



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): 02-09-2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: SAJ-RD-WT, Brighton Valley, SAJ-2014-03077

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Florida County/parish/borough: Highlands City: Okeechobee
Center coordinates of site (lat/long in degree decimal format): Lat. 27.232156° N, Long. -81.144292° W.
Universal Transverse Mercator:

Name of nearest waterbody: C-41A Canal

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

Name of watershed or Hydrologic Unit Code (HUC): 0309010122, Indian Prairie Basin

- 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: 01-06-15 through 02-09-2018
Field Determination. Date(s): 12-02-14 through 12-04-14, 12-08-14 through 12-10-2014, 12-15-14 through 12-17-14

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "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 Pick List "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 waters2 (RPWs) that flow directly or indirectly into TNWs
Non-RPWs that flow directly or indirectly into TNWs
Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
Impoundments of jurisdictional waters
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 1.0 acres.
Wetlands: 1,515.6 acres.

c. Limits (boundaries) of jurisdiction based on: Established by mean (average) high waters.

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:

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

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

(i) General Area Conditions:

Watershed size: 86577 acres

Drainage area: 86577 acres

Average annual rainfall: 53 inches

Average annual snowfall: 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 15-20 river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 15-20 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<sup>5</sup>: The review area contains the C-41A perennial RPW located along the north boundary of the project site, and many unnamed man-made ditches within the project area which are also RPW's. The C-41A Canal is

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

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

a perennial man-made canal which drains through control structures from Lake Istokpoga to Lake Okeechobee. C-41A has 3 control structures within the canal which impede navigation from Lake Okkeechobee to Lake Istokpoga. C-41A was man-made in the 1960's with the C-40 canal for the purpose of transporting water from the Indian Prairie Basin and Lake Istokpoga to outfall to Lake Okeechobee. The project site contains other RPW's which are unnamed man-made agriculture ditches; however the review area for this AJD is limited to the C-41A RPW and its abutting wetlands. The data for the other waters on-site are on a separate AJD form.  
 Tributary stream order, if known: .

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

**Tributary is:**  Natural  
 Artificial (man-made). Explain: C-41A is a man-made canal, and the 10,726 linear feet of RPW's on-site are also man-made ditches for agricultural purposes.  
 Manipulated (man-altered). Explain: .

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

Average width: 155 feet; agriculture ditches: 20 feet  
 Average depth: 14.8 feet  
 Average side slopes: **2:1**.

**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: Man-made canal which is maintained by the State. Banks are stabilized by riprap in areas where sloughing has occurred, majority of banks are stable with herbaceous grass vegetation, top of banks are maintained and mowed.

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

Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): 10 %

(c) Flow:

Tributary provides for: **Perennial flow**

Estimate average number of flow events in review area/year: **20 (or greater)**

Describe flow regime: Flows are from Lake Istokpoga through 3 control structures to Lake Okeechobee.

Other information on duration and volume: Flow is perennial and regulated by the State as part of Lake Okeechobee management.

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

Subsurface flow: **Unknown**. Explain findings: .

Dye (or other) test performed: .

Tributary has (check all that apply):

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

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

High Tide Line indicated by:  Mean High Water Mark indicated by:  
 oil or scum line along shore objects  survey to available datum;  
 fine shell or debris deposits (foreshore)  physical markings;

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

<sup>7</sup>Ibid.

- physical markings/characteristics
- tidal gauges
- other (list):

- 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 within C41-A flows from Lake Istokpoga to Lake Okeechobee. The watershed is predominantly agriculture and pasture. The watershed drains into C-41A which is predominantly agricultural runoff, surface flow during rains and direct flow from agricultural ditches. Observed water was dark with low visibility. Specific data reported by the National Water Quality Monitoring Council of water at the S-68 Spillway located within the C-41A Canal found up to 12 mg/l of suspended solids, 8 mg/l of total alkalinity, 4 mg/ of chlorophyll, 4 mg/l of organic carbon, 4 mg/l pheophytin, 0.8 mg/l sodium, 0.4 mg/l chloride, 0.4 mg/l sulfate, 0.4 mg/l magnesium, 0.2 mg/l silica, 0.2 mg/l kjeldahl nitrogen, 0.1 mg/l potassium and 0.02 nitrate.

Identify specific pollutants, if known: Nitrate.

(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: Freshwater fishing for bass and other freshwater sport fisheries.
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

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

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: 1,515.6 acres

Wetland type. Explain: Freshwater herbaceous wetlands identified as Land Use Cover: 641 .

Wetland quality. Explain: Per functional assessments conducted at the project site, the freshwater marsh habitat has been impacted by agriculture uses on the property and draining from agriculture ditches and the construction of C-41A. The wetland quality has been impacted and as a result the wetlands have invasive and exotic vegetation which impacts wetland community structure. Project wetlands cross or serve as state boundaries. Explain: No.

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: The 1,515.6 acres of herbaceous wetlands are separated by a berm and ditch system from the C-41A canal, these wetlands overflow through sheet flow and into the agricultural ditch which drains directly into C-41A.

Surface flow is: **Overland sheetflow**

Characteristics: Both overland sheetflow and flow into ditches which abut the wetlands into the RPW.

Subsurface flow: **Unknown**. Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain: The wetlands are all bordering and neighboring C-41A Canal. These wetlands are only separated from C-41A by the man-made berm and ditch system which runs parallel to the C-41A Canal.

(d) Proximity (Relationship) to TNW

Project wetlands are **15-20** river miles from TNW.

Project waters are **15-20** 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: Project site is used for agriculture and as a result water quality is diminished due to runoff. Identify specific pollutants, if known: Unknown.

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

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain: Freshwater herbaceous vegetation.
- Habitat for:
  - Federally Listed species. Explain findings: Foraging and nesting habitats for wading birds.
  - 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: **5**

Approximately ( 1, 515.63 ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
N	1273.68 acres		
N	88.51 acres		
N	147.72 acres		
N	4.40 acres		
N	1.32 acres		

Summarize overall biological, chemical and physical functions being performed: Overall, wetlands provide water quality treatment, water storage and wildlife habitat. Water drains from surrounding pasture/and agriculture areas which are utilized by grazing cattle. Wetlands could be utilized by wading birds and small amphibians.

### 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 determinations in the Eleventh Circuit:**The Eleventh Circuit has concluded that the Kennedy standard is the sole method of determining CWA jurisdiction in that Circuit (United States v. McWane, Inc., et al., 505 F.3d 1208 [11th Cir. 2007,]); therefore, unless the aquatic resources are traditional navigable waters or wetlands adjacent to traditional navigable waters, the Corps needs to conduct a significant nexus determination on all other waters in order to determine jurisdiction under the CWA. The Corps has determined that for this review the subject tributary is an RPW (C-41A) and its adjacent wetlands have more than an insubstantial or speculative effect on the physical, chemical, and biological integrity of the downstream TNW, as described below Section IV of this document.
5. .

### 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: A review of aerials during different periods of the year (rainy and dry season) show continuous flow in C-41A Canal. A public boat ramp is located within this Canal which is used by the public for fishing. The Canal undergoes monitoring and water collection at two locations which have reported water collections throughout the year.
- 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: **1 acre** linear feet width (ft).
  - Other non-wetland waters: acres.
- Identify type(s) of waters: .

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

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

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

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

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

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

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

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

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

Provide acreage estimates for jurisdictional wetlands in the review area: **1,515.6** acres.

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

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

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

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

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

- Demonstrate that impoundment was created from “waters of the U.S.,” or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or

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

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

- Demonstrate that water is isolated with a nexus to commerce (see E below).

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

- which are or could be used by interstate or foreign travelers for recreational or other purposes.  
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.  
 which are or could be used for industrial purposes by industries in interstate commerce.  
 Interstate isolated waters. Explain: .  
 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: .  
 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: 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: .  
 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: .

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

- USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey for Highlands County.
- National wetlands inventory map(s). Cite name: USFWS National Wetland Inventory.
- State/Local wetland inventory map(s):
- FEMA/FIRM maps:
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): Aerial Photographs from Google Earth from December 1984 - May 2017.  
or  Other (Name & Date):
- Previous determination(s). File no. and date of response letter:
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify): <https://www.waterqualitydata.us>.

**B. ADDITIONAL COMMENTS TO SUPPORT JD:**

The purpose of this AJD is to document the findings for the C-41A Canal directly abutting the Brighton Valley project site and the directly adjacent wetlands to the C-41A Canal which are on-site. For the purposes of this AJD, the relevant reach is the C-41A Canal. A separate AJD has been prepared for the on-site RPW relevant reach and its adjacent wetlands. This AJD is subject to the 1.0 acre portion of the C-41A Canal RPW included in the Brighton Valley project area; however the entire relevant reach abutting the property (35,000 lf) is included in the relevant reach for this AJD. Wetlands Directly Adjacent to the C-41A RPW are as follows:

W-2	1273.68 ac
W-55	88.51 ac
W-85	147.72 ac
W-60	4.40 ac
W-64	1.32 ac
Total:	1,515.63 ac

The aforementioned wetlands are considered adjacent to C-41A as they meet the definition of “bordering, contiguous, or neighboring. Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes, and the like are “adjacent” wetlands. (33CFR328.3(c)). Specifically, these wetlands are only separated from the C-41A canal by a man-made berm and ditch system that run parallel to C-41A canal. These wetlands physically touch the man-made barrier or are only separated by a narrow swath of uplands. These wetlands also have a surface hydrologic connection with the C-41A Canal through direct ditch flow.

The Brighton Valley project site is located within the Indian Prairie Watershed, and is bordered by the C-41A canal. In the 1960’s, the C-40 and C-41A canals were constructed to transport water from the Indian Prairie Basin and Lake Istokpoga with an eventual outfall to Lake Okeechobee. These canals had the effect of substantially lowering the water table resulting in an increase in arable land and dewatering the historic wetlands within the watershed. Since the completion of the C-41A canal, the subject property and most of the surrounding lands has been converted to agriculture for farming and cattle. Minimal changes to the subject property have occurred over the last 40 years. Lake Okeechobee is recognized as the downstream TNW which C-41A drains directly.

In its current condition, the Brighton Valley project site is a large-scale agriculture operation. The topography of the property is generally flat, with a slight fall from east to west, with a mosaic of upland and wetland habitats interspersed across the landscape. As previously mentioned, the property, as well as the surrounding lands, were wetter than the current condition. This is reflected in the soils data mapped for this site which indicates a total of 14 individual soils occur within the Brighton Valley project area, with all but one classified as poorly or very poorly drained.

As the project site is being evaluated in the area within the Eleventh Circuit Court, the Corps has provided a significant nexus analysis for the C-41A Canal (RPW) and its adjacent wetlands. The findings are included as follows:

**C-41A Canal Significant Nexus:**

**Physical:** The C-41A canal and its adjacent lands receive rainfall and stormwater runoff from a large area and transports this water and sediment load downstream. The flows from C-41A affect the downstream duration, frequency and volume of flow in Lake Okeechobee. In fact, the Brighton Valley project permit application is for the development of a reservoir to pump excess water from C-41A and retain and then return it to Lake Okeechobee for attenuation and treatment resulting in improved water quality.

**Biological:** As demonstrated by the Florida Fish and Wildlife Conservation Commission website, C-41A Canal possesses a public boat ramp. The Canal is well known to maintain a bass fishery. Additionally, the water column supports other non-sports fisheries which rely on the Canal for life-cycle functions. The Canal also supports freshwater habitat for use by reptiles, amphibians and birds which migrate between the Lake and the Canal.

**Chemical:** The C-41A canal transfers nutrients and organic carbon that supports food webs in Lake Okeechobee, as well as transfer potential pollutants to the downstream TNW, which could negatively affect aquatic resources and contribute to algal blooms. Water quality data detailed in Section B.1.iii of this document demonstrates the water column has nutrients and pollutants within the Canal which is directly discharged into the Lake.

Wetlands directly adjacent to the C-41A Canal Significant Nexus:

Physical: Land management activities (clearing, pasture, ditching etc.) have altered natural sheet flow in the area and the C-41A Canal has lowered the water table. The wetlands directly adjacent to the C-41A Canal have the ability during heavy rainfall to flow through overland sheet flow; however the majority of flow is through the on-site agricultural ditches which drain directly into the Canal. These wetlands maintain a physical connection to C-41A Canal which drains directly into the downstream TNW. The wetlands perform important physical benefits to the downstream TNW. During rain events, these wetlands store flood waters which would otherwise be directly discharged into the Canal. The presence of these wetlands ensures the maintenance of groundwater supplies, and therefore directly affect the duration, frequency and volume of flow in the tributaries and the downstream TNW. As evidenced by studies conducted by academia and the SFWMD, the wetlands within the larger Lake Okeechobee Watershed provide a means of slowing water's velocity and reducing the amount of sediments entering the Lake.

Biological: The aforementioned wetlands subject to this AJD are surrounded by low intensity agriculture and/or pasture. Little native habitat is available outside the project area as the majority of this watershed has been converted to agricultural uses. As such, the wildlife corridors have impacted and there are barriers such as cattle fences, ditches and berm systems which limit wildlife movement through the landscape. These wetlands provide important biological functions for the downstream TNW as they are contiguous with the Canal and provide opportunities for aquatic and terrestrial species to move from the wetlands to the Canal for foraging, resting and nesting. These species can utilize the corridor provided by the Canal to migrate to and from Lake Okeechobee.

Chemical: Discharges from the wetlands provide to downstream areas. Water received from precipitation and overland sheet flow from the surrounding agriculture lands is stored in these wetlands and ultimately discharged to the Canal. As high nutrient levels are evident within Lake Okeechobee, these wetlands provide essential nitrification, treatment, attenuation and overall water quality improvements.

 Brighton Valley Project Boundary - 8,143.78 ac.±

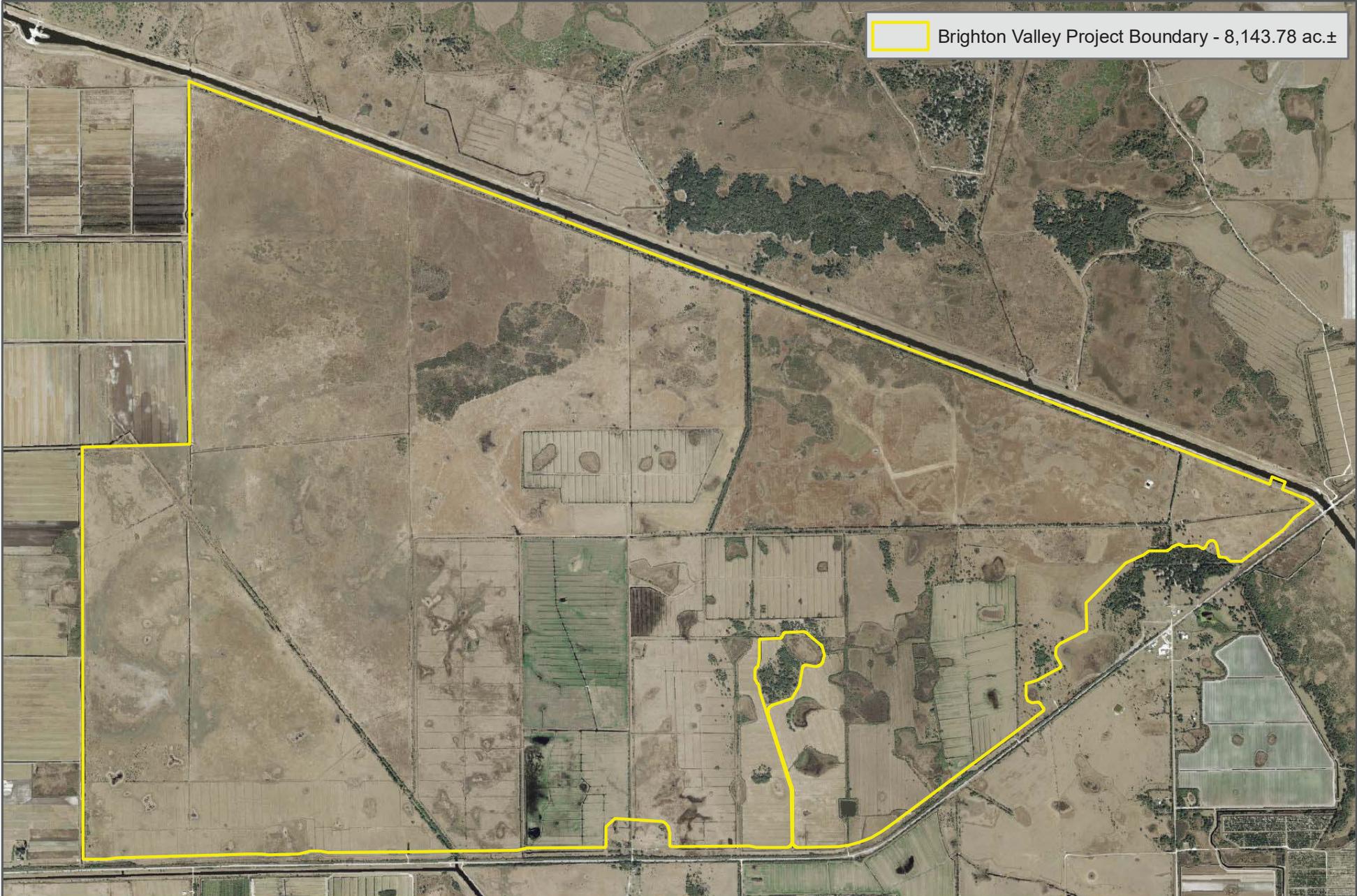


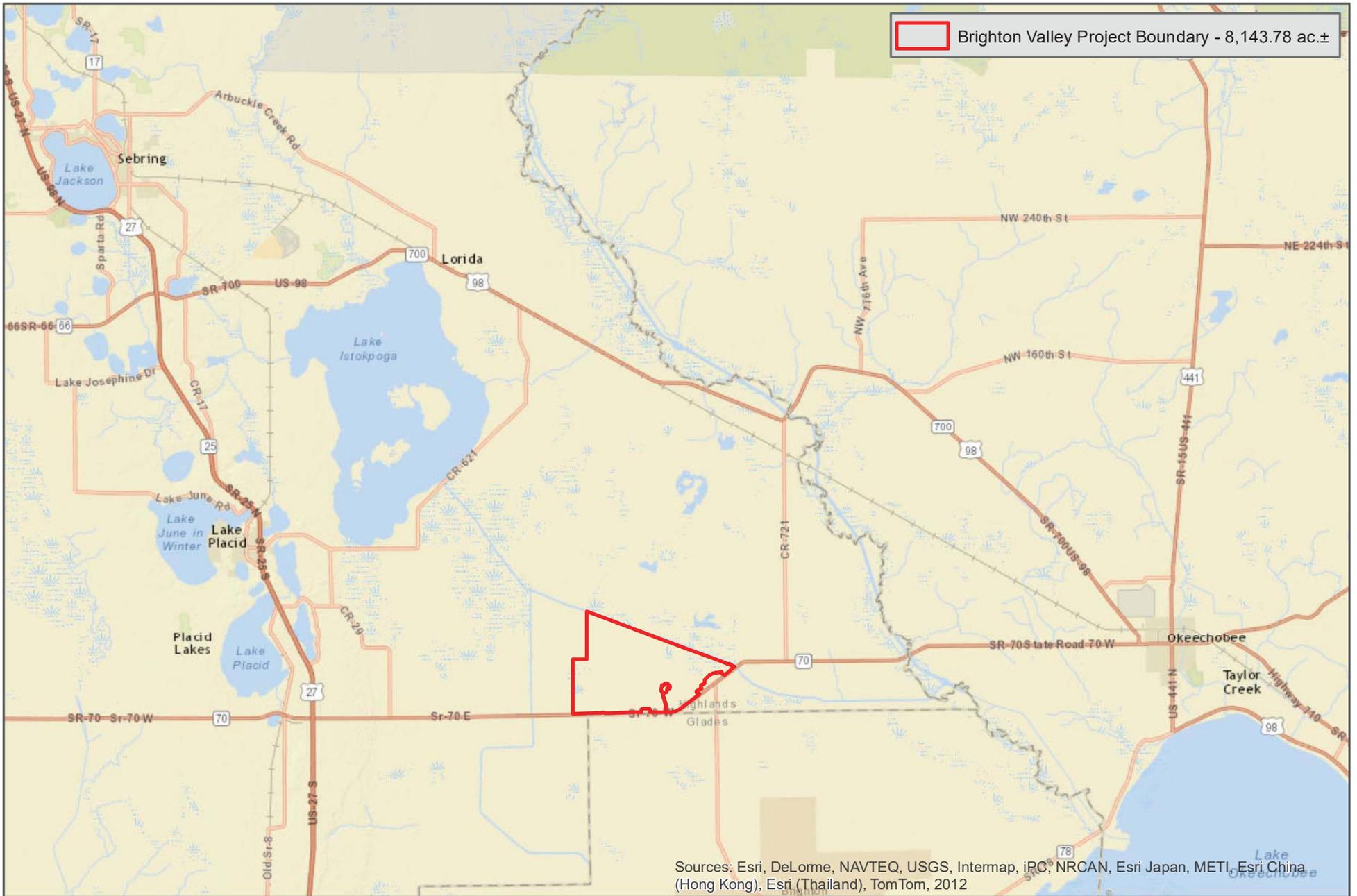
  
Image:2011 FREAC  
Data Source:  
SFWMD, 2009  
  
Sec 13,24,25,36;17-35  
Twp 37 S  
Rng 31,32 E

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### Aerial Map Brighton Valley Highlands County, Florida



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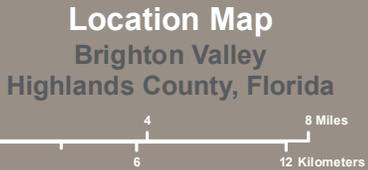


 Brighton Valley Project Boundary - 8,143.78 ac.±

Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2012

Image: 2011 FREAC  
 Data Source:  
 SFWMD, 2009  
 Sec 13,24,25,36;17-35  
 Twp 37 S  
 Rng 31,32 E

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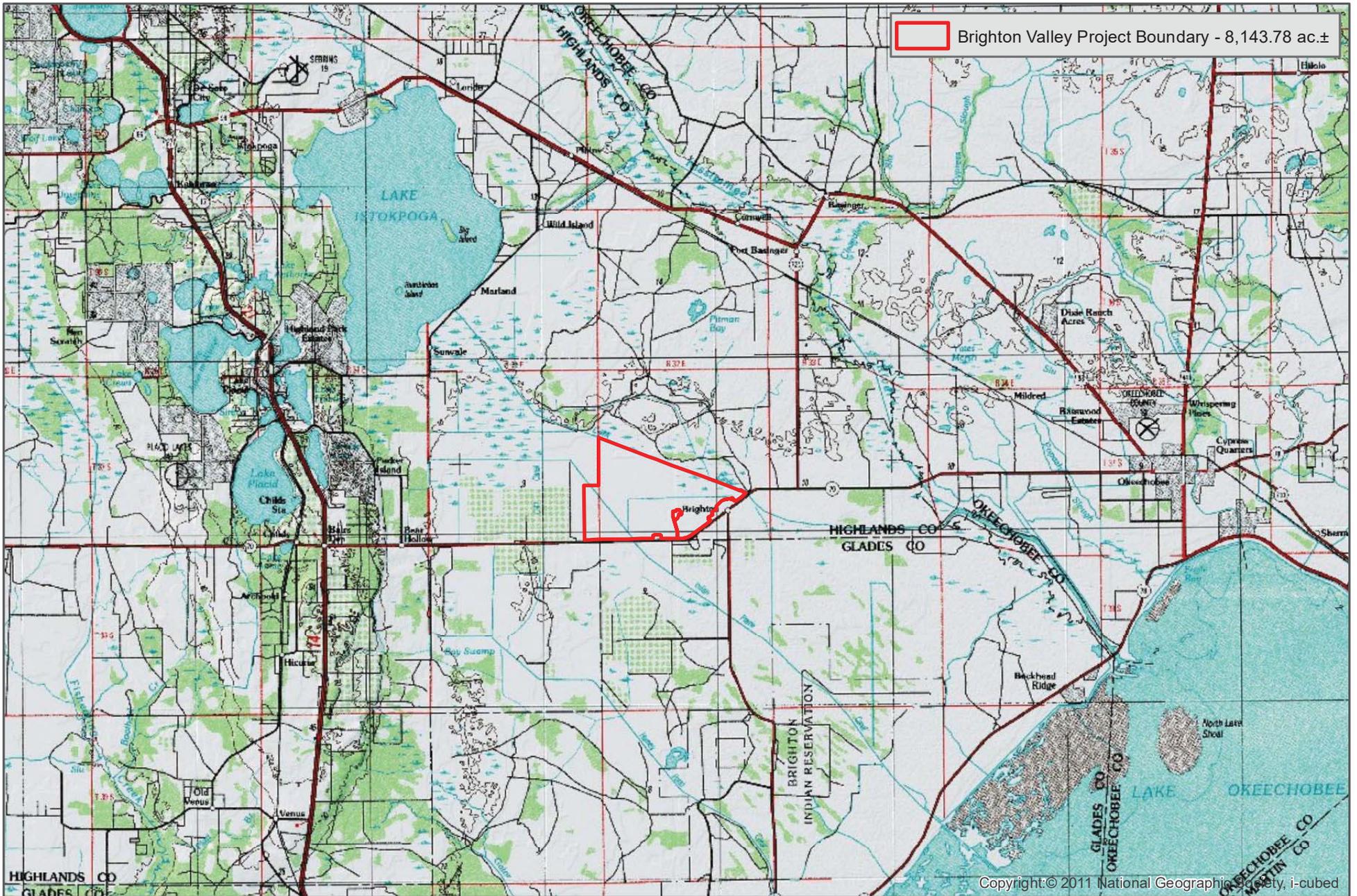


Image: 2011 FREAC  
 Data Source:  
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## USGS Topographic Map - Brighton NW, NE

### Brighton Valley Highlands County, Florida



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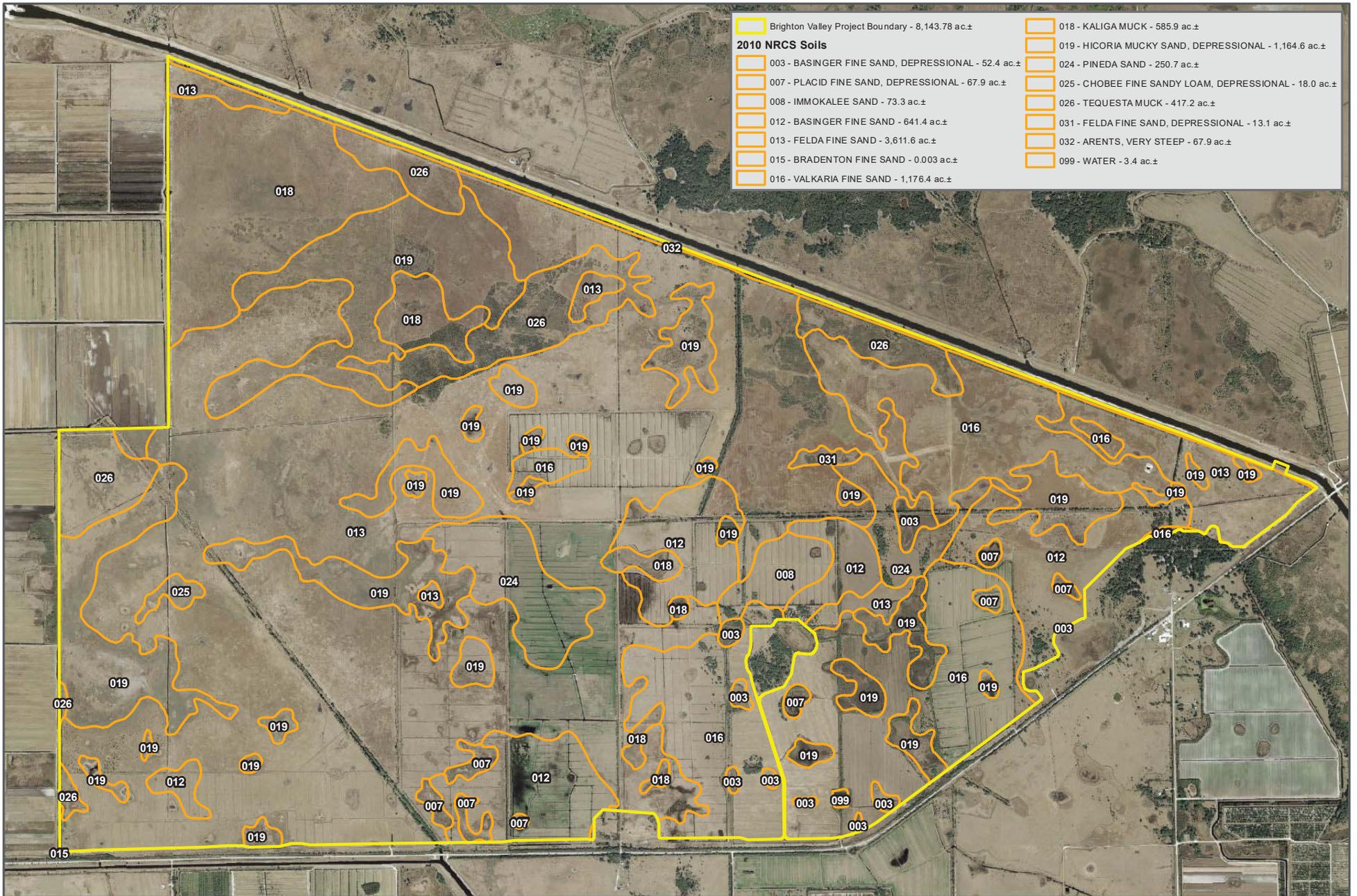


Image: 2011 FREAC  
 Data Source:  
 SFWMD, 2009

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## NRCS 2010 Soils Map

### Brighton Valley Highlands County, Florida



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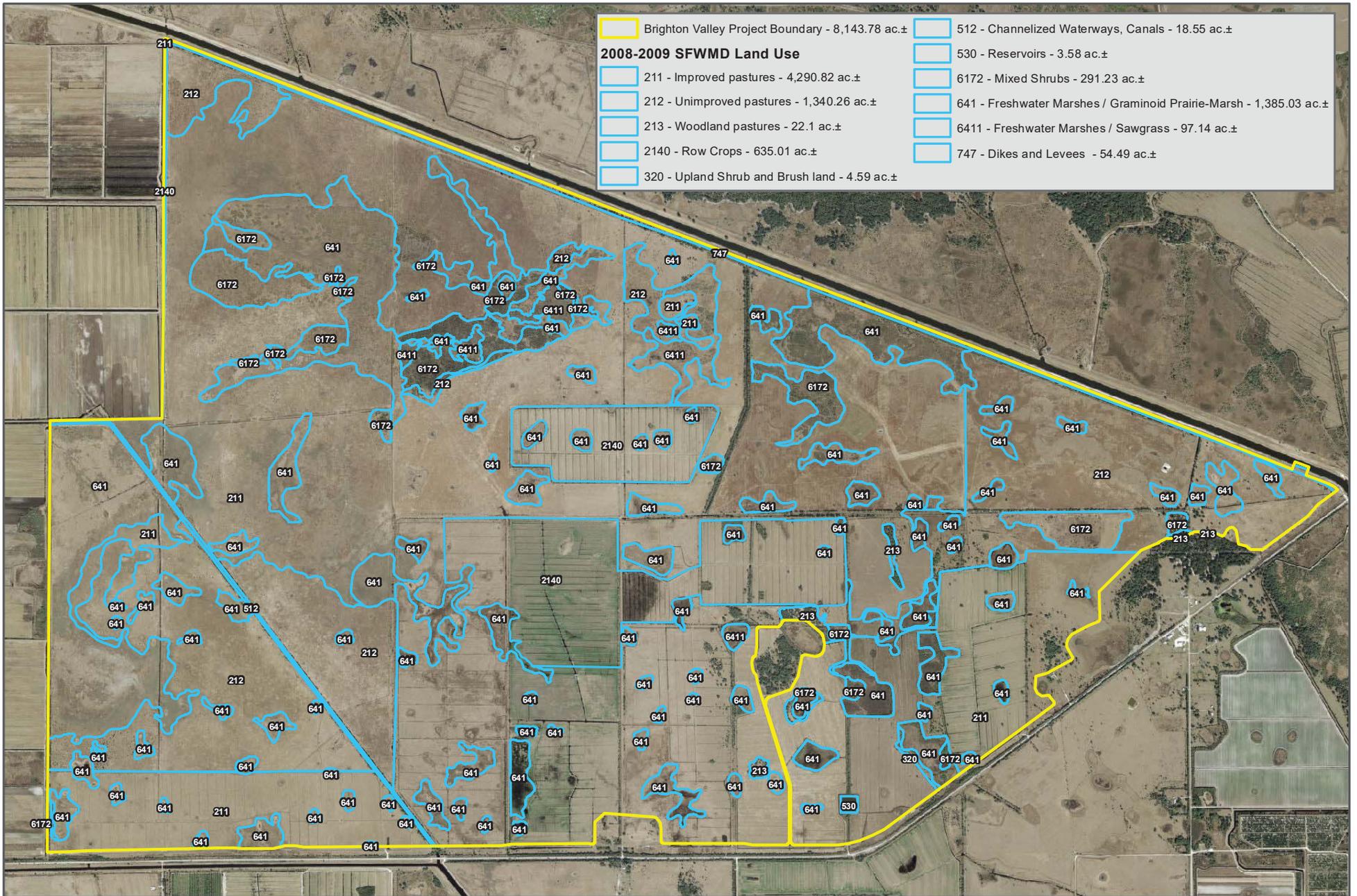



 Image: 2011 FREAC  
 Data Source:  
 SFWMD, 2009  
  
 Sec 13,24,25,36;17-35  
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 Rng 31,32 E

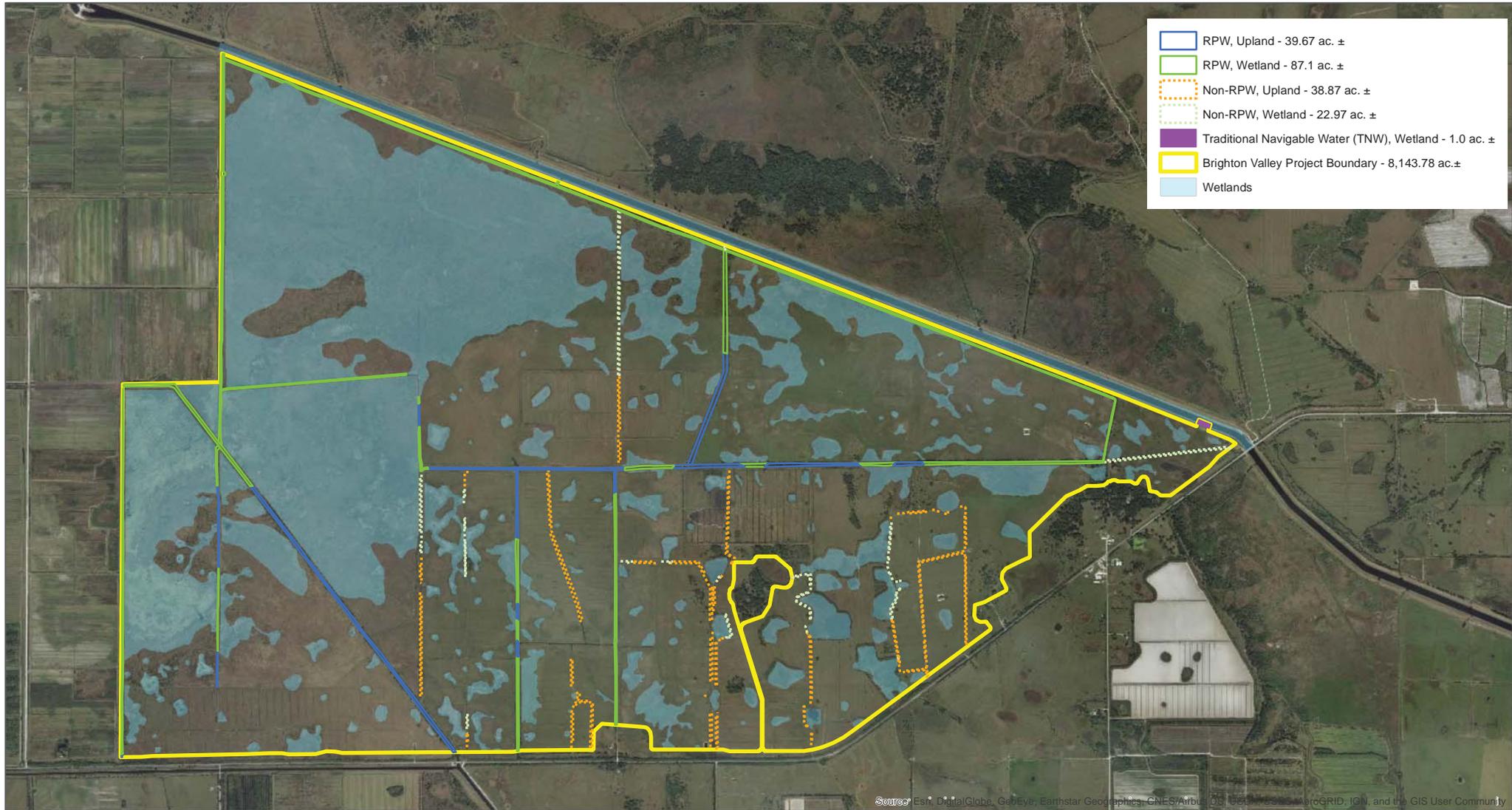
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## SFWMD 2009 Land Use/Land Cover

### Brighton Valley Highlands County, Florida



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- RPW, Upland - 39.67 ac. ±
- RPW, Wetland - 87.1 ac. ±
- Non-RPW, Upland - 38.87 ac. ±
- Non-RPW, Wetland - 22.97 ac. ±
- Traditional Navigable Water (TNW), Wetland - 1.0 ac. ±
- Brighton Valley Project Boundary - 8,143.78 ac.±
- Wetlands

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus, USDA, AeroGRID, IGN, and the GIS User Community

Image: 2017

Data Source:  
State of Florida

Sec: 13, 24, 25, 36, 17, 35  
Twp 37 S  
Rng 31, 32 E

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0 2,500 5,000 Feet  
0 762 1,524 Meters

## Historic Surface Water Habitat Assessment

Brighton Valley  
Highlands County, Florida



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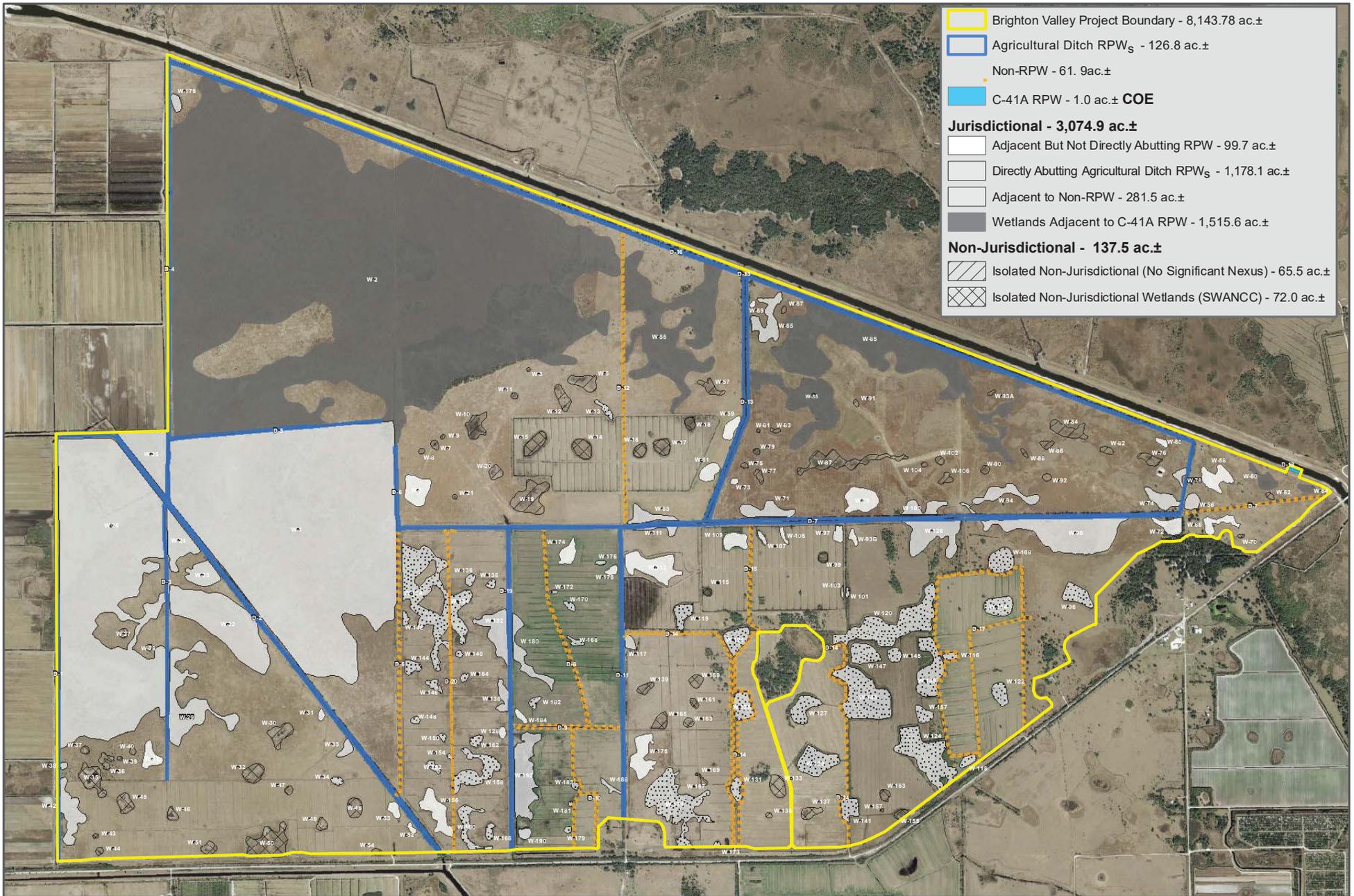


Image: 2011 FREAC  
 Data Source:  
 SFWMD, 2009

Sec 13.24, 25, 36, 17-35  
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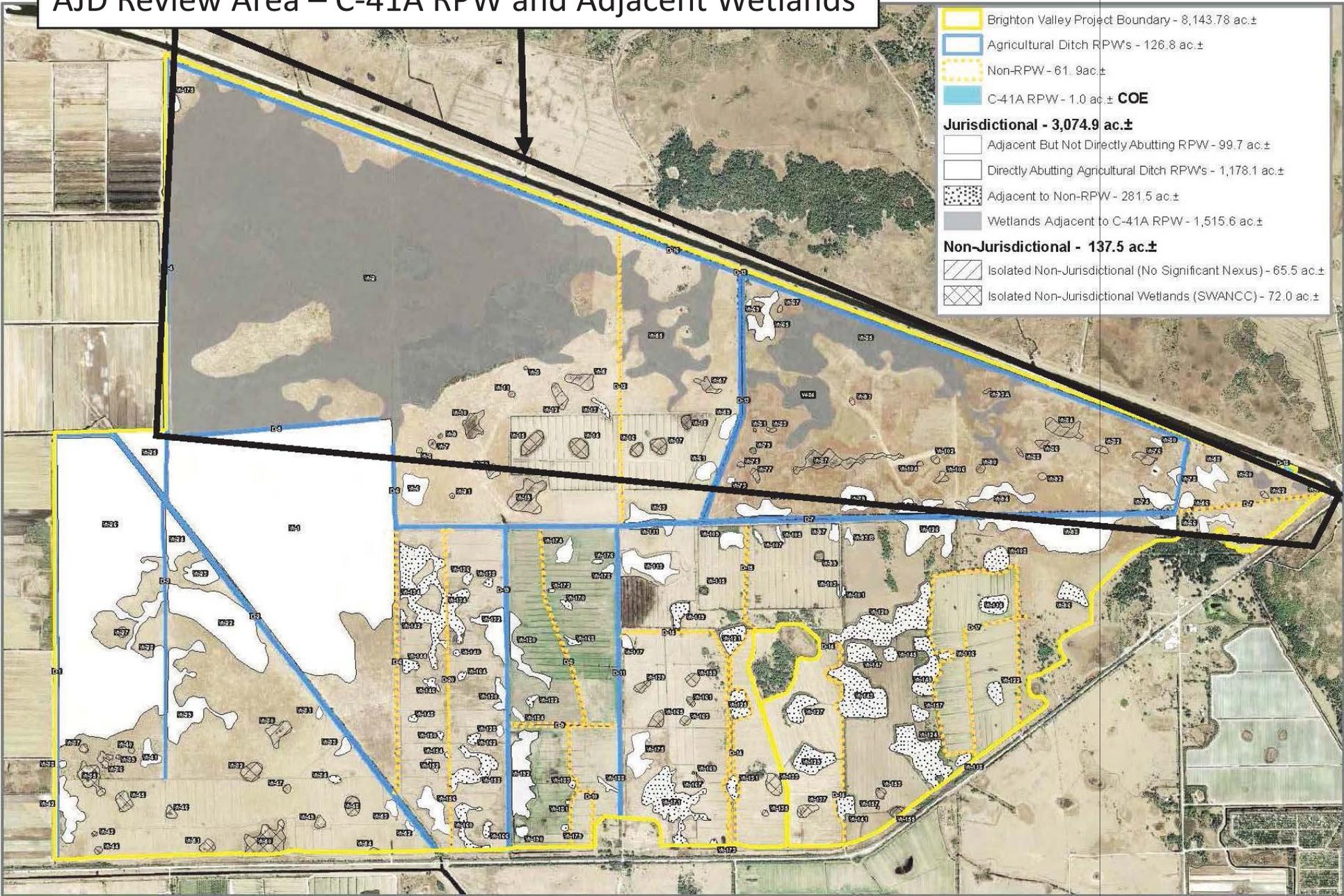
## Rapanos Wetland Map

### Brighton Valley Highlands County, Florida



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# AJD Review Area – C-41A RPW and Adjacent Wetlands



Brighton Valley Project Boundary - 8,143.78 ac.±  
 Agricultural Ditch RPW's - 126.8 ac.±  
 Non-RPW - 61.9 ac.±  
 C-41A RPW - 1.0 ac.± **COE**

**Jurisdictional - 3,074.9 ac.±**

- Adjacent But Not Directly Abutting RPW - 99.7 ac.±
- Directly Abutting Agricultural Ditch RPW's - 1,178.1 ac.±
- Adjacent to Non-RPW - 281.5 ac.±
- Wetlands Adjacent to C-41A RPW - 1,515.6 ac.±

**Non-Jurisdictional - 137.5 ac.±**

- Isolated Non-Jurisdictional (No Significant Nexus) - 65.5 ac.±
- Isolated Non-Jurisdictional Wetlands (SWANCC) - 72.0 ac.±

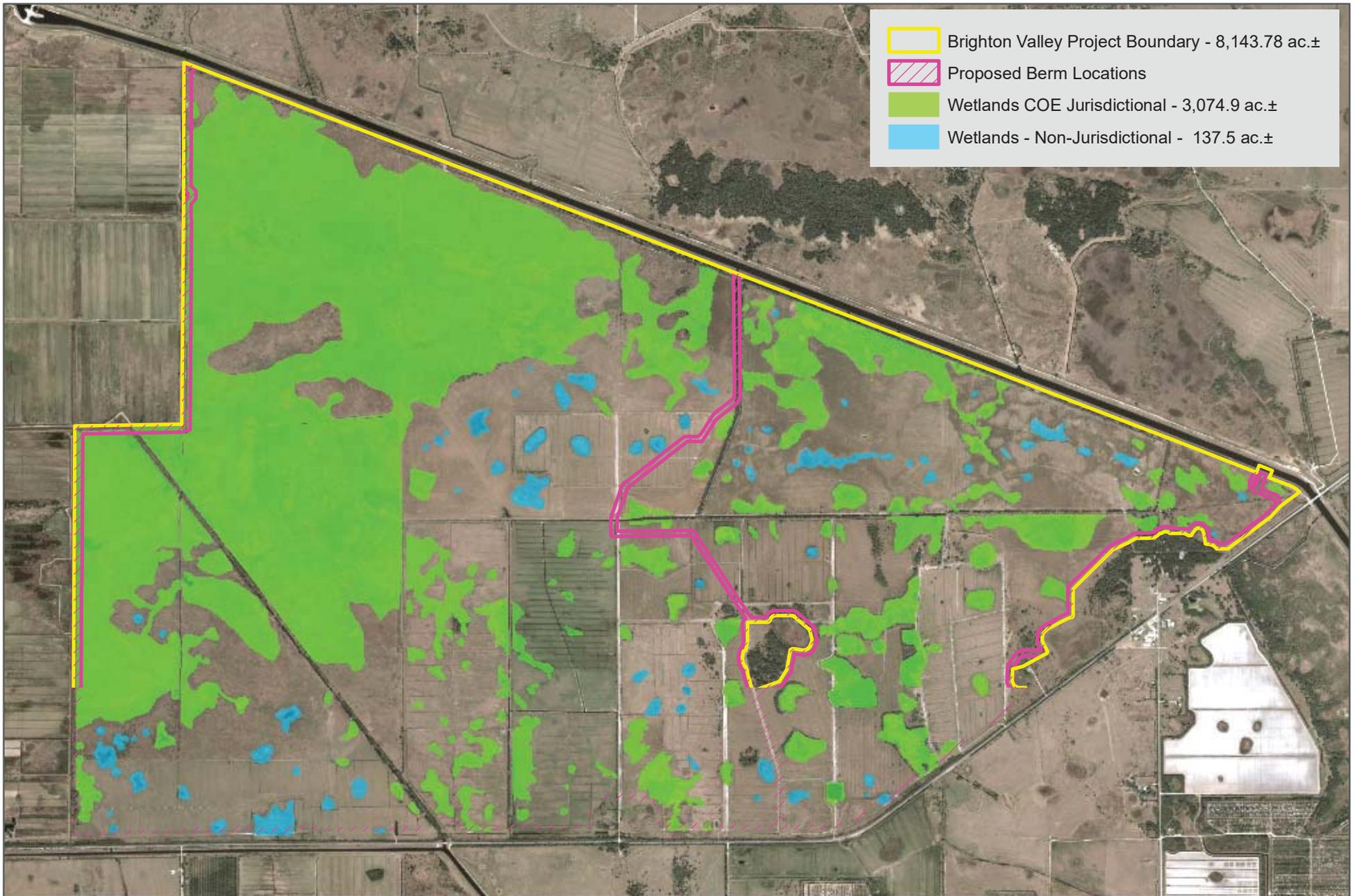
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 Type: 37 S  
 Page: 31, 32 E

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## Rapanos Wetland Map Brighton Valley Highlands County, Florida



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- Brighton Valley Project Boundary - 8,143.78 ac.±
- Proposed Berm Locations
- Wetlands COE Jurisdictional - 3,074.9 ac.±
- Wetlands - Non-Jurisdictional - 137.5 ac.±

  
 Image: 2014  
 Data Source:  
 FDOT  
 Sec 13,24,25,36,17,35  
 Twp 37 S  
 Rng 31,32 E

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**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): 02-09-2018**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: SAJ-RD-WT, Brighton Valley, SAJ-2014-03077**

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: Florida County/parish/borough: Highlands City: Okeechobee  
Center coordinates of site (lat/long in degree decimal format): Lat. 27.232156° N, Long. -81.144292° W.  
Universal Transverse Mercator:

Name of nearest waterbody: C-41A Canal

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

Name of watershed or Hydrologic Unit Code (HUC): 0309010122, Indian Prairie Basin

- 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: 01-06-15 through 02-09-2018
- Field Determination. Date(s): 12-02-14 through 12-04-14, 12-08-14 through 12-10-2014, 12-15-14 through 12-17-14

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

There **Are no** "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** "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):<sup>1</sup>**

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters<sup>2</sup> (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 188.7 acres.  
Wetlands: 1,559.3 acres.

**c. Limits (boundaries) of jurisdiction based on: Established by mean (average) high waters.**

Elevation of established OHWM (if known): .

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.  
Explain: **A total of 137.5 acres of isolated wetlands were determined to be present within the review area. The analysis for this determination is located in Section IV.B.**

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

<sup>2</sup> 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).

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

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

(i) General Area Conditions:

Watershed size: 86577 acres

Drainage area: 86577 acres

Average annual rainfall: 53 inches

Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 2 tributaries before entering TNW.

Project waters are 15-20 river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 15-20 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<sup>5</sup>: The project site contains a 1.0 acre section of the C-41A Canal which is located along the north boundary of the project site. This Canal and its directly adjacent wetlands are captured in the C-41 A relevant

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

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

reach and detailed on a separate AJD form. The review area for this AJD is the main agriculture ditch RPW relevant reach, which drains directly into and out of the C-41A Canal, and is located perpendicular to the C-41A Canal. This RPW starts at the pump station on the Brighton Valley Project Site located specifically at: 27.248738, -81.126918, and is considered the main arterial ditch on-site. The main agriculture ditch RPW traverses the project site and connects the smaller agriculture ditches which are defined as Non-RPW's to the larger drainage network. The agricultural ditch RPW is 126.8 acres. The non-RPW's on the project site comprise 61.9 acres. The agricultural ditch RPW system drains on-site wetlands and uplands and discharges directly into the C-41A Canal. The non-RPW's drain wetlands and uplands on the project site and drains into the main RPW system. The tributaries on-site all eventually drain into the C-41A Canal. The C-41A Canal is a perennial man-made canal which drains through control structures from Lake Istokpoga to Lake Okeechobee. Lake Okeechobee is the downstream TNW.

Tributary stream order, if known: .

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

Tributary is:  Natural

Artificial (man-made). Explain: All the tributaries are man-made ditches used for agricultural purposes. There are a total of 126.8 acres of surface waters classified as RPW's and 61.9 acres classified as Non-RPW's contained within the Brighton Valley project limits. The RPW's are generally deeper features and typically contain standing water on a seasonal basis while the Non-RPW's are shallow, seasonal agriculture ditches. With regards to vegetative conditions, the RPW's contain a mix of unvegetated open water and varying amounts of vegetation including pickerelweed (*Pontedaria cordata*), arrowhead (*Sagittaria lancifolia*), Carolina willow (*Salix caroliniana*), primrose willow (*Ludwigia peruviana*), fragrant water lily (*Nymphaea odorata*), cattail (*Typha* sp.) and torpedo grass (*Panicum repens*). The Non-RPW's are dominated by bahia grass (*Paspalum notatum*), Bermuda grass (*Cynodon dactylon*), torpedo grass, pennywort (*Hydrocotyle umbellata*), coinwort (*Centella asiatica*), sedge (*Rhynchospora* spp.), flatsedge (*Carex* spp.), and softrush (*Juncus effusus*).

Manipulated (man-altered). Explain: .

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

Average width: 5-20 feet

Average depth: 1-4 feet

Average side slopes: **2:1**.

Primary tributary substrate composition (check all that apply):

Silts

Sands

Concrete

Cobbles

Gravel

Muck

Bedrock

Vegetation. Type/% cover: 60% nuisance and exotic herbaceous vegetation.

Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Man-made agricultural ditches with banks covered with bahia grass vegetation, top of banks are maintained and mowed.

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

Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): 10 %

(c) Flow:

Tributary provides for: **Seasonal flow**

Estimate average number of flow events in review area/year: **20 (or greater)**

Describe flow regime: Arterial ditch which runs north and south of the property and crosses east and west, is used to pump water from the canal and is then distributed throughout the property. When the pumping is active, the ditches all flow. When it rains the RPW and non-RPW's flow. The precipitation and property conditions dictate the amount of pumping from C-41A Canal by the operators of the land. The flow within all the ditches is seasonal but has been documented by the applicant to flow over 3-months of the year..

Other information on duration and volume: .

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

Subsurface flow: **Unknown**. Explain findings: .

Dye (or other) test performed: .

Tributary has (check all that apply):

Bed and banks

OHWM<sup>6</sup> (check all indicators that apply):

clear, natural line impressed on the bank

the presence of litter and debris

changes in the character of soil

destruction of terrestrial vegetation

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

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> shelving                     | <input type="checkbox"/> the presence of wrack line                            |
| <input type="checkbox"/> vegetation matted down, bent, or absent | <input type="checkbox"/> sediment sorting                                      |
| <input type="checkbox"/> leaf litter disturbed or washed away    | <input type="checkbox"/> scour   |
| <input type="checkbox"/> sediment deposition                     | <input checked="" type="checkbox"/> multiple observed or predicted flow events |
| <input checked="" type="checkbox"/> water staining               | <input checked="" type="checkbox"/> abrupt change in plant community           |
| <input type="checkbox"/> other (list):                           |  |
- Discontinuous OHWM.<sup>7</sup> Explain: .

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

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

**(iii) Chemical Characteristics:**

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

Explain: Water within C41-A flows from Lake Istokpoga to Lake Okeechobee and drains a watershed which is predominantly agriculture and pasture use. The applicant has indicated the ditches on-site have water which is dark with low visibility due to tannic. .

Identify specific pollutants, if known: Unknown.

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<sup>7</sup>Ibid.

(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: Potential foraging habitat for wading birds such as the wood stork.
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings: Depending on the water conditions, the RPW and Non-RPW features

provide limited wildlife breeding and foraging habitat and some water quality benefits through nutrient absorption and sediment filtration.

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: 1,559.3 acres

Wetland type. Explain: Dominated by freshwater herbaceous wetlands with few freshwater shrubby wetlands.

Wetland quality. Explain: Per functional assessments conducted at the project site, the wetland habitat has been impacted by agriculture uses on the property and draining from agriculture ditches and the construction of C-41A. The wetland quality has been impacted and as a result the wetlands have invasive and exotic vegetation which impacts wetland community structure.

Project wetlands cross or serve as state boundaries. Explain: No.

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: Wetlands overflow during rainy seasons into abutting and adjacent RPW and non-RPW's.

Surface flow is: **Overland sheetflow**

Characteristics: Both overland sheetflow and direct channelized flow into ditches.

Subsurface flow: **Unknown**. Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: Shallow wetland and upland cut ditches drain the wetlands which ultimately flow into the main arterial RPW and discharge to C-41A.

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **15-20** river miles from TNW.

Project waters are **15-20** 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: Project site is used for agriculture and as a result water quality is diminished due to runoff. Identify specific pollutants, if known: Unknown.

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

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain: Over 90% herbaceous vegetation.
- Habitat for:
  - Federally Listed species. Explain findings: Foraging and nesting habitats for wading birds.
  - 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: **30 (or more)**

Approximately ( 1,559.3 ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
Wetland Type		ID		Acres
Adjacent but not Abutting RPW		W-66		4.05
Adjacent but not Abutting RPW		W-72		4.35
Adjacent but not Abutting RPW		W-80		1.00
Adjacent but not Abutting RPW		W-89		9.09
Adjacent but not Abutting RPW		W-93		1.20
Adjacent but not Abutting RPW		W-97		1.78
Adjacent but not Abutting RPW		W-105		0.90
Adjacent but not Abutting RPW		W-59		3.53
Adjacent but not Abutting RPW		W-73		0.59
Adjacent but not Abutting RPW		W-61		3.52
Adjacent but not Abutting RPW		W-107		0.81
Adjacent but not Abutting RPW		W-109		4.56
Adjacent but not Abutting RPW		W-113		13.98
Adjacent but not Abutting RPW		W-190		1.52
Adjacent but not Abutting RPW		W-52		0.78
Adjacent but not Abutting RPW		W-53		1.93
Adjacent but not Abutting RPW		W-128		0.93
Adjacent but not Abutting RPW		W-184		1.25
Adjacent but not Abutting RPW		W-126		0.86
Adjacent but not Abutting RPW		W-41		4.17
Adjacent but not Abutting RPW		W-6		8.27
Adjacent but not Abutting RPW		W-174		3.82
Adjacent but not Abutting RPW		W-178		1.13
Adjacent but not Abutting RPW		W-156		9.18
Adjacent but not Abutting RPW		W-175		9.26
Adjacent but not Abutting RPW		W-58		6.79
Adjacent but not Abutting RPW		W-69		0.42
Wetland Type		ID		Acres
Adjacent to Non-RPW		W-96		5.78
Adjacent to Non-RPW		W-120		30.52
Adjacent to Non-RPW		W-101		0.49
Adjacent to Non-RPW		W-103		0.42
Adjacent to Non-RPW		W-147		6.52
Adjacent to Non-RPW		W-143		25.10
Adjacent to Non-RPW		W-123		10.11
Adjacent to Non-RPW		W-127		6.47
Adjacent to Non-RPW		W-129		10.66
Adjacent to Non-RPW		W-141		4.27
Adjacent to Non-RPW		W-121		6.59
Adjacent to Non-RPW		W-119		4.22
Adjacent to Non-RPW		W-125		6.03
Adjacent to Non-RPW		W-186		0.64
Adjacent to Non-RPW		W-183		0.59
Adjacent to Non-RPW		W-181		0.26
Adjacent to Non-RPW		W-179		0.53
Adjacent to Non-RPW		W-182		1.11
Adjacent to Non-RPW		W-144		2.39
Adjacent to Non-RPW		W-34		1.01
Adjacent to Non-RPW		W-165		1.60
Adjacent to Non-RPW		W-172		0.36
Adjacent to Non-RPW		W-170		0.91
Adjacent to Non-RPW		W-176		0.50
Adjacent to Non-RPW		W-131		2.56
Adjacent to Non-RPW		W-173		0.53
Adjacent to Non-RPW		W-168		1.03
Adjacent to Non-RPW		W-134		43.89
Adjacent to Non-RPW		W-142		0.95
Adjacent to Non-RPW		W-171		26.68

Wetland Type	ID	Acres
Directly Abutting RPW	W-56	2.75
Directly Abutting RPW	W-78	1.70
Directly Abutting RPW	W-74	5.39
Directly Abutting RPW	W-98	42.78
Directly Abutting RPW	W-94	8.14
Directly Abutting RPW	W-100	5.54
Directly Abutting RPW	W-126	15.09
Directly Abutting RPW	W-71	7.53
Directly Abutting RPW	W-63	5.23
Directly Abutting RPW	W-111	2.21
Directly Abutting RPW	W-117	1.67
Directly Abutting RPW	W-188	1.32
Directly Abutting RPW	W-130	3.63
Directly Abutting RPW	W-180	8.33
Directly Abutting RPW	W-132	12.71
Directly Abutting RPW	W-120	8.19
Directly Abutting RPW	W-121	19.67
Directly Abutting RPW	W-125	2.09
Directly Abutting RPW	W-26	340.56
Directly Abutting RPW	W-65	10.17
Directly Abutting RPW	W-175	1.80
Directly Abutting RPW	W-198	541.37
Directly Abutting RPW	W-22	53.44
Directly Abutting RPW	W-143b	12.81
Directly Abutting RPW	W-29	28.67
Directly Abutting RPW	W-192	20.53
Directly Abutting RPW	W-42	11.24
Directly Abutting RPW	W-38	0.54

Summarize overall biological, chemical and physical functions being performed: Overall, wetlands provide water quality treatment, water storage and wildlife habitat. Water drains from surrounding pasture/and agriculture areas which are utilized by grazing cattle. Wetlands could be utilized by wading birds and small amphibians.

### 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: Detailed in Section IV.B.
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: Detailed in Section IV.B
4. Significant nexus determinations in the Eleventh Circuit: The Eleventh Circuit has concluded that the Kennedy standard is the sole method of determining CWA jurisdiction in that Circuit (*United States v. McWane, Inc., et al.*, 505 F.3d 1208 [11th Cir. 2007,]); therefore, unless the aquatic resources are traditional navigable waters or wetlands adjacent to traditional navigable waters, the Corps needs to conduct a significant nexus determination on all other waters in order to determine jurisdiction under the CWA. The Corps has determined that for this review the subject tributary and its adjacent wetlands have more than an insubstantial or speculative effect on the physical, chemical, and biological integrity of the downstream TNW, as described below Section IV of this document.
5. .

**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: The project site contains 126.8 acres of surface waters classified as Relatively Permanent Waters (RPW) which flow seasonally. A total of 87.1 acres of the 126.8 acres of RPW’s were excavated in historic wetland habitat, with the remaining acreage excavated in historic upland habitat. The RPW’s typically contain standing water on a seasonal basis. Flow is augmented by precipitation, flooding and overflow from wetlands and pumping from C-41A to provide hydration for the agricultural operation.

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

- Tributary waters: **126.8 acres of RPW agricultural ditches** linear feet width (ft).
  - Other non-wetland waters: acres.
- Identify type(s) of waters: .

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

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

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

- Tributary waters: **61.9 acres of Non-RPW agricultural ditches** 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: **1,178.1.**

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

- Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

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

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

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

Provide acreage estimates for jurisdictional wetlands in the review area: **99.67** 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: **281.5** acres.

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

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

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

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

- which are or could be used by interstate or foreign travelers for recreational or other purposes.  
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.  
 which are or could be used for industrial purposes by industries in interstate commerce.  
 Interstate isolated waters. Explain: .  
 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:          .  
 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):

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

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

- 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: 72 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: 65.5 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: .
  - 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: Soil Survey for Highlands County.
- National wetlands inventory map(s). Cite name: USFWS National Wetland Inventory.
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): Aerial Photographs from Google Earth from December 1984 - May 2017.  
or  Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): <https://www.waterqualitydata.us>.

**B. ADDITIONAL COMMENTS TO SUPPORT JD:**

**OVERALL:**

The purpose of this AJD is to document the main agriculture ditch RPW relevant reach, which drains directly into and out of the C-41A Canal, and its adjacent waters. The JD findings for the C-41A Canal and its directly adjacent wetlands to the C-41A Canal are located on a separate JD form.

The Brighton Valley project site is located within the Indian Prairie Watershed, and is bordered by the C-41A canal. In the 1960’s, the C-40 and C-41A canals were constructed to transport water from the Indian Prairie Basin and Lake Istokpoga with an eventual outfall to Lake Okeechobee. These canals had the effect of substantially lowering the water table resulting in an increase in arable land and dewatering the historic wetlands within the watershed. Since the completion of the C-41A canal, the subject property and most of the surrounding lands has been converted to agriculture for farming and cattle. Minimal changes to the subject property have occurred over the last 40 years. Lake Okeechobee is recognized as the downstream TNW which C-41A drains directly.

In its current condition, the Brighton Valley project site is a large-scale agriculture operation. The topography of the property is generally flat, with a slight fall from east to west, with a mosaic of upland and wetland habitats interspersed across the landscape. As previously mentioned, the property, as well as the surrounding lands, were wetter than the current condition. This is reflected in the soils data mapped for this site which indicates a total of 14 individual soils occur within the Brighton Valley project area, with all but one classified as poorly or very poorly drained.

**NON-REGULATED WATERS / WETLANDS:**

A total of 137.5 acres of isolated wetlands were determined to be present within the review area. These 137.5 acres of isolated wetlands have no direct flow, indirect surface flow or shallow subsurface flow to the nearest jurisdictional water. These wetlands are not reasonably close nor are they only separated by man-made barriers. These waters are at least 200 feet away from an RPW, non-RPW or other jurisdictional wetlands. In addition to the absence of direct or indirect surface or shallow subsurface flow, there is no ecological interconnection between

these wetlands and the closest TNW. There is no physical, chemical or biological nexus to the downstream TNW (i.e. do not affect downstream water integrity). Based on the above, these wetlands are also non-navigable, are not interstate waters, and should be classified as isolated wetlands. Pursuant to the Supreme Court decision SWANCC, isolated wetlands are not jurisdictional under the Clean Water Act. The degradation or destruction of these wetlands would not affect interstate or foreign commerce.

#### SIGNIFICANT NEXUS:

As the project site is being evaluated in the area within the Eleventh Circuit Court, the Corps has provided a significant nexus analysis for the RPW and its adjacent wetlands. The findings are included as follows:

#### RPW Significant Nexus:

**Physical:** The project site contains 126.8 acres of surface waters classified as RPW's which flow seasonally. A total of 87.1 acres of the 126.8 acres of RPW's were excavated in historic wetland habitat, with the remaining acreage excavated in historic upland habitat. The RPW's typically contain standing water on a seasonal basis. Flow is augmented by precipitation, flooding and overflow from wetlands and pumping from C-41A to provide hydration for the agricultural operation. These RPW's connect to onsite Non-RPW's and discharge into the C-41A Canal. These tributaries drain runoff and rainfall from the project site downstream via C-41A Canal.

**Biological:** The RPW's are man-made agricultural ditches which due to a lack of habitat within this watershed, have the opportunity to provide habitat for reptiles, amphibians, fish, birds and other aquatic species, including species which move between aquatic and upland environments during their life cycles. The biological functions provided by the tributaries addressed in this JD are expected to be exported downstream to, and provide benefits to, TNW.

**Chemical:** The agricultural canals transfer nutrients and organic carbon that supports food webs in Lake Okeechobee, as well as transfer potential pollutants to the downstream TNW, which could negatively affect aquatic resources and contribute to algal blooms.

#### Wetlands Adjacent (but not directly abutting) the RPW's within the Relevant Reach:

**Physical:** Land management activities (clearing, pasture, ditching etc.) have altered natural sheet flow in the area and the C-41A Canal has lowered the water table. The wetlands adjacent to the RPW's have the ability during heavy rainfall to flow through overland sheet flow; however the majority of flow is through the on-site agricultural ditches. These wetlands maintain a physical connection to the ditches which ultimately drain into C-41A Canal which then drains directly to the downstream TNW. The wetlands perform important physical benefits to the downstream TNW. During rain events, these wetlands store flood waters which would otherwise be directly discharged into the TNW. The presence of these wetlands ensures the maintenance of groundwater supplies, and therefore directly affect the duration, frequency and volume of flow in the tributaries and the downstream TNW. As evidenced by studies conducted by academia and the SFWMD, the wetlands within the larger Lake Okeechobee Watershed provide a means of slowing water's velocity and reducing the amount of sediments entering the Lake.

**Biological:** The adjacent wetlands are surrounded by low intensity agriculture and/or pasture. Little native habitat is available outside the project area as the majority of this watershed has been converted to agricultural uses. As such, the wildlife corridors have been impacted and there are barriers such as cattle fences, ditches and berm systems which limit wildlife movement through the landscape. These adjacent wetlands provide important biological functions for the downstream TNW as they provide opportunities for aquatic and terrestrial species to use the wetlands for foraging, resting and nesting.

**Chemical:** Discharges from the wetlands provide benefit to downstream areas. Water received from precipitation and overland sheet flow from the surrounding agriculture lands is stored in these wetlands and ultimately discharged to the C-41A Canal. As high nutrient levels are evident within Lake Okeechobee, these wetlands provide essential denitrification, treatment, attenuation and overall water quality improvements. Furthermore, these wetlands provide important storage for any on-site pesticides or fertilizers which may be applied during agricultural operations, which protects the downstream TNW.

#### Non-RPW and Adjacent Wetlands to the Non-RPW:

**Physical:** The project site contains 61.9 acres of surface waters classified as Non-RPW's which flow seasonally. A total of 23 acres of the 61.9 acres of Non-RPW's were excavated in historic wetland habitat, with the remaining acreage excavated in historic upland habitat. These Non-RPW's connect to onsite RPW's and discharge into the C-41A Canal. These tributaries drain runoff and rainfall from the project site downstream via C-41A Canal. The project site contains 281.5 acres of wetlands which are adjacent to the Non-RPW's. These wetlands provide storage of flood waters and maintenance of groundwater supplies, and therefore directly affect the duration, frequency and volume of flow in the tributaries and the downstream TNW.

**Biological:** The Non-RPW's are man-made agricultural ditches which provide a conveyance of waters from wetlands to RPW's on-site. These Non-RPW's also provide wildlife corridors for species movement from wetland to tributary and vice versa. The wetlands adjacent to the Non-RPW's provide breeding grounds for species that cannot reproduce in faster-moving water and move between wetlands and uplands over their lifecycle, and provide habitat for a variety of species. The subject wetlands provide oases in an altered landscape and resting and wading habitats for birds.

Chemical: The Non-RPW's transfer nutrients and organic carbon that supports food webs in Lake Okeechobee, as well as transfer potential pollutants to the downstream TNW, which could negatively affect aquatic resources and contribute to algal blooms. The wetlands provide important denitrification and pollutant storage to increase water quality downstream.

 Brighton Valley Project Boundary - 8,143.78 ac.±

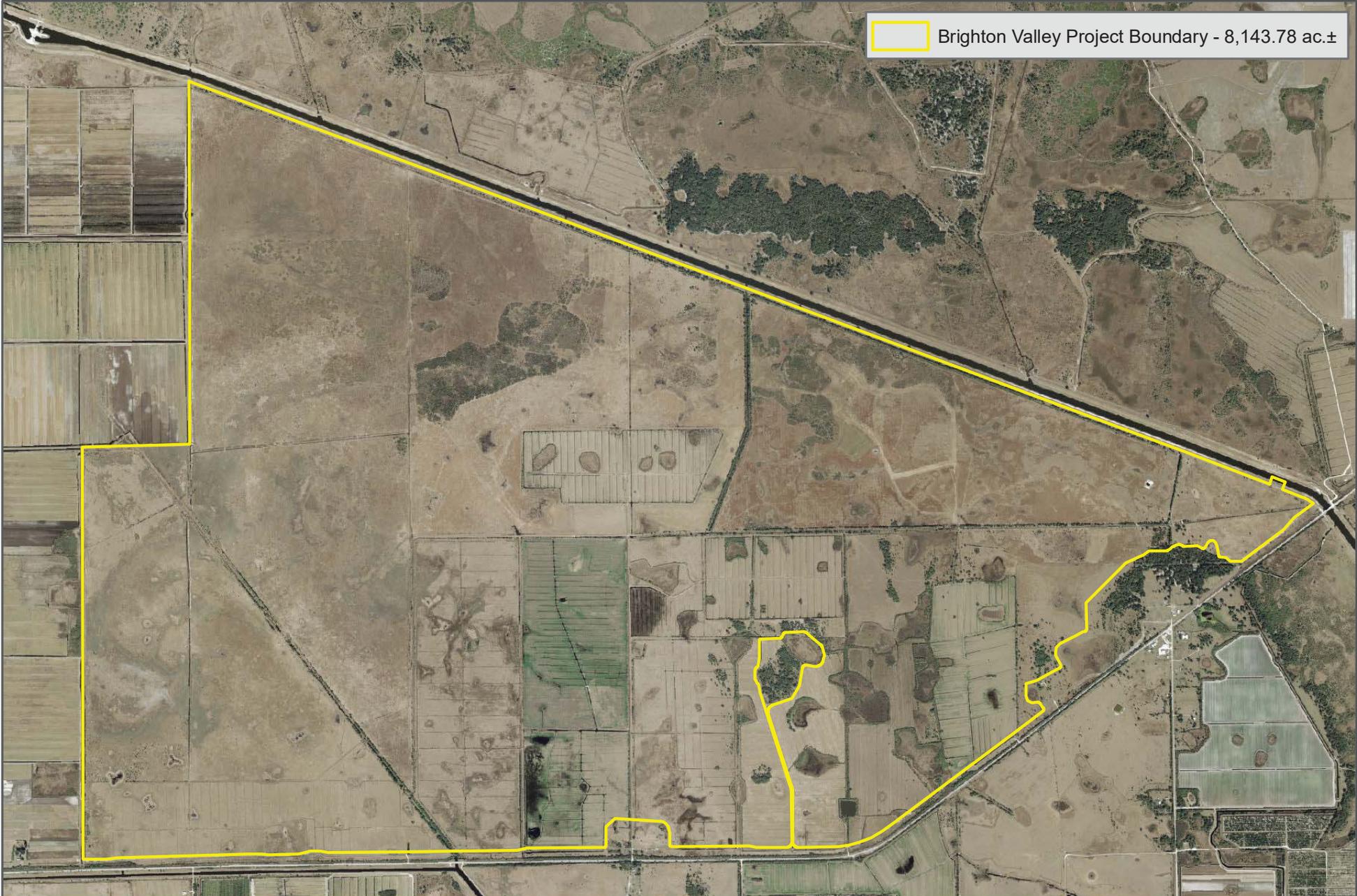


  
Image:2011 FREAC  
Data Source:  
SFWMD, 2009  
  
Sec 13,24,25,36;17-35  
Twp 37 S  
Rng 31,32 E

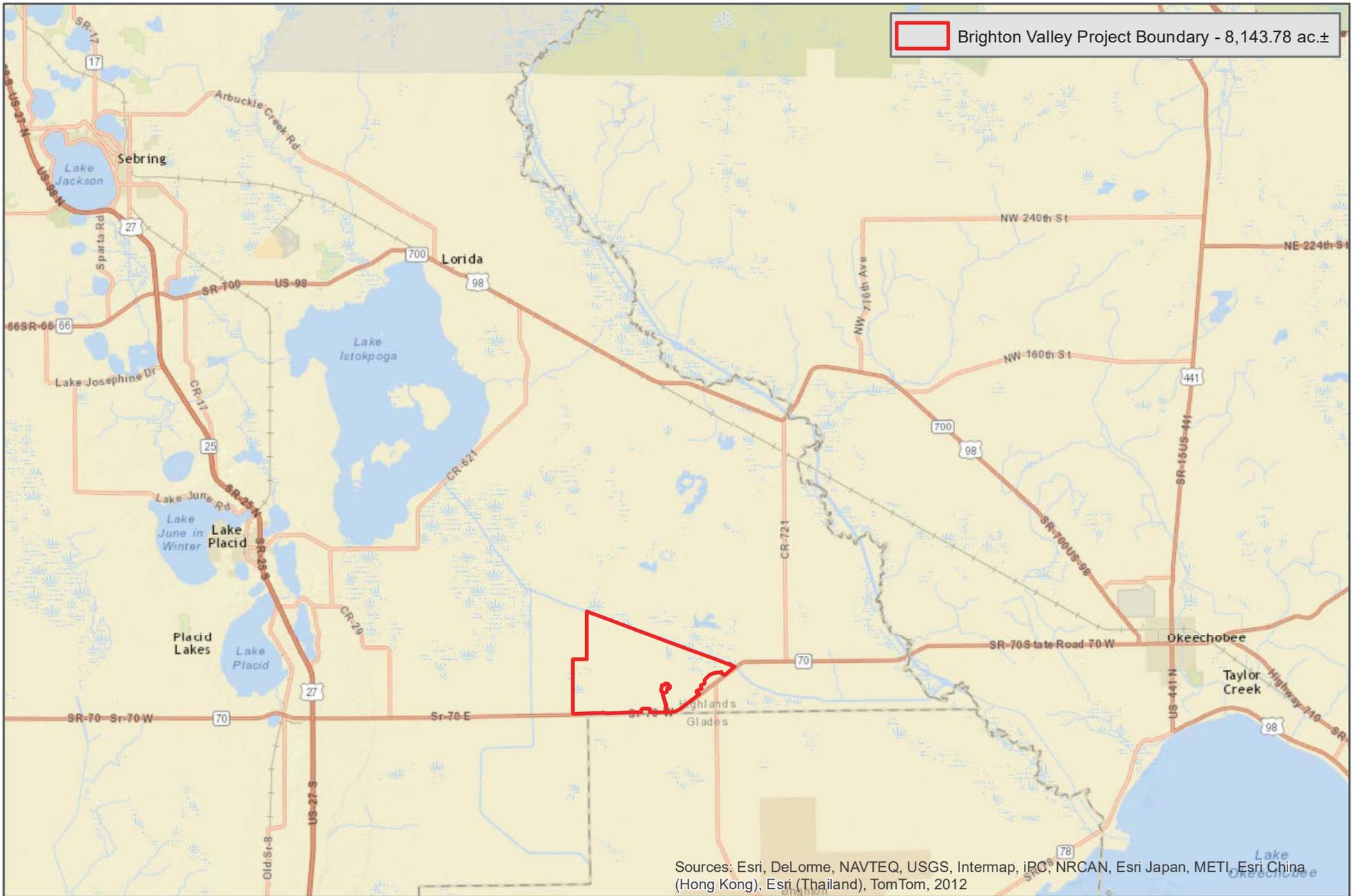
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**Aerial Map**  
**Brighton Valley**  
**Highlands County, Florida**

0 2,800 5,600 Feet  
0 875 1,750 Meters

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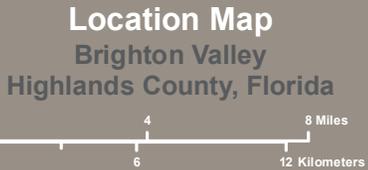
 Brighton Valley Project Boundary - 8,143.78 ac.±

Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2012

Image: 2011 FREAC  
 Data Source:  
 SFWMD, 2009

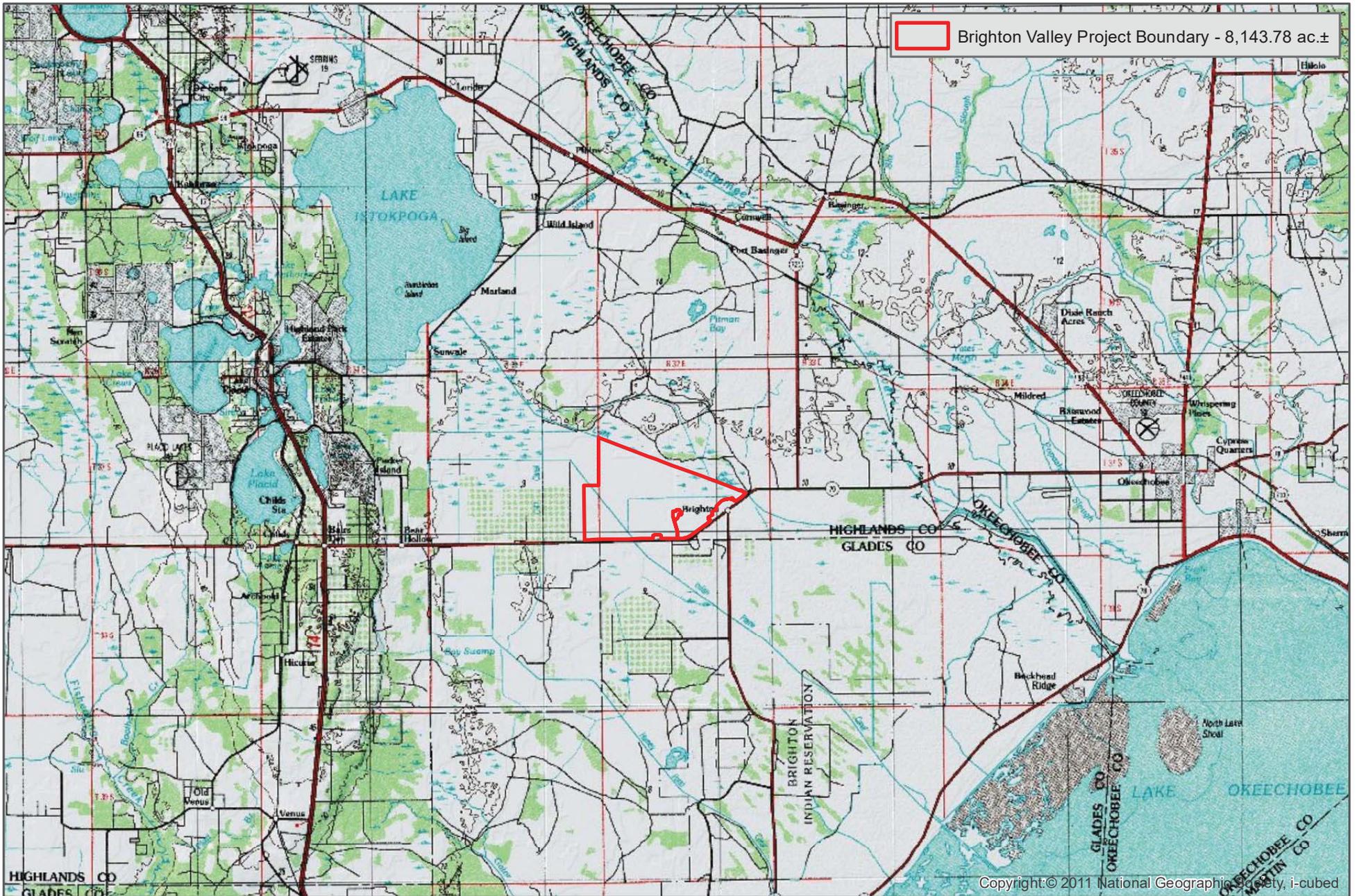
Sec 13,24,25,36;17-35  
 Twp 37 S  
 Rng 31,32 E

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Brighton Valley Project Boundary - 8,143.78 ac.±

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### USGS Topographic Map - Brighton NW, NE

#### Brighton Valley Highlands County, Florida



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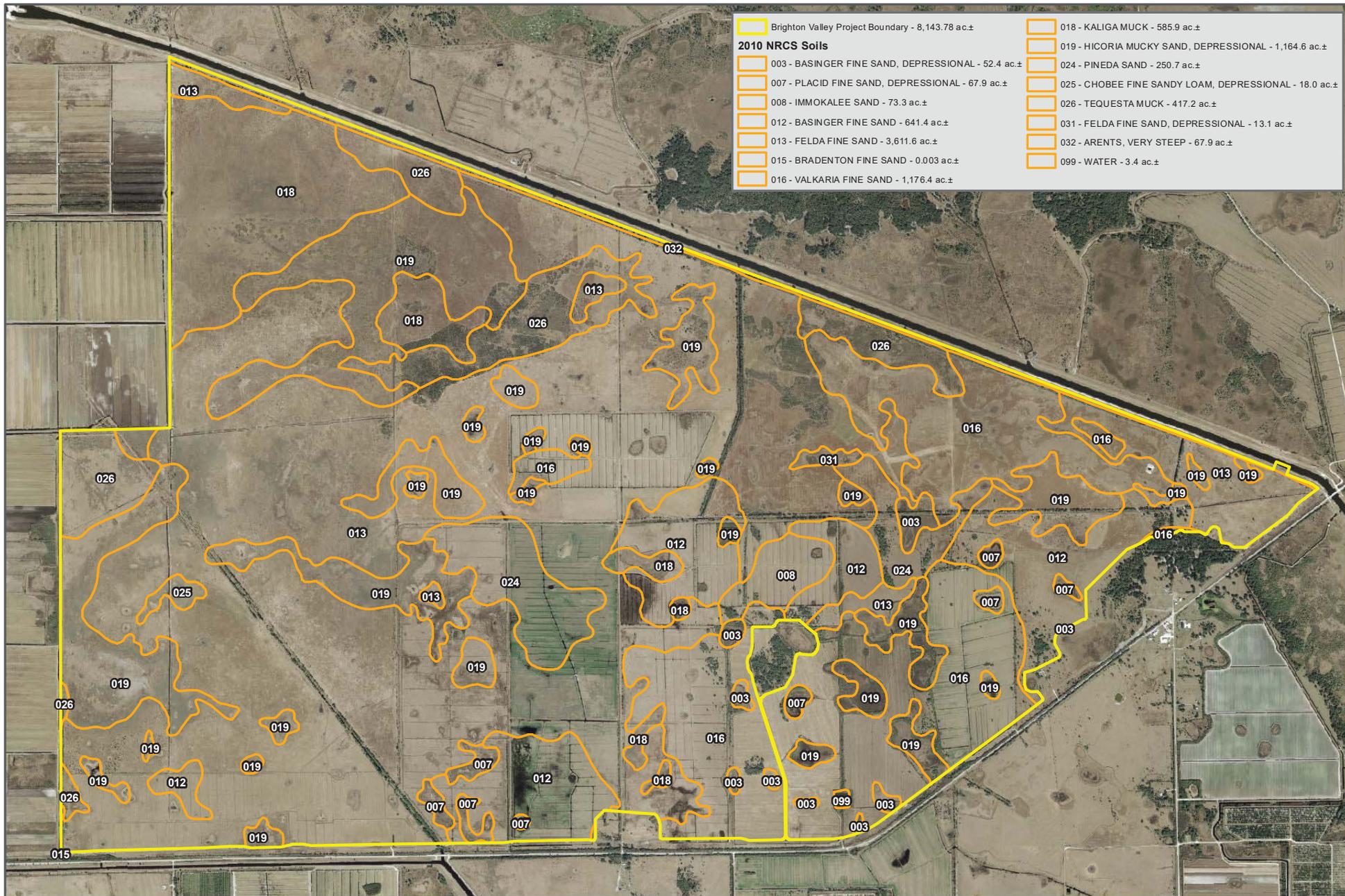


  
 Image: 2011 FREAC  
 Data Source:  
 SFWMD, 2009  
  
 Sec 13,24,25,36;17-35  
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## NRCS 2010 Soils Map

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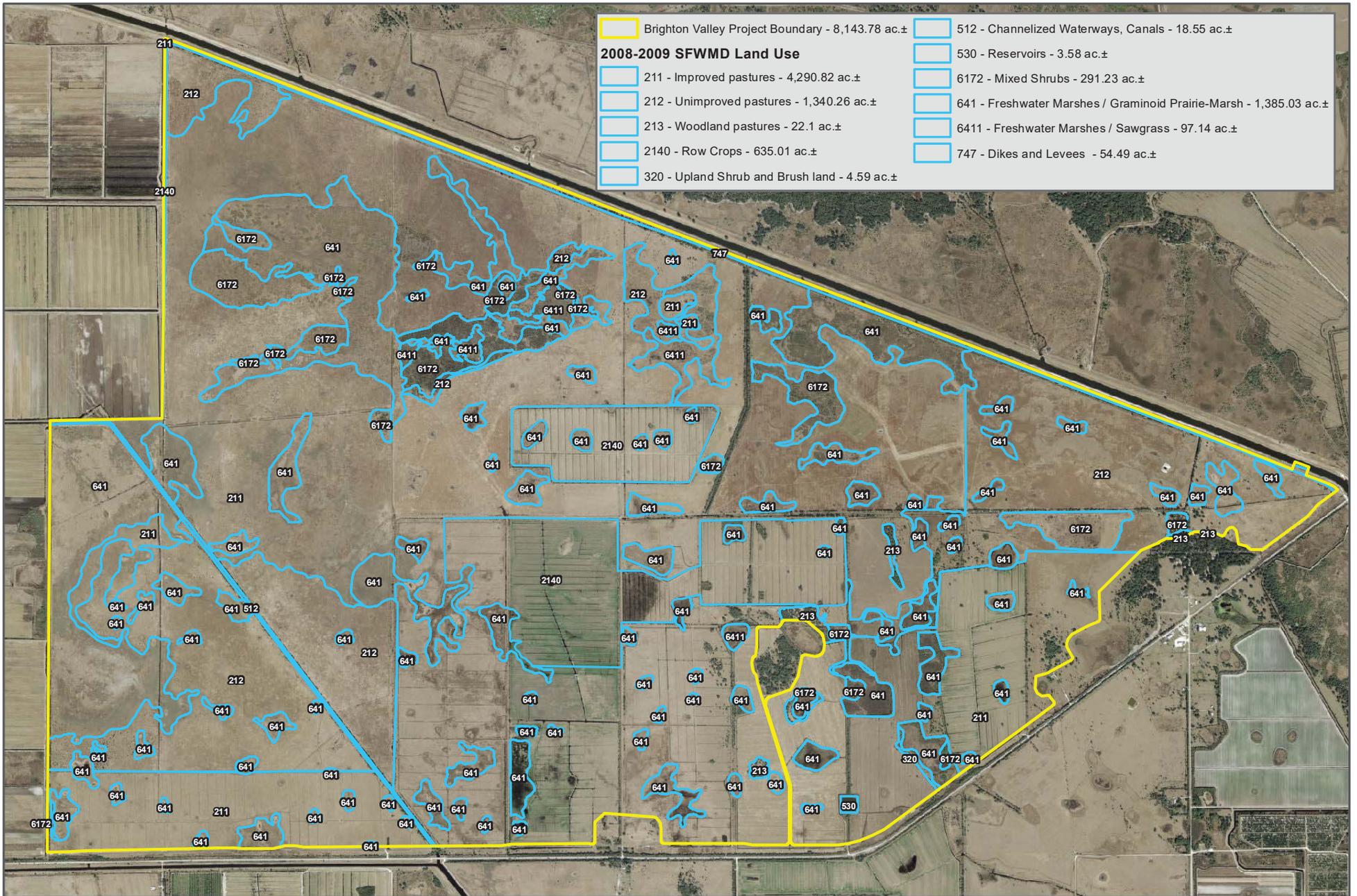



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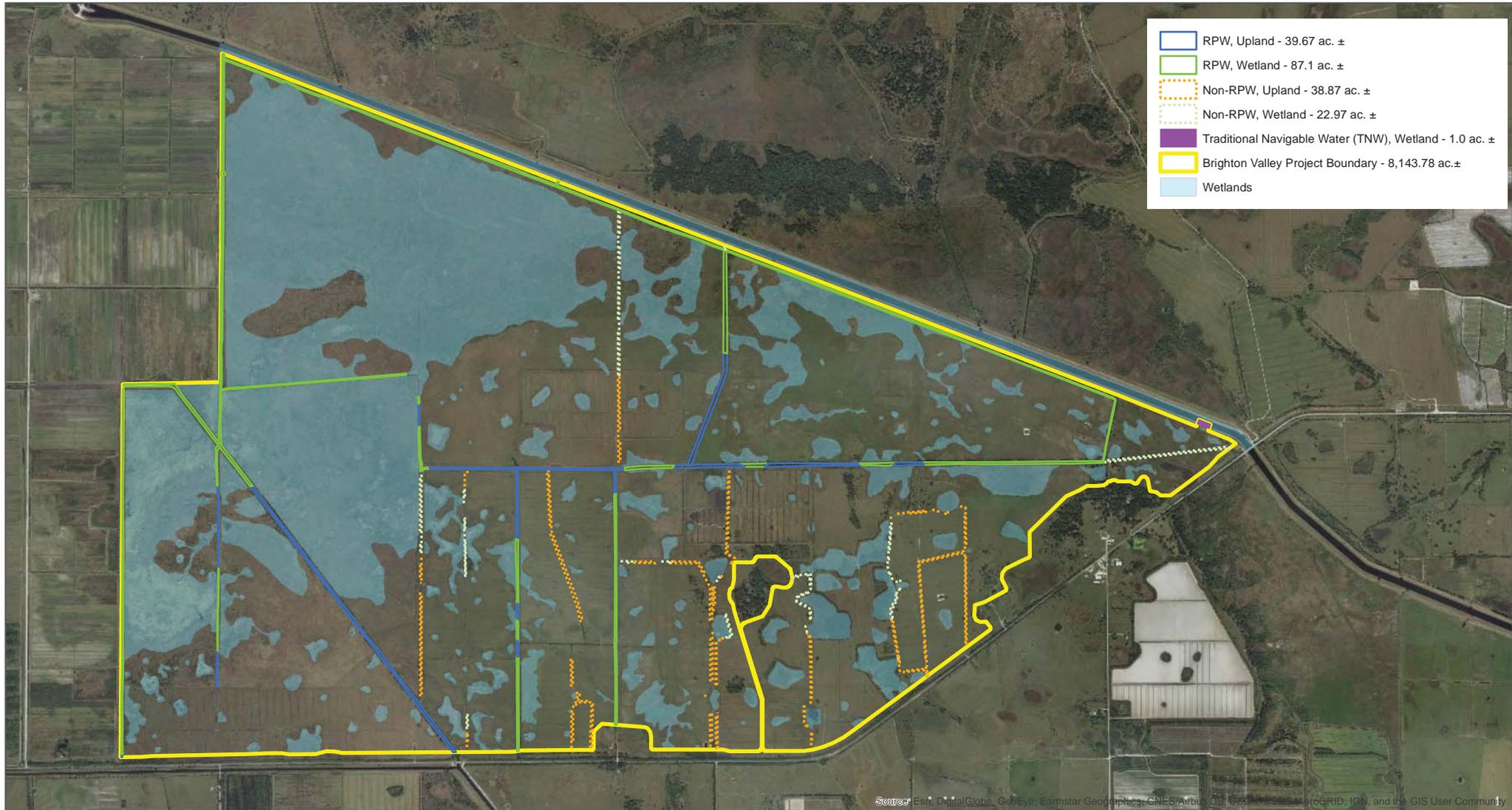
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## SFWMD 2009 Land Use/Land Cover

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- RPW, Upland - 39.67 ac. ±
- RPW, Wetland - 87.1 ac. ±
- Non-RPW, Upland - 38.87 ac. ±
- Non-RPW, Wetland - 22.97 ac. ±
- Traditional Navigable Water (TNW), Wetland - 1.0 ac. ±
- Brighton Valley Project Boundary - 8,143.78 ac.±
- Wetlands

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus, USDA, AeroGRID, IGN, and the GIS User Community

Image: 2017

Data Source:  
State of Florida

Sec: 13, 24, 25, 36, 17, 35  
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Rng 31, 32 E

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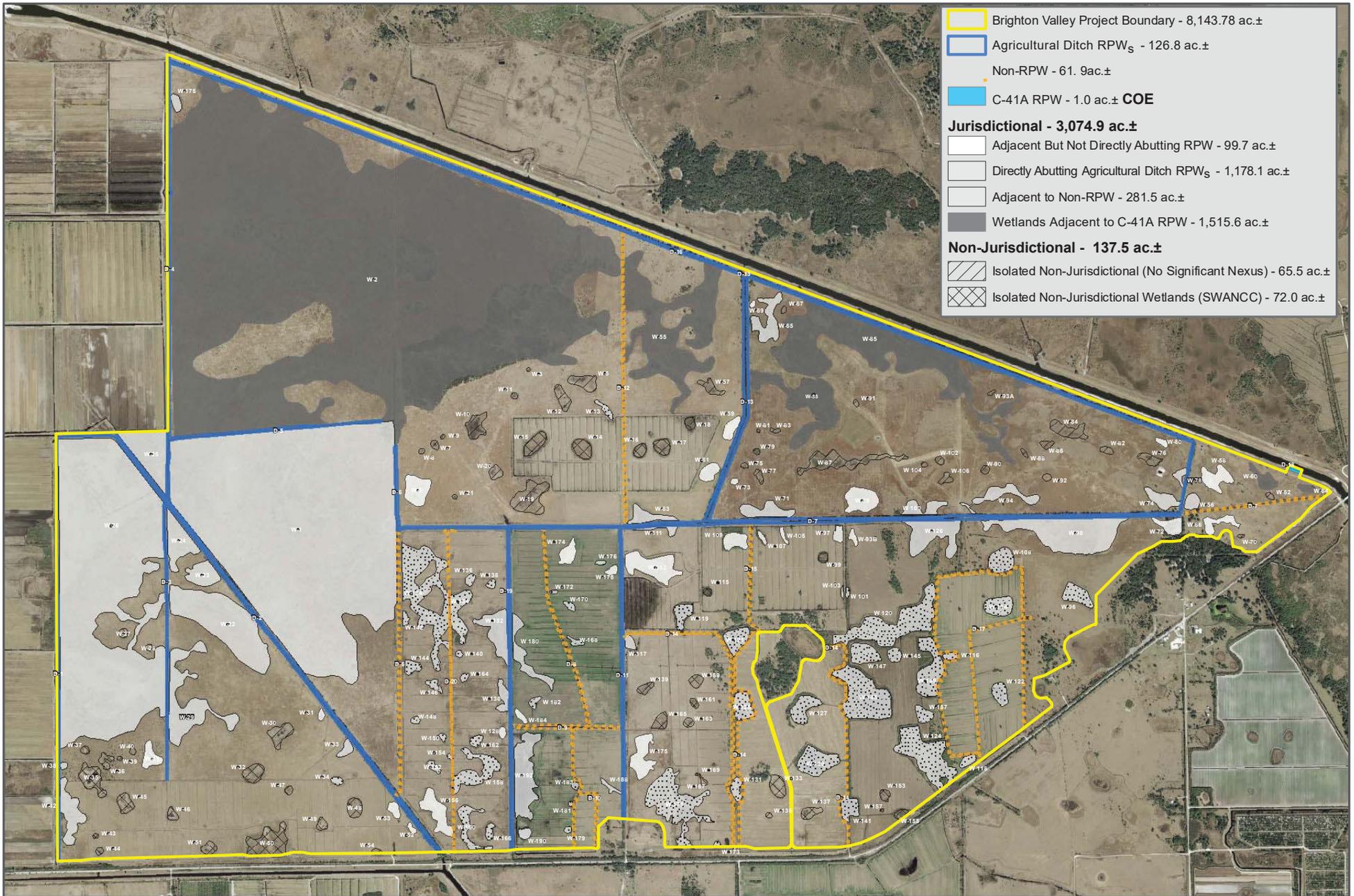
0 2,500 5,000 Feet  
0 762 1,524 Meters

## Historic Surface Water Habitat Assessment

Brighton Valley  
Highlands County, Florida



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- Brighton Valley Project Boundary - 8,143.78 ac.±
- Agricultural Ditch RPW<sub>S</sub> - 126.8 ac.±
- Non-RPW - 61.9 ac.±
- C-41A RPW - 1.0 ac.± **COE**
- Jurisdictional - 3,074.9 ac.±**
- Adjacent But Not Directly Abutting RPW - 99.7 ac.±
- Directly Abutting Agricultural Ditch RPW<sub>S</sub> - 1,178.1 ac.±
- Adjacent to Non-RPW - 281.5 ac.±
- Wetlands Adjacent to C-41A RPW - 1,515.6 ac.±
- Non-Jurisdictional - 137.5 ac.±**
- Isolated Non-Jurisdictional (No Significant Nexus) - 65.5 ac.±
- Isolated Non-Jurisdictional Wetlands (SWANCC) - 72.0 ac.±

Image:2011 FREAC  
 Data Source:  
 SFWMD, 2009  
  
 Sec 13.24,25,36;17-35  
 Twp 37 S  
 Rng 31.32 E

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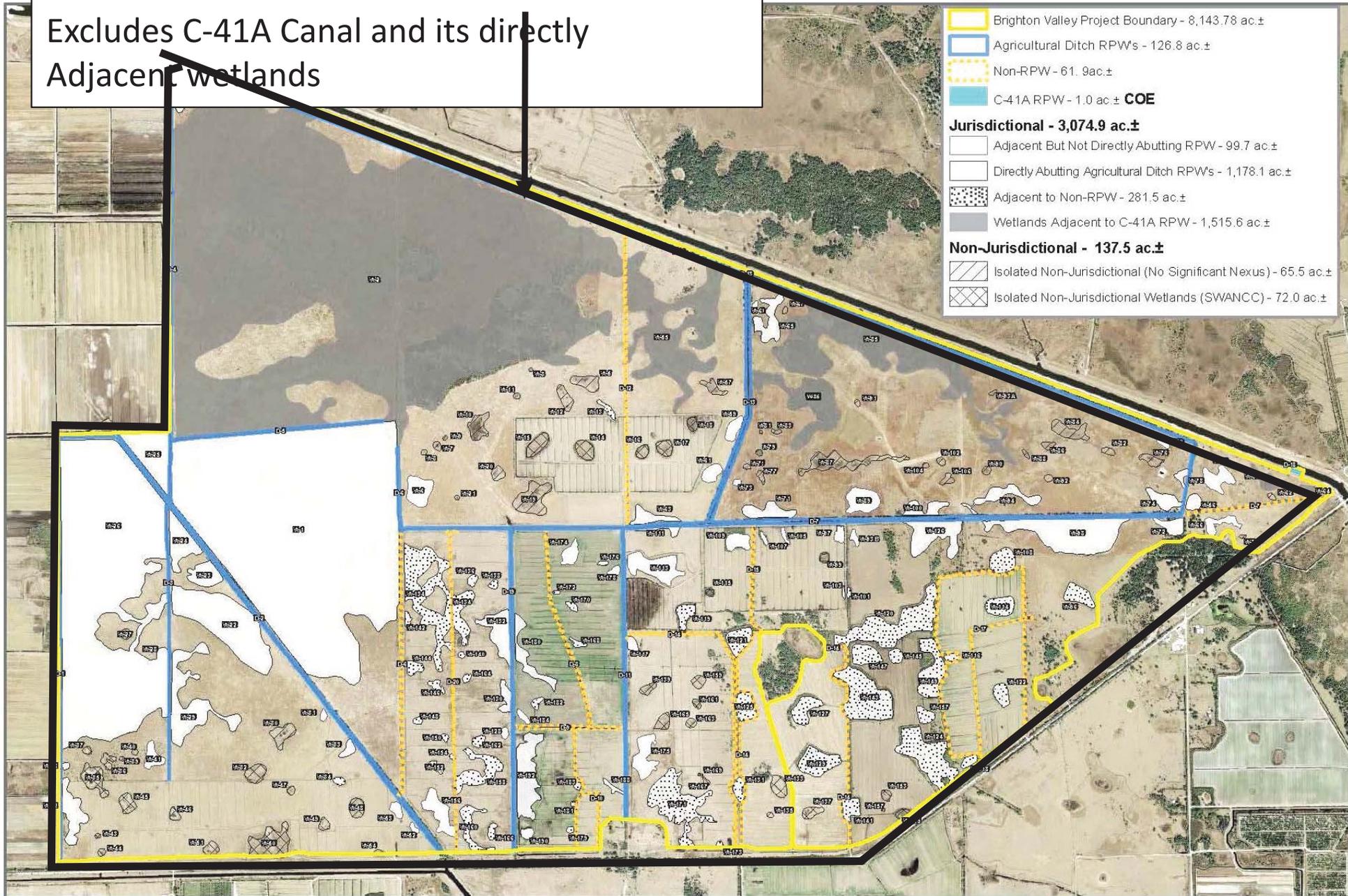
## Rapanos Wetland Map

### Brighton Valley Highlands County, Florida



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# AJD Review Area – Ditch RPW Relevant Reach Excludes C-41A Canal and its directly Adjacent wetlands



- Brighton Valley Project Boundary - 8,143.78 ac.±
- Agricultural Ditch RPWs - 126.8 ac.±
- Non-RPW - 61.9 ac.±
- C-41A RPW - 1.0 ac.± **COE**
- Jurisdictional - 3,074.9 ac.±**
- Adjacent But Not Directly Abutting RPW - 99.7 ac.±
- Directly Abutting Agricultural Ditch RPWs - 1,178.1 ac.±
- Adjacent to Non-RPW - 281.5 ac.±
- Wetlands Adjacent to C-41A RPW - 1,515.6 ac.±
- Non-Jurisdictional - 137.5 ac.±**
- Isolated Non-Jurisdictional (No Significant Nexus) - 65.5 ac.±
- Isolated Non-Jurisdictional Wetlands (SWANCC) - 72.0 ac.±

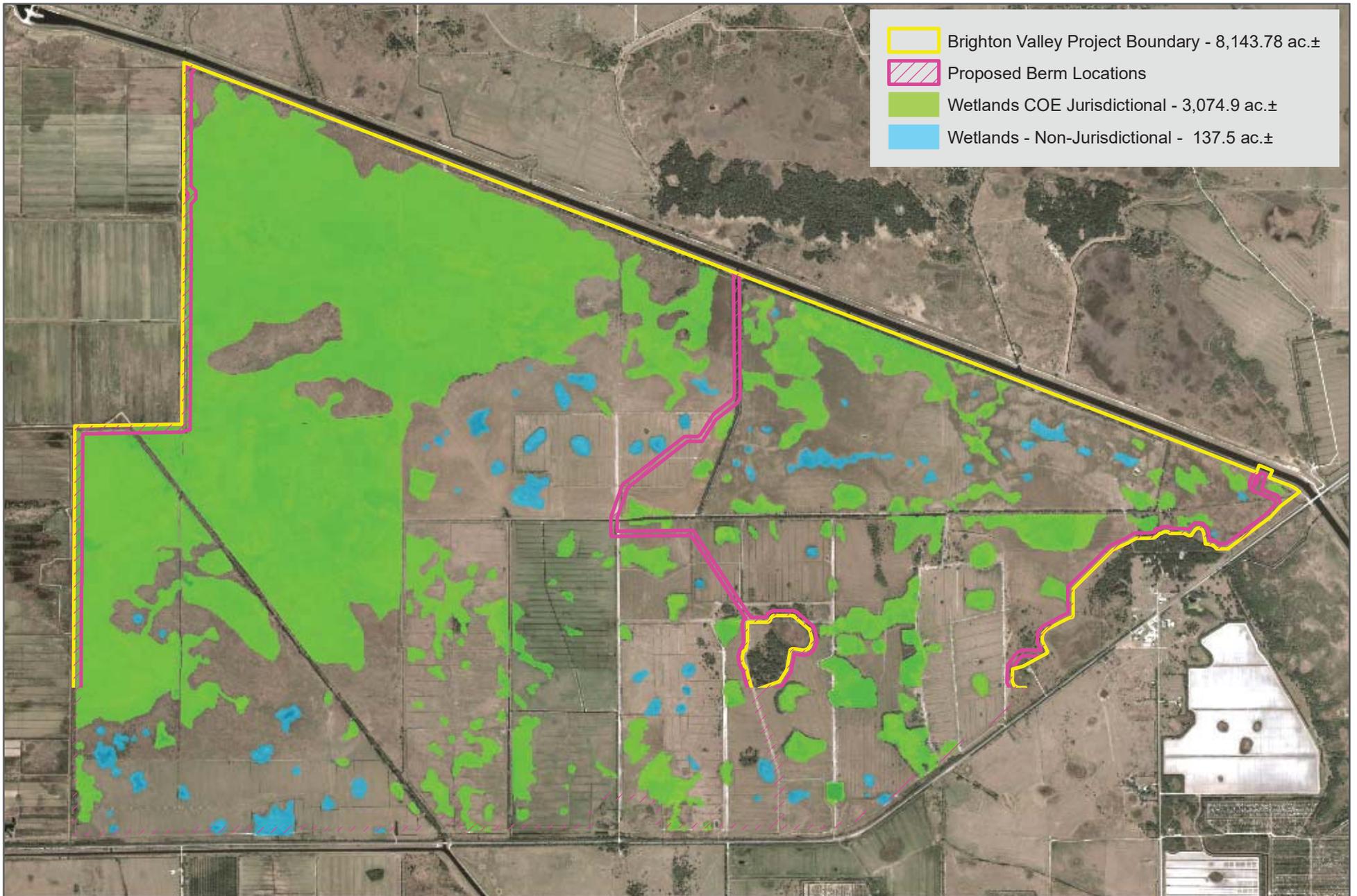
Image: 2011 FREAC  
Data Source: SFWMD, 2008  
Sec 13, 24, 25, 36, 17-36, Twp 37 S, Rng 31, 32 E

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## Rapanos Wetland Map Brighton Valley Highlands County, Florida



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- Brighton Valley Project Boundary - 8,143.78 ac.±
- Proposed Berm Locations
- Wetlands COE Jurisdictional - 3,074.9 ac.±
- Wetlands - Non-Jurisdictional - 137.5 ac.±

  
 Image: 2014  
 Data Source:  
 FDOT  
 Sec 13,24,25,36,17,35  
 Twp 37 S  
 Rng 31,32 E

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