US Army Corps of Engineers

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): May 6, 2019

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CESAJ-RD-WT SAJ-2017-02482 Hickman Property, Sumter County

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State:FL County/parish/borough: Sumter City: Wildwood
Center coordinates of site (lat/long in degree decimal format): Lat. 28.827386° **N**, Long. -82.040609° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: Little Jones Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Panasoffkee
Name of watershed or Hydrologic Unit Code (HUC): Lake Panasoffkee (HUC 0310020807)
☒ 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. Adjacent Property AJD SAJ-2017-02096

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: April 9, 2019
☒ Field Determination. Date(s): March 19, 2018

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: .

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]
   ☐ 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: linear feet: width (ft) and/or 1.89 acres.
   Wetlands: 56.58 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]
   ☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: **W-32, W-22, W-26, W-27, W-28, W-C, W-B, W-24, W-23, W-25, W-20, W-A, W-10, W-8, W-7, SW-6, SW-7, W-17, W-13, W-14, W-15, W-16, W-18, W-19, W-21 (for a total of 32.91 ac): Waters are geographically isolated. Lidar imagery shows that these waters are topographically separated from waters of the U.S. that have been identified on the property. Additionally, waters listed above are non-navigable, intrastate waters from which the only potential basis to exercise Corps jurisdiction would be migratory bird use. Migratory bird use by itself is not a sufficient basis to exercise CWA jurisdiction (Solid Waste Agency of Northern Cook County vs. U.S Army Corps of Engineers 531 U.S. 159, 2001)**.

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[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.

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: .

Summarize rationale supporting determination: .

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: 175,287 **acres**
Drainage area: As described by Taylor (1977) 268,800 **acres**
Average annual rainfall: 51.55 inches
Average annual snowfall: 0 inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☒ Tributary flows through **3** tributaries before entering TNW.

Project waters are **5-10** river miles from TNW.
Project waters are **1 (or less)** river miles from RPW.
Project waters are **2-5** aerial (straight) miles from TNW.
Project waters are **1 (or less)** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: No.

Identify flow route to TNW[5]: Figure 3 shows flow route to TNW. Surface water from SW-2 and SW-3 flows indirectly into Lake Panasoffkee (a TNW and head water of the Withlacoochee River) via a culvert that runs under Main St and a culvert and channel that crosses under Florida's Turnpike and feeds into Little Jones Creek, an official tributary of Lake Panasoffkee.
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☒ Natural

[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.

☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: Historically the forested, wetland was continguous with wetlands to the north of the Florida Turnpike. Fill from construction of the turnpike and the culvert system created a man-made barrier between wetlands. Historical wetlands on site have been manipulated for agricultural land use. A series of ditches and culverts have been installed utitilizing the foot print of historical wetlands, to drain water off the site.

Tributary properties with respect to top of bank (estimate):
Average width: 25 feet
Average depth: 4 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):

☐ Silts	☒ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☒ Muck
☐ Bedrock	☒ Vegetation. Type/% cover: Forested with 90% Cover	
☒ Other. Explain: Parent material is sandy marine deposits.		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Good.
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): 5 %

(c) Flow:
Tributary provides for: **Seasonal flow**
Estimate average number of flow events in review area/year: **2-5**
Describe flow regime: Water flow typically follows rainfall patterns. It rains on average 71 days a year in Sumter County, FL with a pronounced wet (July-Sept) and dry (Oct-June) season (http://www.usa.com/sumter-county-fl-weather.htm). Water flow within the RPW was observed during the site visit on March 19. Observed water flow within the waterbody during the dry season demonstrates that it is capable of supporting water flow, not only seasonally during the wet season, but also during the dry season under normal rainfall conditions. A DAREM analysis was conducted and showed that rainfall prior and during the site visit was normal.
Other information on duration and volume: .

Surface flow is: **Confined.** Characteristics: Channelized flow.

Subsurface flow: **Yes**. Explain findings: .
☒ Dye (or other) test performed: Strontium isotope data (McBride et al 2010) confirmed that rainfall is the primary source of groundwater recharge within the Lake Panasoffkee watershed and that the watershed drainage is primarily internal. The three distinct water types that occur within the Lake Panasoffkee watershed (calcium-bicarbonate type waters, mixed calcium-bicarbonate/calcium-sulfate type waters, and ground water samples composed of calcium-sulfate type water) indicate that the Upper Floridan Aquifer (UFA) contributes inflow to the overlying hydrogeologic units and surface waters within the watershed (McBride et al 2010).

Tributary has (check all that apply):
☐ Bed and banks
☒ OHWM[6] (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.[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:	☐ 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: Water color was observed to be a tea color with a yellow-brown hue, most likely caused by natural dissolved

[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.

organic acids such as tannins and lignins and minerals such as inosluble oxidized iron and manganese which are commonly produced under anerobic conditions.

Identify specific pollutants, if known: Nutrient pollutants such as nitrogen and phosphorus are common with cattle operations. The property is currently being used for cattle operations.

(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: Provides breeding, nesting, and foraging habitat for insects, reptiles, birds, amphibians, mollusks, and mammals (Haag and Lee 2010). In addition, nutrient/pollutant filtration functions of the RPW are important for maintaining water quality for aquatic flora and fauna in Lake Panasoffkee. Lake Panasoffkee is an important recreational freshwater fishing resource and is especially known for redear sunfish, blue gill, and bass fishery resource.

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: 58.47 acres

Wetland type. Explain: Palustrine, emergent persistent and Palustrine, forested.

Wetland quality. Explain: low to moderate.

Project wetlands cross or serve as state boundaries. Explain: N/A.

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: Water flow typically follows rainfall patterns. It rains on average 71 days a year in Sumter County, FL with a pronounced wet (July-Sept) and dry (Oct-June) season (http://www.usa.com/sumter-county-fl-weather.htm).

Surface flow is**: Discrete and confined**

Characteristics: .

Subsurface flow: **Yes**. Explain findings: .

☒ Dye (or other) test performed: Strontium isotope data (McBride et al 2010) confirmed that rainfall is the primary source of groundwater recharge within the Lake Panasoffkee watershed and that the watershed drainage is primarily internal. The three distinct water types that occur within the Lake Panasoffkee watershed (calcium-bicarbonate type waters, mixed calcium-bicarbonate/calcium-sulfate type waters, and ground water samples composed of calcium-sulfate type water) indicate that the UFA contributes inflow to the overlying hydrogeologic units and surface waters within the watershed (McBride et al 2010).

(c) Wetland Adjacency Determination with Non-TNW:

☒ Directly abutting

☒ Not directly abutting

☒ Discrete wetland hydrologic connection. Explain: Surface water flows between wetlands and RPW at least seasonally during the wet season.

☒ Ecological connection. Explain: Through movements of plant of animals via response to complex habitat requirements and biotic connections (Leibowitz 2003). For example, many animals, including amphibians, require both aquatic and terrestrial habitat at different life history stages. In addition, biological functions of wetlands filter and remove pollutants and nutrients from through-flowing water (Harper et al 1986 and Johengen & LaRock 1993), improving the water quality of fresh water being discharged into RPW and downstream into TNW.

☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **5-10** river miles from TNW.

Project waters are **2-5** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

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: Water color was observed to be a tea color with a yellow-brown hue, most likely caused by natural dissolved organic acids such as tannins and lignins and minerals such as inosluble oxidized iron and manganese which are commonly produced under anerobic conditions..

Identify specific pollutants, if known: Nutrient pollutants such as nitrogen and phosphorus are common with cattle operations. The property is currently being used for cattle operations.

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

☐ Riparian buffer. Characteristics (type, average width): .

☒ Vegetation type/percent cover. Explain:Palustrine, emergent persistent and Palustrine, forested.

☒ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☒ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings: Provides breeding, nesting, and foraging habitat for insects, reptiles, birds, amphibians, mollusks, and mammals (Haag and Lee 2010). In addition, nutrient/pollutant filtration functions of the wetlands are

important for maintaining water qulaity for aquatic flora and fauna in Lake Panasoffkee. Lake Panasoffkee is an important recreational freshwater fishing resource and is especially known for redear sunfish, blue gill, and bass fishery resource.

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

   All wetland(s) being considered in the cumulative analysis: **30 (or more)**

   Approximately (57.23) 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)
SW-1 (Y)	0.23 ac		
SW-4 (Y)	0.21 ac		
SW-5 (Y)	0.21 ac		
W-1 (Y)	1.24 ac		
W-12 (Y)	0.10 ac		
W-2 (Y)	1.14 ac		
W-3 (forested) (Y)	19.12 ac		
W-3 (herbaceous) (Y)	9.14 ac		
W-31 (Y)	11.39 ac		
W-6 (herbaceous) (Y)	5.07 ac		
W-6 (forested) (Y)	1.38 ac		
W-11 (N)	1.66 ac		
W-29 (N)	1.27 ac		
W-30 (N)	1.62 ac		
W-31A (N)	0.20 ac		
W-31B (N)	0.89 ac		
W-31C (N)	0.77 ac		
W-4 (N)	0.87 ac		
W-5 (N)	0.26 ac		
W-9 (N)	0.46 ac		

Summarize overall biological, chemical and physical functions being performed: Contributes freshwater inflow into TNW, filters and removes sediments and nutrients from watershed (Harper et al 1986 and Johengen & LaRock 1993), ultimately reducing nutrient loading into TNW. Maintains water flow within watershed, providing temporary storage of surface water to reduce local flooding (Smith et al 1995). Provides breeding, nesting, and foraging habitat for insects, reptiles, birds, amphibians, mollusks, and mammals (Haag and Lee 2010).

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:

4. **Significant nexus findings for RPW; wetlands directly abutting RPW; and wetlands adjacent to an RPW, but that do not directly abut the RPW, that flows directly into TNW:** Subject RPW (SW-2 and SW-3) and Subject Wetlands (abutting Wetlands/Surface Waters: SW-1, SW-4, SW-5, W-1, W-12, W-2, W-3, W-31, and W-6, in combination with adjacent wetlands and surface waters:W11, W-29, W-30, W-31A, W-31B, W-31C, W-4, W-5, and W9) have more than an insubstantial or speculative effect on the physical, chemical, and biological integrity of the downstream TNW (Lake Panasoffkee).

   PHYSICAL-RPW contributes fresh water in-flow into Lake Panasoffkee (TNW). Wetland functions of Subject Wetlands contribute to maintaining water flow (Smith et al 1995) in the watershed (storing flood waters and recharging ground water), directly influencing fresh water flow rates into RPW and downstream to TNW. Due to the karst topography and well developed internal drainage system the actual surface-water drainage basin for the Lake Panasoffkee watershed is 62.2 square miles, with Little Jones Creek and Shady Brook being the primary tributaries (McBride et al 2010 and SWFWM 2000). However, McBride et al (2010) found that during the year 2007-2008, ground water contributed 68% of the water in flow to Lake Panasoffkee; indentifying a groundwater contribution area for Lake Panasoffkee that is 192 square miles and extends 15 miles southeast and 5 miles northeast of Lake Panasoffkee.

   CHEMICAL-Pollutant and nutrient loading into TNW is directly affected by the quality of discharge from RPW and Subject Wetlands. The RPW and Subject Wetlands receive rainfall and stormwater runoff from adjacent areas and transports water and sediments via surface flow, downstream into the TNW. Higher than normal flows within the RPW are associated with pollutant and excess nutrient discharge into TNW. Studies have shown that surface inflow contributes about 51% of total nitrogen and 56% of the total phosphorus input into TNW (SWFMD 2000). Wetland functions of Subject Wetlands filter and remove pollutants (bacteria, pesticides, metals, petroleum by-products) and nutrients from through-flowing water (Harper et al 1986 and Johengen & LaRock 1993), improving the water quality of fresh water being discharged into RPW and downstream into TNW.

   BIOLOGICAL-Water quality within the RPW and Subject Wetlands directly affects the biological integrity of the downstream TNW. The functions of the RPW and the Subject Wetlands provide nutrient and pollutant filtration necessary for maintenance of water quality in the TNW. The TNW is nationally recognized as one of Florida's most productive lakes for the redear sunfish fishery and is located within the core foraging area of the federally endangered Wood Stork (SWFMD 2000). Good water quality in the TNW is essential for the health of the freshwater sport fishery and survival of environmentally sensitive flora and fauna.

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: linear feet width (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: .
   ☒ 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: Water flow typically follows rainfall patterns. It rains on average 71 days a year in Sumter County, FL with a pronounced wet (July-Sept) and dry (Oct-June) season (http://www.usa.com/sumter-county-fl-weather.htm). Water flow within the RPW was observed during the site visit on March 19. Observed water flow within the waterbody during the dry season demonstrates that it is capable of supporting water flow, not only seasonally during the wet season, but also during the dry season under normal rainfall conditions. A DAREM analysis was conducted and showed that rainfall prior and during the site visit was normal.

Provide estimates for jurisdictional waters in the review area (check all that apply):
☒ Tributary waters: **2,000** linear feet **25** 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: A field site visit revealed that these waters directly abut RPW (SW-2 and SW-3) via concrete culverts. Additionally, lidar imagery and NHD wetland data shows resources are hydraulically connected. .

Provide acreage estimates for jurisdictional wetlands in the review area: **49.23** 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.

Provide acreage estimates for jurisdictional wetlands in the review area: **8** 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: .

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[8] See Footnote # 3.
[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.*

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: .
☐ 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: 0.36 acres. List type of aquatic resource: ditch.
☒ Wetlands: 32.55 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: BDA.
☒ 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: .
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☒ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☐ Aerial (Name & Date): .
or ☐ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☒ Applicable/supporting case law: .
☒ Applicable/supporting scientific literature: See below.
☐ Other information (please specify):

Applicable/supporting scientific literature:

Haag, K. and Lee, T. 2010. Hydrology and Ecology of Freshwater Wetlands in Central Florida-A Primer. Prepared in cooperation with the St. Johns River Water Management District, the Southwest Florida Water Management District and Tampa Bay Water. U.S. Department of the Interior, U.S. Geological Survey.

Harper, H., Wanielista, M., Baker, D., Fries, B., and Livingston, E. 1986. Treatment Efficiencies for Residential Stormwater Runoff in a Hardwood Wetland. Lake and Reservoir Management. 2:1, 351-356.

Johengen, T. and LaRock, P. 1993. Quantifying Nutrient Removal Processes Within a Constructed Wetland Designed to Treat Urban Stormwater Runoff. Ecological Engineering, 2(1993) 347-366.

Leibowitz, S. 2003. Isolated Wetlands and Their Functions: An Ecological Perspective. WETLANDS, Vol. 23, No. 3, pp. 517-531.

McBride W.S., Bellino, C.J., Swancar, A. Hyrdology, Water Budget, and Water Chemistry of Lake Panasoffkee, West-Central Florida. Scientific Investigations Reprot 2010-5237. US Department of the interior and US Geological Survey.

Smith. RD., Ammann, A., Bartoldus, C., and Brinson, M.M. 1995. An Approach for Assessing Wetland Functions Using Hydrogeomorphic Classification, Reference Wetlands, and Functional Incies, Wetland Research Program Technical Report, USACE.

SWFMD. 2000. Lake Panasoffkee Surface Water Improvement and Management Plan.

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B. ADDITIONAL COMMENTS TO SUPPORT JD:

List of Figures
Figure 1: Review Area
Figure 2: Wetland and Surface Waters
Figure 3: Relevant Reach to TNW

Enclosures
Enclosure 1: Memorandum for Recorord: Description of Jurisdictional Waters in Review Area (6 pages)
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Figure 1: Review Area for SAJ-2017-02482 Hickman Property, Sumter County, FL

Figure 2: Wetlands and Surface Waters in Project Area (SAJ-2017-Hickman Property, Sumter County, FL).

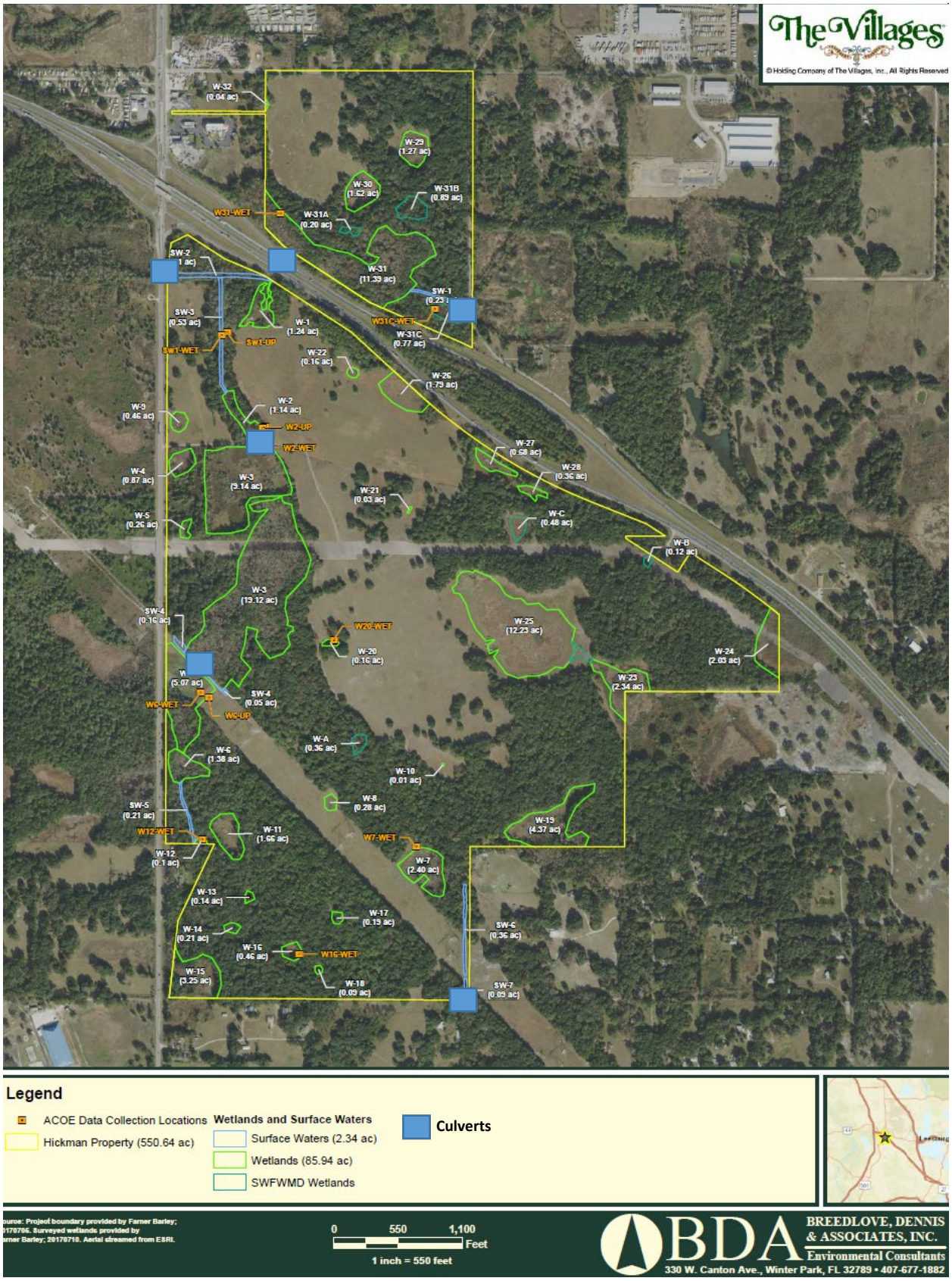
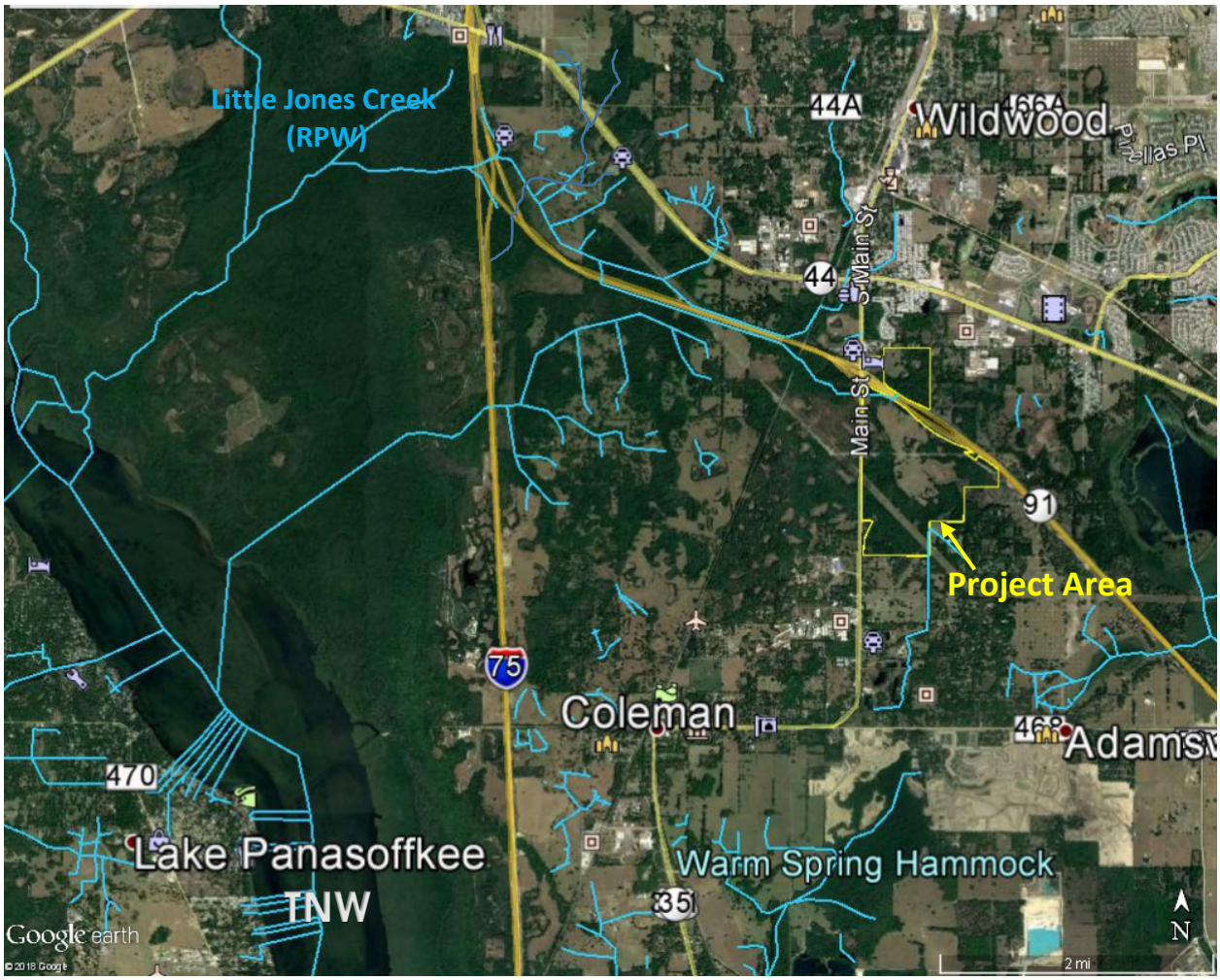


Figure 3: Relevant Reach for SAJ-2017-02482 Hickman Property, Sumter County, FL.



Memorandum for Record: Description of Jurisdictional Waters for Approved Jurisdictional Determination (AJD) Form CESAJ-RD-WT, SAJ-2017-02482 Hickman Property, Sumter County

April 8, 2019

The Corps utilized the June 5, 2007 memorandum that provides guidance for Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States (referred to as "Rapanos Guidance") and 33 CFR 328.3(a) to identify which waters in the review area were subject to jurisdiction under the Clean Water Act. The Corps found the following jurisdictional waters within the review area.

1. <u>Relatively Permanent Waters (RPWs) that flow directly or indirectly into TNWs</u>

   SW-2 and SW-3 (for a total of 1.24 ac):

   Surface water from SW-2 and SW-3 flows indirectly into Lake Panasoffkee (a TNW and head water of the Withlacoochee River) via a culvert that runs under Main St and a culvert and channel that crosses under Florida's Turnpike and feeds into Little Jones Creek, an official tributary of Lake Panasoffkee.

   Rapanos Guidance states that the Corps should exert jurisdiction over non-navigable tributaries of TNWs that are RPWs where the tributaries typically flow year-round or has a continuous flow at least seasonally (3 months a year). The Corps determined that SW-2 and SW-3 satisfies this standard and are a jurisdictional RPW, collectively.

   This determination was made by taking into consideration the technical information available for the property (i.e. soil surveys, topography maps, aerial photography, and lidar imagery) and the observations made at a site visit.

   A site visit was conducted by the Corps on March 19, 2018. The following was observed:

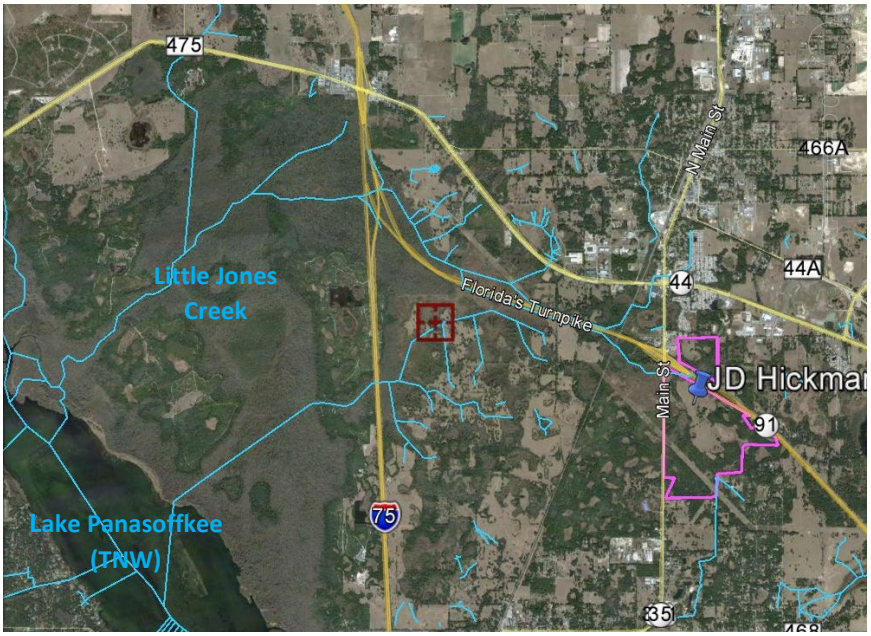
   a) SW-2 and SW-3 was a channelized water way with a bed and bank and OHWM.
   b) The 25 ft wide channelized water body had standing water in it with a 3 foot water depth along the margins.
   c) Water flowing in the waterbody directly into a culvert that runs off site.

Photos of SW-2 and SW-3 showing water flowing into a culvert that runs off site.

Based on field observations and technical information available for the site, it is reasonable to consider the following:

a) SW-2 and SW-3 supports water flow year-round or has a continuous flow at least seasonally, typically following local rainfall patterns. Sumter County receives 51.5 inches of rain annually and it rains on average 71 days a year with a pronounced wet (July-Sept) and dry (Oct-June) season. A DAREM analysis was conducted and showed that rainfall prior to and during the site visit was normal. Observed water flow within waterbody during the dry season demonstrates that it is capable of supporting water flow, not only seasonally during the wet season, but also during the dry season under normal rainfall conditions.

b) SW-2 and SW-3 currently functions as a tributary collecting and conveying water indirectly into the TNW. NHD flow lines demonstrate that the waterbody is hydraulically connected to little Jones Creek, an official tributary of Lake Panasoffkee the TNW.

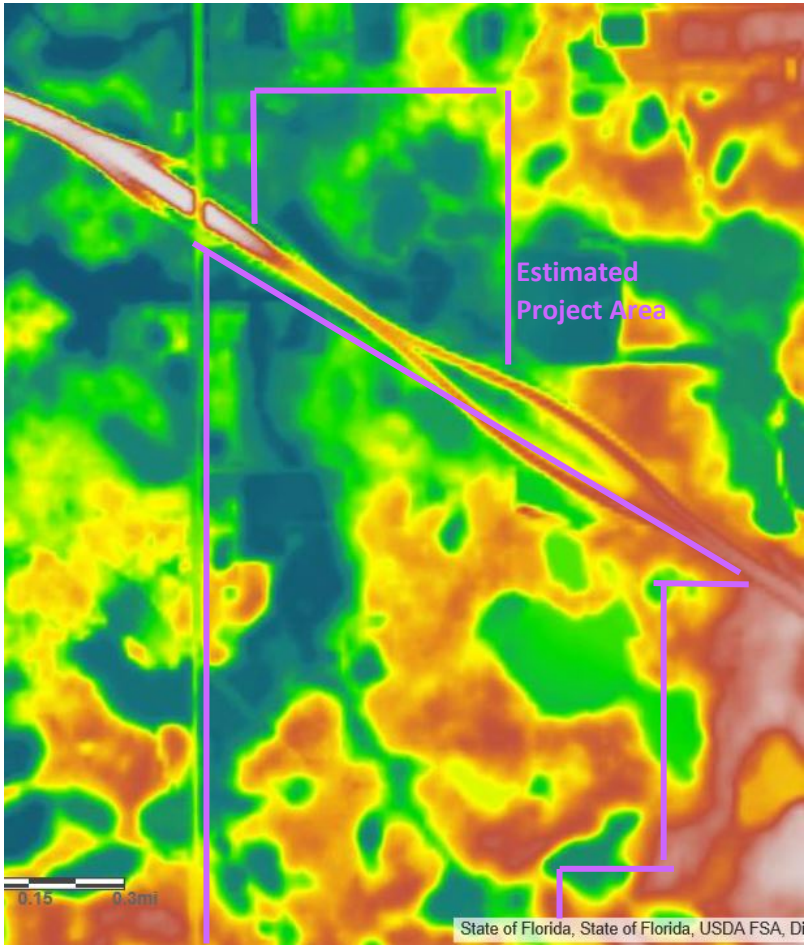


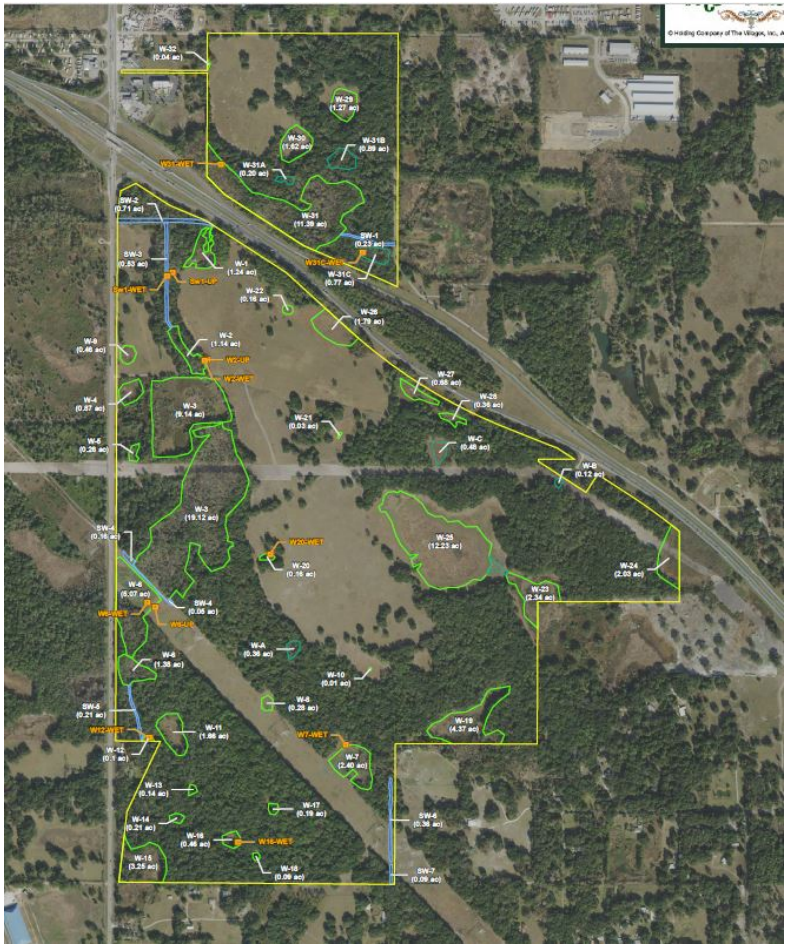
NHD Flow Lines from SW-2 and SW-3 (on the project site) to Little Jones Creek (an official tributary of Lake Panasoffkee).

2. <u>Wetlands Directly Abutting RPWs that flow directly or indirectly into TNWs</u>

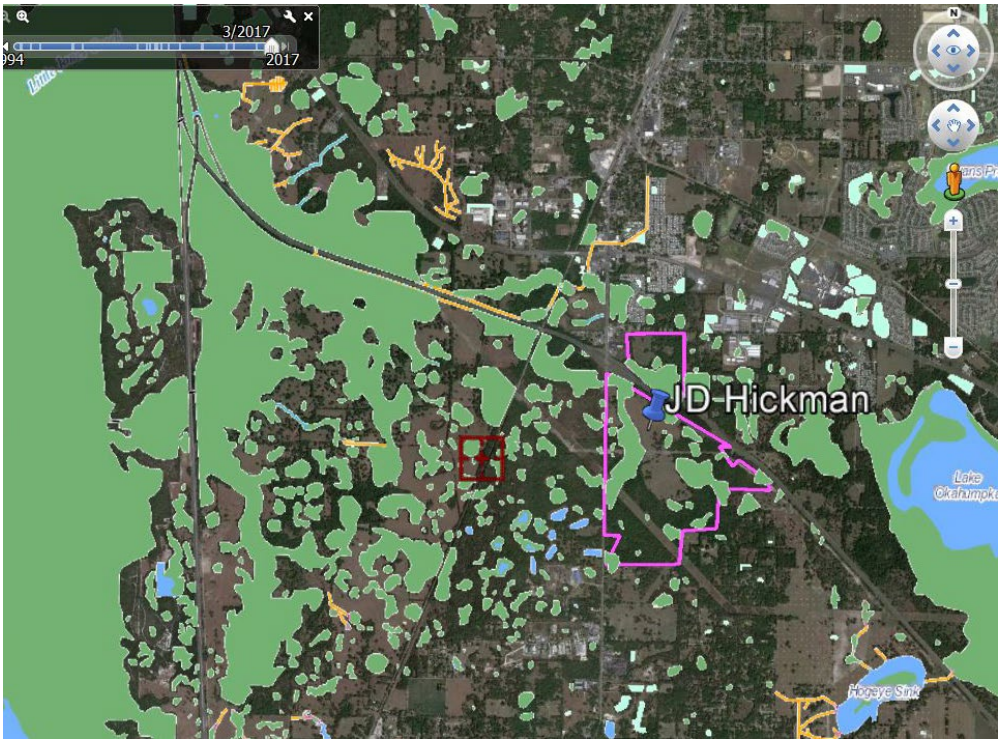
   W-1, W-31, SW-1, W-3 (forested), W-2, W-3 (herbaceous), SW-4, W-6(herbaceous), W-6 (forested), SW-5, and W-12 (for a total of 49.23):

   A field site visit revealed that these waters directly abut RPW (SW-2 and SW-3) via concrete culverts. Additionally, lidar imagery and NHD wetland data shows resources are hydraulically connected. Rapanos Guidance states that the Corps will assert jurisdiction over wetlands that directly abut non-navigable tributaries of TNWs that are relatively permanent. In addtion a fact-specific analysis was conducted to show that these waters have a significant nexus with Lake Panasoffkee (the TNW). See Significant Nexus analysis in Section III.B.C.4. Significant nexus findings for RPW; wetlands directly abutting RPW; and wetlands adjacent to an RPW, but that do not directly abut the RPW, but flows directly into TNW.





Lidar Imagery of Project Area as Compared to Wetland Delineation for Project Area



NHD Wetland Data of project area

3. <u>Wetlands Adjacent to, but not Directly Abutting RPWs with a Significant Nexus to TNW</u>

   W-31A, W-31B, W-30, W31C, W-29, W-9, W-4, W-5, W-11 (for a total of 8 ac):

   Wetlands listed above were determined to be adjacent wetlands that do not have a continuous surface connection to SW-2 and SW-2 (RPW). As per the Rapanos Guidance, waters listed above were determined to be "similarly situated" because they function alike and are sufficiently close to function together in affecting downstream waters. Lidar imagery demonstrates that waters, listed above, are hydraulically connected to the RPW. The Rapanos Guidance states that the Corps will assert jurisdiction over wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary where such tributaries and wetlands have a significant nexus to a TNW. A significant nexus analysis determined that these "similarly situated" waters in combination with the RPW affects the chemical, physical, and biological integrity of the downstream TNW. See Significant Nexus analysis in Section III.B.C.4 Significant nexus findings for RPW; wetlands directly abutting RPW; and wetlands adjacent to an RPW, but that do not directly abut the RPW, but flows directly into TNW.

4. <u>Non-jurisdictional Waters</u>

   W-32, W-22, W-26, W-27, W-28, W-C, W-B, W-24, W-23, W-25, W-20, W-A, W-10, W-8, W-7, SW-6, SW-7, W-17, W-13, W-14, W-15, W-16, W-18, W-19, W-21 (for a total of 32.91 ac):

   The Corps determined that none of these waters are adjacent to any waters of the US as defined by 33 CFR 328.3(a) (1-6). Lidar imagery shows that these waters are topographically separated from waters of the US listed above. Additionally, waters listed above are non-navigable, intrastate waters from which the only potential basis to exercise Corps jurisdiction would be migratory bird use. Migratory bird use by itself is not a sufficient basis to exercise CWA jurisdiction (Solid Waste Agency of Northern Cook County vs. U.S Army Corps of Engineers 531 U.S. 159, 2001).