APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

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): 10/15/2015

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:Jacksonville District; Jasil Majors Holdings, LLC/Clearwater Reserve; SAJ-2007-01817-SCW

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: FL County/parish/borough: Lake City: Okahumpka

Center coordinates of site (lat/long in degree decimal format): Lat. 28.715274° **Pick List**, Long. -81.907437° **Pick List**.

Universal Transverse Mercator:

Name of nearest waterbody: Palatlakaha River

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

Name of watershed or Hydrologic Unit Code (HUC): Ocklawaha River subbasin (03080102), Palatlakaha River watershed (030810201), Palatlakaha River subwatershed (030801020203)

☒ 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):

☒ Office (Desk) Determination. Date: 10/2/2015

☒ Field Determination. Date(s): 9/17/2015

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are** "*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.

☒ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain: The Palatlakaha River is listed on the Jacksonville District list of Navigable Waters of the United States. Additionally, the Palatlakaha River is the headwaters of the Ocklawaha River and is a designated Florida Blueways trail. Florida Blueways are scenic waterway trails for non-motorized vessels. Several non-motorized boat outfitters provide rentals for commercial waterbourne recreation on the Palatlakaha Run Blueways trail.

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*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]
      - ☒ TNWs, including territorial seas
      - ☐ Wetlands adjacent to TNWs
      - ☒ Relatively permanent waters[2] (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
      - ☐ 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: 595 linear feet: 50 width (ft) and/or acres.
      Wetlands: 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]

[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.

☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: **Non-RPWs labeled as Ditch 1, Ditch 2, Ditch 3 and Wetland 1 are located within the Palatlakaha River subwatershed. No historical aerial photographs are available prior to 1941. Historical aerial photographs from 1941 show Ditch 1 extending approximately 1 mile from CR-33 to RPW 1. Historically, water in Ditch 1 originated in freshwater wetlands along CR-33 and flowed through freshwater wetlands and unimproved pasture. The historical aerial photographs from 1958 show Ditch 1 with no discernible modifications from the 1941 photographs. The historical aerial photographs from 1969 show Ditch 1 was widened and expanded likely to support the extensive surrounding citrus groves. From the 1969 photographs it appears that a large portion of the freshwater wetlands along CR-33 were filled for agricultural purposes. The historic aerial photographs from 1974 show Ditch 1 with no discernible modifications from the 1969 photographs. In 2004 the area surrounding Ditch 1 was was developed into a golf-course and residential community. A portion of Ditch 1 near RPW 1 was filled and culverted during the construction of a roadway associated with development. Currently Ditch 1 is surrounded by a golf course. No evidence of ordinary high water mark or flow in Ditch 1 was found during a site inspection on September 17, 2015. Ditch 1 appears to be ephemeral. Ditch 2 appeared in the 1969 aerial photographs. Ditch 2 was excavated approximately 0.42 miles south Ditch 1 on CR-33. Ditch 2 flows into Ditch 1. From the 1974 photographs it appears that a portion of Ditch 2 near CR-33 was filled. Currently, Ditch 2 is a grassey swale with no evidence of water flow. There is not evidence of water in Ditch 2 in aerial photographs from 1994 to 2013. Ditch 2 appears to be ephemeral. Ditch 3 appeared in the 1969 aerial photographs. Ditch 3 appears to be excavated to drain wetlands located approximately 0.3 miles north of the existing Ditch 1. Ditch 3 flows into Ditch 1. In 2004, Ditch 3 was filled during the construction of the golf course and residential development community. Historical aerial photographs from 1941 show Ditch 4 extending from Wetland 1 (Clearwater Lake) to Ditch 1. Historically, Ditch 4 originated from Wetland 1 and flowed through freshwater wetlands and unimproved pastures to CR-33 and Ditch 1. The historical aerial photographs from 1958 show Ditch 4 with no discernible modifications from the 1941 photographs. Also, from the 1969 photographs it appears that Ditch 4 was connected to Ditch 2. Between the 1958 and 1969 historic aerial photographs for the Florida Turnpike was constructed along the northern boundary of the review area and Ditch 4 was culverted under the turnpike. Aerial photographs from 1994 to 2013 were examined. Only aerial photographs from 2005 and 2006 show visible water in Ditch 4; however, no water was visible in Ditch 2 during these years. No evidence of ordinary high water mark or flow in Ditch 4 was found during a site inspection on September 17, 2015. Wetland 1 (Clearwater Lake) encompasses approximately 140.8 acres of freshwater wetlands within project area. Historically, Wetland 1 was a depressional shallow lake consisting of large open water areas interspersed with freshwater marsh areas. Small areas of open water surrounded by unimproved pasture were observed during the September 17, 2015 site inspection. Ditches 1 - 4 are not jurisdictional because they do not carry relatively permanent flow nor contribute to the surface hydrologic connection between Wetland 1 and the TNW. Additionally, Wetland 1 does not provide a substaintial nexus to interstate or foreign commerce.**

.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: **Palatlakaha River**.

Summarize rationale supporting determination: The Palatlakaha River is the headwaters of the Ocklawaha River and is a designated Florida Blueways trail. Florida Blueways are scenic waterway trails for non-motorized vessels. Several non-motorized boat outfitters provide rentals for commercial waterbourne recreation on the Palatlakaha Run Blueways trai.

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": .

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[4] 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: 28516 **acres**
Drainage area: 28516 **acres**
Average annual rainfall: 51 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 **1 (or less)** river miles from TNW.
Project waters are **Pick List** river miles from RPW.
Project waters are **1 (or less)** aerial (straight) miles from TNW.
Project waters are **Pick List** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

Identify flow route to TNW[5]: The RPW flows northeast approximately 595 feet before discharging into the Palatlakaha River.
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: Historic aerial photographs from 1969 indicate a ditch was excavated within the RPW.

Tributary properties with respect to top of bank (estimate):
Average width: 25 feet
Average depth: 10 feet
Average side slopes: **3:1 .**

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: The banks of the RPW are vegetated by shrubs, vines and trees and are stable.
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Seasonal flow**
Estimate average number of flow events in review area/year: **20 (or greater)**

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] 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.

Describe flow regime: Perennial flow.
Other information on duration and volume: .

Surface flow is: **Discrete and confined.** Characteristics: .

Subsurface flow: **Unknown**. Explain findings: .
☐ Dye (or other) test performed: .

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

☐ Discontinuous OHWM.[7] 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:
- ☐ oil or scum line along shore objects
- ☐ fine shell or debris deposits (foreshore)
- ☐ physical markings/characteristics
- ☐ tidal gauges
- ☐ other (list):

☐ Mean High Water Mark indicated by:
- ☐ survey to available datum;
- ☐ physical markings;
- ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: Water color is tannic, no oily film or algal growth observed.
Identify specific pollutants, if known: No known pollutants are present within the RPW.

(iv) Biological Characteristics. Channel supports (check all that apply):
☐ Riparian corridor. Characteristics (type, average width): .
☐ Wetland fringe. Characteristics: .
☒ Habitat for:
- ☐ Federally Listed species. Explain findings: .
- ☐ Fish/spawn areas. Explain findings: .
- ☐ Other environmentally-sensitive species. Explain findings: .
- ☒ Aquatic/wildlife diversity. Explain findings: Wood ducks and a variety of small sunfish were observed utlizing the RPW on September 17, 2015.

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: .

[6]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.
[7]Ibid.

☐ 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: 1200 linear feet 50width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: 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: See Section III B.
   - ☐ 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[8] 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 jurisidictional. Data supporting this conclusion is provided at Section III.C.

[8]See Footnote # 3.

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.[9]

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):[10]

☐ 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: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

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: 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:**Ditches 1-4 are not jurisdictional. Wetland 1 is located approximately 7500 linear feet from the TNW and abuts Ditch 4. Ditch 4 flows from the project site north through freshwater wetlands to CR-33. Fill activities in the late 1960s and early 1970s appeared to alter the flow regime of ditches within the review area. See Section II.B.2 for further details.**
☐ Other: (explain, if not covered above): .

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: 135 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).

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[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

[10] 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.*

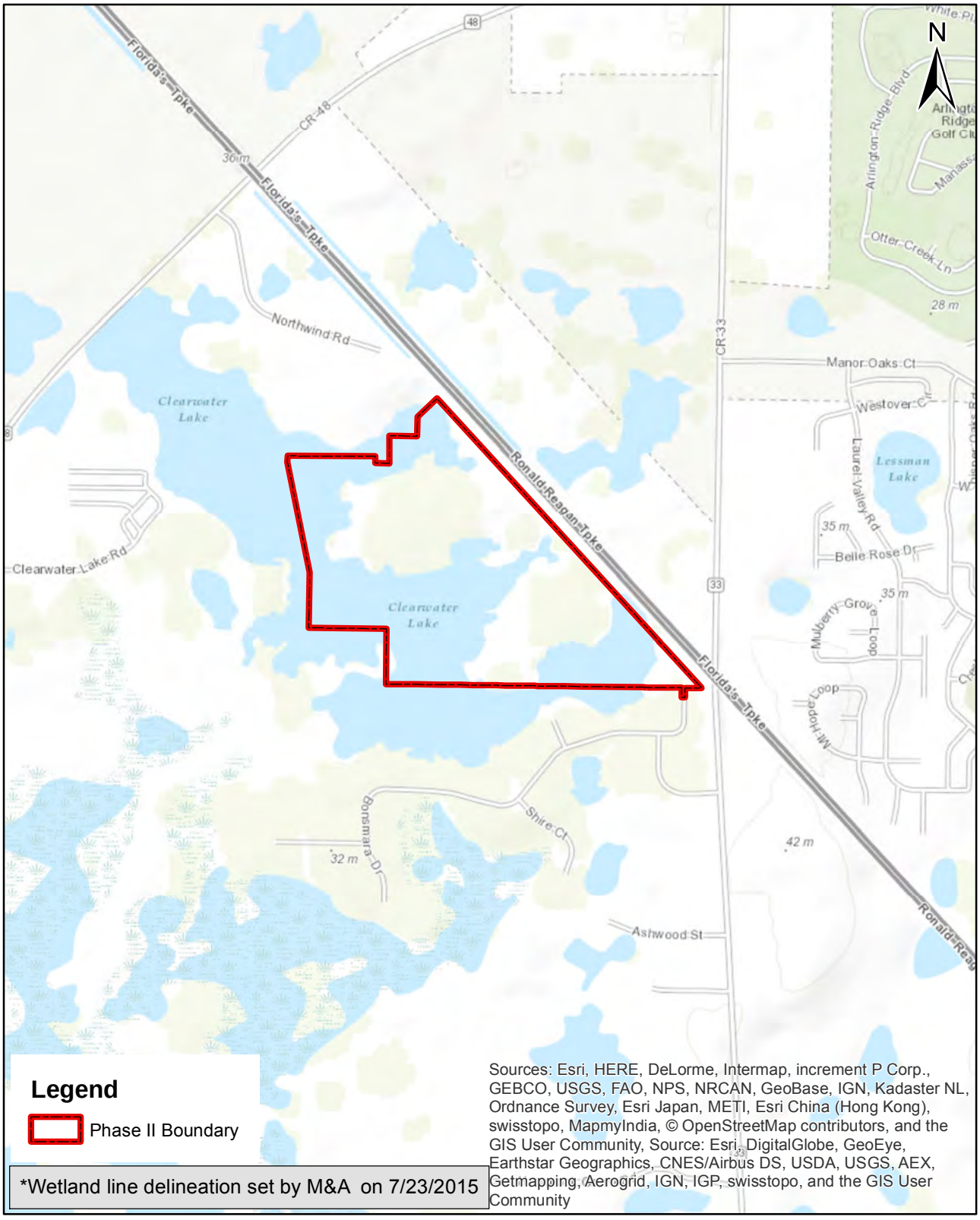
☐ Lakes/ponds: acres.
☒ Other non-wetland waters: 1.7 acres. List type of aquatic resource: .
☒ Wetlands: 135 acres.

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: .
☒ 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: HUC 8 - 03080102, HUC 10 - 0308010202 and HUC 12 - 030801020203.
  ☒ USGS NHD data.
  ☒ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: Jacksonville District JD-kit Google Earth Data Layer accessed 10/6/2015.
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☒ National wetlands inventory map(s). Cite name:Jacksonville District JD-kit Google Earth Data Layer accessed 10/6/2015.
☐ State/Local wetland inventory map(s): .
☒ FEMA/FIRM maps: Jacksonville District JD-kit Google Earth Data Layer accessed 10/6/2015.
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☐ Photographs: ☒ Aerial (Name & Date): Jacksonville District JD-kit Google Earth Data Layer accessed 10/6/2015.
  or ☒ Other (Name & Date):http://ufdc.ufl.edu/aerials accessed 10/2/2015.
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify):Site Inspection 9/17/2015.

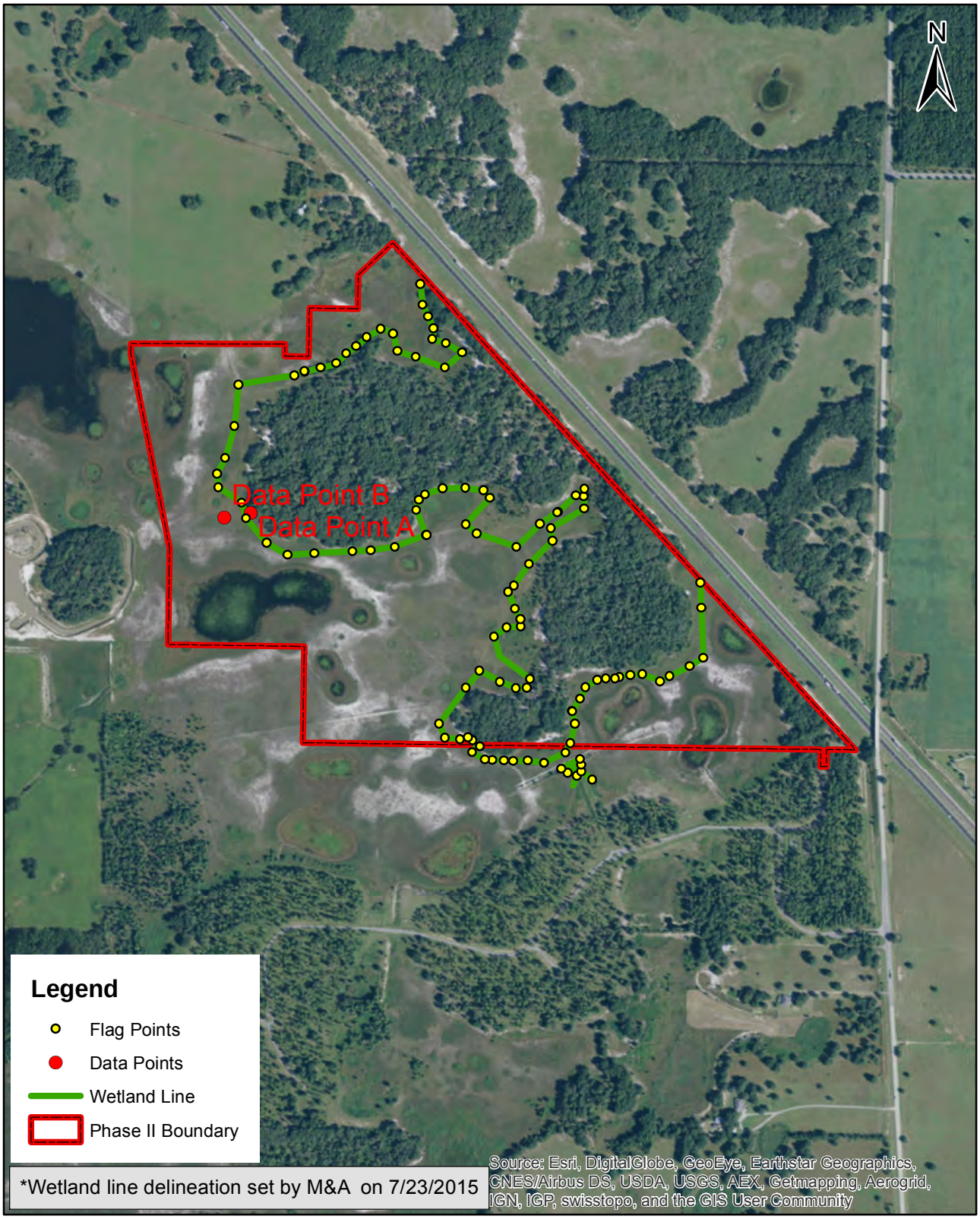
B. ADDITIONAL COMMENTS TO SUPPORT JD: .



Clearwater Reserve Phase II
S27 T20S R24E
S28 T20S R24E
Lake County, Florida

0.2 0.1 0 0.2
Miles

Modica & Associates, Inc.
Environmental Planning, Design & Permitting
302 Mohawk Road
Clermont, FL 34715
Phone: (352) 394-2000
Fax: (352) 394-1159
Email: Environmental@Modica.cc
www.ModicaAndAssociates.com



Clearwater Reserve Phase II
S27 T20S R24E
S28 T20S R24E
Lake County, Florida

0.2 0.1 0 0.2 Miles

Modica & Associates, Inc.
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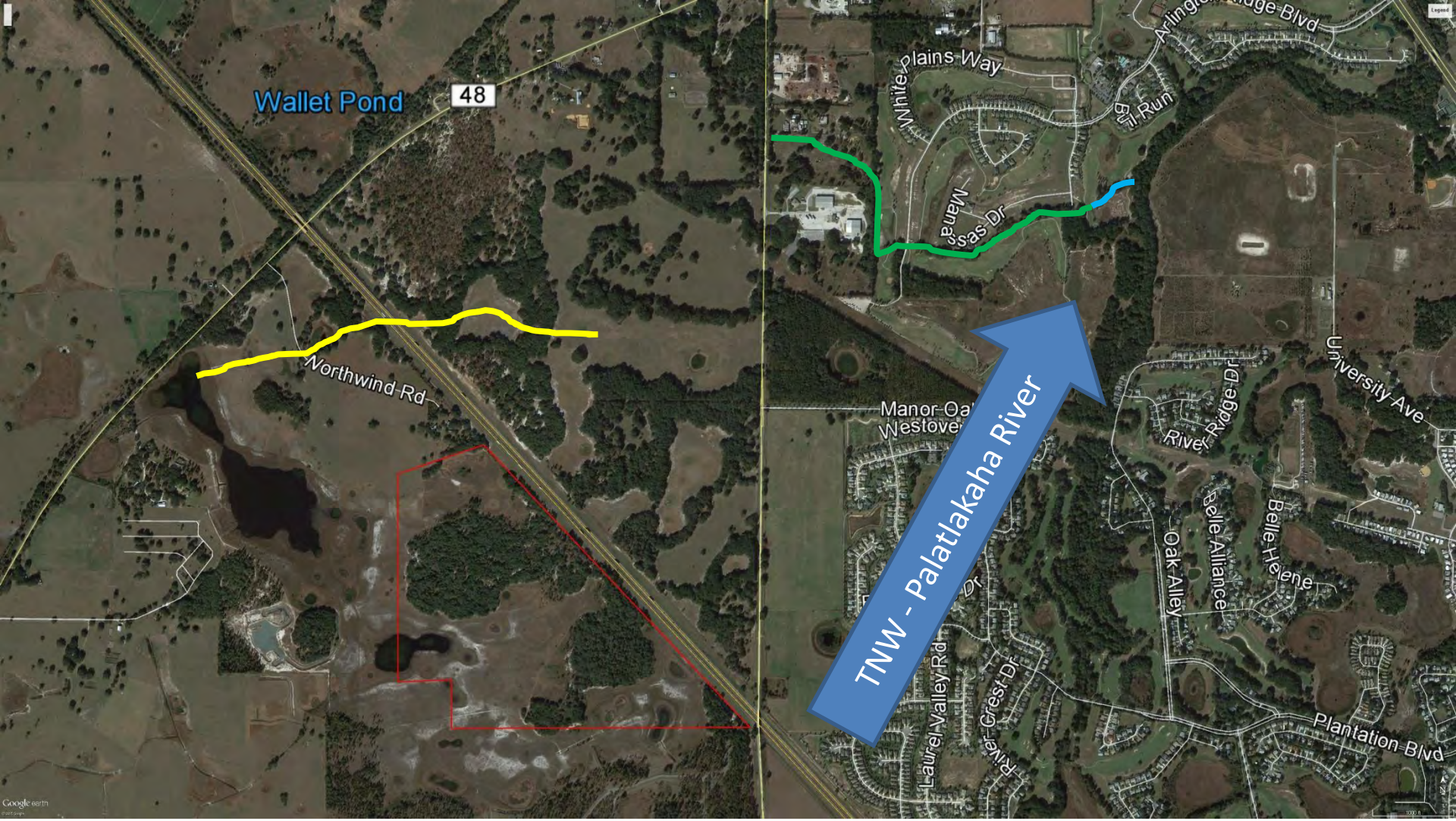
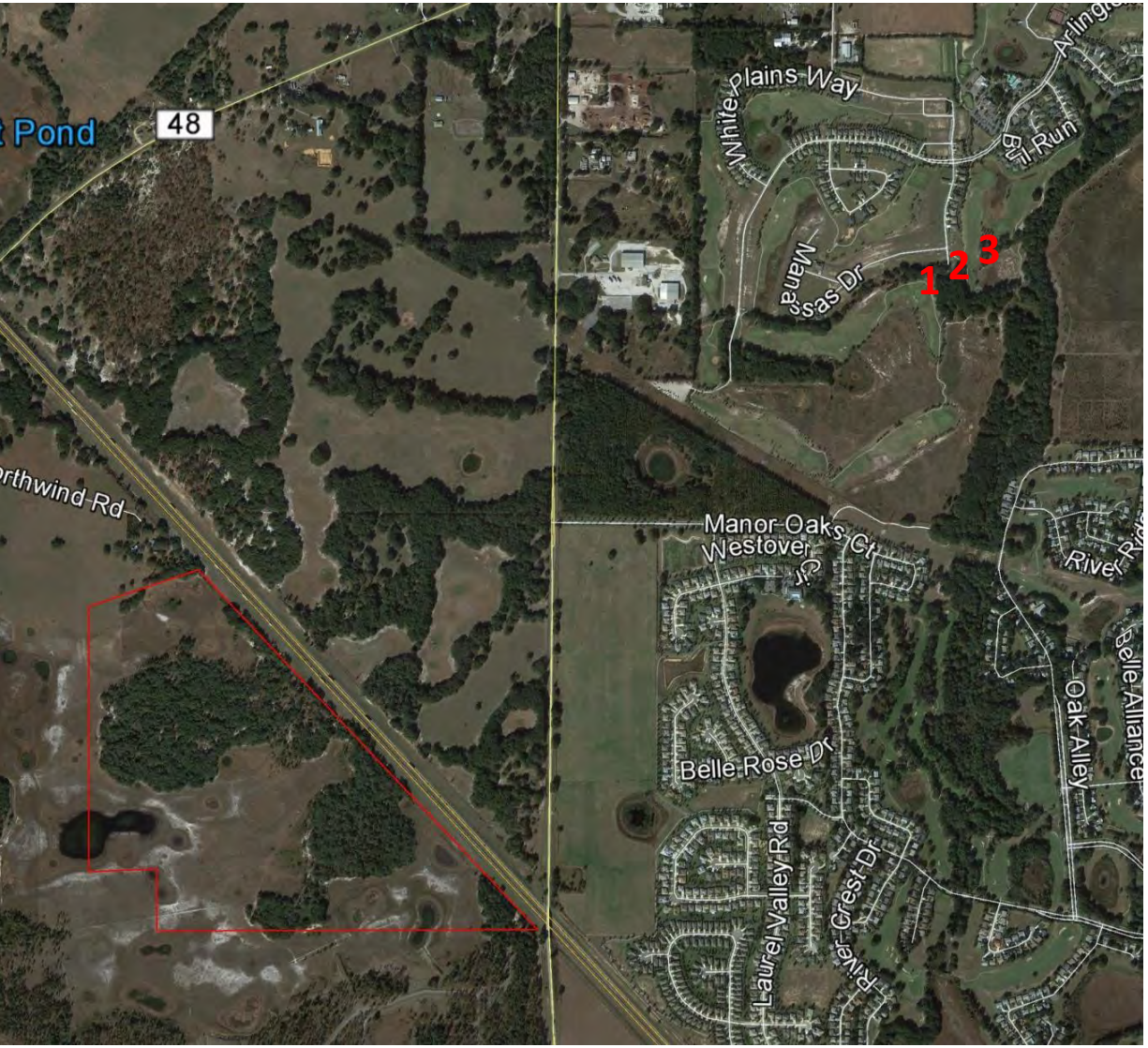
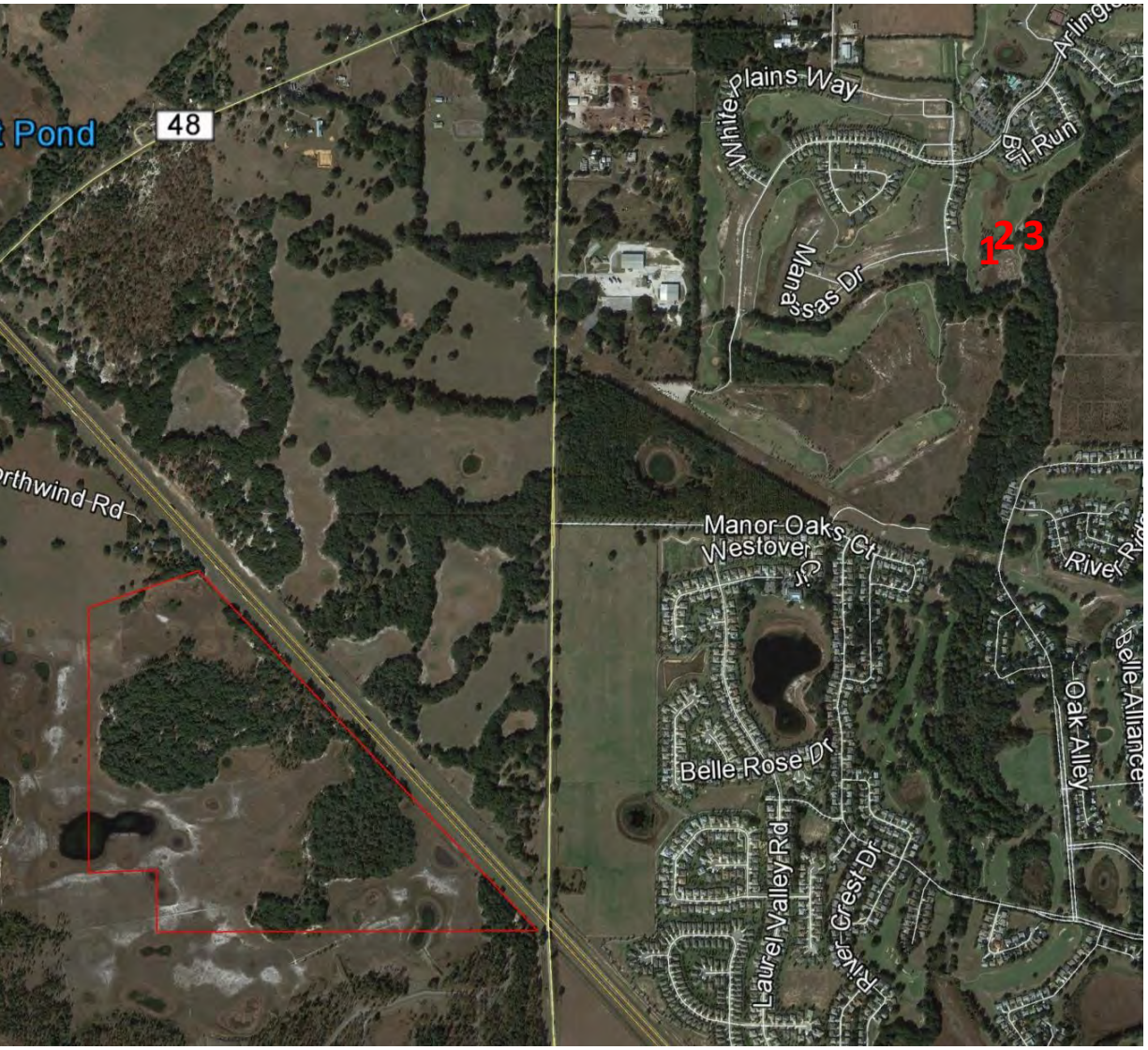
Email: Environmental@Modica.cc
www.ModicaAndAssociates.com



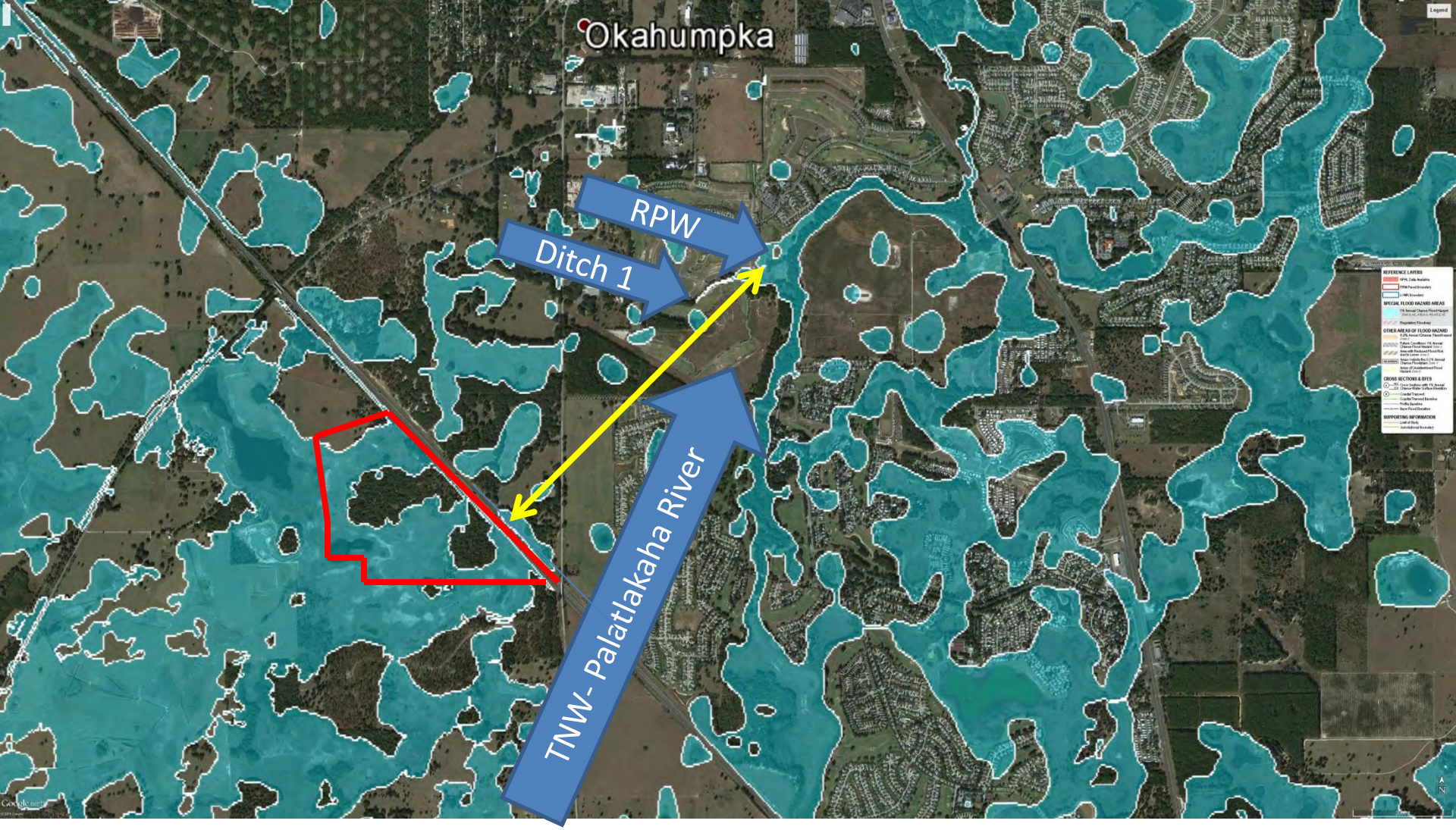
Aerial photograph from 2013. The project site is outlined in red, Ditch 1 is shown in green, Ditch 4 is shown in yellow and RPW is shown in blue.



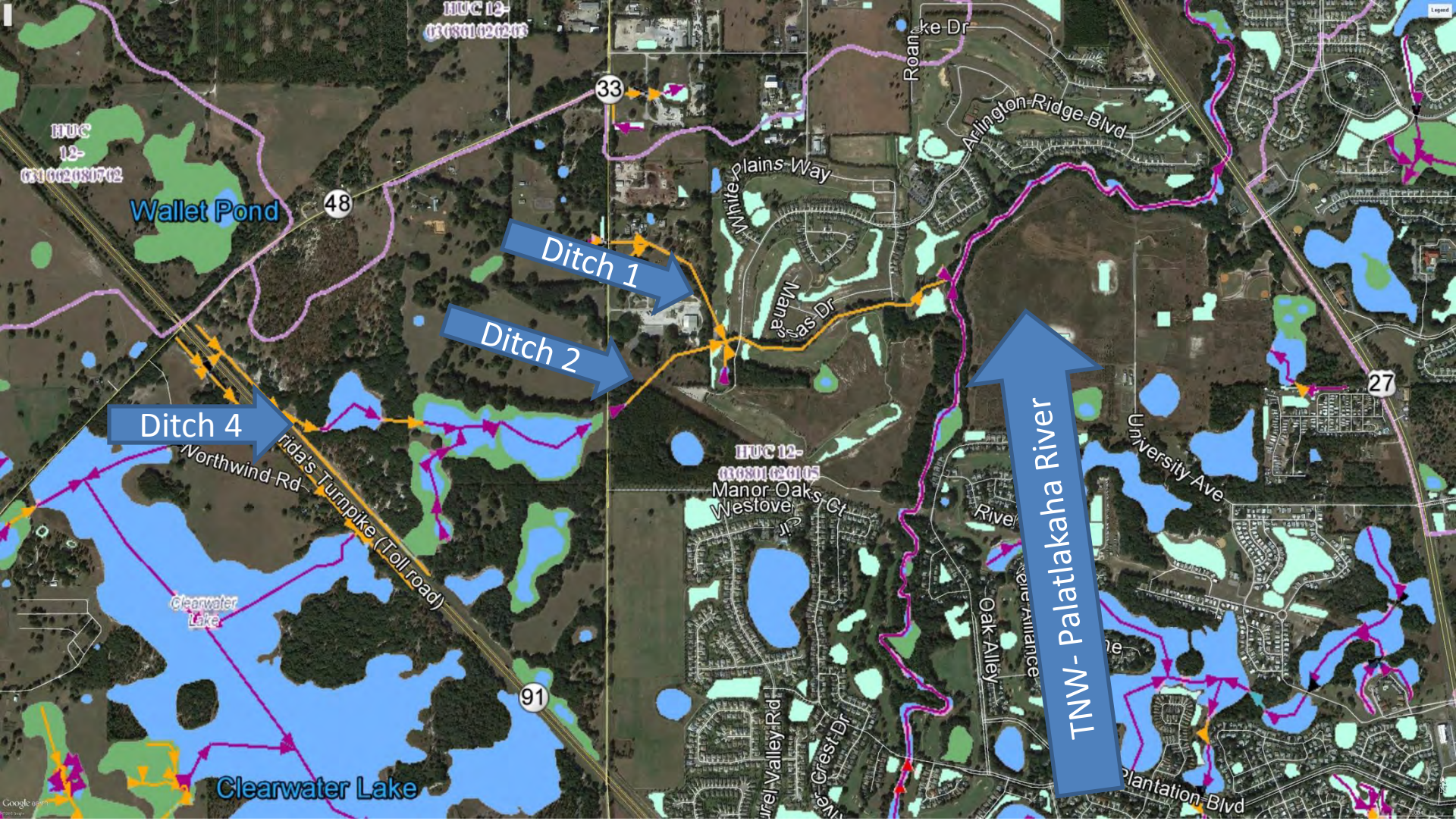
The aerial photograph is from 20113. The project site is outlined in red. Photographs 1 – 3 were taken September 17, 2015 in Ditch 1 near RPW.



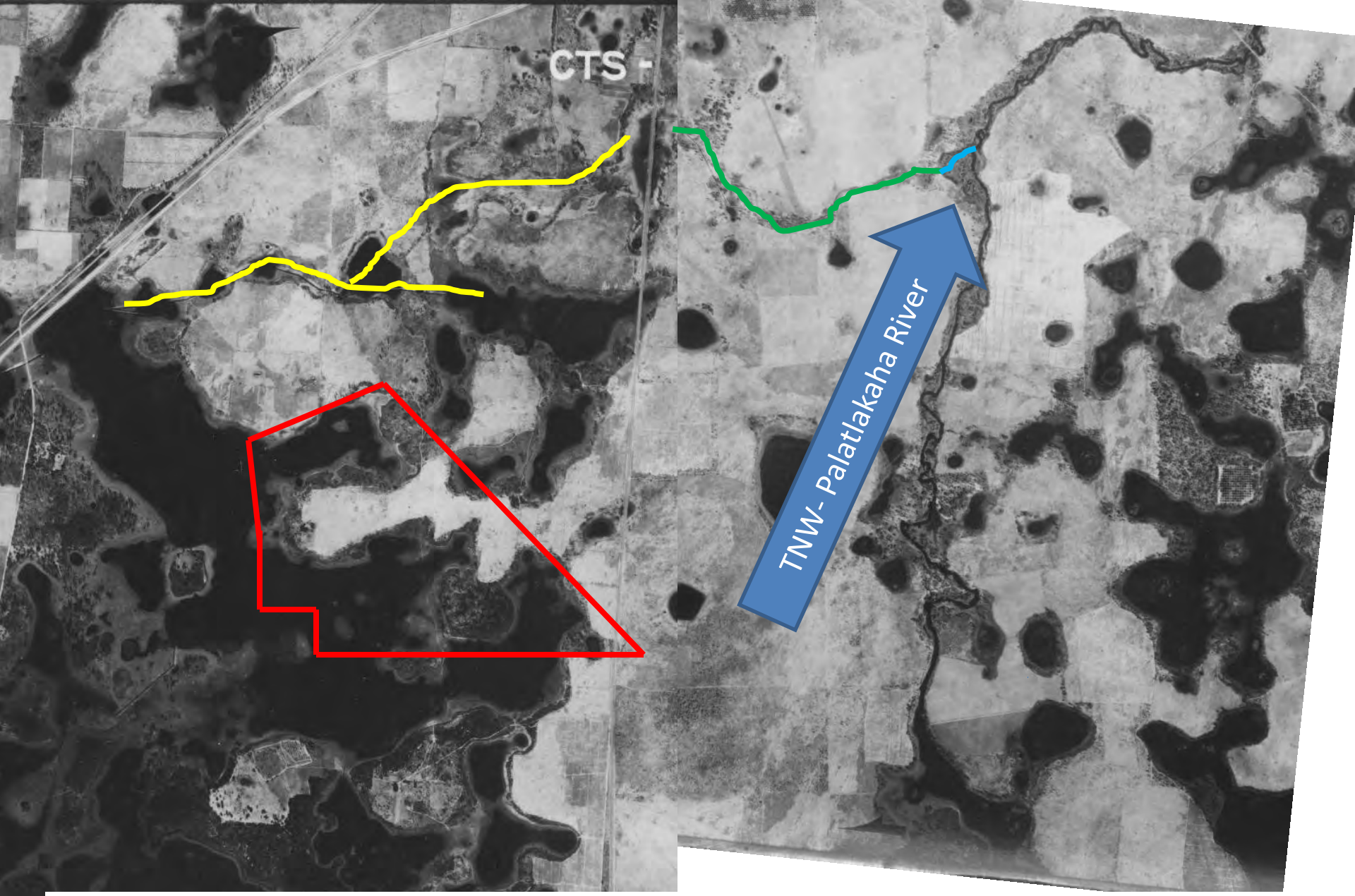
The aerial photograph is from 2013. The project site is outlined in red. Photographs 1 – 3 were taken September 17, 2015 at RPW.



The 100 year flood zones are shown in blue. The project site is outlined in red. The yellow arrow depicts the distance from the project site to the Palatlakaha River. The distance is approximately 7,500 linear feet.

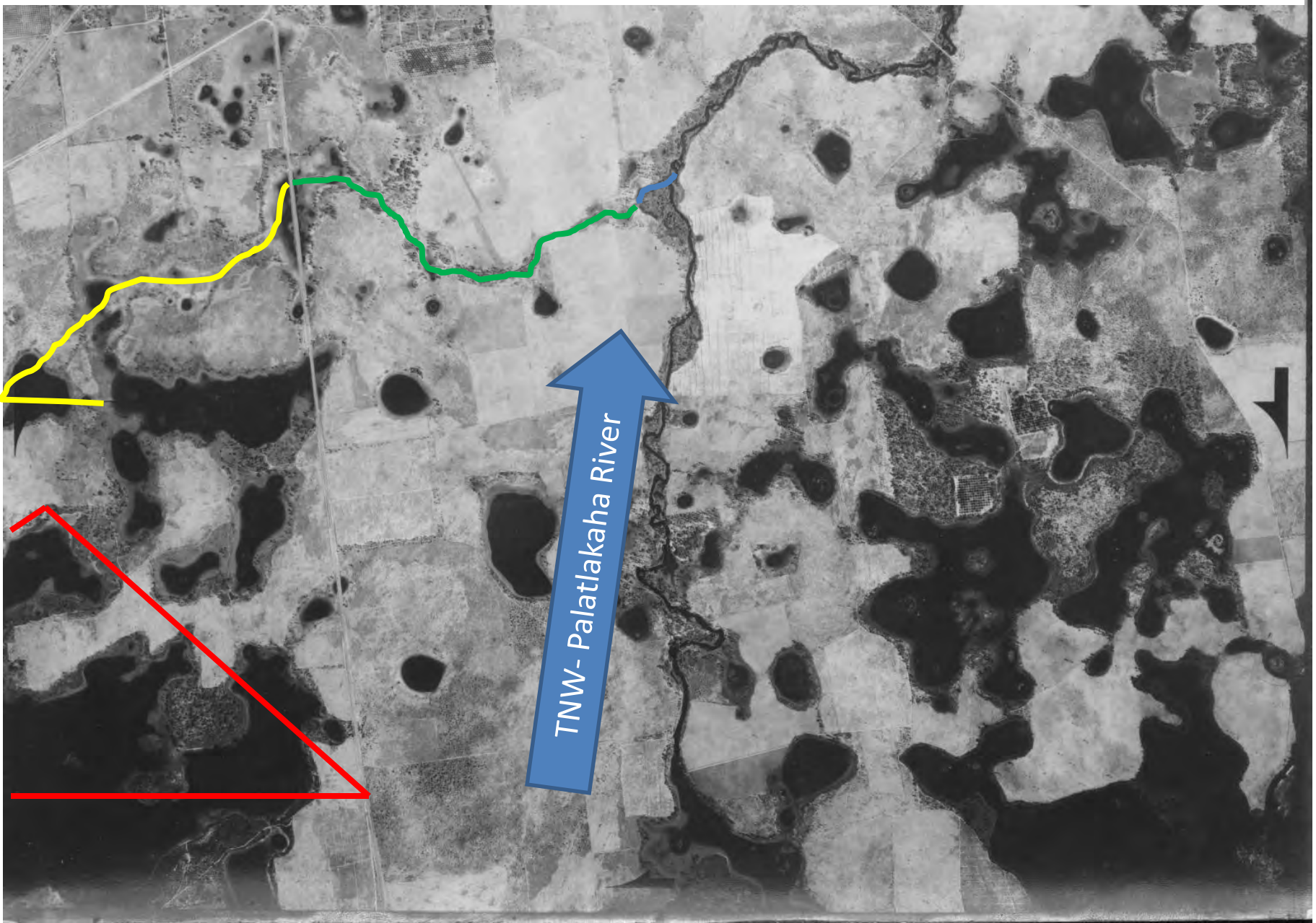


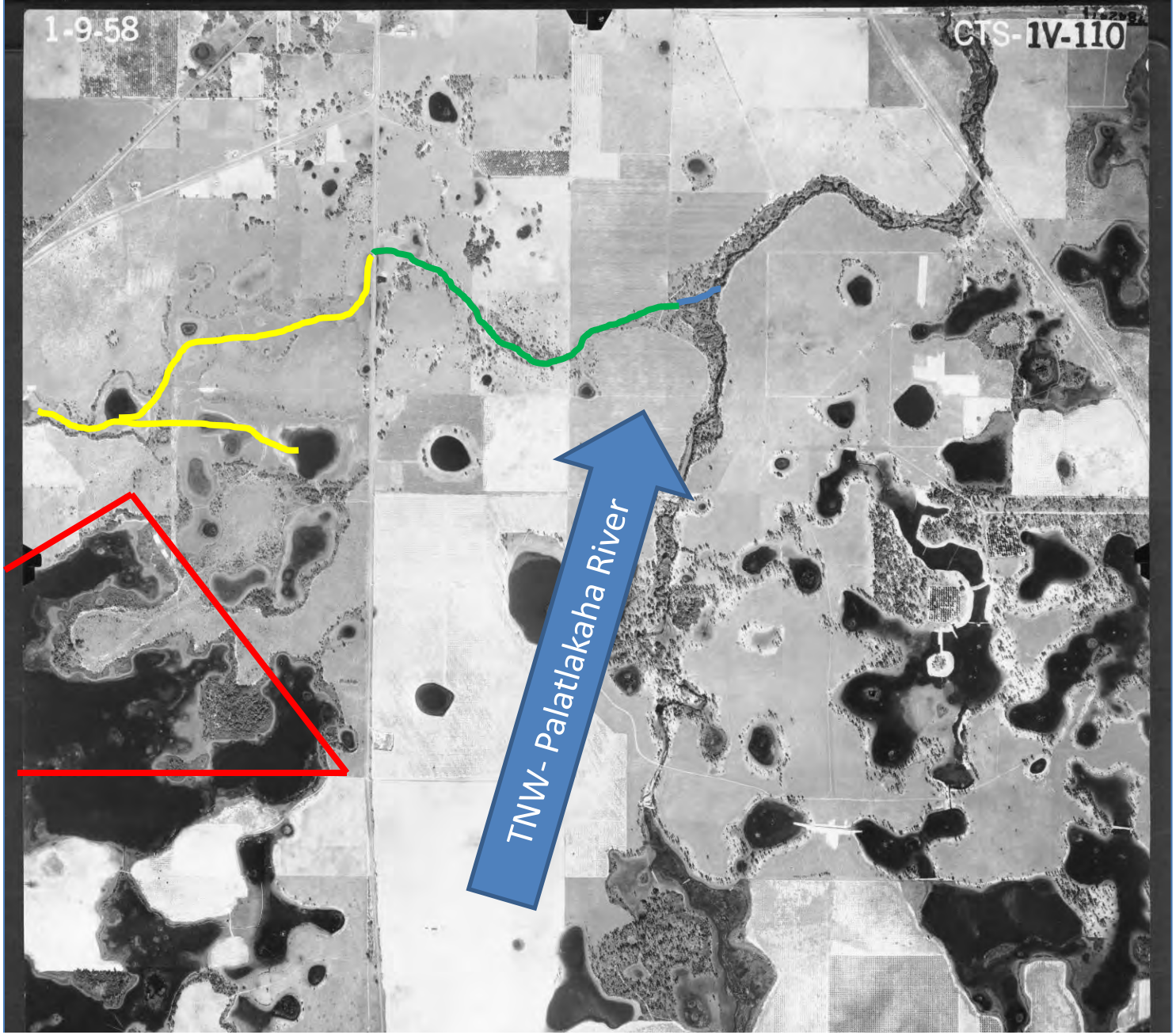
National Hydrologic Dataset showing flow pathways and NWI wetlands.



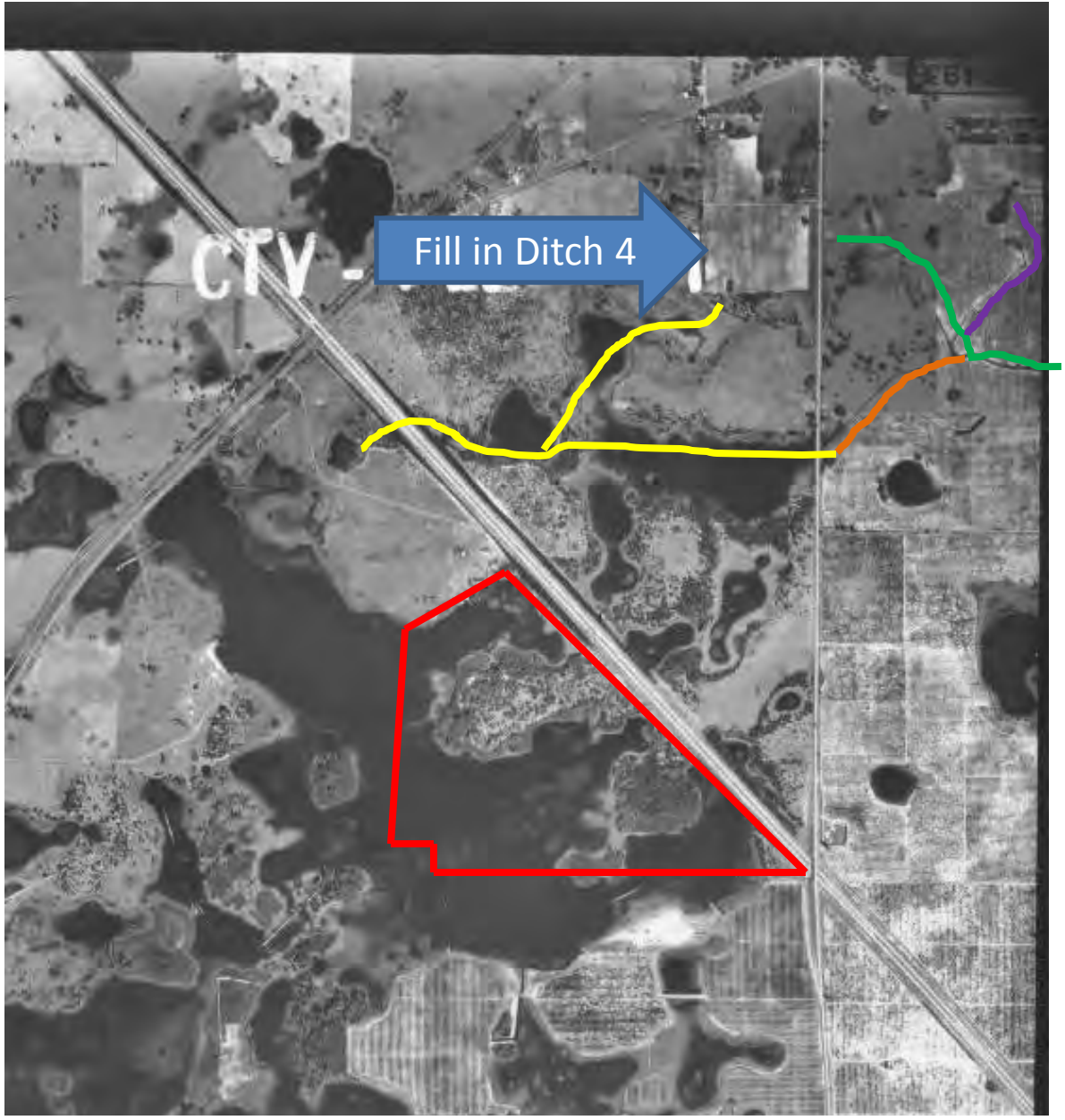
1941 Historic aerial photograph. The project site is outlined in red, Ditch 4 is shown in yellow, Ditch 1 is shown in green and RPW is shown in blue.

1941 Historic aerial photograph. The project site is outlined in red. Ditch 4 is shown in yellow, Ditch 1 is shown in green and RPW is shown in blue.



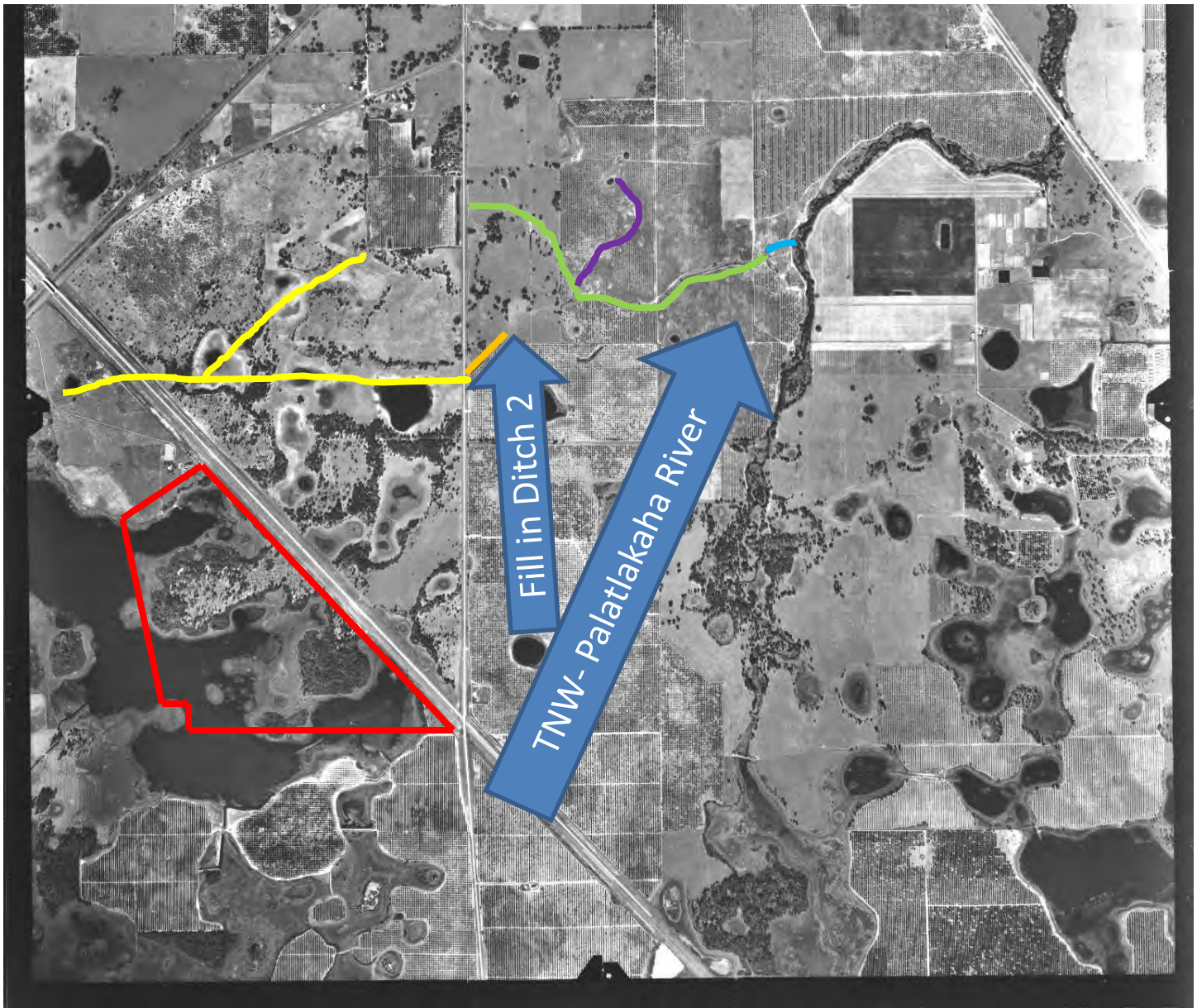


1958 Historic aerial photograph. The project site is outlined in red. Ditch 4 is shown in yellow, Ditch 1 is shown in green and RPW is shown in blue.



1969 Historic aerial photograph. The project site is outlined in red, Ditch 4 is shown in yellow, Ditch 1 is shown in green, Ditch 2 is shown in orange and Ditch 3 is shown in purple.

1974 Historic aerial photograph. The project site is outlined in red, Ditch 4 is shown in yellow, Ditch 1 is shown in green, Ditch 2 is shown in orange and Ditch 3 is shown in purple.



The project site is outlined in red. Aerial photograph from 1994.

The project site is outlined in red. Aerial photograph from 2004.

The project site is outlined in red. Aerial photograph from 2005.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Clearwater Reserve Phase II City/County: Lake Sampling Date: Jul 23, 2015

Applicant/Owner: Ranches of Orlando, LLC. State: Florida Sampling Point: Wetland A Point A

Investigator(s): Clark Modica and Jim Modica Section, Township, Range: S27 T20S and R24E and S28 T20S R24E

Landform (hillslope, terrace, etc.) upland Local relief (concave, convex, none): none Slope (%): 0-5

Subregion (LRR or MLRA): LRR U Lat: 28°43'9.4" N Long: 81°54'35.7" W Datum:

Soil Map Unit Name: Placid and Myakka Sands, Depressional NWI Classification:

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

Are Vegetation ____, Soil ____, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

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

Remarks:
This point is located in the uplands adjacent to Wetland A. No hydrologic indicators present.

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

Sampling Point: Wetland A Point A

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0	= Total Cover	

50 % of total cover: 0 20 % of total cover: 0

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0	= Total Cover	

0 20 % of total cover: 0

Herb Stratum (Plot size:)			
1. Amphicarpum muhlenbergianum	20	Y	FACW
2. Axonopus affinis (Grass,southern carpet)	20	Y	FACW
3. Paspalum notatum (Grass,bahia)	15	Y	FACU
4. Plantago virginica (Plantain,pale-seed)	5		FACU
5. Rubus cuneifolius (Blackberry,sand)	5		FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	65	= Total Cover	

50 % of total cover: 32.5 20 % of total cover: 13

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

50 % of total cover: 0 20 % of total cover: 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		X 2 =	
FAC species		X 3 =	
FACU species		X 4 =	
UPL species		X 5 =	
Column Totals:		(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 – Rapid Test for Hydrophytic Vegetation

X 2 – Dominance Test is > 50%

___ 3 – Prevalence Test is ≤ 3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or probl matic.

Definitions 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.

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. Includes 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** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland A Point A

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR3/1				N/A	N/A	Sandy	

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

Hydric Soil Indicators:

- ___Histosol (A1)
- ___Histic Epipedon (A2)
- ___Black Histic (A3)
- ___Hydrogen Sulfide (A4)
- ___Stratified Layers (A5)
- ___Organic Bodies (A6) **(LRR P, T, U)**
- ___5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___Muck Presence (A8) **(LRR U)**
- ___1 cm Muck (A9) **(LRR P, T)**
- ___Depleted Below Dark Surface (A11)
- ___Thick Dark Surface (A12)
- ___Coast Prairie Redox (A16) **(MLRA 150A)**
- ___Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___Sandy Gleyed Matrix (S4)
- ___Sandy Redox (S5)
- ___Stripped Matrix (S6)
- ___Dark Surface (S7) **(LRR P, S, T, U)**
- ___Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___Thin Dark Suface (S9) **(LRR S, T, U)**
- ___Loamy Gleyed Matrix (F1) **(LRR O)**
- ___Loamy Gleyed Matrix (F2)
- ___Depleted Matrix (F3)
- ___Redox Dark Surface (F6)
- ___Depleted Dark Surface (F7)
- ___Redox Depressions (F8)
- ___Marl (F10) **(LRR U)**
- ___Depleted Ochric (F11) **(MLRA 151)**
- ___Iron Manganese Masses (F12) **(LRR O, P, T)**
- ___Umbric Surface (F13) **(LRR P, T, U)**
- ___Delta Ochric (F17) **(MLRA 151)**
- ___Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___1 cm Muck (A9) **(LRR O)**
- ___2 cm Muck (A10) **(LRR S)**
- ___Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___Red Parent Material (TF2)
- ___Very Shallow Dark Surface (TF12)
- ___Other (Explain in Remarks)

[3]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** **X**

Remarks:

Additional Vegetation Samples

		Abs% Cover	Dom Spec?	Ind Status			Abs% Cover	Dom Spec?	Ind Status
Tree Stratum					20.				
9.					21.				
10.					22.				
11.					23.				
12.					24.				
13.					25.				
14.					26.				
15.					27.				
16.					28.				
17.					29.				
18.					30.				
19.					31.				
Sapling/Shrub Stratum					20.				
9.					21.				
10.					22.				
11.					23.				
12.					24.				
13.					25.				
14.					26.				
15.					27.				
16.					28.				
17.					29				
18.					30.				
19.					31.				
Herb Stratum					38.				
13.					39.				
14.					40.				
15					41.				
16.					42.				
17.					43.				
18.					44.				
19.					45.				
20.					46.				
21.					47.				
22.					48.				
23.					49.				
24.					50.				
25.					51.				
26.					52.				
27.					53.				
28.					54.				
29.					55.				
30.					56.				
31.					57.				
32.					58.				
33.					59.				
34.					60.				
35.					61.				
36.					62.				
37.					63.				
Vine Stratum					17.				
6.					18.				
7.					19.				
8.					20.				
9.					21.				
10.					22.				
11.					23.				
12.					24.				
13.					25.				
14.					26.				
15.					27.				
16.					28.				

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Clearwater Reserve Phase II City/County: Lake Sampling Date: Jul 23, 2015

Applicant/Owner: Ranches of Orlando, LLC. State: Florida Sampling Point: Wetland A Point B

Investigator(s): Clark Modica and Jim Modica Section, Township, Range: S27 T20S and R24E and S28 T20S R24E

Landform (hillslope, terrace, etc.) wetland Local relief (concave, convex, none): none Slope (%): 0-5

Subregion (LRR or MLRA): LRR U Lat: 28°43'9.6" N Long: 81°54'37.7" W Datum:

Soil Map Unit Name: Placid - Myakka Sands, Depressional NWI Classification:

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

Are Vegetation ____, Soil ____, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ____	**Is the Sampled Area within a Wetland?**	Yes X No ____
Hydric Soil Present?	Yes X No ____		
Wetland Hydrology Present?	Yes X No ____		

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- X Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) **(LRR T, U)**

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Aerial photographs and site inspection

Remarks:

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

Sampling Point: Wetland A Point B

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0	= Total Cover	

50 % of total cover: 0 20 % of total cover: 0

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0	= Total Cover	

0 20 % of total cover: 0

Herb Stratum (Plot size:)			
1. Rhynchospora inundata (Beakrush,horned)	20	Y	OBL
2. Hypericum fasciculatum (St. john's-wort,sandweed)	15	Y	FACW
3. Panicum hemitomon (Maiden-cane)	15	Y	OBL
4. Rhynchospora tracyi (Beakrush,tracy's)	15	Y	OBL
5. Scirpus cubensis (Bulrush,cuban)	10		OBL
6. Amphicarpum muhlenbergianum	5		FACW
7.			
8.			
9.			
10.			
11.			
12.			
	80	= Total Cover	

50 % of total cover: 40 20 % of total cover: 16

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

50 % of total cover: 0 20 % of total cover: 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		X 2 =	
FAC species		X 3 =	
FACU species		X 4 =	
UPL species		X 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 – Rapid Test for Hydrophytic Vegetation

___ 2 – Dominance Test is > 50%

___ 3 – Prevalence Test is ≤ 3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or probl matic.

Definitions 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.

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. Includes 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** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland A Point B

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR3/1				N/A	N/A	Sandy	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- X Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Suface (S9) **(LRR S, T, U)**
- ___ Loamy Gleyed Matrix (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]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** X **No** _____

Remarks:

Additional Vegetation Samples

		Abs% Cover	Dom Spec?	Ind Status			Abs% Cover	Dom Spec?	Ind Status
Tree Stratum					20.				
9.					21.				
10.					22.				
11.					23.				
12.					24.				
13.					25.				
14.					26.				
15.					27.				
16.					28.				
17.					29.				
18.					30.				
19.					31.				
Sapling/Shrub Stratum					20.				
9.					21.				
10.					22.				
11.					23.				
12.					24.				
13.					25.				
14.					26.				
15.					27.				
16.					28.				
17.					29				
18.					30.				
19.					31.				
Herb Stratum					38.				
13.					39.				
14.					40.				
15					41.				
16.					42.				
17.					43.				
18.					44.				
19.					45.				
20.					46.				
21.					47.				
22.					48.				
23.					49.				
24.					50.				
25.					51.				
26.					52.				
27.					53.				
28.					54.				
29.					55.				
30.					56.				
31.					57.				
32.					58.				
33.					59.				
34.					60.				
35.					61.				
36.					62.				
37.					63.				
Vine Stratum					17.				
6.					18.				
7.					19.				
8.					20.				
9.					21.				
10.					22.				
11.					23.				
12.					24.				
13.					25.				
14.					26.				
15.					27.				
16.					28.				