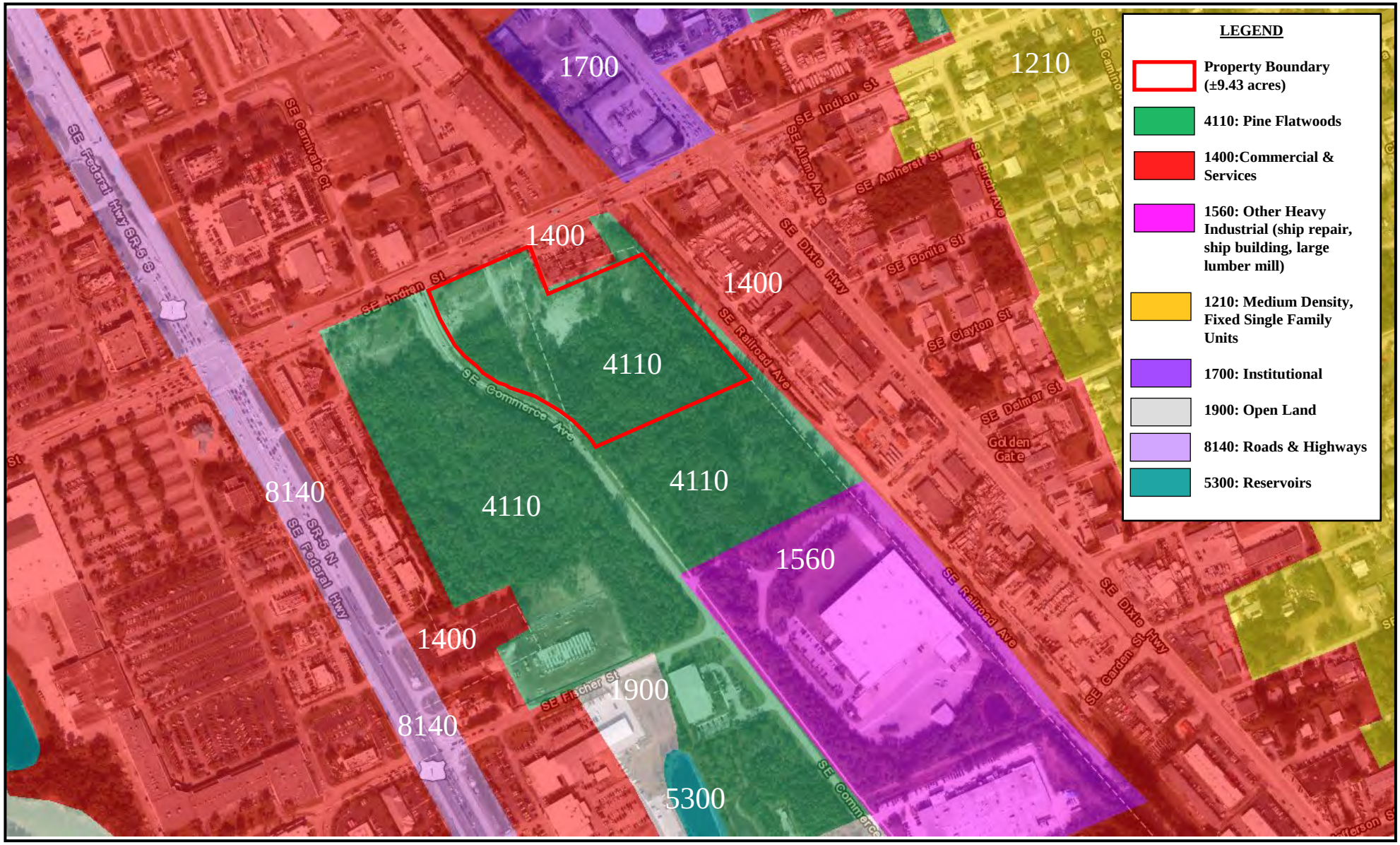
1966 Historic Aerial

Sewall's Point Land Company – Subdivision
A Portion of LOTS 65, 66 & 67, Unassigned SE Indian Street
City of Stuart, Martin County, Florida
PIN: 38-38-41-002-065-00010-3

Figure 3

Image: Florida Department of Transportation 1986

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Agency Reported Land Use Map

Sewall's Point Land Company – Subdivision
A Portion of LOTS 65, 66 & 67, Unassigned SE Indian Street
City of Stuart, Martin County, Florida
PIN: 38-38-41-002-065-00010-3

Figure 4

Image: Florida Department of Environmental Protection
Data: Florida Land Cover Classification System Definitions for the Cooperative Land Cover Map v2.3

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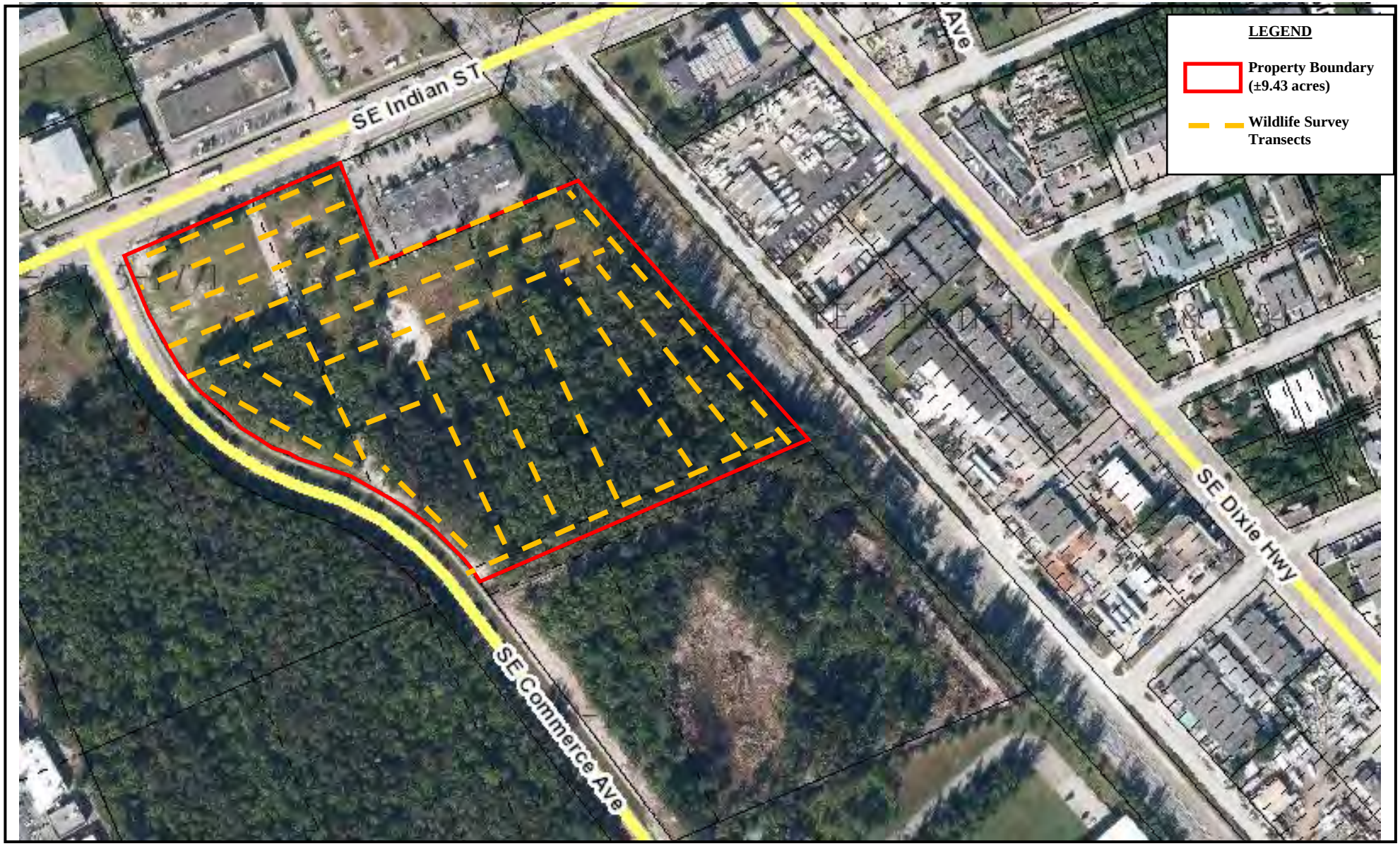
Existing Habitat/FLUCCS Map

Sewall's Point Land Company – Subdivision
A Portion of LOTS 65, 66 & 67, Unassigned SE Indian Street
City of Stuart, Martin County, Florida
PIN: 38-38-41-002-065-00010-3

Figure 5

Image: Google Earth Date 01/03/2018
Data: Aquatic Research Monitoring, Equipment, & Deployment LLC

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Wildlife Survey Transect Map

Sewall's Point Land Company – Subdivision
A Portion of LOTS 65, 66 & 67, Unassigned SE Indian Street
City of Stuart, Martin County, Florida
PIN: 38-38-41-002-065-00010-3

Figure 6

Image: Martin County Property Appraiser
Data: Aquatic Research Monitoring, Equipment, & Deployment LLC

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Soil(s) Map

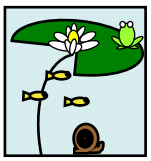
Sewall's Point Land Company – Subdivision
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City of Stuart, Martin County, Florida
PIN: 38-38-41-002-065-00010-3

Figure 7

Image: Florida Department of Environmental Protection
Data: Soil Survey Staff, Natural Resources Conservation Service

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Appendix B
15 % Gopher Tortoise Survey



ENVIRONMENTAL CONSULTING DEPARTMENT

Aquatic RESEARCH Monitoring, Equipment, & Deployment, LLC.

Field Survey Report
Gopher Tortoise (*Gopherus polyphemus)*

Sewall's Point Land Company – Subdivision
A Portion of LOTS 65, 66 & 67,
Unassigned SE Indian Street
City of Stuart, Martin County, Florida

Parcel Identification Number:
38-38-41-002-065-00010-3 (±9.43 acres)

Prepared For:

Meritage Homes

City of Stuart

Prepared By:

Jennifer Acevedo
Florida Fish and Wildlife Conservation Commission Certified Gopher Tortoise Agent
Number 09-00112E

ENVIRONMENTAL CONSULTING DEPARTMENT
Aquatic RESEARCH Monitoring, Equipment, & Deployment, LLC.

October 2020

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Figure 4: Gopher Tortoise Survey Transects Maps
Figure 5: Soil(s) Map

Appendix B
Raw Data Excel Spreadsheet

1.0 Introduction

Jennifer Acevedo Florida Fish and Wildlife Conservation Commission (FWCC) Certified Gopher Tortoise Agent 09-0112E from Aquatic Research Monitoring, Equipment, and Deployment, LLC (Aquatic Research), completed a ±15% minimum upland habitat survey for gopher tortoises, *Gopherus polyphemus*. The property is ±9.43 acres identified as a portion of Lots 65, 66 & 67 in the Sewall's Point Land Development Company Subdivision. The property is located at unassigned SE Indian Street, within the City of Stuart, Martin County, Florida. The parcel is identified by the Martin County Property Appraisers office as 38-38-41-002-065-00010-3 and is further located in Section 38, Township 38 S and Range 41 East. Please see Appendix A, Figure 1 for the site location map.

The survey was conducted on October 14th, 2020 throughout 38% (3.42 acres) of representative suitable gopher tortoise habitat on the subject property. This survey was executed according to the burrow survey methodology from the Florida Fish and Wildlife Conservation Commission Gopher Tortoise Permitting Guidelines, April 2008, Revised January 2017, Appendix 4 Burrow Survey Methods (Minimum of 15%). Please see enclosed Wildlife Survey Transect Map for depiction of transects conducted (Figure 4).

Total Acreage of Suitable Habitat	8.97
Total Acreage Surveyed	3.42
Total Percent of Suitable Habitat Surveyed	38%

2.0 Site Description

The property is a mixture of lands that have experienced partial development via construction of an access road and associated clearing and undeveloped disturbed lands that have been impact by human activity (dumping and transient encampments) as well as intrusion of invasive exotic vegetation. The parcel is bordered on the west and southwest by SE Commerce Avenue, SE Indian Street and a commercial strip mall complex to the north, Florida East Coast Railway (FEC) to the east, and an undeveloped lot undergoing active site clearing adjacent to the perimeter ditch to the south (Appendix A Figure 2). The immediate surrounding area generally consists of a mixture of commercial, industrial, low-density residential development, and undeveloped lands. The onsite habitat is best classified as inactive lands with street patterns without structures and disturbed lands. The inactive open land area consists of a partially constructed asphalt access road the traverses the property in a northwest to southeast direction, interspersed with weedy grasses and vegetation due to the cessation of further development and a lack of active maintenance.

The disturbed lands are heavily impacted from the presence of transients and are dominated by invasive exotic vegetation.

See the enclosed FLUCCS/existing habitat map (Figure 3). Habitat as follows:

Identified uplands are classified as FLUCCS categories:
#1920 Inactive Lands (±3.47 acres) **Suitable Habitat**
#7400 Disturbed Lands (±5.50 acres) **Suitable Habitat**

3.0 Survey Methodology

Survey protocol is based on burrow survey methodology from the Florida Fish and Wildlife Conservation Commission Gopher Tortoise Permitting Guidelines, April 2008, Revised January 2017, Appendix 4 Burrow Survey Methods (Minimum of 15%). The project area is initially evaluated to determine the total acreage of suitable gopher tortoise habitat. Belt transects are then evenly distributed across all suitable gopher tortoise habitat within the project's impact areas, for a minimum of 15% coverage. Transects are then mapped and overlaid on an aerial to create a gopher tortoise transect map. The maximum transect dimensions are not to exceed 250 meters (820 feet) long and 16 meters (52 feet) wide. Survey is then conducted throughout each established transect, covering 100% of the area within these transects. Generally, one (1) or more individuals are utilized during the field survey as recommended by the protocol stated above. The width between each observer ranges from one (1) meter to no more than ten (10) meters apart, depending in the density of the habitat. When using more than one (1) individual each observer is stationed parallel to each other, spaced so that 100% of the area between each individual can be observed. When using two (2) people, one (1) person serves as the navigator who uses a compass and a GPS to navigate and record all burrows observed within the transect. When using three (3) people, the middle person serves as the navigator and records all burrows found by the observation team. The edges of each transect are marked with flagging tape to ensure complete coverage.

Any burrows noted during the survey are recorded with a hand-held GPS and are also flagged in the field with high visibility flagging tape. Field notes are taken depicting the status of each burrow (i.e. potentially occupied or abandoned). According to the Gopher Tortoise Permitting Guidelines a potentially occupied burrow classification "combines the active and inactive categories, and therefore includes burrows with obvious sign of use and those with minimal or no obvious sign of use." An abandoned burrow "appears unused and dilapidated." The classification of potentially occupied and abandoned burrows along with GPS locations of each burrow are depicted on an enclosed aerial. Additionally, for each belt transect raw data is reported in tabular format indicating transect dimensions, number of burrows and activity class, as well as total number of tortoises per acre.

Tortoises per acre is calculated as follows:

Total Potentially Occupied Burrows
Total Acres within Survey Area X 0.50 = Tortoises per Acre

Tortoise population is then estimated as follows:

Tortoises per Acre X Number of Acres of
Potential Gopher Tortoise Habitat = Estimated Tortoise Population

4.0 Results and Discussion

Seventeen (17) transects were established, resulting in a total survey area of 38% of suitable gopher tortoise habitat. Upon completion of the gopher tortoise survey no burrows were found. Utilizing the FFWCC estimations:

- Tortoises per acre – 0 potentially occupied burrows/3.42 acres surveyed X 0.50 = 0 Tortoises per Acre.
- Estimated Tortoise Population – 0 Tortoises per Acre X 8.97 Acres of Suitable Gopher Tortoise Habitat = Estimated Gopher Tortoise Population of 0

Estimated Total Gopher Tortoise Population = 0 Gopher Tortoises or 0 Burrows

In conclusion, a 15% minimum gopher tortoise survey was conducted on the ±9.43 acres property located at unassigned SE Indian Street, within the City of Stuart, Martin County, Florida. Survey was conducted by Jennifer Acevedo Florida Fish and Wildlife Conservation Commission (FWCC) Certified Gopher Tortoise Agent 09-0112E from Aquatic Research Monitoring, Equipment, and Deployment, LLC (Aquatic Research), on October 14th, 2020. Total area of survey was 38% of suitable gopher tortoise habitat.

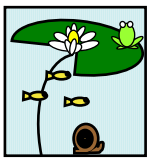
No potentially occupied burrows were found across 38% of the site's suitable gopher tortoise habitat. Utilizing the FFWCC estimation formulas for partial surveys, the site contains no gopher tortoise burrows.

Respectfully submitted,

Jennifer Acevedo

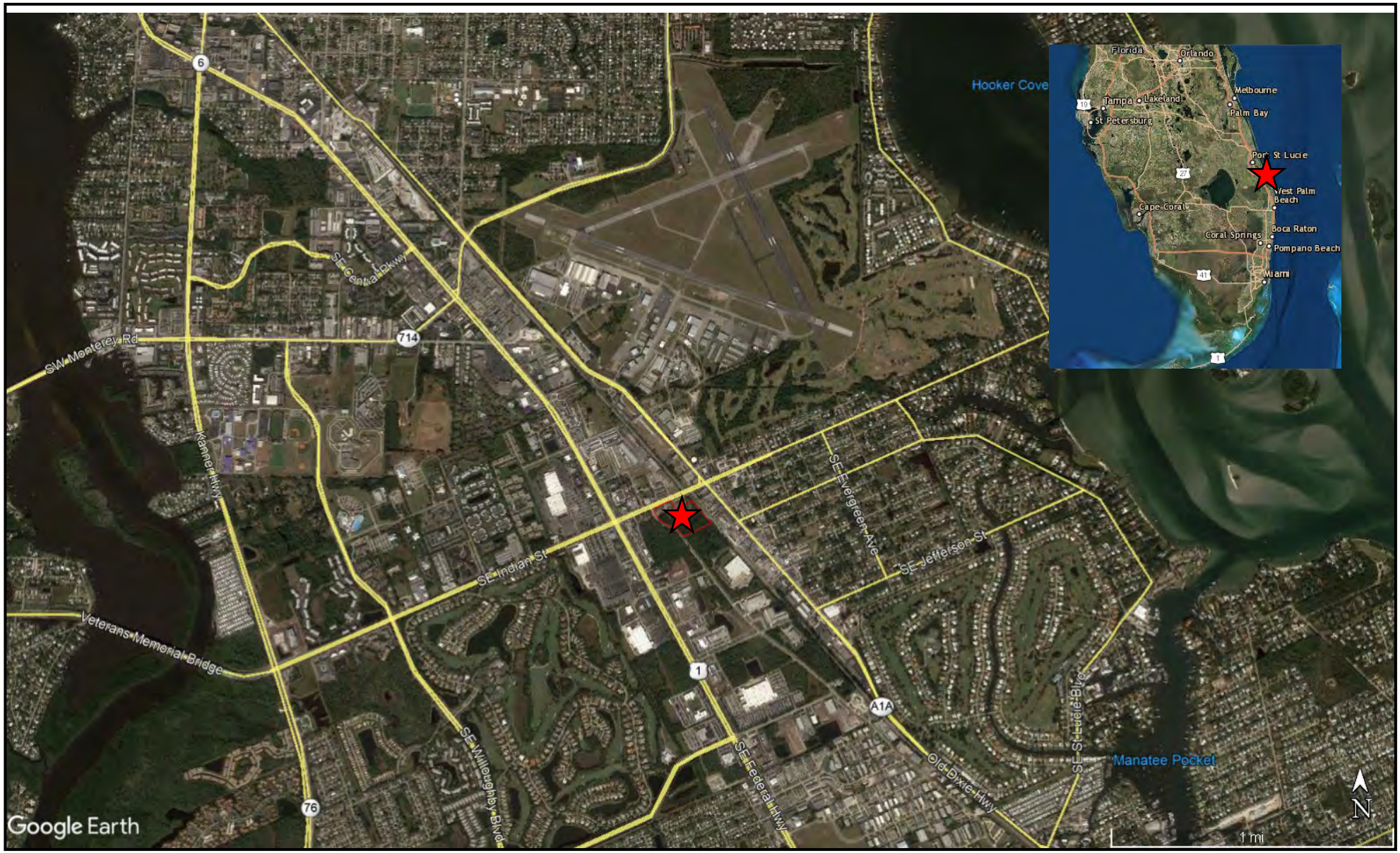
Jennifer Acevedo, Biologist
Florida Fish and Wildlife Conservation Commission Certified Gopher Tortoise Agent Number 09-00112E

Appendix A
Site Maps



ENVIRONMENTAL CONSULTING DEPARTMENT

Aquatic RESEARCH Monitoring, Equipment, & Deployment, LLC.



Aquatic RESEARCH
Monitoring, Equipment, & Deployment, LLC
AquaticResearchFl.com
Environmental Consulting Department

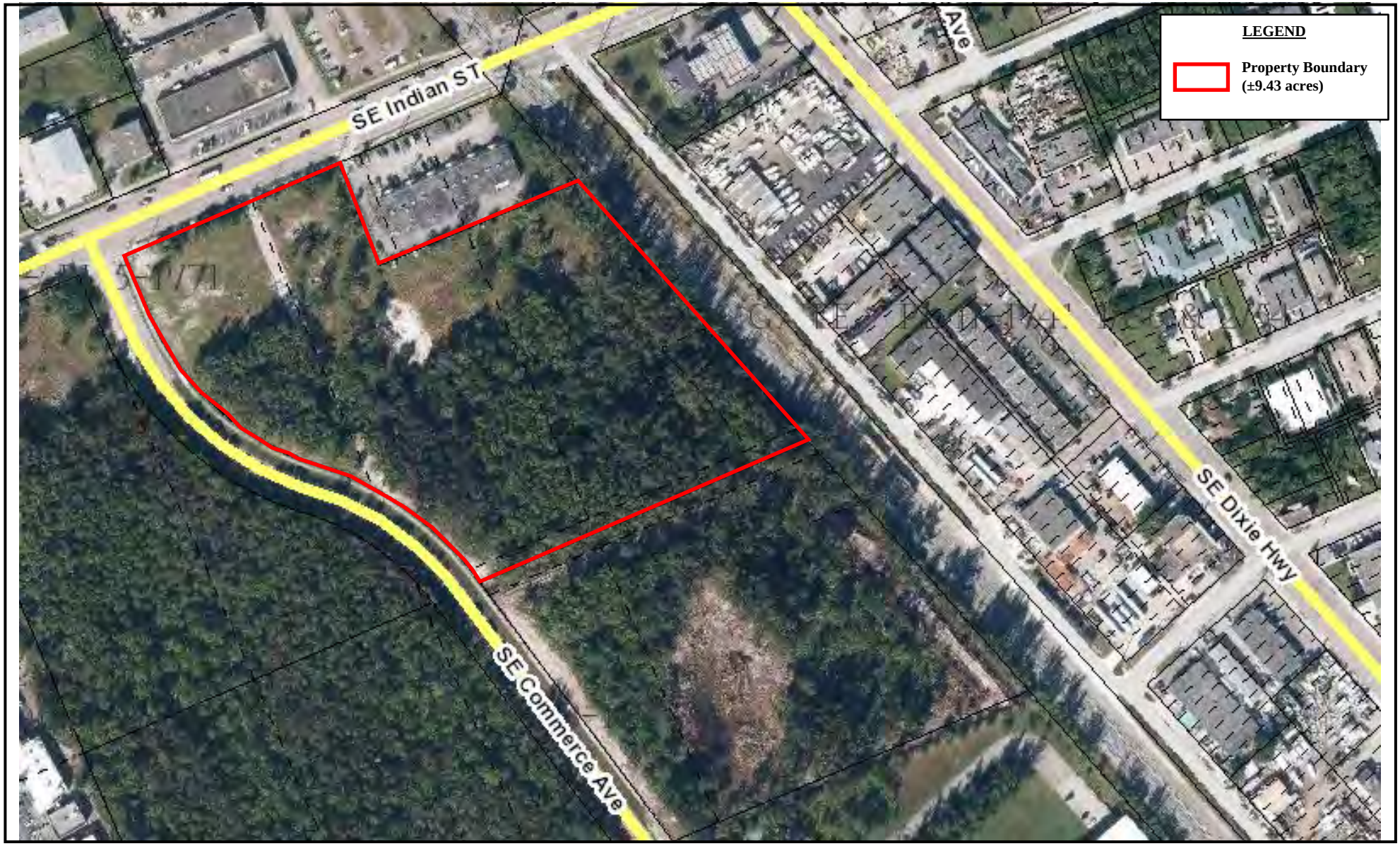
Location Map

Sewall's Point Land Company – Subdivision
A Portion of LOTS 65, 66 & 67, Unassigned SE Indian Street
City of Stuart, Martin County, Florida
PIN: 38-38-41-002-065-00010-3

Figure 1

Image: Google Earth Date 01/03/2018

N



Aquatic RESEARCH
Monitoring, Equipment, & Deployment, LLC
AquaticResearchFl.com
Environmental Consulting Department

Site Map

Sewall's Point Land Company – Subdivision
A Portion of LOTS 65, 66 & 67, Unassigned SE Indian Street
City of Stuart, Martin County, Florida
PIN: 38-38-41-002-065-00010-3

Figure 2

Image & Data: Martin County Property Appraisers

N



Aquatic RESEARCH
Monitoring, Equipment, & Deployment, LLC
AquaticResearchFl.com
Environmental Consulting Department

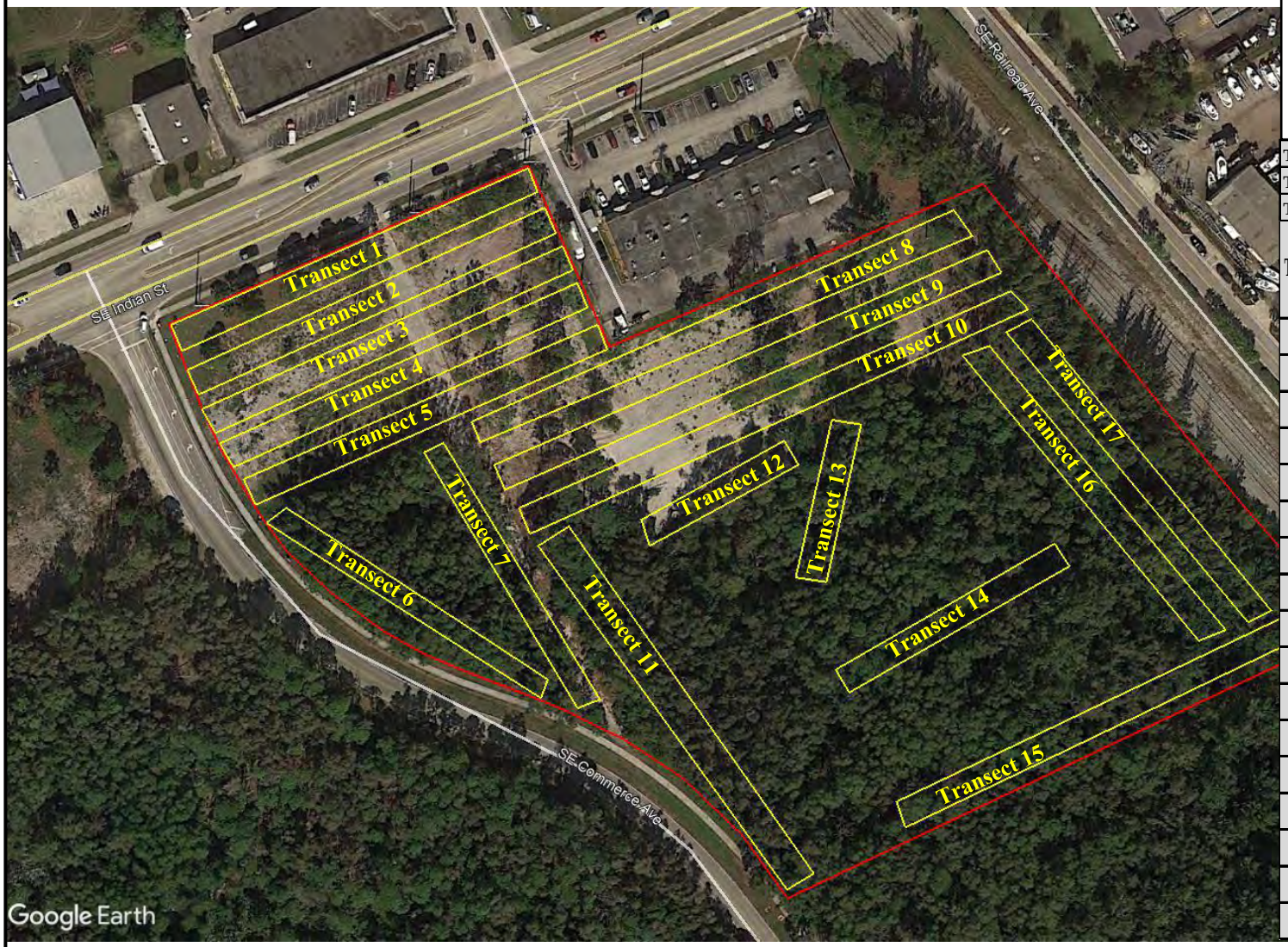
Existing Habitat/FLUCCS Map

Sewall's Point Land Company – Subdivision
A Portion of LOTS 65, 66 & 67, Unassigned SE Indian Street
City of Stuart, Martin County, Florida
PIN: 38-38-41-002-065-00010-3

Figure 3

Image: Google Earth Date 01/03/2018
Data: Aquatic Research Monitoring, Equipment, & Deployment LLC

N



LEGEND

Property Boundary (±9.43 acres)

Gopher Tortoise Survey Belt Transects (±2.65 acres)

Total Acreage of Suitable Habitat	8.97
Total Acreage Surveyed	3.42
Total Percent of Suitable Habitat Surveyed	38%

Belt Transect ID#	Width (ft)	Length (ft)	Survey Acreage	Gopher Tortoise Burrow ID #	Latitude (DMS)	Longitude (DMS)
1	25	360	0.21	N/A	N/A	N/A
2	25	360	0.21	N/A	N/A	N/A
3	25	360	0.21	N/A	N/A	N/A
4	25	360	0.21	N/A	N/A	N/A
5	25	360	0.21	N/A	N/A	N/A
6	25	235	0.13	N/A	N/A	N/A
7	25	235	0.13	N/A	N/A	N/A
8	25	485	0.28	N/A	N/A	N/A
9	25	485	0.28	N/A	N/A	N/A
10	25	485	0.28	N/A	N/A	N/A
11	25	485	0.28	N/A	N/A	N/A
12	25	155	0.09	N/A	N/A	N/A
13	25	155	0.09	N/A	N/A	N/A
14	25	235	0.13	N/A	N/A	N/A
15	25	485	0.28	N/A	N/A	N/A
16	25	340	0.20	N/A	N/A	N/A
17	25	340	0.20	N/A	N/A	N/A

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AquaticResearchFl.com
Environmental Consulting Department

Wildlife Survey Transect Map

Sewall's Point Land Company – Subdivision
A Portion of LOTS 65, 66 & 67, Unassigned SE Indian Street
City of Stuart, Martin County, Florida
PIN: 38-38-41-002-065-00010-3

Figure 4

Image: Google Earth
Data: Aquatic Research Monitoring, Equipment, & Deployment LLC

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Monitoring, Equipment, & Deployment, LLC
AquaticResearchFl.com
Environmental Consulting Department

Soil(s) Map

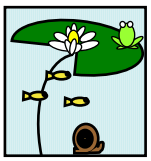
Sewall's Point Land Company – Subdivision
A Portion of LOTS 65, 66 & 67, Unassigned SE Indian Street
City of Stuart, Martin County, Florida
PIN: 38-38-41-002-065-00010-3

Figure 5

Image: Florida Department of Environmental Protection
Data: Soil Survey Staff, Natural Resources Conservation Service

N

Appendix B
Gopher Tortoise Survey
Raw Data



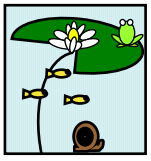
ENVIRONMENTAL CONSULTING DEPARTMENT
Aquatic RESEARCH Monitoring, Equipment, & Deployment, LLC.

Belt Transect ID#	Width (ft)	Length (ft)	Survey Acreage	Gopher Tortoise Burrow ID #	Latitude (DMS)	Longitude (DMS)
1	25	360	0.21	N/A	N/A	N/A
2	25	360	0.21	N/A	N/A	N/A
3	25	360	0.21	N/A	N/A	N/A
4	25	360	0.21	N/A	N/A	N/A
5	25	360	0.21	N/A	N/A	N/A
6	25	235	0.13	N/A	N/A	N/A
7	25	235	0.13	N/A	N/A	N/A
8	25	485	0.28	N/A	N/A	N/A
9	25	485	0.28	N/A	N/A	N/A
10	25	485	0.28	N/A	N/A	N/A
11	25	485	0.28	N/A	N/A	N/A
12	25	155	0.09	N/A	N/A	N/A
13	25	155	0.09	N/A	N/A	N/A
14	25	235	0.13	N/A	N/A	N/A
15	25	485	0.28	N/A	N/A	N/A
16	25	340	0.20	N/A	N/A	N/A
17	25	340	0.20	N/A	N/A	N/A

Total Acreage of Suitable Habitat	7.18
Total Acreage Surveyed	3.42
Total Percent of Suitable Habitat Surveyed	47.50%

Aquatic **RESEARCH** Monitoring, Equipment, & Deployment, Llc.
CUSTOM DESIGNED RESEARCH EQUIPMENT AND CREATIVE RESEARCH SOLUTIONS

Appendix C
South Florida Water Management District (SFWMD)
Informal Wetland Delineation (IWD)



ENVIRONMENTAL CONSULTING DEPARTMENT
Aquatic RESEARCH Monitoring, Equipment, & Deployment, LLC.

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

February 11, 2019

** Delivered via email*

Paul Kuehn
Ted Glasrud Associates Fl LLC
1700 W Highway 36 #650
Roseville, MN 55113

Subject: Ted Glasrud Associates FL LLC
Application No. 181226-1080
Informal Wetland Determination No. 43-100937-P
Martin County

Dear Mr. Kuehn:

The District reviewed your request for an informal determination of the jurisdictional wetland and other surface water boundaries within the five subject properties, which are located as shown on the attached Exhibit 1. Joint site inspections were conducted on January 8, 2019 and February 5, 2019.

Based on the information provided and the results of the site inspections, jurisdictional wetlands as defined in Chapter 62-340, Florida Administrative Code, exist on one of the properties, Site No. 5. Exhibit 2, attached, identifies the boundaries of each property inspected and the approximate landward limits of the wetlands on Site No. 5.

This correspondence is an informal jurisdictional wetland determination pursuant to Section 373.421(6), Florida Statutes, and Section 7.3 of Environmental Resource Permit Applicant's Handbook Volume I. It does not bind the District, its agents or employees, nor does it convey any legal rights, expressed or implied. Persons obtaining this informal jurisdictional determination are not entitled to rely upon it for purposes of compliance with provision of law or District rules.

Sincerely,

Barbara Conmy
Section Leader

c: Daniel Saskowsky, Daniel M Saskowsky Environmental Consultant *
Ted Glasrud Associates Fl, LLC
Paul Kuehn, Ted Glasrud Associates Fl LLC

Exhibits

The following exhibits to this permit are incorporated by reference. The exhibits can be viewed by clicking on the links below or by visiting the District's ePermitting website (http://my.sfwmd.gov/ePermitting) and searching under this application number 181226-1080.

Exhibit No. 1.0 Location Map

Exhibit No. 2.0 Wetland Map

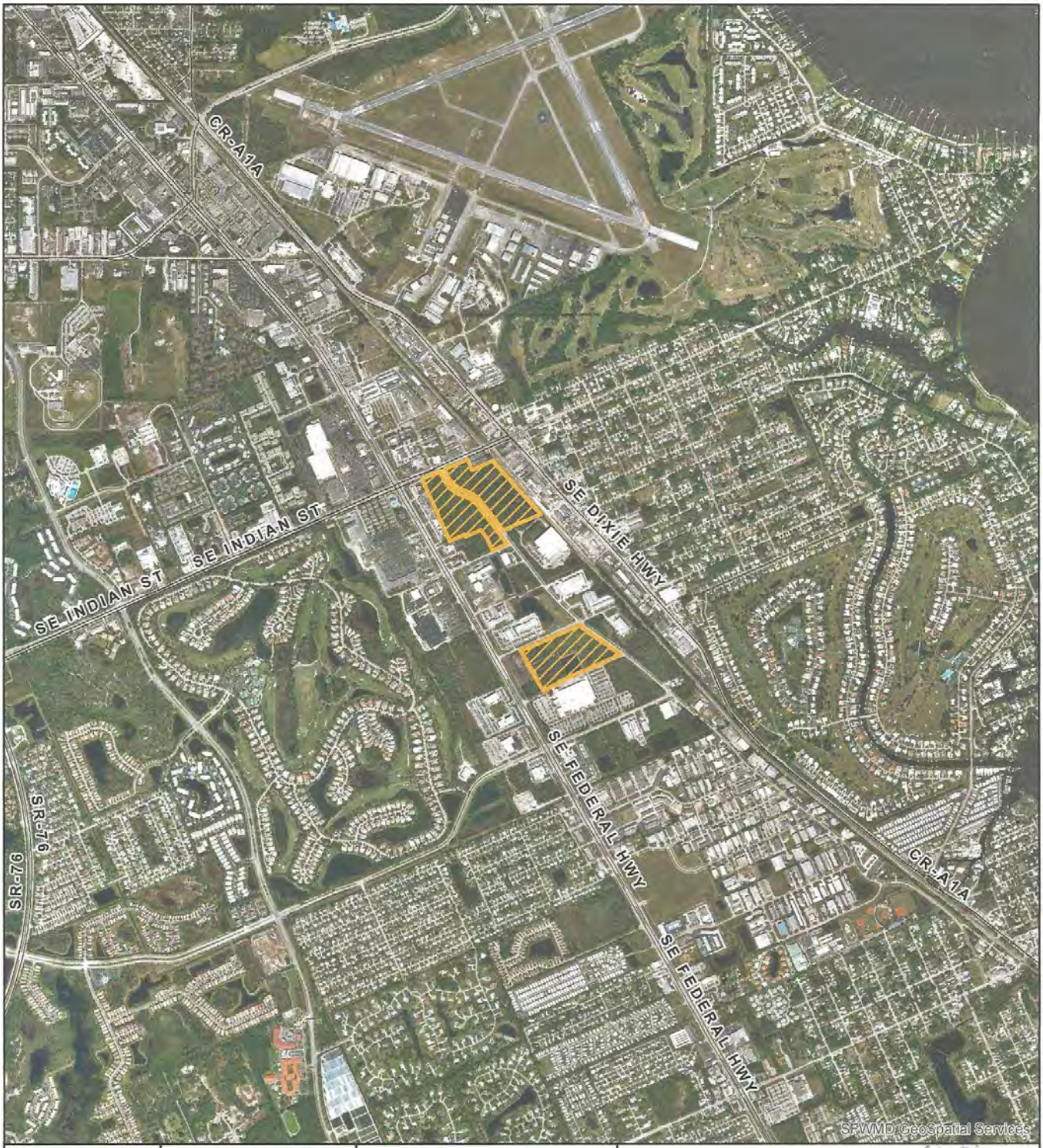


Exhibit No: 1	Exhibit Created On: 2019-02-08	MARTIN COUNTY, FL

REGULATION DIVISION

Project Name: Ted Glasrud Associates FL LLC

0 0.325 0.65 Miles

N

Application

Application Number: 181226-1080

South Florida Water Management District


SITE #1
SE Commerce Ave

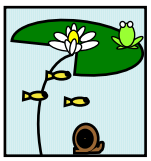

SITE #2
SE Railroad Ave
SE Commerce Ave


SITE #3
ce Ave
© 2016 Google


SITE #4
merce Ave


SE Miami Ave
SE Commerce Ave
SITE #5
W
W
OSW
© 2016 Google
Google Earth
Imagery Date: 1/23/2016 27°09'31.05" N 80°13'08.37" W elev 12 ft eye alt 1658 ft

Appendix D Site Photographs



ENVIRONMENTAL CONSULTING DEPARTMENT

Aquatic RESEARCH Monitoring, Equipment, & Deployment, LLC.

Representative Site Photos



Western perimeter of property facing north.



Eastern perimeter of property, facing northwest.



North perimeter of property, facing south.



On-site access road, facing south.



On-site access road, facing south.



South perimeter of property, facing east.



South perimeter ditch, facing south.



South perimeter exotic vegetation earleaf acacia, Australian pine, sword fern and native cabbage palm, facing north.



Southern portion of property, facing north.



Interior areas of property.



Interior areas of property.



Cleared portion of property facing west.

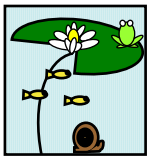


Eastern perimeter ditch, facing southeast.



Eastern portion of property, Australian pine and Brazilian pepper tree.

Appendix E
IPAC Report



ENVIRONMENTAL CONSULTING DEPARTMENT

Aquatic RESEARCH Monitoring, Equipment, & Deployment, LLC.

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Martin County, Florida



Local office

South Florida Ecological Services Field Office

(772) 562-3909
(772) 562-4288

1339 20th Street
Vero Beach, FL 32960-3559

http://fws.gov/verobeach

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

NOT FOR CONSULTATION

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

Florida Bonneted Bat Eumops floridanus — Endangered
There is **proposed** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/8630

Florida Panther Puma (=Felis) concolor coryi — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/1763

Puma (=mountain Lion) Puma (=Felis) concolor (all subsp. except coryi) — SAT
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6049

Southeastern Beach Mouse Peromyscus polionotus niveiventris — Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/3951

West Indian Manatee Trichechus manatus — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/4469
Marine mammal

Birds

NAME	STATUS

Audubon's Crested Caracara Polyborus plancus audubonii — Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8250

Everglade Snail Kite Rostrhamus sociabilis plumbeus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/7713

Florida Scrub-jay Aphelocoma coerulescens — Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6174

Ivory-billed Woodpecker Campephilus principalis — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8230

Red-cockaded Woodpecker Picoides borealis — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/7614

NOT FOR CONSULTATION

Whooping Crane Grus americana — EXPN
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/758

Wood Stork Mycteria americana — Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8477

Reptiles

NAME	STATUS

American Alligator Alligator mississippiensis — SAT
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/776

Eastern Indigo Snake Drymarchon corais couperi — Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/646

Hawksbill Sea Turtle Eretmochelys imbricata — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/3656

Leatherback Sea Turtle Dermochelys coriacea — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/1493

Loggerhead Sea Turtle Caretta caretta — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/1110

Insects

NAME	STATUS

Florida Leafwing Butterfly Anaea troglodyta floridalis — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6652

Miami Blue Butterfly Cyclargus (=Hemiargus) thomasi bethunebakeri — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/3797

NOT FOR CONSULTATION

Flowering Plants

NAME	STATUS
Beach Jacquemontia Jacquemontia reclinata No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1277	Endangered
Four-petal Pawpaw Asimina tetramera No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3461	Endangered
Lakela's Mint Dicerandra immaculata No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6390	Endangered
Tiny Polygala Polygala smallii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/996	Endangered

Lichens

NAME	STATUS
Florida Perforate Cladonia Cladonia perforata No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7516	Endangered

NOT FOR CONSULTATION

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NOT FOR CONSULTATION

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
American Kestrel Falco sparverius paulus This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 1 to Aug 31
American Oystercatcher Haematopus palliatus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8935	Breeds Apr 15 to Aug 31

Bald Eagle Haliaeetus leucocephalus — Breeds Sep 1 to Jul 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1626

Black Skimmer Rynchops niger — Breeds May 20 to Sep 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5234

Common Ground-dove Columbina passerina exigua — Breeds Feb 1 to Dec 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Least Tern Sterna antillarum — Breeds Apr 20 to Sep 10
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Limpkin Aramus guarauna — Breeds Jan 15 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Magnificent Frigatebird Fregata magnificens — Breeds Oct 1 to Apr 30
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Prairie Warbler Dendroica discolor — Breeds May 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Prothonotary Warbler Protonotaria citrea — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Red-headed Woodpecker Melanerpes erythrocephalus — Breeds May 10 to Sep 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Ruddy Turnstone Arenaria interpres morinella — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

NOT FOR CONSULTATION

Semipalmated Sandpiper Calidris pusilla This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Swallow-tailed Kite Elanoides forficatus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938	Breeds Mar 10 to Jun 30
Willet Tringa semipalmata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5
Yellow Warbler Dendroica petechia gundlachi This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 20 to Aug 10

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

NOT FOR CONSULTATION

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

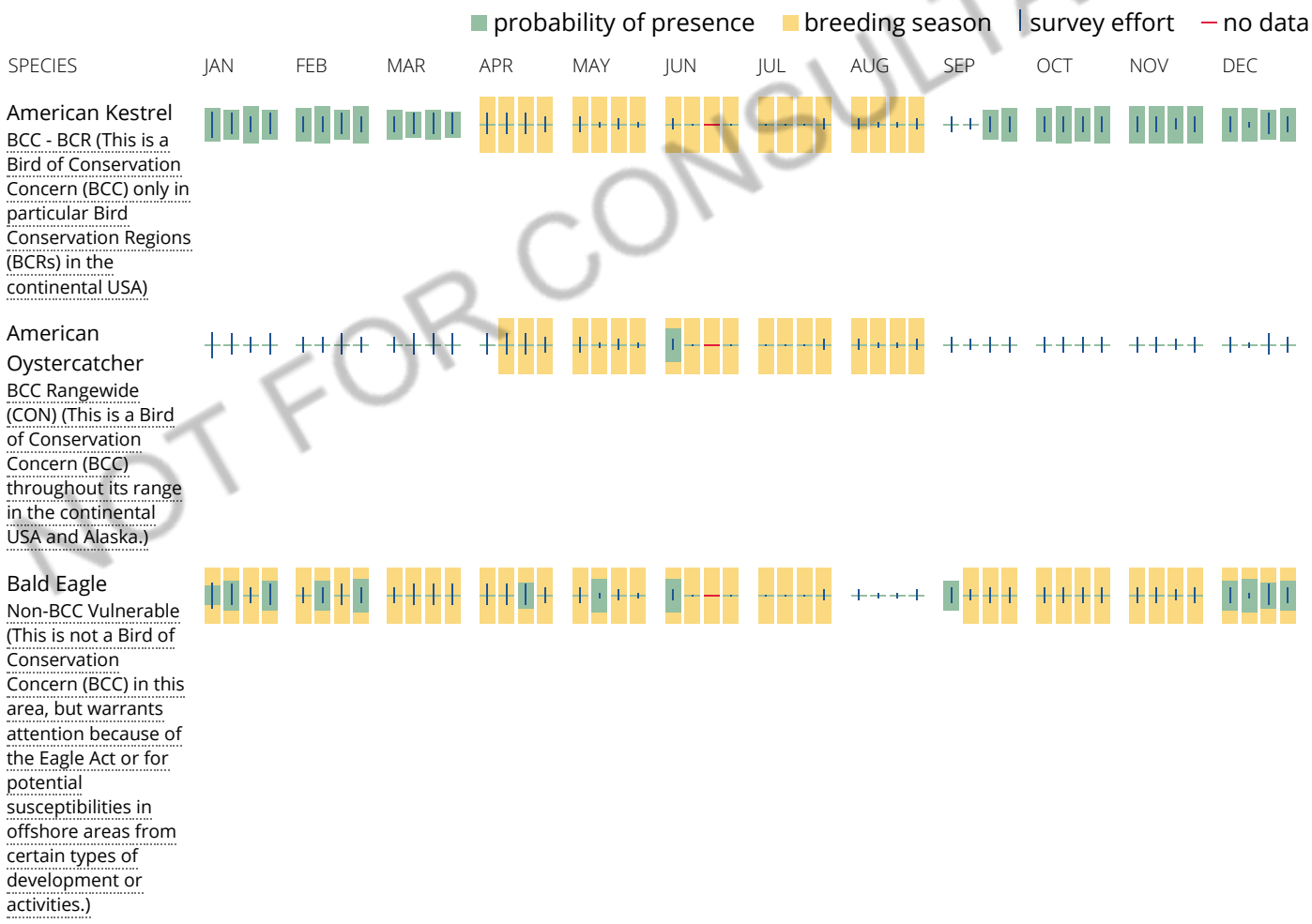
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

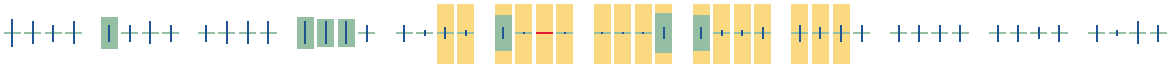
No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

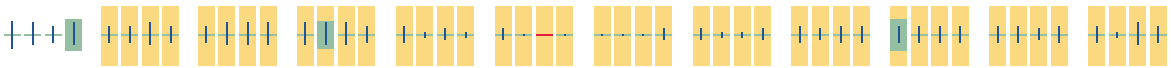
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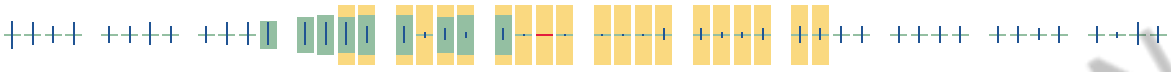
Black Skimmer
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



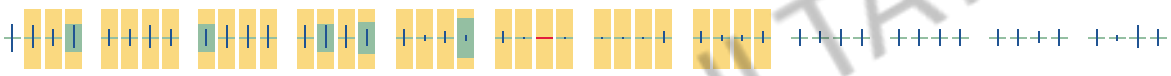
Common Ground-dove
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



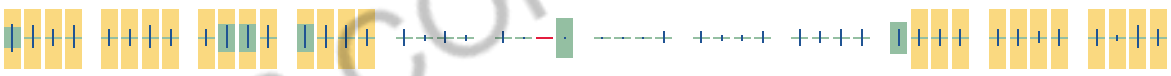
Least Tern
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



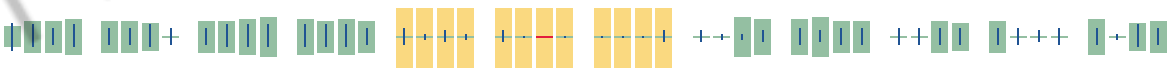
Limpkin
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



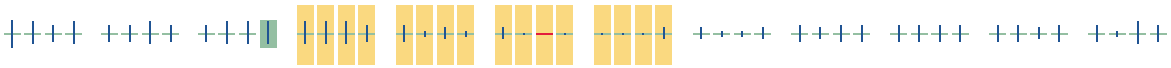
Magnificent Frigatebird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Prairie Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Prothonotary Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



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Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review.

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Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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Marine mammals

Marine mammals are protected under the Marine Mammal Protection Act. Some are also protected under the Endangered Species Act[1] and the Convention on International Trade in Endangered Species of Wild Fauna and Flora[2].

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries[3] [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the Marine Mammals page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take (to harass, hunt, capture, kill, or attempt to harass, hunt, capture or kill) of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

1. The Endangered Species Act (ESA) of 1973.
2. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
3. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following marine mammals under the responsibility of the U.S. Fish and Wildlife Service are potentially affected by activities in this location:

NAME

West Indian Manatee Trichechus manatus
https://ecos.fws.gov/ecp/species/4469

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Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

R5UBFx

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

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Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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