

Wetland Delineation Report

New Garden Deal Viera

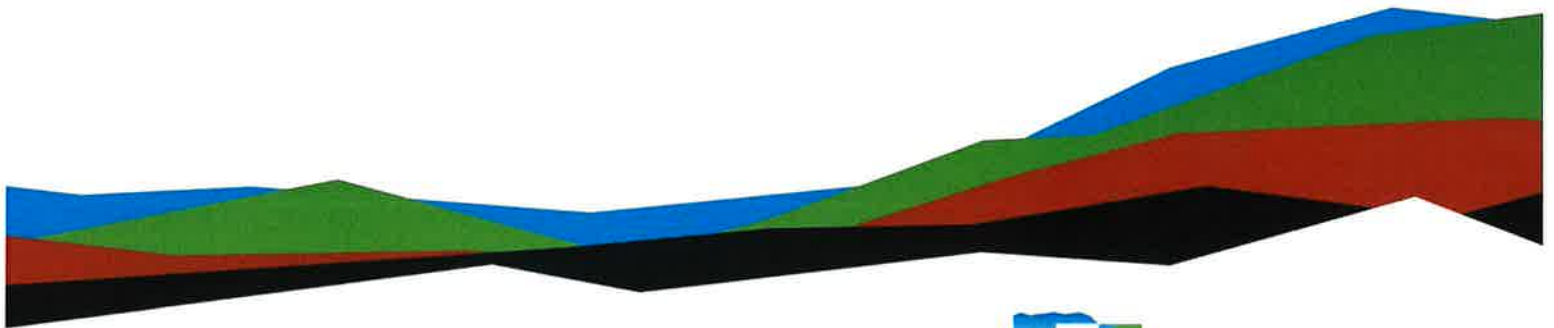
June 2, 2023 | Project Number: H1237389

Site Location:

New Garden Deal Viera
Viera, Brevard County, Florida

Prepared for:

MCRT Investments, LLC
225 East Robinson Street
Suite 360
Orlando, Florida



Nationwide
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June 2, 2023

MCRT Investments, LLC
225 East Robinson Street, Suite 360
Orlando, Orange County, Florida

Attn: Mr. Christopher Burtner
P (407) 337-6326
E cburtner@mctrust.com

RE: Wetland Delineation Report
New Garden Deal Viera
5955 South US Highway 1
Viera, Brevard County, Florida
Terracon Project No. H1237389

Dear Mr. Burtner:

Terracon Consultants, Inc. (Terracon) is pleased to submit the enclosed Natural and Aquatic Resources Report for the above-referenced site. The scope of this assessment included a wetland delineation on the site.

This work was performed in general accordance with the scope of services outlined in the Supplement to Agreement for Services dated May 22, 2023. This report was prepared for the exclusive reliance of MCRT Investments, LLC ("client"). Use or reliance by any other party is prohibited without the written authorization of the client and Terracon.

We trust that this information will assist you in your evaluation of the site. If you have questions concerning this report, or if we can assist you in other matters, please contact us.

Sincerely,

Terracon

Brennan Hagan, PWS
Group Manager
(321) 203-7402
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1.0 Introduction

The site consists of ±14.99 acres of forested land located at 5955 South US Highway 1 (identified as Brevard County Parcel No. 26-36-01-00-753) in Viera, Florida. The site primarily consists of forested uplands, agricultural areas, a single family residence, and a stormwater pond. It is the understanding of Terracon that the site will be developed with multi-family residential development, associated infrastructure, and dock within the Indian River Lagoon.

Any potential wetland areas on the site would likely fall under the jurisdiction of the St. Johns River Water Management District (SJRWMD) for the State, as "Waters of the United States" (WOTUS) regulated by federal authority under 33 Code of Federal Regulations (CFR) Parts 320-330 by the U.S. Army Corps of Engineers (USACE) as "Retained Waters", and/or potentially the Florida Department of Environmental Protection (FDEP) under the new State 404 Program as "Assumed Waters". Potential impacts to species which are listed as threatened or endangered would fall under the jurisdiction of the Florida Fish and Wildlife Conservation Commission (FWC) for state listed species, and the United States Fish and Wildlife Service (USFWS) for federally listed species. The following sections provide Terracon's methodologies and findings to conduct a natural and aquatic resources assessment of the site.

2.0 Methodology

2.1 Wetland Delineation

A review of readily available published resources was conducted to preliminarily identify features indicative of jurisdictional wetlands and listed species on the site or in the immediate vicinity. A field investigation is then conducted to delineate wetland areas utilizing the FDEP Wetlands Delineation Manual¹, and guidance provided in Florida Administrative Code (F.A.C.) 62-330 *Delineation of the Landward Extent of Wetlands and Surface Waters*. Potential wetland areas are located and evaluated based on the three wetland parameters of hydrophytic vegetation, hydrology, and hydric soil indicators.

Hydrophytic vegetation is assessed by identifying plant species and their assigned wetland indicator rating of obligate (occur in wetlands >99% of the time), facultative wet (occur in wetlands 67-99% of the time), facultative (occur in wetlands 34-66% of the time), facultative upland (occur in wetland 1-33% of the time), and upland (occur in wetlands <1% of the time). The FDEP and water management districts determines hydrophytic vegetation as present when the percent coverage of obligate species is greater than the percent cover of upland species (A Test), or when the percent cover of obligate and facultative wet species are greater than 50% of all species in that stratum (B Test). Wetland hydrology is determined to be present based on several indicators (water marks, elevated lichen lines, plant adaptations, etc.). Hydric soil is determined by investigating soil features such as soil color, and evidence of redoximorphic features which are features that are formed by the processes of reduction,

¹Gilbert, K.M., J.D. Tobe, R.W. Cantrell, M.E. Sweely, and J.R. Cooper. 1995. The Florida Wetlands Delineation Manual. FDEP, Tallahassee, FL.

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translocation, and/or oxidation of Fe and Mn oxides formerly called mottles and low chroma colors. These features are commonly found in hydric soils.

2.2 Land Cover

To better categorize onsite habitats, onsite areas were demarcated and classified using FLUCFCS.² Particular attention was allocated to undeveloped and natural areas. The current conditions are discussed in Section 4.0 of this report and reflected on Exhibit 5 (Appendix A).

3.0 Desktop Assessment

3.1 Topography and Hydrology

A review of the United States Geological Survey (USGS) topographical maps for this parcel (Cocoa, FL Quadrangle, 1984), and elevation data from Google Earth indicate the parcel is situated between 0 and 5 feet above mean sea level (amsl). Surface water drainage is anticipated to be consistent with the topographic gradient of the site which generally flows in an eastern direction toward the Indian River Lagoon. According to the USGS Topographic Map Key, the site appears to be a mix of residential, disturbed areas, agriculture, and forested areas as of the most recent topographic map. The topographic maps are included as Exhibit 1, Appendix A.

3.2 Soil Survey

According to the Natural Resources Conservation Service (NRCS) Soil Survey for Brevard County, mapped soil units on the site include the following:

- **9 – Canaveral-Anclote complex, gently undulating:** Somewhat poorly drained with average depth to water table between 12 and 36 inches below ground surface (bgs). This soil type is located on the eastern portion of the site.
- **51 – Pompano sand with 0 to 2 percent slopes:** Poorly drained with average depth to water table 3 to 12 inches bgs. This soil type is mapped centrally on the site.
- **52 – Quartzipsamments, smoothed:** Moderately well drained with average depth to water table 24 to 60 inches bgs. This soil type is mapped along the northwestern portion of the site.
- **53 – Satellite sand 0 to 2 percent slopes:** Somewhat poorly drained with average depth to water table 18 to 42 inches bgs. This soil type is mapped along the southwestern portion of the site.

During the site reconnaissance, Terracon dug test pits to analyze subsurface soil conditions for hydric soil indicators. According to the *Hydric soils of Florida Handbook*, Canaveral-Anclote (9), Pompano sand (51), and Satellite sand (53) are categorized as hydric soils. Quartzipsamments, smoothed (52) is not categorized as a hydric soil. All soil designated areas listed above and located

²Florida Department of Transportation, Survey and Mapping Office Geographic Mapping Section. January 1999, Third Ed. Florida Land Use, Cover and Forms Classification System. Tallahassee, FL.

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on site were observed to be generally consistent with the NRCS soil survey designation. The NRCS Soil Survey Map for the site is included as Exhibit 3.

3.3 National Wetlands Inventory

The NWI map of the site was reviewed to identify potential wetlands and surface waters. The map for the site was published by USFWS and depicts probable wetland areas and surface waters based on stereoscopic analysis of high-altitude aerial photographs, topographic maps, and soil survey information. The NWI map does not depict any wetlands on the site; however a surface water is depicted outside of the project area along the northern and eastern portions of the site which has been identified as the Indian River. Based on the site reconnaissance, Terracon identified an additional surface water pond on the northern and southern portions of the site. In addition, Terracon identified two wetlands onsite located centrally and on the northern portion of the site. The NWI map for the site is included as Exhibit 4.

3.4 Flood Zones

Terracon reviewed the Federal Emergency Management Agency (FEMA) ArcGIS online open data portal to determine if the subject project area falls within a designated flood zone area. The site is located within three (3) different flood zones. Flood Zone AE Coastal Floodplain, which are areas subject to a 0.2% annual chance flood hazard, and which base flood elevations (BFE) have been determined. The BFE for this portion of the site is 3 feet amsl. A portion of the site is also located in Flood Zone A, which are areas subject to a 0.2% annual chance flood hazard, and which BFEs have not been determined. The remainder of the site is located in Flood Zone X, which are areas located outside of the 0.2% annual chance flood hazard area. The FEMA 100-Year Flood Zone Map is included as part of Appendix A.

3.5 Previously Issued Wetland Permits

Terracon reviewed the following sources to determine if wetland or surface water permits had previously been issued for the site, or if the site is associated with a currently valid permit.

- **Environmental Resource Permit (ERP) Database:** The SJRWMD and FDEP Environmental Resource Permit (ERP) databases were reviewed to identify potential wetland areas and permits previously issued for the site. According to the records search, there are no previously issued ERP permits issued for the site.
- **State 404 Program Permit Database:** The FDEP State 404 Program permit database was reviewed to identify potential wetland areas and permits previously issued for the site. According to the records search, there are no previously issued State 404 Program permits issued for the site.
- **USACE Permit Database:** The US Army Corps of Engineers (USACE) permit database was reviewed to identify potential wetland areas and permits issued for the site. According to the records search, there are no previously issued wetland permits associated with the site.

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3.6 Recorded Conservation Easements

Terracon reviewed site information made available through the Brevard County Property Appraiser website, and available data layers made available through FDEP's Map Direct database to determine if the site was associated with recorded conservation easements. According to these resources, there are no conservation easements recorded for the site. However, Terracon recommends that title records for the site be researched prior to acquisition or development of the site.

4.0 Site Reconnaissance

The site was reviewed by Brennan Hagan, PWS and Ashley Chattle, WPIT on May 11, 2023. The site was investigated for the presence of wetlands and surface waters using the Routine Onsite Determination Method described in the FDEP Wetland Delineation Manual. Additionally, the site was investigated to determine if habitat for listed threatened or endangered species was present based on FLUCFCS designation. The following section outlines Terracon's observations during the site reconnaissance.

4.1 Existing Site Conditions

Based on the site inspection and review of the above resources, the following land uses were observed on the site:

- **Residential, Low Density** (Mapped FLUCFCS Code – 110) – ±0.36-acre: The eastern portion of the site contained a structure that appeared to be vacant and abandoned. This structure appeared to previously be a single family residence with a small driveway and landscaped yard.
- **Open Land** (Mapped FLUCFCS Code – 190) – ±0.35-acre: The western portion of the site contained an open grassy area between the forested edge of the property and the right-of-way of US-1.
- **Tree Nurseries** (Mapped FLUCFCS Code – 241) ±2.91 acres: A portion of the site appears to consist of an abandoned tree nursery. The dominant vegetation in this area contained plotted rows of Sylvester palm (*Phoenix sylvestris*). The area also contained cabbage palm (*Sabal palmetto*), cogon grass (*Imperata cylindrica*), Brazilian pepper (*Schinus terebinthifolia*), Frangipani (*Plumeria rubra*), Florida avocado (*Persea americana*), and Muscadine grapevine (*Vitis Rotundifolia*).
- **Brazilian Pepper** (Mapped FLUCFCS Code – 422) – ±1.89 acres: Multiple areas around the central portion of the site is currently dominated by Brazilian pepper. Due to the growth pattern of Brazilian pepper, there was no other canopy or sub canopy. The ground cover was minimal but did contained elderberry (*Sambucus nigra*) and Ceasar's weed (*Urena lobata*).
- **Sand Live Oak** (Mapped FLUCFCS Code – 432) – ±6.05 acres: The western and eastern portion of the site contained forested uplands dominated by sand live oak (*Quercus geminata*). The canopy also included scattered pignut hickory (*Carya glabra*). The sub canopy consisted of cabbage palm, Brazilian pepper, cherry laurel (*Prunus caroliniana*). The ground cover in these

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areas consisted of cogon grass, chalky bluestem (*Andropogon virginicus*), golden rod (*Solidago fistulosa*), bracken fern (*Pteridium aquilinum*), dog fennel (*Eupatorium capillifolium*), and creeping oxeye (*Sphagneticola trilobata*).

- **Streams and Waterways** (Mapped FLUCFCS Code – 510) – ±0.36-acre: The southern portion of the site contained a small excavated pond. The edges of the pond was dominated by Brazilian pepper.
- **Reservoirs** (Mapped FLUCFCS Code – 530) – ±0.68-acre: The northern portion of the site contained a small excavated pond. The edges of the pond contained carolina willow *Salix caroliniana*, Peruvian primrose (*Ludwigia peruviana*), swamp fern (*Blechnum serrulatum*), cattail (*Typha latifolia*), creeping oxeye, and Brazilian pepper.
- **Exotic Wetland Hardwoods** (Mapped FLUCFCS Code – 619) – ±1.06-acre: The central portion of the site contained a wetland dominated by nuisance and exotic vegetation. The area is dominated by Brazilian pepper and elderberry with occurrences of swamp fern and coastal leather fern (*Acrostichum danaeifolium*).
- **Wetland Forested Mixed** (Mapped FLUCFCS Code – 630) – ±0.11-acre: The northern portion of the site contained a forested wetland. This wetland appears to be associated with the excavated pond and located directly adjacent to the wetland. The wetland vegetation contained a canopy dominated by cabbage palm with occurrences of pignut hickory. The sub canopy consisted of carolina willow, Peruvian primrose, and Brazilian pepper. The ground cover consisted of swamp fern, coastal leather fern, and swamp rosemallow (*Hibiscus grandiflorus*).
- **Disturbed Lands** (Mapped FLUCFCS Code – 740) – ±1.22 acres: The site contained several areas that appeared to have been disturbed in the past due to the landscape operating occurring on the site. This area was dominated by cogon grass, Ceasar’s weed, common ragweed (*Ambrosia artemisiifolia*), beggartick (*Bidens alba*), dog fennel, Brazilian pepper, young cabbage palm, and Sylvester palm.

5.0 Wetland Jurisdiction and Permitting Needs

5.1 Brevard County

Because the site is located within unincorporated Brevard County, onsite wetlands fall under the jurisdiction of Brevard County Environmental Resource Management. Per Brevard County Land Development Code § 62-3639 (1), any wetlands addressed by a SJRWMD or FDEP permit will be exempt from the County’s permitting and mitigation standards. The permit (and any staff comments) must be provided to Brevard County ERM prior to any wetland alterations. In addition, the ERM may conduct a site visit to review the wetland delineation boundaries. Therefore, additional coordination with Brevard County ERM may be required, but is not anticipated to require a separate permit and mitigation.

5.2 St. John's River Water Management District

The wetlands and surface waters on site also fall under the jurisdiction of SJRWMD. An ERP application would need to be submitted to address stormwater needs and wetland/surface water impacts as they relate to the project. If SJRWMD deems it necessary, mitigation may be required in order to offset any impacts to wetlands or surface waters. If purchasing mitigation credits is the preferred method of mitigation, the credits would need to be purchased from a mitigation bank located within the same drainage basin. The site is located within the Northern Indian River Lagoon drainage basin which has two (2) different mitigation banks (Green Wing and NeoVerde Mitigation Banks) that service this area. If credits are not available at these banks at the time of permitting, a cumulative impact assessment would need to be reviewed and approved by SJRWMD in order to mitigate from a bank located out of basin.

5.3 Florida Department of Environmental Protection

Under current state regulations, wetlands and surface waters are assessed to determine if they would constitute WOTUS and be federally regulated by the FDEP under the Assumed Waters Rule that went into effect on December 22, 2020. Although the NWPR was vacated in federal court on August 31, 2021, the FDEP is using the NWPR to make jurisdictional determinations until the state definition is revised to be consistent with the federal definition. However, to avoid objection from the EPA due to the FDEP utilizing the NWPR to determine jurisdictional status, the pre-2015 definition of WOTUS is also considered. Based on the findings of the site reconnaissance, one of the two wetlands located onsite would likely be considered (a)(4) 'Adjacent wetlands' because it appears to be adjacent to jurisdictional features. Therefore, a State 404 Program permit would be required from FDEP to address any proposed wetland/surface water impacts. Mitigation would need to be provided to offset wetland and surface water impacts. Additionally, as part of the State 404 Program permit application process, the applicant will need to provide an alternate site analysis which demonstrates that other parcels were considered for purchase to accommodate the project, and that development on the subject site represents the least environmentally damaging practicable alternative (LEDPA) of all the parcels considered.

In addition to jurisdiction over wetlands on the site, FDEP retains jurisdiction of the Sovereign Submerged Lands Program (SSL). The project currently proposed a docking structure that will be subject to the SSL program and will likely require a State Lands Lease.

5.4 United States Army Corps of Engineers

The "Assumed Waters Rule" went into effect on December 22, 2020. Under this rule, jurisdiction over traditional navigable waters, tidally influenced waters, certain other waters, and wetlands within 300 feet of these resources was "retained" by USACE. Jurisdiction over all other wetlands and surface waters was "assumed" by the FDEP under the State 404 Program. Based on Terracon's review of publicly available resources, one of the wetlands onsite appears to be within 300 feet of a waterbody in which jurisdiction was retained by USACE. Therefore, a 404 Permit application would ordinarily need to be submitted to USACE to address any impacts to jurisdictional features. However, on May 25, 2023 the U.S. Supreme Court issued its decision in *Sackett v. Environmental Protection Agency (EPA)*. Based on the ruling, WOTUS are limited to streams, rivers, lakes, oceans, relatively permanent water bodies that are connected to navigable waters that are navigable in fact, and wetlands that have a continuous surface connection with navigable waters; provided the relatively permanent water bodies and wetlands constitute WOTUS in their own right, and are "indistinguishable from" those waters. The EPA and USACE

will interpret the phrase "Waters of the United States" consistent with the Supreme Court's decision in Sackett. Following interpretation, the agencies will develop rules and guidance. Therefore, USACE jurisdiction over the wetlands and surface waters on the site will be determined once new agency guidance is provided; however, it is the opinion of Terracon that the supreme court decision implies the wetlands and surface waters on the site would not be considered WOTUS.

6.0 Functional Assessment

In accordance with Rule 62-345 FAC: UMAM, Terracon conducted a preliminary analysis to determine the functional value of wetlands onsite that were proposed to be impacted. The following table is a summary of the preliminary UMAM scores for the site.

Assessment Area	Type	Location & Landscape		Water Environment		Community Structure		Delta
		w/o	w	w/o	w	w/o	w	
Wetland 1	Direct	5	0	4	0	4	0	-0.43
Wetland 2	Direct	5	0	5	0	3	0	-0.43

Based on the UMAM analysis of the wetlands onsite, the functional value of Wetland 1 is estimated to be 0.43 and the functional loss for wetland 2 is estimated to be 0.43. Therefore, each acre of impact to Wetland 1 would require 0.43 credits, and each acre of impact to Wetland 2 would require 0.43 credits. If utilizing a mitigation bank is the preferred method of mitigation, then mitigation credits would need to be purchased from a mitigation bank located within the same cumulative impact basin to offset wetland impacts and yield "no net loss" of wetlands. Based on the location of the site, there are currently 2 wetland mitigation banks located within the same cumulative impact basin (Northern Indian River Lagoon) as the site – Green Wing and NeoVerde Mitigation Banks. Credits are currently \$320,000 per credit for dual credits. As such, if only a portion of the wetlands onsite are proposed for impact, the mitigation needed will likely cost \$136,000 per acre of wetland impact.

7.0 Conclusions and Recommendations

The site was investigated to identify the potential presence of wetlands and listed species on the site. Based on the results of our assessment, Terracon makes the following conclusions and recommendations:

- Based on the site visit, multiple jurisdictional wetlands and surface waters to the State have been identified on the site. Terracon recommends having the delineated wetland and surface water boundaries reviewed and approved by SJRWMD. The agency will review the wetland and surface water boundaries once an ERP application is submitted for stormwater/wetlands permit with SJRWMD or as part of a request for a formal wetland delineation determination with SJRWMD.

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- Based on recent actions by the supreme court, the jurisdictional reach of WOTUS has been reduced and the 404 program is pending guidance from the regulatory community regarding the implementation of the supreme court ruling in *Sackett v. US EPA*. It is the opinion of Terracon that the supreme court decision implies the wetlands and surface waters on the site would not be considered WOTUS.
- Because the installation of a dock is proposed as part of the project, coordination and permitting with FDEP SSL program would be required.
- Brevard County ERM may conduct a site visit to review the wetland delineation boundaries. Additional coordination with Brevard County ERM may be required as ERM may request to conduct a site visit to review the wetland delineation boundaries. However, it is not anticipated to require a separate permit and mitigation.

8.0 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, express or implied, regarding the findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third-party resources supplying information used in the preparation of the report. These services were performed in accordance with the scope of work agreed to by the client. Findings, conclusions, and recommendations resulting from these services are based upon information derived from the onsite activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of wetlands may have been latent, inaccessible, unobservable, or not present during our services.

9.0 User Reliance

This report is prepared for the exclusive use and reliance of MCRT Investments, LLC. Use or reliance by any other party is prohibited without the written authorization of MCRT Investments, LLC and Terracon Consultants, Inc. (Terracon). Reliance on this report by the client and all authorized parties will be subject to the terms, conditions and limitations stated in the proposal and Terracon's Agreement for Services. The limitation of liability defined in the Agreement for Services is the aggregate limit of Terracon's liability to the client and all relying parties.

10.0 Additional Considerations

It should be noted that development projects within the state of Florida typically involve additional natural resources considerations that are regulated by state, and federal agencies as well as local governments. Additionally, the project funding may constitute a federal nexus and be subject to regulation under the National Environmental Policy Act (NEPA); which requires additional consultation

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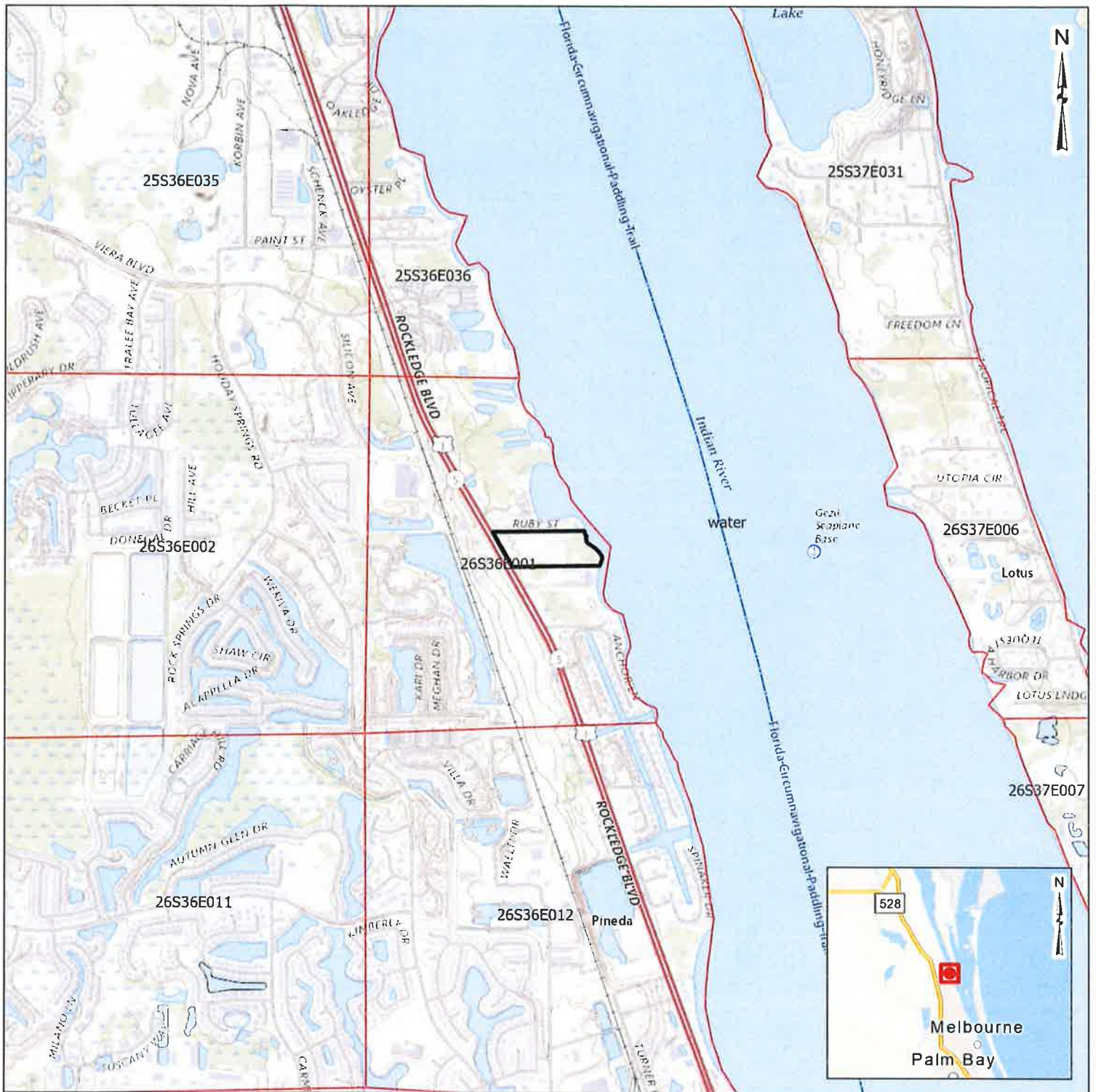
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efforts with federal agencies, native american tribes, and the general public. At the request of the client, Terracon can provide the following services:

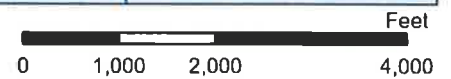
- Tree inventories/Health Assessments
- Tree Mitigation Plans and Permitting Assistance
- Desk-Based Assessment (DBA) for Archaeological and Historical Resources
- Cultural Resources Assessment Survey (CRAS)
- Historical Structure Assessments and National Register Nominations
- Cemetery Assessments and Rehabilitation
- NEPA Services
- Public Outreach
- Guidance on Environmental and Cultural Elements of Land Development Code (LDC)
- Land Use Feasibility Studies
- Wetland Mitigation Bank Siting, Permitting, and Monitoring
- Grant Management Services
- Commercial Dock Permitting/Compliance

Appendix A

Exhibits



- Project Boundary
- Public Land Survey System (TRS)



DATA SOURCES:
 USGS Topographic Survey, Cocoa Quadrangle, ESRI -
 USGS Topographic Basemap & World Navigation Map

Project No.:	H1237389
Date:	May 2023
Drawn By:	GRS
Reviewed By:	BH



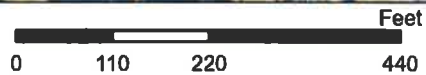
1675 Lee Road Winter Park, FL 32789
 PH. (407) 740-6110 terracon.com

Project Location
Wetland Delineation New Deal Viera Brevard County, Florida

Exhibit
1



 Project Boundary



DATA SOURCES:
 Brevard County - Parcels (2022); ESRI - World Imagery
 Hybrid Basemap & World Navigation Map

Project No.:
 H1237389
 Date:
 May 2023
 Drawn By:
 GRS
 Reviewed By:
 BH



1875 Lee Road Winter Park, FL 32789
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Aerial Photograph

Wetland Delineation
 New Deal Viera
 Brevard County, Florida

Exhibit

2

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Project Boundary

Soils

- 9, Canaveral-Anclote Complex, Gently Undulating
- 51, Pompano Sand
- 52, Quartzipsamments, Smoothed
- 53, Satellite Sand
- 100, Waters Of The Atlantic Ocean



DATA SOURCES
 USDA - NRCS Soils Survey of Seminole County, FL;
 ESRI - World Imagery Hybrid Basemap & World
 Navigation Map

Project No.:
H1237389

Date:
May 2023

Drawn By:
GRS

Reviewed By:
BH

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NRCS Soils

Wetland Delineation
 New Deal Viera
 Brevard County, Florida

Exhibit

3



Project Boundary

National Wetlands Inventory

- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland



DATA SOURCES:
 USFWS - National Wetlands Inventory (NWI), ESRI -
 World Imagery Basemap & World Navigation Map

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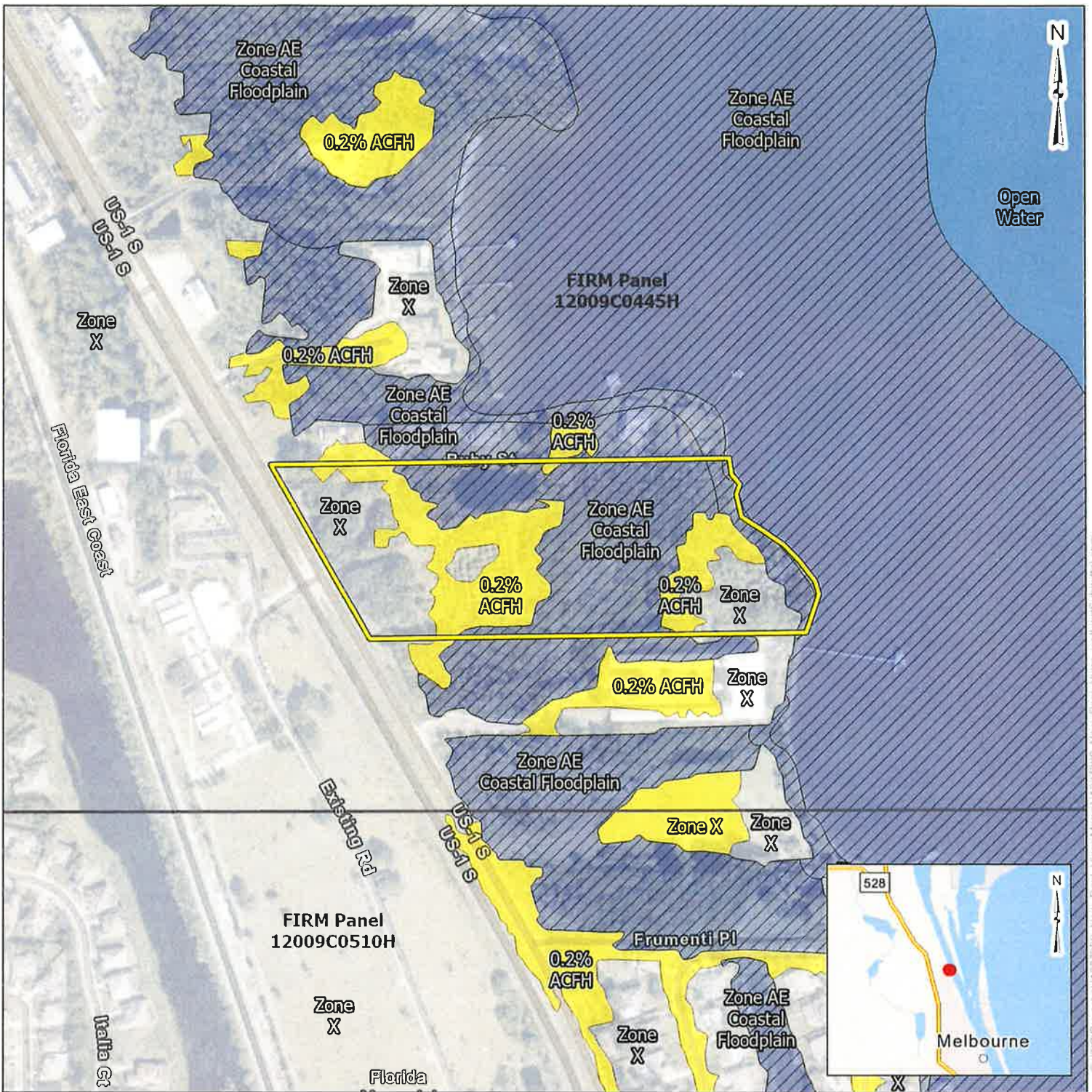
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National Wetlands Inventory

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Exhibit

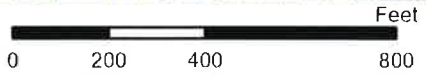
4



Project Boundary

FEMA Flood Hazard Zones

- Zone AE - Base Flood Elev. Determined
- Zone X - Outside 0.2% Annual Chance Floodplain
- Open Water
- 0.2 Pct Annual Chance Flood Hazard in Coastal Zone
- Coastal Floodplain



DATA SOURCES:
 FEMA - Flood Hazard Zones for Brevard County (Effective Date 7/13/2021); FIRM Panel - 12009C0445H; ESRI - World Imagery Basemap & World Navigation Map

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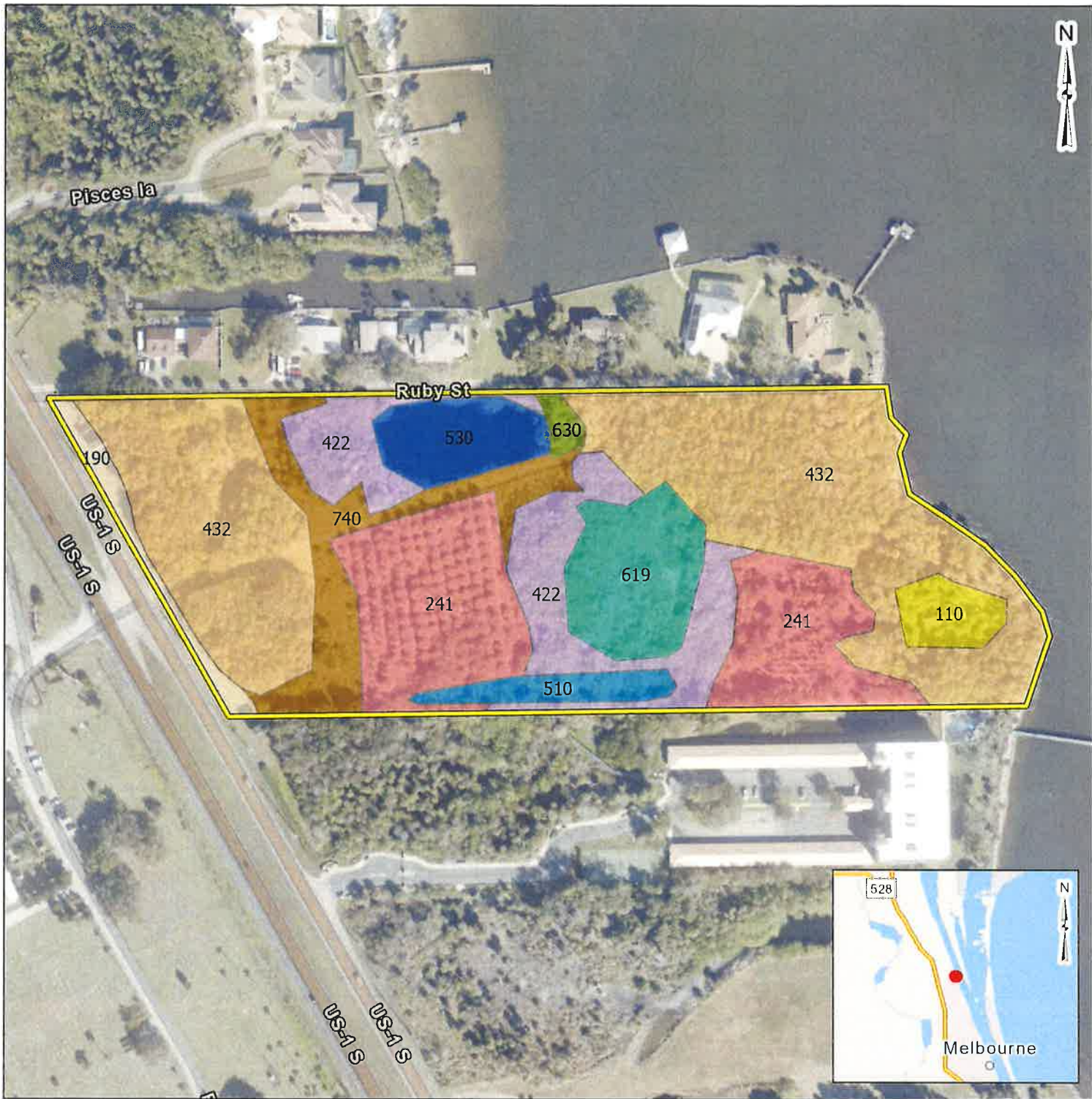
FEMA

Wetland Delineation
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 Brevard County, Florida

Exhibit

5


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- Project Boundary (14.99 ac.±)
- 110, Residential - Low Density (0.36 ac.±)
- 190, Open Land (0.35 ac.±)
- 241, Tree Nurseries (2.91 ac.±)
- 422, Brazilian Pepper (1.89 ac.±)
- 432, Sand Live Oak (6.05 ac.±)
- 510, Streams and Waterways (0.36 ac.±)
- 530, Reservoirs (0.68 ac.±)
- 619, Exotic Wetland Hardwoods (1.06 ac.±)
- 630, Wetland Forested Mixed (0.11 ac.±)
- 740, Disturbed Land (1.22 ac.±)

DATA SOURCES:
 Terracon - Wetland Delineation; Florida Land Use, Cover and Forms Classification System (FLUCFCS);
 ESRI - World Imagery Basemap & World Navigation Map

Project No.:
 H1237389
 Date:
 May 2023
 Drawn By:
 GRS
 Reviewed By:
 BH



1675 Lee Road Winter Park, FL 32789
 PH. (407) 740-6110 terracon.com

Existing Site Conditions

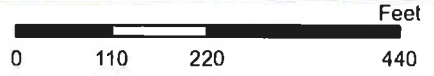
Wetland Delineation
 New Deal Viera
 Brevard County, Florida

Exhibit

6



- Project Boundary (14.99 ac.±)
- Flagged
- Wetlands (1.17 ac.±)
- Other Surface Water (0.36 ac.±)
- Unflagged
- Other Surface Water (0.68 ac.±)



DATA SOURCES:
 Terracon - Wetland Delineation; ESRI - World Imagery
 Basemap & World Navigation Map

Project No.:	H1237389
Date:	May 2023
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Approximate Wetlands

Wetland Delineation
 New Deal Viera
 Brevard County, Florida

Exhibit

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Appendix B

Photos



Photo #1 Surface Water 1



Photo #2 Surface Water 2



Photo #3 Wetland 1



Photo #4 Wetland 2



Photo #5 Wetland 2



Photo #6 Typical Wetland Soil Profile

Appendix C Resumes

Brennan Hagan

GROUP MANAGER

PROFESSIONAL EXPERIENCE

Mr. Hagan has 6.5 years of experience as an environmental professional, specializing in environmental permitting, wetland delineation, environmental planning, arboricultural services, and listed species services in Florida. His expertise includes wetland delineation, wetland permitting and compliance, design, implementation, and design of wetland mitigation plans, sovereign submerged land authorizations, hydrologic surveys, sand skink surveys, tree inventories, tree health/risk assessments, reviewing/interpreting municipal code, southeastern American kestrel survey, Audabon's crested caracara surveys, Florida burrowing owl survey/relocations, and gopher tortoise surveys/relocations. In addition, Mr. Hagan has experience conducting Phase 1 site visits and writing Phase 1 reports per the ASTM standards. Experience also includes coordination with Florida Fish and Wildlife Conservation Commission (FWC), the Florida Department of Environmental Protection (FDEP), Orange County Environmental Protection Division (OCEPD), Hillsborough County Environmental Protection Commission (EPC) and all Water Management Districts (WMD) across the state.

PROJECT EXPERIENCE

Bass Pro Okeechobee Fishing Resort – Wetland Permitting & Crested Caracara Survey

Assisted in obtaining a formal wetland determination with SFWMD associated with this site. In addition, was the primary observer on the crested caracara survey from January 2023 – April 2023.

South Fork High School – Natural Resources Assessment, Wetland Permitting & Conservation Easement Amendment

Project Manager for this multi-phase project in coordination with Martin County School Board. The first phase of this project included listed species assessment and wetland delineation. The second phase involved amending the existing conservation easement onsite. Efforts included initial wetland evaluation bases on a UMAM analysis, creating a mitigation plan & monitoring plan, facilitate agency field visits, and prepare project documents for submittal to SFWMD.

Tampa VA Regional – Natural Resources Assessment & Wetland Permitting

Project Manager for this two-phase project located in Tampa, Florida. The first phase of the project included a listed species assessment and wetland delineation. the second phase of the project included permitting efforts with Hillsborough County EPC, SWFWMD, and FDEP. Efforts included pre-application meetings, application preparation, document submittals, and facilitating agency field visits.

Duke Energy Falmouth – Southeastern American Kestrel Survey

The lead project scientist on a southeastern American kestrel survey on over 500 acres in panhandle Florida. Created the survey design, managed a project team to execute the survey, prepared the assessment report, and facilitated the permitting phase of the project.



EDUCATION

Bachelor of Science,
Interdisciplinary Studies –
Environmental Science
University of Central Florida, 2018

Masters of Science, Urban &
Regional Planning, University of
Central Florida, 2021

Graduate Certificate, Emergency
Management & Homeland
Security, University of Central
Florida, 2021

YEARS WITH TERRACON: 2
YEARS WITH REGULATORY
AGENCIES: 5

CERTIFICATIONS

Wildland Firefighter

Florida Stormwater, Erosion, and
Sediment Control Inspector, Tier II

Professional Wetland Scientist
(PWS)

Authorized Gopher Tortoise Agent

ADDITIONAL TRAINING

40 hours of Advanced Wetland
Delineation Training by FDEP
delineation team.

40-hour Hazardous Waste
Operations and Emergency
Response Certification

AFFILIATIONS

Society of Wetland Scientists

Urban Knights (UCF)

Central Florida Association of
Environmental Professionals

** Work performed prior to joining
Terracon.*

Brennan Hagan (continued)

Duke Energy – Hildreth Solar Gopher Tortoise Relocation

Authorized Gopher Tortoise Agent responsible for surveys, bucket trapping, and relocation activities. Lead agent onsite for multiple relocation efforts managing a team of eight people and three backhoe operators.

Advent Health – City of Orlando Environmental Assessment / Parcel Annex

Project Manager for this environmental assessment for a City of Orlando parcel annexation. The scope of services included wetland delineation, wetland functional assessment, Q-Wet Ranking score, and a listed species assessment. In addition, the project included the annexation requirements set forth within the City of Orlando Code of Ordinance.

Orange County Public Schools – Continuing Contract

Staff Scientist for this continuing environmental consulting services contract with Orange County Public Schools. The scope of services include sand skink surveys, burrowing owl surveys, consultation with USFWS, gopher tortoise burrow surveys and permitting, wetland delineations and permitting, and consultation with the Orange County Environmental Protection Division, FWC, and USFWS.

Lake Placid Solar – Listed Species Surveys

Staff Scientist on this solar farm project in Highlands County. Conducted American Kestrel surveys along with multiple other different listed species including Scrub Jay, Gopher Tortoise, Sand Skinks, and Crested Caracara.

Palm City Elementary School – Wetland Permitting

Project manager for this wetland permitting contract. The scope of work includes a wetland delineation report and permitting, gopher tortoise burrow surveys. Additional efforts included pre-application meetings, application preparation, document submittals, and facilitating agency field visits with SFWMD.

Shingle Creek Regional Trail – Application Processor*

The lead environmental analyst at SFWMD on this multi-county regional recreation trail. This project consisted of multiple field reviews and planning around large wetland systems such as Shingle Creek and Lake Tohopekaliga. Worked in consultation with multiple consulting firms, Orange County, Osceola County, City of Kissimmee, and the City of Orlando.

ADDITIONAL EXPERIENCE

Land Management Reviews (LMRs)

Participated in land management reviews of Florida State Parks including Tiger Bay State Park, Blue Springs State Park, and Hontoon Island State Park. FDEP participated to review how the State Park was being ecologically managed and offered input on practices that we working or not.

Central Florida Water Initiative

Conducted vegetative and hydrologic surveys at various management areas around Central Florida. These surveys required coordination between SFWMD, SWFWMD, and SJRWMD.

Prescribed Fire

Participated in multiple controlled burns on SFWMD property.

Phase 1 Reports/Site Visits

Conducts Phase 1 site visits and prepares reports per the ASTM standards.

Tree Inventory and Health Assessments

Brian P. Brandon, PWS

Environmental Department Manager III

PROFESSIONAL EXPERIENCE

Mr. Brandon's experience includes serving in leadership roles at consulting firms in Florida for the past decade, having expert level experience in wetland delineation, wetland permitting and compliance, wetland functional assessment/mitigation plans, wetland monitoring, habitat assessments, habitat conservation plans, floral/vegetation surveys, threatened and endangered species surveys, migratory bird evaluations, wildlife monitoring, creation and maintenance of avian protection programs, tribal and agency consultation pursuant to the National Environmental Policy Act (NEPA), Phase I Environmental Site Assessments (ESA), Asbestos sampling, Lead-based Paint sampling, and other environmental assessment and monitoring techniques. His experience also includes coordination with the United States Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FWC), Federal Communications Commission (FCC), various state and tribal historic preservation offices (HPOs), the Florida Department of Environmental Protection (FDEP), United States Army Corps of Engineers (USACE), all 5 Florida Water Management Districts, and dozens of county and municipal representatives for various permitting and compliance projects.

PROJECT EXPERIENCE

Durando Yeehaw Ranch – Yeehaw Junction, Florida

Senior Staff Scientist and Project Manager for land analysis that includes demography of saw palmetto stands, agricultural soil analysis, and land use analysis to determine the correlation between palmetto densities and productivity and available soil nutrients on site. The 12,000-acre project site was proposed to be utilized for saw palmetto propagation and harvesting.

Placid Solar Projects – Highlands County

Senior Staff Scientist and Project Manager for a proposed 2,000 acre solar farm. Scope of services includes wetland delineation and permitting assistance, gopher tortoise and burrowing owl surveys, formal surveys for crested caracara, Florida scrub-jay, Florida bonneted bat, sand skinks and blue-tailed mole skinks, Southeastern American kestrel, and agency consultation.

Endangered Plant Surveys – Lake County Florida

Conducted surveys for the federally endangered Lewton's polygala and clasping warea on an outparcel owned by Seminole State Forest. Surveys were conducted in pre-established plots. The target species were identified, and the growth status was recorded. All collected data was used to monitor yearly population growth, correlate impacts of prescribed fire, and determine if detrimental effects from invasive herbs affected rare plant species population. Work was conducted as a volunteer for the Florida Forest Service.

Endangered Plant Surveys – Polk County, Florida

Conducted demography survey on the state endangered blushing scrub balm at a confidential site in Polk County, Florida. Surveys consisted of measuring



EDUCATION

Bachelor of Science, Biology
University of Central Florida, 2012

Graduate Certificate, Wetlands
and Water Resource Management,
University of Florida 2020

YEARS WITH TERRACON: 4
YEARS WITH OTHER FIRMS: 6

CERTIFICATIONS

Professional Wetland Scientist
(PWS) No. 3405

FWC Authorized Gopher Tortoise
Agent No. GTA-14-00004D

FWC Burrowing Owl Authorized
Agent No. RAG-21-00005

Certified Florida Master Naturalist

PROFESSIONAL TRAINING

38-Hour USACE Wetland
Delineation Training

AFFILIATIONS

Florida Native Plant Society –
Tarflower Chapter

National Association of
Environmental Professionals

Ecological Society of America

National Audubon Society

Florida Association of
Environmental Soil Scientists

Society of Wetland Scientists



and recording plant height and width, and counting stems, flowers, and seeds. The data was used to determine germination rates in response to the prescribed fire regiment of the area.

Grand Medina Resort (Everest Place) – Osceola County, Florida

Project Manager and Senior Ecologist for conducting annual wetland monitoring for Consumptive Use Permit with the City of Apopka. The scope of work included bringing the CUP permit into compliance by conducting wetland monitoring for a two-year period; collecting GPS data of water elevations at four lakes, analyzing vegetative cover, and making a correlation between annual rainfall data, piezometer data, and visual observations to determine if groundwater drawdown is occurring as the result of the City's water usage.

ADDITIONAL EXPERIENCE

Biological Assessments - Alabama, Florida, Georgia, North Carolina, South Carolina*

Project Manager and Lead Biologist. Analyzed habitat structure and performed surveys to determine anticipated impacts to threatened and endangered species and species of special concern pursuant to Section 7 of the Endangered Species Act. Species-specific surveys include gopher tortoise, migratory bird evaluations, bats, red cockaded woodpeckers, Florida scrub-jays, and various vegetation surveys. Consulted with lead agency for determinations of "no adverse effect" findings and coordinated permitting when necessary.

Wetland Delineations –Florida, Georgia, Maryland*

Project Manager and Lead Wetland Scientist. Determined the landward extent of wetlands and other surface waters in accordance with Florida Administrative Code 62-340 and the Army Corps of Engineers wetland delineation methodology. Delineated wetland boundaries and coordinated Environmental Resource Permits (ERP's), Nationwide Permits, and Individual Permits with the FDEP, USACE, and all Water Management Districts.

Migratory Bird Evaluations and Avian Protection Programs – Nationwide*

Director of Migratory Bird Services. Managed and directed a team of scientists to conduct evaluations/formal surveys of Osprey, Bald Eagle, Red-tailed Hawk, Great Horned Owl, Crested Caracara, Crows, Ravens, Eastern Kingbirds, and other migratory birds for compliance with the Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act, and Endangered Species Act. Determined nest status and facilitated permit actions. Created and maintained Avian Protection Programs for various national clientele.