



This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): September 10, 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: SAJ-2017-02584-CSH (POLK COUNTY LAND PARTNERS, LLC / BELLAVIVA / POLK)

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State:FL County/parish/borough: Polk City: Haines City
Center coordinates of site (lat/long in degree decimal format): Lat. 28.076474° N, Long. -81.641312° W
Universal Transverse Mercator:

Name of nearest waterbody: Little Lake Hamilton

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Hamilton

Name of watershed or Hydrologic Unit Code (HUC): 031001010201 Lake Hamilton; 03100101 Peace River

[X] Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

[ ] Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

[X] Office (Desk) Determination. Date: September 10, 2018

[X] Field Determination. Date(s): September 4, 2018

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There appear to be "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

[ ] Waters subject to the ebb and flow of the tide.

[X] Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain: Historical connection between Lake Tracy and Lake Hamilton allowing vessels engaged in interstate commerce to transit this canal. Little Lake Hamilton is navigable-in-fact. Note, navigable connection from Lake Hamilton has been severed by water management structures.

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are and are not "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply): 1

- [X] TNWs, including territorial seas
[X] Wetlands adjacent to TNWs
[ ] Relatively permanent waters2 (RPWs) that flow directly or indirectly into TNWs
[ ] Non-RPWs that flow directly or indirectly into TNWs
[ ] Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
[ ] Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
[ ] Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
[ ] Impoundments of jurisdictional waters
[X] Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: 2,325 linear feet: 60 width (ft) and/or acres.

Wetlands: 31.74 acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual

Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):3

[X] Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain: The Corps reviewed historic aerials from 1941, 1953, 1957 and 1968, and performed a field inspection in September 2018, and made the following determinations of non-jurisdiction:

1 Boxes checked below shall be supported by completing the appropriate sections in Section III below.

2 For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

3 Supporting documentation is presented in Section III.F.

- 1.) The Corps determined one wetland on-site is isolated and non-jurisdictional. This wetland (Wetland 3 - 1.12 ac) has no apparent hydrologic connection with jurisdictional tributaries. The site has been extensively cultivated for agriculture over the past 80 years or longer.**
  
- 2) SW 1 (5.08 ac) appears to have been excavated from uplands, based on the historic aerials. This wetland is considered non-jurisdictional based on the preamble to 33 CFR Part 328 in the November 13, 1986, Federal Register (51 FR 41217, Section 328.3)..**

### SECTION III: CWA ANALYSIS

#### A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

##### 1. TNW

Identify TNW: **Lake Tracy Canal and Little Lake Hamilton.**

Summarize rationale supporting determination: Historical connection between Lake Tracy and Lake Hamilton allowing vessels engaged in interstate commerce to transit this canal. Little Lake Hamilton is navigable-in-fact..

##### 2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”: There are wetlands that directly border the Lake Tracy Canal and also Little Lake Hamilton..

#### B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody<sup>4</sup> is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

##### 1. Characteristics of non-TNWs that flow directly or indirectly into TNW

###### (i) General Area Conditions:

Watershed size: **acres**

Drainage area: **acres**

Average annual rainfall: 56 inches

Average annual snowfall: 0 inches

###### (ii) Physical Characteristics:

###### (a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.

Project waters are **Pick List** river miles from RPW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Project waters are **Pick List** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: .

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<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW<sup>5</sup>:  
Tributary stream order, if known:

(b) General Tributary Characteristics (check all that apply):

**Tributary is:**  Natural  
 Artificial (man-made). Explain:  
 Manipulated (man-altered). Explain:

**Tributary properties with respect to top of bank (estimate):**

Average width: feet  
Average depth: feet  
Average side slopes: **Pick List**.

**Primary tributary substrate composition (check all that apply):**

Silts  Sands  Concrete  
 Cobbles  Gravel  Muck  
 Bedrock  Vegetation. Type/% cover:  
 Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Ditches were excavated before the 1940s through the 1960s with apparently little maintenance since then. The resultant spoil formed berms on either side of the ditches. The banks are relatively stable..

Presence of run/riffle/pool complexes. Explain: None.

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime:

Other information on duration and volume:

Surface flow is: **Pick List**. Characteristics:

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks  
 OHWM<sup>6</sup> (check all indicators that apply):  
 clear, natural line impressed on the bank  the presence of litter and debris  
 changes in the character of soil  destruction of terrestrial vegetation  
 shelving  the presence of wrack line  
 vegetation matted down, bent, or absent  sediment sorting  
 leaf litter disturbed or washed away  scour  
 sediment deposition  multiple observed or predicted flow events  
 water staining  abrupt change in plant community  
 other (list):  
 Discontinuous OHWM.<sup>7</sup> Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

High Tide Line indicated by:  Mean High Water Mark indicated by:  
 oil or scum line along shore objects  survey to available datum;  
 fine shell or debris deposits (foreshore)  physical markings;  
 physical markings/characteristics  vegetation lines/changes in vegetation types.  
 tidal gauges  
 other (list):

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).  
Explain:

<sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

<sup>6</sup> A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

<sup>7</sup>Ibid.

Identify specific pollutants, if known: .

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics: Adjacent wetlands are forested or emergent systems.
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain:

Surface flow is: **Pick List**

Characteristics:

Subsurface flow: **Pick List**. Explain findings:

- Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)      Size (in acres)      Directly abuts? (Y/N)      Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

### C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

**Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:**

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

### D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- TNWs: 2,325 linear feet 60 width (ft), Or,      acres.
- Wetlands adjacent to TNWs: 30.62 acres.

2. **RPWs that flow directly or indirectly into TNWs.**

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
- Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).  
 Other non-wetland waters: acres.  
Identify type(s) of waters: .

**3. Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).  
 Other non-wetland waters: acres.  
Identify type(s) of waters: .

**4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.  
 Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .  
 Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

**5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

**6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

**7. Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from "waters of the U.S.," or  
 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or  
 Demonstrate that water is isolated with a nexus to commerce (see E below).

**E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):<sup>10</sup>**

- which are or could be used by interstate or foreign travelers for recreational or other purposes.  
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.  
 which are or could be used for industrial purposes by industries in interstate commerce.  
 Interstate isolated waters. Explain: Wetland 3 is a isolated pond/wetland that has no surface water connection.  
 Other factors. Explain: .

**Identify water body and summarize rationale supporting determination:** .

<sup>8</sup>See Footnote # 3.

<sup>9</sup>To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup>Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
- Identify type(s) of waters: .
- Wetlands: 1.12 acres.

**F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):**

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- Other: (explain, if not covered above): **5.08 acre Upland dug borrow pit.**

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: Wetland 3 - 1.12 acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

**SECTION IV: DATA SOURCES.**

**A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):**

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Modica & Associates.
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - Office concurs with data sheets/delineation report.
  - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000; Winter Haven, FL.
- USDA Natural Resources Conservation Service Soil Survey. Citation: Florida Soils Map digital data from the Natural Resources Conservation Service. Date (September 10, 2018). Web Soil Survey website. U.S. Department of Agriculture, Natural Resources Conservation Service, Washington, D.C.
- National wetlands inventory map(s). Cite name: Wetland digital data from U. S. Fish and Wildlife Service. Date (September 10, 2018). National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps:
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): 1941, 1953, 1957, 1968, 1994-2018.
  - or  Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

**B. ADDITIONAL COMMENTS TO SUPPORT JD:** The determination of USACE jurisdiction for Surface Water 1 on the subject site was based on guidance regarding the Corp's the intended exclusion of certain waters by the USACE as being classified as "Waters of the United States (WOTUS)" referenced in the Corps 1986 preamble [51 FR 41250, Nov. 13, 1986, as amended at 58 FR 45036, Aug. 25, 1993]. Specifically, based on the preamble language under 33 CFR § 328.3 (b)(4)(ii) as it applies to this application, WOTUS should generally not include the following waters present on the project site:

- Section 328.3 (b)(4)(ii) "Artificial, constructed lakes and ponds created in dry land such as farm and stock watering ponds, irrigation ponds, settling basins, fields flooded for rice growing, log cleaning ponds, or cooling ponds".

**WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region**

Project/Site: Bellaviva City/County: Polk Sampling Date: 25-Jul-17  
 Applicant/Owner: Polk County Land Partners LLC State: FL Sampling Point: Surface Water 1  
 Investigator(s): James Modica IV Section, Township, Range: S 5 T 28S R 27E  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope: 0.0 % / 0.0 °  
 Subregion (LRR or MLRA): LRR U Lat.: 28.073823 Long.: -81.643624 Datum: \_\_\_\_\_  
 Soil Map Unit Name: 58-Udorthefts Excavated NWI classification: \_\_\_\_\_

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  , Soil  , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  , Soil  , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	

Remarks:  
 This is a manmade surface water created when FDOT excavated an upland for road construction fill.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		Secondary Indicators (minimum of 2 required)	
Primary Indicators (minimum of one required; check all that apply)			
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
		<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	

<b>Field Observations:</b>		Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
Surface Water Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches): <u>2</u>	
Water Table Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches): _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 Portions of area exhibit standing water.

**VEGETATION (Five/Four Strata) - Use scientific names of plants.**

Sampling Point: Surface Water 1

Tree Stratum	(Plot size: <u>10 m</u> )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Sapling or Sapling/Shrub Stratum	(Plot size: _____ )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Shrub Stratum	(Plot size: <u>.5 m</u> )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Herb Stratum	(Plot size: <u>1 m</u> )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Eleocharis baldwinii</u>	30	<input checked="" type="checkbox"/> 46.2%	OBL
2.	<u>Juncus effusus</u>	20	<input checked="" type="checkbox"/> 30.8%	OBL
3.	<u>Hydrocotyle umbellata</u>	15	<input checked="" type="checkbox"/> 23.1%	OBL
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
9.		0	<input type="checkbox"/> 0.0%	
10.		0	<input type="checkbox"/> 0.0%	
11.		0	<input type="checkbox"/> 0.0%	
12.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>32.5</u> 20% of Total Cover: <u>13</u>		65	<b>= Total Cover</b>	

Woody Vine Stratum	(Plot size: _____ )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	<u>65</u>	x 1 = <u>65</u>
FACW species	<u>0</u>	x 2 = <u>0</u>
FAC species	<u>0</u>	x 3 = <u>0</u>
FACU species	<u>0</u>	x 4 = <u>0</u>
UPL species	<u>0</u>	x 5 = <u>0</u>
Column Totals:	<u>65</u> (A)	<u>65</u> (B)
Prevalence Index = B/A =		<u>1.000</u>

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is > 50%
  - 3 - Prevalence Index is ≤ 3.0<sup>1</sup>
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definition of Vegetation Strata:**

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (If observed, list morphological adaptations below).

\*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

**SOIL**

Sampling Point: Surface Water 1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR	2/1						
4-12	10YR	5/1						

<sup>1</sup>Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains    <sup>2</sup>Location: PL=Pore Lining. M=Matrix

<p><b>Hydric Soil Indicators:</b></p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input checked="" type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Muck Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Marl (F10) (LRR U)</p> <p><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</p> <p><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</p> <p><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</p>	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?**    Yes     No

Remarks:

Plot ID: **Surface Water 1**

Photo Path: M:\OTHER COUNTIES\POLK COUNTY\Bellaviva\Site Photos\07-2



Photo File: **IMG\_3797.JPG** Orientation: -facing

Lat/Long or UTM : Long/Easting: **-81.643624** Lat/Northing: **28.073823**

Description:



Photo File: **IMG\_3798.JPG** Orientation: South -facing

Lat/Long or UTM: Long/Easting: **0** Lat/Northing: **0**

Description:

**WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region**

**Project/Site:** Bellaviva **City/County:** Polk **Sampling Date:** 25-Jul-17

**Applicant/Owner:** Polk County Land Partners LLC **State:** FL **Sampling Point:** Surface Water 2

**Investigator(s):** James Modica IV **Section, Township, Range:** S 5 T 28S R 27E

**Landform (hillslope, terrace, etc.):** \_\_\_\_\_ **Local relief (concave, convex, none):** \_\_\_\_\_ **Slope:** 0.0 % / 0.0 °

**Subregion (LRR or MLRA):** LRR U **Lat.:** 28.072533 **Long.:** -81.64383 **Datum:** \_\_\_\_\_

**Soil Map Unit Name:** \_\_\_\_\_ **NWI classification:** \_\_\_\_\_

**Are climatic/hydrologic conditions on the site typical for this time of year?** Yes  No  (If no, explain in Remarks.)

**Are Vegetation**  , **Soil**  , **or Hydrology**  **significantly disturbed?** **Are "Normal Circumstances" present?** Yes  No

**Are Vegetation**  , **Soil**  , **or Hydrology**  **naturally problematic?** (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
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Remarks:

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	Secondary Indicators (minimum of 2 required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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<b>Field Observations:</b> Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION (Five/Four Strata) - Use scientific names of plants.**

Sampling Point: Surface Water 2

Tree Stratum (Plot size: <u>10 m</u> )		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Acer rubrum</u>	40	<input checked="" type="checkbox"/> 100.0%	FAC
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>20</u> 20% of Total Cover: <u>8</u>		40	<b>= Total Cover</b>	

Sapling or Sapling/Shrub Stratum (Plot size: _____ )		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Shrub Stratum (Plot size: <u>5 m</u> )		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Ludwigia peruviana</u>	50	<input checked="" type="checkbox"/> 83.3%	OBL
2.	<u>Acer rubrum</u>	10	<input type="checkbox"/> 16.7%	FAC
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>30</u> 20% of Total Cover: <u>12</u>		60	<b>= Total Cover</b>	

Herb Stratum (Plot size: _____ )		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Urochloa mutica</u>	20	<input checked="" type="checkbox"/> 100.0%	FACW
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
9.		0	<input type="checkbox"/> 0.0%	
10.		0	<input type="checkbox"/> 0.0%	
11.		0	<input type="checkbox"/> 0.0%	
12.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>10</u> 20% of Total Cover: <u>4</u>		20	<b>= Total Cover</b>	

Woody Vine Stratum (Plot size: _____ )		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	<u>50</u>	x 1 = <u>50</u>
FACW species	<u>20</u>	x 2 = <u>40</u>
FAC species	<u>50</u>	x 3 = <u>150</u>
FACU species	<u>0</u>	x 4 = <u>0</u>
UPL species	<u>0</u>	x 5 = <u>0</u>
Column Totals:	<u>120</u> (A)	<u>240</u> (B)
Prevalence Index = B/A =		<u>2.000</u>

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is > 50%
  - 3 - Prevalence Index is ≤ 3.0<sup>1</sup>
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definition of Vegetation Strata:**

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (If observed, list morphological adaptations below).

\*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

**SOIL**

Sampling Point: Surface Water 2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR	2/1						
4-12	10YR	5/1						

<sup>1</sup>Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains <sup>2</sup>Location: PL=Pore Lining. M=Matrix

<p><b>Hydric Soil Indicators:</b></p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) <input checked="" type="checkbox"/> Muck Presence (A8) (LRR U) <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR O, S) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR U) <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?**    Yes     No

Remarks:

Plot ID: **Surface Water 2**

Photo Path: M:\OTHER COUNTIES\POLK COUNTY\Bellaviva\Site Photos\07-2



Photo File: **IMG\_3816.JPG** Orientation: -facing

Lat/Long or UTM : Long/Easting: **-81.64383** Lat/Northing: **28.072533**

Description:



Photo File: **IMG\_3818.JPG** Orientation: South -facing

Lat/Long or UTM: Long/Easting: **0** Lat/Northing: **0**

Description:

**WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region**

**Project/Site:** Bellaviva **City/County:** Polk **Sampling Date:** 25-Jul-17  
**Applicant/Owner:** Polk County Land Partners LLC **State:** FL **Sampling Point:** Upland 1  
**Investigator(s):** James Modica IV **Section, Township, Range:** S 5 T 28S R 27E  
**Landform (hillslope, terrace, etc.):** Flat **Local relief (concave, convex, none):** flat **Slope:** 0.0 % / 0.0 °  
**Subregion (LRR or MLRA):** LRR U **Lat.:** 28.075318 **Long.:** -81.642604 **Datum:** \_\_\_\_\_  
**Soil Map Unit Name:** 17- Smyrna and Myakka Fine Sands **NWI classification:** N/A

**Are climatic/hydrologic conditions on the site typical for this time of year?** Yes  No  (If no, explain in Remarks.)  
**Are Vegetation**  , **Soil**  , **or Hydrology**  **significantly disturbed?** **Are "Normal Circumstances" present?** Yes  No   
**Are Vegetation**  , **Soil**  , **or Hydrology**  **naturally problematic?** (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	

**Remarks:**  
 Improved pasture dominated by a bahiagrass (Paspalum notatum) monoculture.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of 2 required)</b>	
<b>Primary Indicators (minimum of one required; check all that apply)</b>			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> FAC-Neutral Test (D5)	
		<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	

<b>Field Observations:</b>		<b>Wetland Hydrology Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	
Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

**VEGETATION (Five/Four Strata) - Use scientific names of plants.**

Sampling Point: Upland 1

Tree Stratum	(Plot size: _____ )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	_____	0	<input type="checkbox"/> 0.0%	_____
2.	_____	0	<input type="checkbox"/> 0.0%	_____
3.	_____	0	<input type="checkbox"/> 0.0%	_____
4.	_____	0	<input type="checkbox"/> 0.0%	_____
5.	_____	0	<input type="checkbox"/> 0.0%	_____
6.	_____	0	<input type="checkbox"/> 0.0%	_____
7.	_____	0	<input type="checkbox"/> 0.0%	_____
8.	_____	0	<input type="checkbox"/> 0.0%	_____
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Sapling or Sapling/Shrub Stratum	(Plot size: _____ )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	_____	0	<input type="checkbox"/> 0.0%	_____
2.	_____	0	<input type="checkbox"/> 0.0%	_____
3.	_____	0	<input type="checkbox"/> 0.0%	_____
4.	_____	0	<input type="checkbox"/> 0.0%	_____
5.	_____	0	<input type="checkbox"/> 0.0%	_____
6.	_____	0	<input type="checkbox"/> 0.0%	_____
7.	_____	0	<input type="checkbox"/> 0.0%	_____
8.	_____	0	<input type="checkbox"/> 0.0%	_____
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Shrub Stratum	(Plot size: _____ )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	_____	0	<input type="checkbox"/> 0.0%	_____
2.	_____	0	<input type="checkbox"/> 0.0%	_____
3.	_____	0	<input type="checkbox"/> 0.0%	_____
4.	_____	0	<input type="checkbox"/> 0.0%	_____
5.	_____	0	<input type="checkbox"/> 0.0%	_____
6.	_____	0	<input type="checkbox"/> 0.0%	_____
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Herb Stratum	(Plot size: _____ )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Paspalum notatum</u>	100	<input checked="" type="checkbox"/> 100.0%	FACU
2.	_____	0	<input type="checkbox"/> 0.0%	_____
3.	_____	0	<input type="checkbox"/> 0.0%	_____
4.	_____	0	<input type="checkbox"/> 0.0%	_____
5.	_____	0	<input type="checkbox"/> 0.0%	_____
6.	_____	0	<input type="checkbox"/> 0.0%	_____
7.	_____	0	<input type="checkbox"/> 0.0%	_____
8.	_____	0	<input type="checkbox"/> 0.0%	_____
9.	_____	0	<input type="checkbox"/> 0.0%	_____
10.	_____	0	<input type="checkbox"/> 0.0%	_____
11.	_____	0	<input type="checkbox"/> 0.0%	_____
12.	_____	0	<input type="checkbox"/> 0.0%	_____
50% of Total Cover: <u>50</u> 20% of Total Cover: <u>20</u>		100	<b>= Total Cover</b>	

Woody Vine Stratum	(Plot size: _____ )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	_____	0	<input type="checkbox"/> 0.0%	_____
2.	_____	0	<input type="checkbox"/> 0.0%	_____
3.	_____	0	<input type="checkbox"/> 0.0%	_____
4.	_____	0	<input type="checkbox"/> 0.0%	_____
5.	_____	0	<input type="checkbox"/> 0.0%	_____
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	<u>0</u>	x 1 = <u>0</u>
FACW species	<u>0</u>	x 2 = <u>0</u>
FAC species	<u>0</u>	x 3 = <u>0</u>
FACU species	<u>100</u>	x 4 = <u>400</u>
UPL species	<u>0</u>	x 5 = <u>0</u>
Column Totals:	<u>100</u> (A)	<u>400</u> (B)
Prevalence Index = B/A =		<u>4.000</u>

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is > 50%
  - 3 - Prevalence Index is ≤ 3.0<sup>1</sup>
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definition of Vegetation Strata:**

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (If observed, list morphological adaptations below).  
bahiagrass monoculture

\*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.



Plot ID: **Upland 1**

Photo Path: M:\OTHER COUNTIES\POLK COUNTY\Bellaviva\Site Photos\07-2



Photo File: **IMG\_3779.JPG** Orientation: North -facing

Lat/Long or UTM : Long/Easting: **-81.642604** Lat/Northing: **28.075318**

Description:



Photo File: **IMG\_3780.JPG** Orientation: -facing

Lat/Long or UTM: Long/Easting: **0** Lat/Northing: **0**

Description:

**WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region**

**Project/Site:** Bellaviva **City/County:** Polk **Sampling Date:** 25-Jul-17

**Applicant/Owner:** Polk County Land Partners LLC **State:** FL **Sampling Point:** Upland 2

**Investigator(s):** James Modica IV **Section, Township, Range:** S 5 T 28S R 27E

**Landform (hillslope, terrace, etc.):** \_\_\_\_\_ **Local relief (concave, convex, none):** \_\_\_\_\_ **Slope:** 0.0 % / 0.0 °

**Subregion (LRR or MLRA):** LRR U **Lat.:** 28.075316 **Long.:** -81.638898 **Datum:** \_\_\_\_\_

**Soil Map Unit Name:** 17- Smyrna and Myakka Fine Sands **NWI classification:** \_\_\_\_\_

**Are climatic/hydrologic conditions on the site typical for this time of year?** Yes  No  (If no, explain in Remarks.)

**Are Vegetation**  , **Soil**  , **or Hydrology**  **significantly disturbed?** **Are "Normal Circumstances" present?** Yes  No

**Are Vegetation**  , **Soil**  , **or Hydrology**  **naturally problematic?** (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
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Remarks:

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of 2 required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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<b>Field Observations:</b> Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION (Five/Four Strata) - Use scientific names of plants.**

Sampling Point: Upland 2

Tree Stratum (Plot size: <u>10 m</u> )		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Quercus virginiana</u>	20	<input checked="" type="checkbox"/> 100.0%	FACU
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>10</u> 20% of Total Cover: <u>4</u>		20	<b>= Total Cover</b>	

Sapling or Sapling/Shrub Stratum (Plot size: _____ )		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Shrub Stratum (Plot size: <u>5 m</u> )		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Herb Stratum (Plot size: <u>1 m</u> )		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Megathyrus maximus</u>	60	<input checked="" type="checkbox"/> 100.0%	FAC
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
9.		0	<input type="checkbox"/> 0.0%	
10.		0	<input type="checkbox"/> 0.0%	
11.		0	<input type="checkbox"/> 0.0%	
12.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>30</u> 20% of Total Cover: <u>12</u>		60	<b>= Total Cover</b>	

Woody Vine Stratum (Plot size: _____ )		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>60</u>	x 3 =	<u>180</u>
FACU species <u>20</u>	x 4 =	<u>80</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>80</u> (A)		<u>260</u> (B)
Prevalence Index = B/A =		<u>3.250</u>

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is > 50%
  - 3 - Prevalence Index is ≤ 3.0<sup>1</sup>
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definition of Vegetation Strata:**

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (If observed, list morphological adaptations below).

\*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

**SOIL**

Sampling Point: Upland 2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-1	10YR	6/1						
1-12	10YR	4/1						

<sup>1</sup>Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains <sup>2</sup>Location: PL=Pore Lining. M=Matrix

<p><b>Hydric Soil Indicators:</b></p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) <input type="checkbox"/> Muck Presence (A8) (LRR U) <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR O, S) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR U) <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?**    Yes     No

Remarks:



Photo File: **IMG\_3763.JPG** Orientation: -facing

Lat/Long or UTM : Long/Easting: **-81.638898** Lat/Northing: **28.075316**

Description:



Photo File: **IMG\_3764.JPG** Orientation: -facing

Lat/Long or UTM: Long/Easting: **0** Lat/Northing: **0**

Description:

**WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region**

Project/Site: Bellaviva City/County: Polk Sampling Date: 25-Jul-17  
 Applicant/Owner: Polk County Land Partners LLC State: FL Sampling Point: Upland 3  
 Investigator(s): James Modica IV Section, Township, Range: S 5 T 28S R 27E  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope: 0.0 % / 0.0 °  
 Subregion (LRR or MLRA): LRR U Lat.: 28.076482 Long.: -81.640873 Datum: \_\_\_\_\_  
 Soil Map Unit Name: 17- Smyrna and Myakka Fine Sands NWI classification: \_\_\_\_\_

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  , Soil  , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  , Soil  , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	<b>Is the Sampled Area</b> within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		Secondary Indicators (minimum of 2 required)
Primary Indicators (minimum of one required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> FAC-Neutral Test (D5)
		<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b>		
Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Five/Four Strata) - Use scientific names of plants.**

Sampling Point: Upland 3

Tree Stratum (Plot size: <u>10 m</u> )		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Citrus sinensis</u>	10	<input checked="" type="checkbox"/> 100.0%	UPL
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>5</u> 20% of Total Cover: <u>2</u>		10	<b>= Total Cover</b>	

Sapling or Sapling/Shrub Stratum (Plot size: _____ )		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Shrub Stratum (Plot size: <u>.5 m</u> )		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Herb Stratum (Plot size: <u>1 m</u> )		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Richardia brasiliensis</u>	15	<input checked="" type="checkbox"/> 23.1%	UPL
2.	<u>Cynodon dactylon</u>	40	<input checked="" type="checkbox"/> 61.5%	FACU
3.	<u>Cyperus esculentus</u>	10	<input type="checkbox"/> 15.4%	FAC
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
9.		0	<input type="checkbox"/> 0.0%	
10.		0	<input type="checkbox"/> 0.0%	
11.		0	<input type="checkbox"/> 0.0%	
12.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>32.5</u> 20% of Total Cover: <u>13</u>		65	<b>= Total Cover</b>	

Woody Vine Stratum (Plot size: _____ )		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>10</u>	x 3 =	<u>30</u>
FACU species <u>40</u>	x 4 =	<u>160</u>
UPL species <u>25</u>	x 5 =	<u>125</u>
Column Totals: <u>75</u> (A)		<u>315</u> (B)
Prevalence Index = B/A =		<u>4.200</u>

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is > 50%
  - 3 - Prevalence Index is ≤ 3.0<sup>1</sup>
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definition of Vegetation Strata:**

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (If observed, list morphological adaptations below).

\*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

**SOIL**

Sampling Point: Upland 3

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR	4/1						
6-12	10YR	5/1						

<sup>1</sup>Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains <sup>2</sup>Location: PL=Pore Lining. M=Matrix

<p><b>Hydric Soil Indicators:</b></p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) <input type="checkbox"/> Muck Presence (A8) (LRR U) <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR O, S) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR U) <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?**    Yes     No

Remarks:

Plot ID: **Upland 3**

Photo Path: M:\OTHER COUNTIES\POLK COUNTY\Bellaviva\Site Photos\07-2



Photo File: **IMG\_3750.JPG** Orientation: -facing

Lat/Long or UTM : Long/Easting: **-81.640873** Lat/Northing: **28.076482**

Description:



Photo File: **IMG\_3751.JPG** Orientation: -facing

Lat/Long or UTM: Long/Easting: **0** Lat/Northing: **0**

Description:

**WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region**

**Project/Site:** Bellaviva **City/County:** Polk **Sampling Date:** 25-Jul-17  
**Applicant/Owner:** Polk County Land Partners LLC **State:** FL **Sampling Point:** Upland 4  
**Investigator(s):** James Modica IV **Section, Township, Range:** S 5 T 28S R 27E  
**Landform (hillslope, terrace, etc.):** \_\_\_\_\_ **Local relief (concave, convex, none):** \_\_\_\_\_ **Slope:** 0.0 % / 0.0 °  
**Subregion (LRR or MLRA):** LRR U **Lat.:** 28.074128 **Long.:** -81.643777 **Datum:** \_\_\_\_\_  
**Soil Map Unit Name:** 17- Smyrna and Myakka Fine Sands **NWI classification:** \_\_\_\_\_

**Are climatic/hydrologic conditions on the site typical for this time of year?** Yes  No  (If no, explain in Remarks.)  
**Are Vegetation**  , **Soil**  , **or Hydrology**  **significantly disturbed?** **Are "Normal Circumstances" present?** Yes  No   
**Are Vegetation**  , **Soil**  , **or Hydrology**  **naturally problematic?** (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of 2 required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
<b>Field Observations:</b> Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____		<b>Wetland Hydrology Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

**VEGETATION (Five/Four Strata) - Use scientific names of plants.**

Sampling Point: Upland 4

	Absolute % Cover	Dominant Spec.? Rel.Strat. Cover	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>10 m</u> )				<b>Dominance Test worksheet:</b> Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)
1. _____	0	<input type="checkbox"/>	0.0%	
2. _____	0	<input type="checkbox"/>	0.0%	
3. _____	0	<input type="checkbox"/>	0.0%	
4. _____	0	<input type="checkbox"/>	0.0%	
5. _____	0	<input type="checkbox"/>	0.0%	
6. _____	0	<input type="checkbox"/>	0.0%	
7. _____	0	<input type="checkbox"/>	0.0%	
8. _____	0	<input type="checkbox"/>	0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>	0	= <b>Total Cover</b>		
<b>Sapling or Sapling/Shrub Stratum</b> (Plot size: _____ )				<b>Prevalence Index worksheet:</b> Total % Cover of:      Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>90</u> x 4 = <u>360</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>90</u> (A) <u>360</u> (B) Prevalence Index = B/A = <u>4.000</u>
1. _____	0	<input type="checkbox"/>	0.0%	
2. _____	0	<input type="checkbox"/>	0.0%	
3. _____	0	<input type="checkbox"/>	0.0%	
4. _____	0	<input type="checkbox"/>	0.0%	
5. _____	0	<input type="checkbox"/>	0.0%	
6. _____	0	<input type="checkbox"/>	0.0%	
7. _____	0	<input type="checkbox"/>	0.0%	
8. _____	0	<input type="checkbox"/>	0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>	0	= <b>Total Cover</b>		
<b>Shrub Stratum</b> (Plot size: <u>5 m</u> )				
1. _____	0	<input type="checkbox"/>	0.0%	
2. _____	0	<input type="checkbox"/>	0.0%	
3. _____	0	<input type="checkbox"/>	0.0%	
4. _____	0	<input type="checkbox"/>	0.0%	
5. _____	0	<input type="checkbox"/>	0.0%	
6. _____	0	<input type="checkbox"/>	0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>	0	= <b>Total Cover</b>		
<b>Herb Stratum</b> (Plot size: <u>1 m</u> )				
1. <u>Paspalum notatum</u>	90	<input checked="" type="checkbox"/>	100.0%    FACU	
2. _____	0	<input type="checkbox"/>	0.0%	
3. _____	0	<input type="checkbox"/>	0.0%	
4. _____	0	<input type="checkbox"/>	0.0%	
5. _____	0	<input type="checkbox"/>	0.0%	
6. _____	0	<input type="checkbox"/>	0.0%	
7. _____	0	<input type="checkbox"/>	0.0%	
8. _____	0	<input type="checkbox"/>	0.0%	
9. _____	0	<input type="checkbox"/>	0.0%	
10. _____	0	<input type="checkbox"/>	0.0%	
11. _____	0	<input type="checkbox"/>	0.0%	
12. _____	0	<input type="checkbox"/>	0.0%	
50% of Total Cover: <u>45</u> 20% of Total Cover: <u>18</u>	90	= <b>Total Cover</b>		
<b>Woody Vine Stratum</b> (Plot size: _____ )				
1. _____	0	<input type="checkbox"/>	0.0%	
2. _____	0	<input type="checkbox"/>	0.0%	
3. _____	0	<input type="checkbox"/>	0.0%	
4. _____	0	<input type="checkbox"/>	0.0%	
5. _____	0	<input type="checkbox"/>	0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>	0	= <b>Total Cover</b>		

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0<sup>1</sup>

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definition of Vegetation Strata:**

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

**Hydrophytic Vegetation Present?**    Yes     No

Remarks: (If observed, list morphological adaptations below).

\*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.



Plot ID: **Upland 4**

Photo Path: M:\OTHER COUNTIES\POLK COUNTY\Bellaviva\Site Photos\07-2



Photo File: **IMG\_3797.JPG** Orientation: -facing

Lat/Long or UTM : Long/Easting: **-81.643777** Lat/Northing: **28.074128**

Description:



Photo File: **IMG\_3798.JPG** Orientation: South -facing

Lat/Long or UTM: Long/Easting: **0** Lat/Northing: **0**

Description:

**WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region**

**Project/Site:** Bellaviva **City/County:** Polk **Sampling Date:** 25-Jul-17  
**Applicant/Owner:** Polk County Land Partners LLC **State:** FL **Sampling Point:** Upland 5  
**Investigator(s):** James Modica IV **Section, Township, Range:** S 5 T 28S R 27E  
**Landform (hillslope, terrace, etc.):** \_\_\_\_\_ **Local relief (concave, convex, none):** \_\_\_\_\_ **Slope:** 0.0 % / 0.0 °  
**Subregion (LRR or MLRA):** LRR U **Lat.:** 28.072533 **Long.:** -81.64383 **Datum:** \_\_\_\_\_  
**Soil Map Unit Name:** 17- Smyrna and Myakka Fine Sands **NWI classification:** \_\_\_\_\_

**Are climatic/hydrologic conditions on the site typical for this time of year?** Yes  No  (If no, explain in Remarks.)  
**Are Vegetation**  , **Soil**  , **or Hydrology**  **significantly disturbed?** **Are "Normal Circumstances" present?** Yes  No   
**Are Vegetation**  , **Soil**  , **or Hydrology**  **naturally problematic?** (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of 2 required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
<b>Field Observations:</b> Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____		<b>Wetland Hydrology Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

**VEGETATION (Five/Four Strata) - Use scientific names of plants.**

Sampling Point: Upland 5

Tree Stratum (Plot size: <u>10 m</u> )		Absolute % Cover	Dominant Species? <input type="checkbox"/>	Rel.Strat. Cover	Indicator Status
1.	<u>Quercus virginiana</u>	50	<input checked="" type="checkbox"/>	90.9%	FACU
2.	<u>Schinus terebinthifolia</u>	5	<input type="checkbox"/>	9.1%	FAC
3.		0	<input type="checkbox"/>	0.0%	
4.		0	<input type="checkbox"/>	0.0%	
5.		0	<input type="checkbox"/>	0.0%	
6.		0	<input type="checkbox"/>	0.0%	
7.		0	<input type="checkbox"/>	0.0%	
8.		0	<input type="checkbox"/>	0.0%	
50% of Total Cover: <u>27.5</u> 20% of Total Cover: <u>11</u>		<u>55</u>	<b>= Total Cover</b>		

Sapling or Sapling/Shrub Stratum (Plot size: _____ )		Absolute % Cover	Dominant Species? <input type="checkbox"/>	Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/>	0.0%	
2.		0	<input type="checkbox"/>	0.0%	
3.		0	<input type="checkbox"/>	0.0%	
4.		0	<input type="checkbox"/>	0.0%	
5.		0	<input type="checkbox"/>	0.0%	
6.		0	<input type="checkbox"/>	0.0%	
7.		0	<input type="checkbox"/>	0.0%	
8.		0	<input type="checkbox"/>	0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		<u>0</u>	<b>= Total Cover</b>		

Shrub Stratum (Plot size: <u>5 m</u> )		Absolute % Cover	Dominant Species? <input type="checkbox"/>	Rel.Strat. Cover	Indicator Status
1.	<u>Schinus terebinthifolia</u>	5	<input checked="" type="checkbox"/>	50.0%	FAC
2.	<u>Quercus virginiana</u>	5	<input checked="" type="checkbox"/>	50.0%	FACU
3.		0	<input type="checkbox"/>	0.0%	
4.		0	<input type="checkbox"/>	0.0%	
5.		0	<input type="checkbox"/>	0.0%	
6.		0	<input type="checkbox"/>	0.0%	
50% of Total Cover: <u>5</u> 20% of Total Cover: <u>2</u>		<u>10</u>	<b>= Total Cover</b>		

Herb Stratum (Plot size: _____ )		Absolute % Cover	Dominant Species? <input type="checkbox"/>	Rel.Strat. Cover	Indicator Status
1.	<u>Oplismenus hirtellus</u>	50	<input checked="" type="checkbox"/>	66.7%	FAC
2.	<u>Paspalum notatum</u>	25	<input checked="" type="checkbox"/>	33.3%	FACU
3.		0	<input type="checkbox"/>	0.0%	
4.		0	<input type="checkbox"/>	0.0%	
5.		0	<input type="checkbox"/>	0.0%	
6.		0	<input type="checkbox"/>	0.0%	
7.		0	<input type="checkbox"/>	0.0%	
8.		0	<input type="checkbox"/>	0.0%	
9.		0	<input type="checkbox"/>	0.0%	
10.		0	<input type="checkbox"/>	0.0%	
11.		0	<input type="checkbox"/>	0.0%	
12.		0	<input type="checkbox"/>	0.0%	
50% of Total Cover: <u>37.5</u> 20% of Total Cover: <u>15</u>		<u>75</u>	<b>= Total Cover</b>		

Woody Vine Stratum (Plot size: _____ )		Absolute % Cover	Dominant Species? <input type="checkbox"/>	Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/>	0.0%	
2.		0	<input type="checkbox"/>	0.0%	
3.		0	<input type="checkbox"/>	0.0%	
4.		0	<input type="checkbox"/>	0.0%	
5.		0	<input type="checkbox"/>	0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		<u>0</u>	<b>= Total Cover</b>		

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species <u>0</u>	x 1 =	<u>0</u>
FACW species <u>0</u>	x 2 =	<u>0</u>
FAC species <u>60</u>	x 3 =	<u>180</u>
FACU species <u>80</u>	x 4 =	<u>320</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>140</u> (A)		<u>500</u> (B)
Prevalence Index = B/A =		<u>3.571</u>

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is > 50%
  - 3 - Prevalence Index is ≤ 3.0<sup>1</sup>
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definition of Vegetation Strata:**

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (If observed, list morphological adaptations below).

\*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

**SOIL**

Sampling Point: Upland 5

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-1	10YR	5/1						
1-12	10YR	3/2						

<sup>1</sup>Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains <sup>2</sup>Location: PL=Pore Lining. M=Matrix

<p><b>Hydric Soil Indicators:</b></p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) <input type="checkbox"/> Muck Presence (A8) (LRR U) <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR O, S) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR U) <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?**    Yes     No

Remarks:



Photo File: **IMG\_3807.JPG** Orientation: -facing

Lat/Long or UTM: Long/Easting: **-81.64383** Lat/Northing: **28.072533**

Description:



Photo File: **IMG\_3808.JPG** Orientation: -facing

Lat/Long or UTM: Long/Easting: **0** Lat/Northing: **0**

Description:

**WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region**

Project/Site: Bellaviva City/County: Polk Sampling Date: 25-Jul-17  
 Applicant/Owner: Polk County Land Partners LLC State: FL Sampling Point: Wetland 1  
 Investigator(s): James Modica IV Section, Township, Range: S 5 T 28S R 27E  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): flat Slope: 0.0 % / 0.0 °  
 Subregion (LRR or MLRA): LRR U Lat.: 28.075371 Long.: -81.642938 Datum: \_\_\_\_\_  
 Soil Map Unit Name: 13-Samsula Muck NWI classification: \_\_\_\_\_

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  , Soil  , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  , Soil  , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks:	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of 2 required)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
<b>Field Observations:</b> Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Historical aerial photography displays periodic inundation of the subject area.			

**VEGETATION (Five/Four Strata) - Use scientific names of plants.**

Sampling Point: Wetland 1

Tree Stratum	Plot size: _____ )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	_____	0	<input type="checkbox"/> 0.0%	_____
2.	_____	0	<input type="checkbox"/> 0.0%	_____
3.	_____	0	<input type="checkbox"/> 0.0%	_____
4.	_____	0	<input type="checkbox"/> 0.0%	_____
5.	_____	0	<input type="checkbox"/> 0.0%	_____
6.	_____	0	<input type="checkbox"/> 0.0%	_____
7.	_____	0	<input type="checkbox"/> 0.0%	_____
8.	_____	0	<input type="checkbox"/> 0.0%	_____
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Sapling or Sapling/Shrub Stratum	Plot size: _____ )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	_____	0	<input type="checkbox"/> 0.0%	_____
2.	_____	0	<input type="checkbox"/> 0.0%	_____
3.	_____	0	<input type="checkbox"/> 0.0%	_____
4.	_____	0	<input type="checkbox"/> 0.0%	_____
5.	_____	0	<input type="checkbox"/> 0.0%	_____
6.	_____	0	<input type="checkbox"/> 0.0%	_____
7.	_____	0	<input type="checkbox"/> 0.0%	_____
8.	_____	0	<input type="checkbox"/> 0.0%	_____
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Shrub Stratum	Plot size: _____ )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	_____	0	<input type="checkbox"/> 0.0%	_____
2.	_____	0	<input type="checkbox"/> 0.0%	_____
3.	_____	0	<input type="checkbox"/> 0.0%	_____
4.	_____	0	<input type="checkbox"/> 0.0%	_____
5.	_____	0	<input type="checkbox"/> 0.0%	_____
6.	_____	0	<input type="checkbox"/> 0.0%	_____
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Herb Stratum	Plot size: <u>1 m</u> _____ )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Axonopus furcatus</u>	50	<input checked="" type="checkbox"/> 50.0%	OBL
2.	<u>Eleocharis baldwinii</u>	30	<input checked="" type="checkbox"/> 30.0%	OBL
3.	<u>Juncus effusus</u>	10	<input type="checkbox"/> 10.0%	OBL
4.	<u>Centella erecta</u>	10	<input type="checkbox"/> 10.0%	FACW
5.	_____	0	<input type="checkbox"/> 0.0%	_____
6.	_____	0	<input type="checkbox"/> 0.0%	_____
7.	_____	0	<input type="checkbox"/> 0.0%	_____
8.	_____	0	<input type="checkbox"/> 0.0%	_____
9.	_____	0	<input type="checkbox"/> 0.0%	_____
10.	_____	0	<input type="checkbox"/> 0.0%	_____
11.	_____	0	<input type="checkbox"/> 0.0%	_____
12.	_____	0	<input type="checkbox"/> 0.0%	_____
50% of Total Cover: <u>50</u> 20% of Total Cover: <u>20</u>		100	<b>= Total Cover</b>	

Woody Vine Stratum	Plot size: _____ )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	_____	0	<input type="checkbox"/> 0.0%	_____
2.	_____	0	<input type="checkbox"/> 0.0%	_____
3.	_____	0	<input type="checkbox"/> 0.0%	_____
4.	_____	0	<input type="checkbox"/> 0.0%	_____
5.	_____	0	<input type="checkbox"/> 0.0%	_____
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	90	x 1 = 90
FACW species	10	x 2 = 20
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	<u>100</u> (A)	<u>110</u> (B)
Prevalence Index = B/A =		<u>1.100</u>

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is > 50%
  - 3 - Prevalence Index is ≤ 3.0<sup>1</sup>
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definition of Vegetation Strata:**

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (If observed, list morphological adaptations below).

\*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

**SOIL**

Sampling Point: Wetland 1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR	2/2						

<sup>1</sup>Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains <sup>2</sup>Location: PL=Pore Lining. M=Matrix

<p><b>Hydric Soil Indicators:</b></p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) <input checked="" type="checkbox"/> Muck Presence (A8) (LRR U) <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR O, S) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR U) <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?**    Yes     No

Remarks:

Plot ID: **Wetland 1**

Photo Path: M:\OTHER COUNTIES\POLK COUNTY\Bellaviva\Site Photos\07-2



Photo File: **IMG\_3789.JPG** Orientation: -facing

Lat/Long or UTM : Long/Easting: **-81.642938** Lat/Northing: **28.075371**

Description:



Photo File: **IMG\_3790.JPG** Orientation: -facing

Lat/Long or UTM: Long/Easting: **0** Lat/Northing: **0**

Description:

**WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region**

Project/Site: Bellaviva City/County: Polk Sampling Date: 25-Jul-17  
 Applicant/Owner: Polk County Land Partners LLC State: FL Sampling Point: Wetland 2  
 Investigator(s): James Modica IV Section, Township, Range: S 5 T 28S R 27E  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope: 0.0 % / 0.0 °  
 Subregion (LRR or MLRA): LRR U Lat.: 28.075307 Long.: -81.638767 Datum: \_\_\_\_\_  
 Soil Map Unit Name: 17- Smyrna and Myakka Fine Sands NWI classification: \_\_\_\_\_

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  , Soil  , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  , Soil  , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
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Remarks:

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	Secondary Indicators (minimum of 2 required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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<b>Field Observations:</b> Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION (Five/Four Strata) - Use scientific names of plants.**

Sampling Point: Wetland 2

Tree Stratum	(Plot size: <u>10 m</u> )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Sapling or Sapling/Shrub Stratum	(Plot size: _____ )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Shrub Stratum	(Plot size: <u>.5 m</u> )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Ludwigia peruviana</u>	80	<input checked="" type="checkbox"/> 100.0%	OBL
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>40</u> 20% of Total Cover: <u>16</u>		80	<b>= Total Cover</b>	

Herb Stratum	(Plot size: <u>1 m</u> )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u>Megathyrus maximus</u>	20	<input checked="" type="checkbox"/> 100.0%	FAC
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
9.		0	<input type="checkbox"/> 0.0%	
10.		0	<input type="checkbox"/> 0.0%	
11.		0	<input type="checkbox"/> 0.0%	
12.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>10</u> 20% of Total Cover: <u>4</u>		20	<b>= Total Cover</b>	

Woody Vine Stratum	(Plot size: _____ )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	<u>80</u>	x 1 = <u>80</u>
FACW species	<u>0</u>	x 2 = <u>0</u>
FAC species	<u>20</u>	x 3 = <u>60</u>
FACU species	<u>0</u>	x 4 = <u>0</u>
UPL species	<u>0</u>	x 5 = <u>0</u>
Column Totals:	<u>100</u> (A)	<u>140</u> (B)
Prevalence Index = B/A =		<u>1.400</u>

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is > 50%
  - 3 - Prevalence Index is ≤ 3.0<sup>1</sup>
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definition of Vegetation Strata:**

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (If observed, list morphological adaptations below).

\*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

**SOIL**

Sampling Point: Wetland 2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR	5/2						

<sup>1</sup>Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains <sup>2</sup>Location: PL=Pore Lining. M=Matrix

<p><b>Hydric Soil Indicators:</b></p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) <input type="checkbox"/> Muck Presence (A8) (LRR U) <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR O, S) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input checked="" type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR U) <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
--	--	--

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?**    Yes     No

Remarks:

Plot ID: **Wetland 2**

Photo Path: M:\OTHER COUNTIES\POLK COUNTY\Bellaviva\Site Photos\07-2

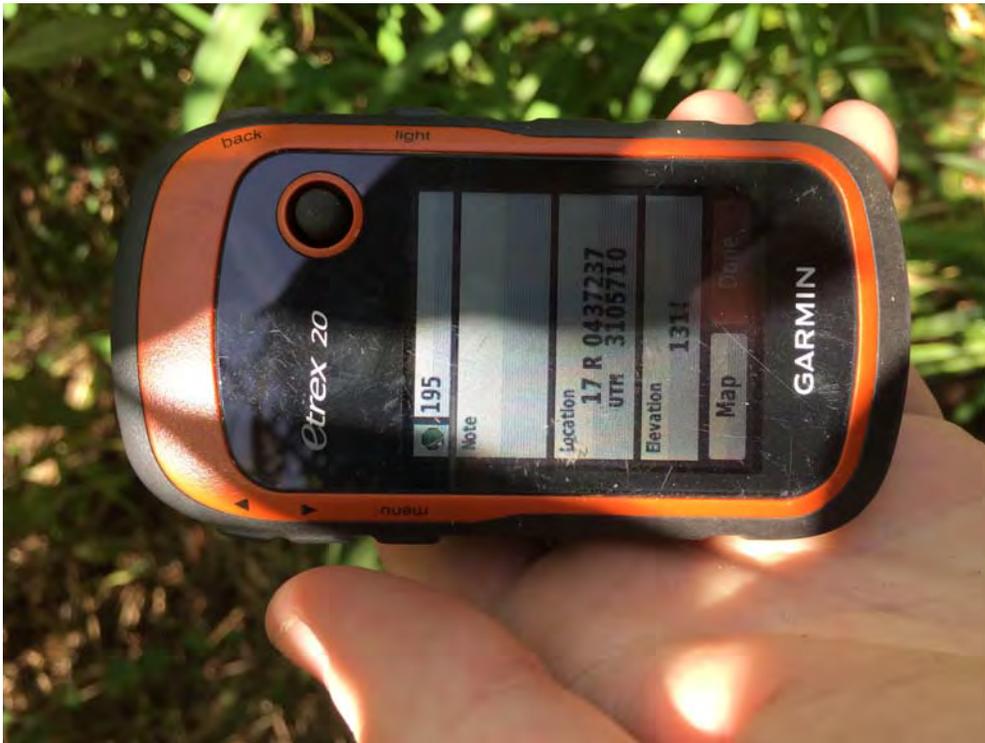


Photo File: **IMG\_3770.JPG** Orientation: -facing

Lat/Long or UTM: Long/Easting: **-81.638767** Lat/Northing: **28.075307**

Description:



Photo File: **IMG\_3778.JPG** Orientation: -facing

Lat/Long or UTM: Long/Easting: **0** Lat/Northing: **0**

Description:

**WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region**

Project/Site: Bellaviva City/County: Polk Sampling Date: 25-Jul-17  
 Applicant/Owner: Polk County Land Partners LLC State: FL Sampling Point: Wetland 3  
 Investigator(s): James Modica IV Section, Township, Range: S 5 T 28S R 27E  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope: 0.0 % / 0.0 °  
 Subregion (LRR or MLRA): LRR U Lat.: 28.076482 Long.: -81.640873 Datum: \_\_\_\_\_  
 Soil Map Unit Name: 36-Basinger Mucky Fine Sand-Depressional NWI classification: \_\_\_\_\_

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  , Soil  , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  , Soil  , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks:	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	Secondary Indicators (minimum of 2 required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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<b>Field Observations:</b> Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION (Five/Four Strata) - Use scientific names of plants.**

Sampling Point: Wetland 3

Tree Stratum	Plot size: <u>10 m</u> )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Sapling or Sapling/Shrub Stratum	Plot size: _____ )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Shrub Stratum	Plot size: <u>5 m</u> )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

Herb Stratum	Plot size: <u>1 m</u> )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<u><i>Urochloa mutica</i></u>	100	<input checked="" type="checkbox"/> 100.0%	FACW
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
9.		0	<input type="checkbox"/> 0.0%	
10.		0	<input type="checkbox"/> 0.0%	
11.		0	<input type="checkbox"/> 0.0%	
12.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>50</u> 20% of Total Cover: <u>20</u>		100	<b>= Total Cover</b>	

Woody Vine Stratum	Plot size: _____ )	Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>		0	<b>= Total Cover</b>	

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:	
OBL species	<u>0</u>	x 1 = <u>0</u>
FACW species	<u>100</u>	x 2 = <u>200</u>
FAC species	<u>0</u>	x 3 = <u>0</u>
FACU species	<u>0</u>	x 4 = <u>0</u>
UPL species	<u>0</u>	x 5 = <u>0</u>
Column Totals:	<u>100</u> (A)	<u>200</u> (B)
Prevalence Index = B/A =		<u>2.000</u>

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is > 50%
  - 3 - Prevalence Index is ≤ 3.0<sup>1</sup>
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definition of Vegetation Strata:**

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (If observed, list morphological adaptations below).

\*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

**SOIL**

Sampling Point: Wetland 3

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR	2/1						

<sup>1</sup>Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains <sup>2</sup>Location: PL=Pore Lining. M=Matrix

<p><b>Hydric Soil Indicators:</b></p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) <input checked="" type="checkbox"/> Muck Presence (A8) (LRR U) <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR O, S) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR U) <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
--	--	--

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?**    Yes     No

Remarks:

Plot ID: **Wetland 3**

Photo Path: M:\OTHER COUNTIES\POLK COUNTY\Bellaviva\Site Photos\07-2



Photo File: **IMG\_3756.JPG** Orientation: -facing

Lat/Long or UTM : Long/Easting: **-81.640873** Lat/Northing: **28.076482**

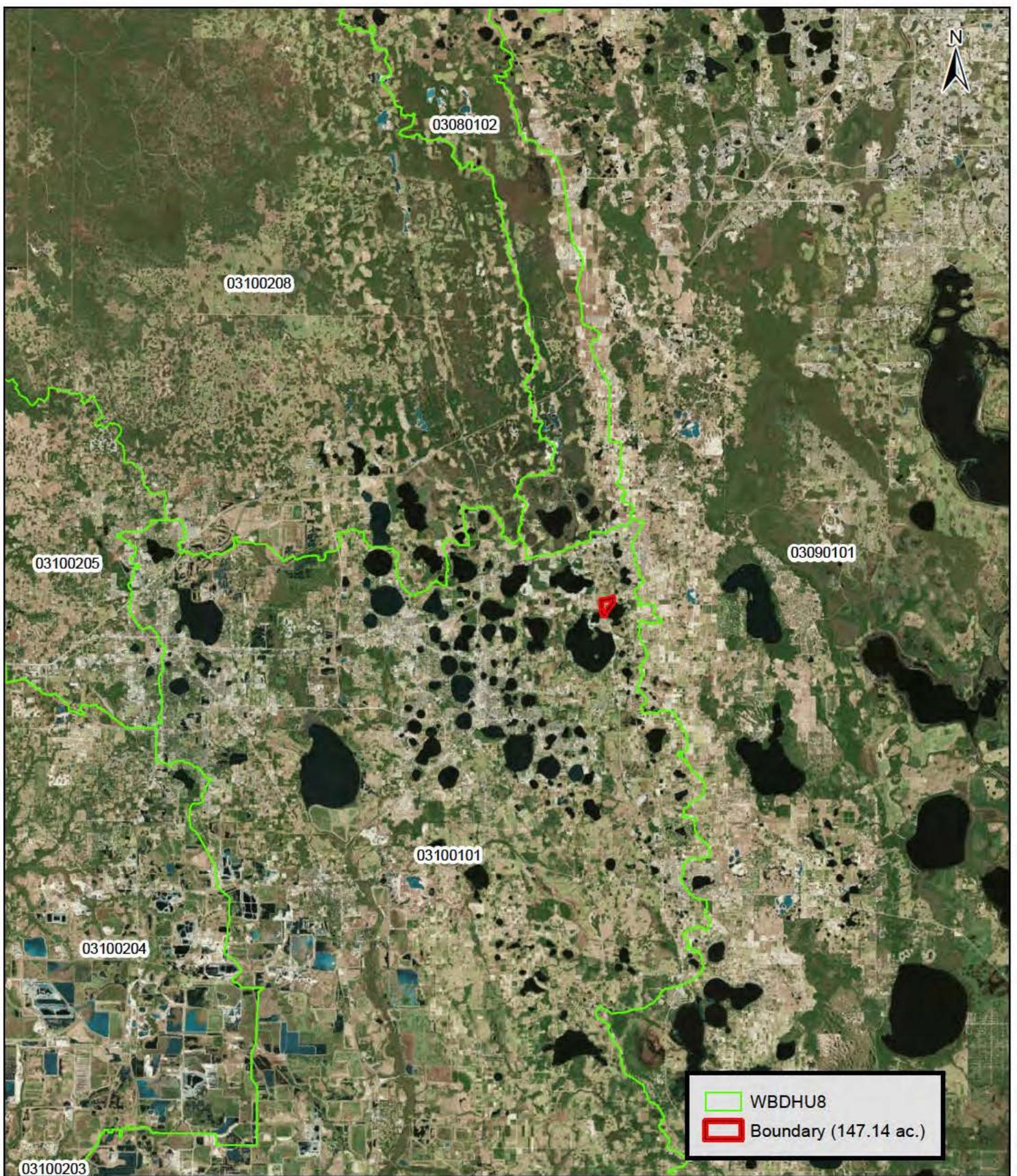
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Lat/Long or UTM: Long/Easting: **0** Lat/Northing: **0**

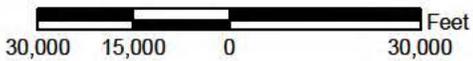
Description:



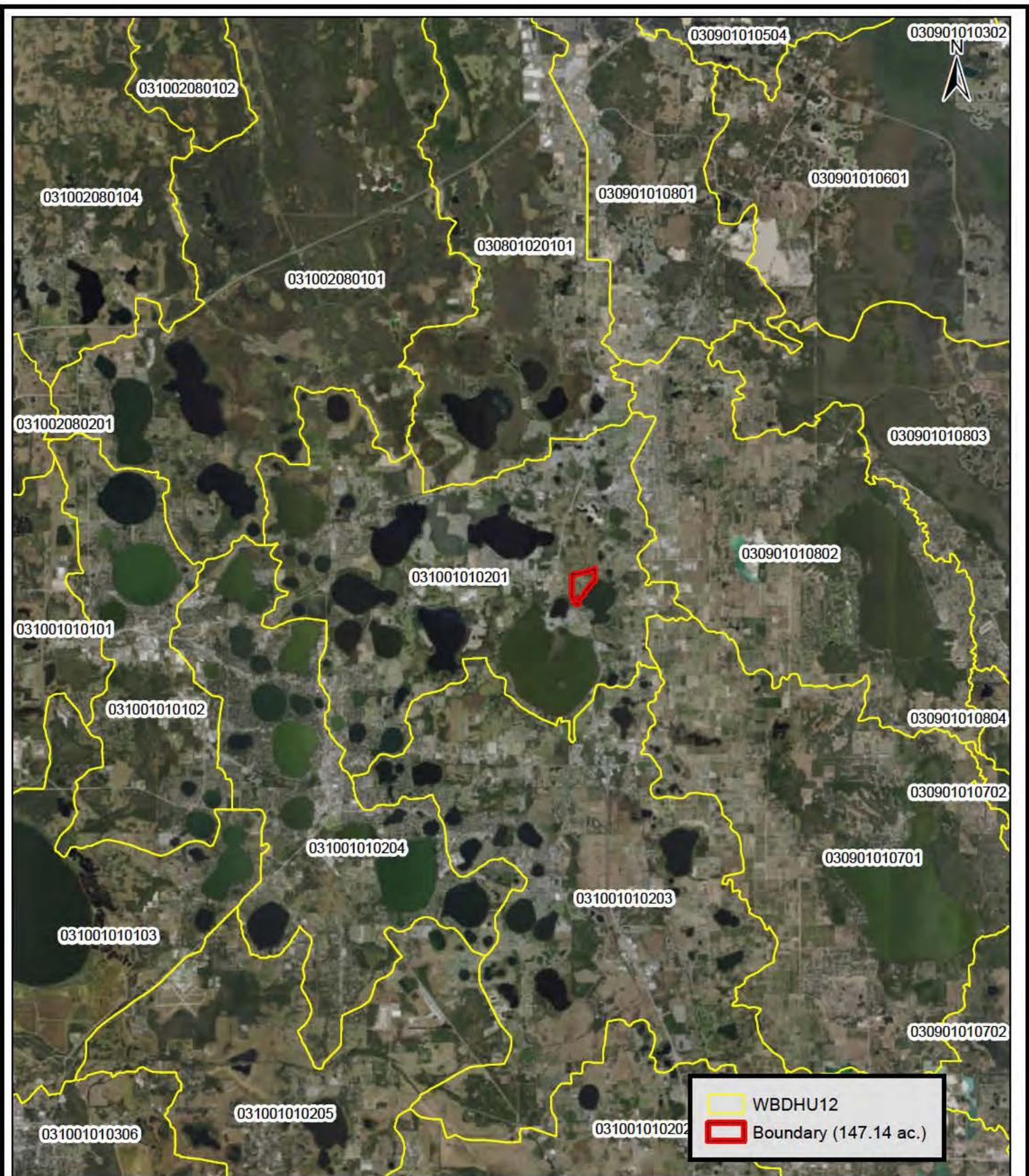
 WBDHU8  
 Boundary (147.14 ac.)

**Bellaviva**

Figure 1 - HUC 8 Digit Map Section 5, Township 28S Range 27E Polk County, Florida

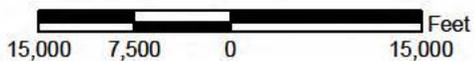


**MODICA & ASSOCIATES**  
 302 Mohawk Road  
 Clermont, Florida 34715  
 P: (352) 394-2000  
 F: (352) 394-1159  
 Email: [Environmental@Modica.cc](mailto:Environmental@Modica.cc)  
[www.ModicaAndAssociates.com](http://www.ModicaAndAssociates.com)



## Bellaviva

Figure 2 - HUC 12 Digit Map  
 Section 5, Township 28S Range  
 27E Polk County, Florida

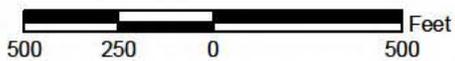


**MODICA & ASSOCIATES**  
 302 Mohawk Road  
 Clermont, Florida 34715  
 P: (352) 394-2000  
 F: (352) 394-1159  
 Email: [Environmental@Modica.cc](mailto:Environmental@Modica.cc)  
[www.ModicaAndAssociates.com](http://www.ModicaAndAssociates.com)



**Bellaviva**

Figure 3 - TNW Map  
 Section 5, Township 28S Range 27E  
 Polk County, Florida



**MODICA & ASSOCIATES**  
 302 Mohawk Road  
 Clermont, Florida 34715  
 P: (352) 394-2000  
 F: (352) 394-1159

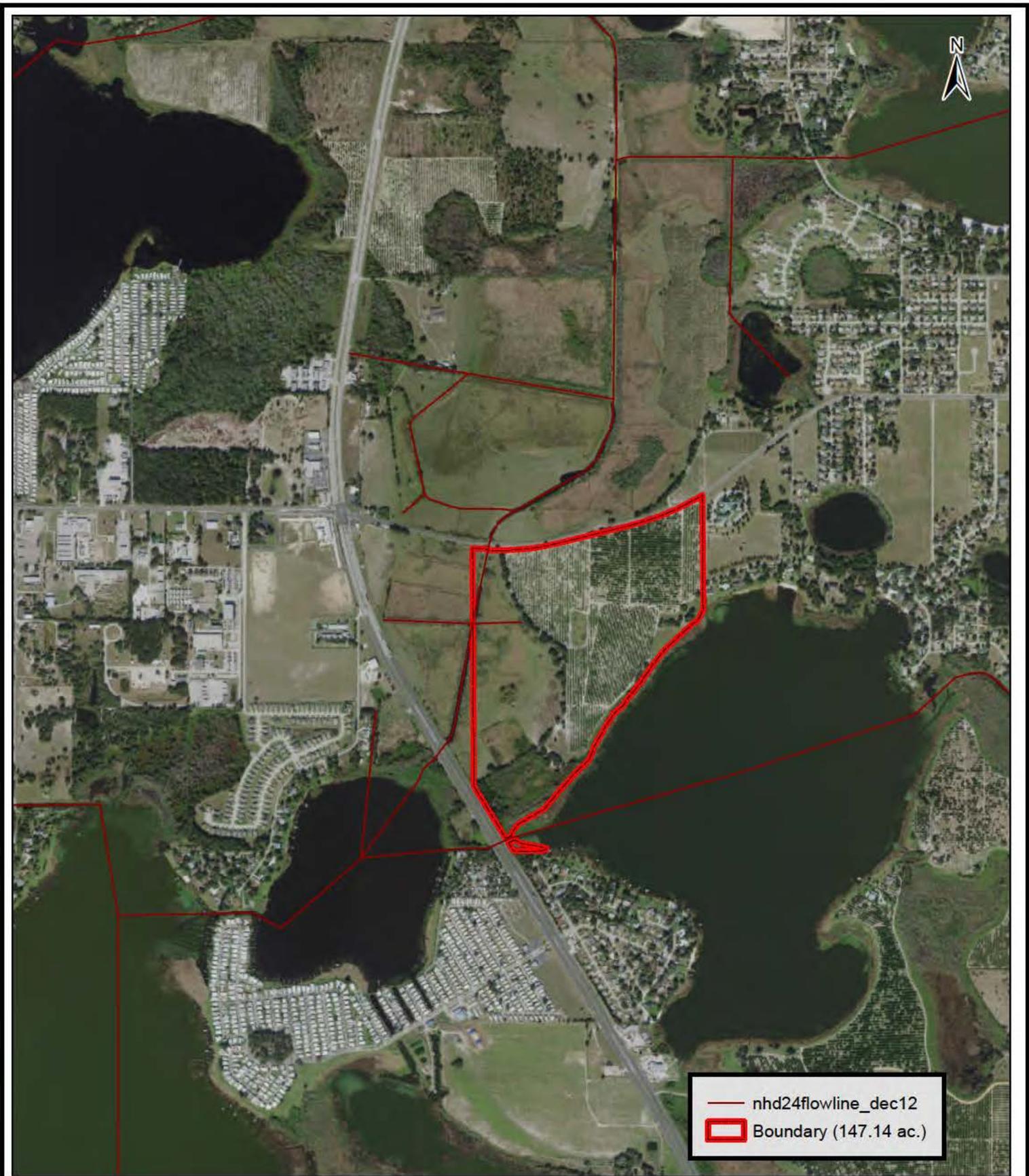
Email: [Environmental@Modica.cc](mailto:Environmental@Modica.cc)  
[www.ModicaAndAssociates.com](http://www.ModicaAndAssociates.com)



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 Figure 4 - NWI Map  
 Section 5, Township 28S Range 27E  
 Polk County, Florida

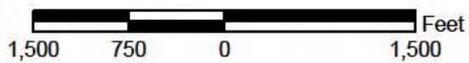


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Figure 5 - NHD Flowline Map  
 Section 5, Township 28S Range 27E  
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Figure 6 - Wetland & Surface Water Map  
 Section 5, Township 28S Range 27E  
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**TABLE 1. PROJECT WETLAND (WL) AND OTHER SURFACE WATER (SW) SUMMARY**

WL & SW ID	WL & SW TYPE	WL & SW SIZE	WL & SW NOT IMPACTED	TEMPORARY WL & SW IMPACTS			PERMANENT WL & SW IMPACTS			MITIGATION ID
				WL & SW TYPE	IMPACT SIZE	IMPACT CODE	WL & SW TYPE	IMPACT SIZE	IMPACT CODE	
WL-1	641	18.26	18.26	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SW-1	742	5.08	0.00	N/A	N/A	N/A	742	5.08	F	None
SW-2	742	7.02	5.40	N/A	N/A	N/A	742	1.62	F	None
WL-2	631	5.34	5.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A
WL-3	643	1.12	0.00	N/A	N/A	N/A	643	1.12	D	BRMB
<b>Totals</b>		<b>36.82</b>	<b>29.00</b>					<b>7.82</b>		

Comments: FLUCFCS - Florida Land Use, Cover and Forms Classification System  
 CODES (multiple entries per cell not allowed):  
 Wetland Type: from an established wetland classification system (see Section E, 111b.)  
 Impact Type: D=dredge; F=fill; H=change hydrology; S=shading; C=clearing; O=other  
 FORM NUMBER 40C-4.900(1)

Reviewer: \_\_\_\_\_