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): April 9, 2019

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CESAJ-RD-WT SAJ-2018-00328 Grand Lakes Project Area, Sarasota County

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State:FL County/parish/borough: Sarasota City: Sarasota
Center coordinates of site (lat/long in degree decimal format): Lat. 27.233527° **N**, Long. -82.440177° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: South Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: South Creek. The mouth of South Creek is subject to the ebb and flow of the tide. Salinity data analysis shows that just a short distance upstream of US-41/Tamiami Trail, South Creek acquires freshwater characterisitics (Sarasota County & SWFWMD 2012).
Name of watershed or Hydrologic Unit Code (HUC): Little Sarasota Bay Frontal (HUC#0310020102)

☒ 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: April 9, 2019
☒ Field Determination. Date(s): August 7, 2018

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):** [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 5.61 acres.
   Wetlands: 32.07 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: **SW-E (0.72 ac) is an artificial pond created by excavating dry land to collect and retain water and is used exclusively for the purpose of irrigation (Preamble to 33CFR Part 328 in the Nov 13, 1986 FR).**

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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.

SW-V, SW-W, SW-X, and W-H (for a total of 4.81 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 U.S . Additionally, these waters 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).

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: 13,5067 Little Sarasota Bay Frontal (HUC#0310020102) **acres**
Drainage area: for South Creek Basin, 12,630 (Sarasota County Wateratlas 2017) **acres**
Average annual rainfall: 48 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 **2-5** 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: .

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

Identify flow route to TNW[5]: Via a man-made channel and culvert system that runs under I-75, through a residential area through an unaltered section of South Creek that flows through rangeland, through Oscar Scherer State Park, and directly into the tidally-influenced section of South Creek (the TNW). Figure 3 shows flow route from OSW-1 (RPW), in project area, to TNW.
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: Historical wetlands on site were manipulated for agricultural land use. A main channel (OSW-1) and a series of ditches and surface water ponds were created, utilizing the foot print of historical wetlands, to drain water on site into OSW-1 (the RPW) and off site into South Creek. Figure 4 shows a 1978 aerial image showing historical wetlands on site as compared to a 2009 aerial image of the project site showing a channel created for diverting water off-site. Project site is currently being used for sod production.

Tributary properties with respect to top of bank (estimate):
Average width: 10-30 feet
Average depth: 2-8 feet
Average side slopes: **3:1 .**

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: A site visit on Aug 7, 2018 revealed that channel was well maintained. Certain culverts and weirs structures were recently replaced. Figure 5 shows pictures of channel and water flowing throughout and off of project site into South Creek.
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Meandering**
Tributary gradient (approximate average slope): 0.1 %

(c) Flow:
Tributary provides for: **Seasonal flow**
Estimate average number of flow events in review area/year: **2-5**
Describe flow regime: A water sampling site (Station ID 700, SO-1 Oscar Scherer Park) found 2.5 miles south of project site shows that water flow in South Creek typically follows rainfall patterns (www.tampabaywateratlas). It rains on average 102 days a year in Venice, FL, just eight miles south of project site (Weather and Science Facts www.currentresults.com) with a typical wet (July-Sept) and dry (Oct-June) season.
Other information on duration and volume: On July 11, 2018 water levels in South Creek were 7.24 ft and on October 22, 2018 water levels were 5.83 ft. South Creek has a historic water level range of 1.4-14.2 ft. (www.sarasota.wateratlas.usf.edu).

Surface flow is: **Confined.** Characteristics: Channelized with culverts, weirs, and ditches.

Subsurface flow: **Yes**. Explain findings: Soil properties and hydrogeology within the review area demonstrate a shallow subsurface flow from wetlands and surface waters to the RPW (OSW-1). The area is mapped as Holopaw fine sand (22), frequently ponded, (6 to 9 months), 0-1% slopes, with a hydric rating of 100% (Figure 6). The Holopaw Series consists of deep, very poorly drained soil that formed in sandy and loamy marine sediments. The geology of the review area indicates the water table is at a depth of 6-12 inches for 2 to 6 months, during the remainder of the year, it is typically at a depth of 12 to 40 inches (https://soilseries.sc.egov.usda.gov/OSD_Docs/H/HOLOPAW.html).

Hydric soil properties show water storage capacity, poor drainage, and the ability to transmit water when subjected to a hydraulic gradient. The presence of hydric and partially hydric soils in the review area is an indicator of water storage capacity and the high saturated hydraulic conductivity (Ksat) and poor drainage, for hydric soils, demonstrates a hydraulic connection via shallow subsurface flow between the RPW and wetlands and surface waters. Of the 11 soil map units (excluding water) in the review area, 80% (or 8 of the soil map units) are either hydric with a 100% hydric rating or partially hydric with a 53%-99% hydric rating (Figure 6). An estimated 100% of soil map series are very poorly drained to somewhat poorly drained soils (Figure 7). This shows that a majority of the soils in the review area are saturated at shallow depths for significant periods during the growing season. Saturated conditions in poorly drained soils are caused by a slowly pervious layer within the soil profile, a high water table, seepage from continouous rainfall, or a

[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.

combination of these factors (SAJ-2009-00833 Landstone Communities DRI, 9 Dec 2011). Additionaly, the majority of the soils within the review area have a high to very high Ksat value, which means that pores in the saturated soil transmits water with ease (Figure 8).

☐ Dye (or other) test performed: .

Tributary has (check all that apply):

☒ Bed and banks

☒ OHWM[6] (check all indicators that apply):

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

☐ Discontinuous OHWM.[7] Explain: .

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

☐ High Tide Line indicated by:

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

☐ Mean High Water Mark indicated by:

- ☐ survey to available datum;
- ☐ physical markings;
- ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

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

Explain: To date, water quality Index ranges from Good to Poor (45-83) and average turbidity is higher than it has been historically (www.sarasota.wateratlas.usf.edu).

Identify specific pollutants, if known: Historic Range: Total Nitrogen = 49-3,600 ug/l, Total Phosphorus=10-1,580 ug/L, Fecal Coliform =3-39,000 CFU/100ml, Dissolved Oxygen = 0.5-28.9 mg/l, and Salinity=0-38.6 ppt. (www.sarasota.wateratlas.usf.edu).

[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.

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

☒ Riparian corridor. Characteristics (type, average width): On average about 200 ft. Project site is currently used as a sod farm. The RPW on project site is bordered by palustrine, emergent wetlands, that are seasonaly flooded and Palustrine, forested, broad-leaved evergreen, wetlands that are seasonally flooded.

☒ Wetland fringe. Characteristics: .

☒ Habitat for:

☒ Federally Listed species. Explain findings: Potential to be used by Eastern indigo snake, Wood stork, and Florida scrub jay. Eastern indigo snake has been documented just 2.5 miles south of review area, down stream of South Creek, in a similar type of habitat. South Creek passes through Oscar Scherer State Preserve which supports scrubby and pine flatwoods that are habitat for Florida scrub jays. A Wood stork was observed foraging in one of the on-site wetlands (ECO Consultants 2018). Although the closest nest is located 5.36 miles southwest of property, South Creek has the potential to be used for foraging by Wood stork because its relatively calm, open, and in certain areas, has the appropriate water depth with concentrated prey.

☒ Fish/spawn areas. Explain findings:

Other environmentally-sensitive species. Explain findings: Potential to be used by Bald eagle, Gopher tortois, and American Aligator (Southwest Florida Water Management District and Sarasota County 2012). There are 4 Bald Eagle nests located within 2 miles of review area.

☒ Aquatic/wildlife diversity. Explain findings: South Creek provides habitat and foraging opportunities for a multitude of invertebrates , birds, reptiles, amphibians, and mammals (White tailed deer, Cotton-tail rabbits, Raccoons, Bobcats) (Carl 2005 and Southwest Florida Water Management District and Sarasota County 2012). Nutrient/pollutant filtration functions of South Creek are important for maintaining water quality in Blackburn Bay for aquatic flora (sea grasses and mangroves) and fauna (fiddler crabs, anchovies, snook, oysters) (Southwest Florida Water Management District and Sarasota County 2012).

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: 12.1 ac of wetlands abutting RPW and 20.79 ac of wetlands/surface waters adjacent to RPW acres Wetland type. Explain:Palustrine emergent.

Wetland quality. Explain: Low to moderate.

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

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: Wetlands directly abut channel. Channel was constructed to drain wetlands on site and to convey water off site, so that land could be used for agricultural activities.

Surface flow is**: Overland Sheet Flow**

Characteristics:

Subsurface flow: **Yes**. Explain findings: Soil properties and hydrogeology within the review area demonstrate a shallow subsurface flow from wetlands and surface waters to the RPW (OSW-1). The area is mapped as EauGallie and Myakka fine sands (10) and Holopaw fine sand (22). Holopaw fine sand is frequently ponded (6 to 9 months) and the water table is at a depth of 6-12 inches for 2 to 6 months, during the remainder of the year, it is typically at a depth of 12 to 40 inches (https://soilseries.sc.egov.usda.gov/OSD_Docs/H/HOLOPAW.html). EauGallie and Myakka fine sands (10) is poorly drained and the the water table rises within 6-18 inches of the surface for periods of 1-4 months, the water table its within 40 inches for more than 6 months, and depressional areas are covered with standing water 3 to 6 months during most years (https://soilseries.sc.egov.usda.gov/OSD_Docs/E/EAUGALLIE.html).

Hydric soil properties show water storage capacity, poor drainage, and the ability to transmit water when subjected to a hydraulic gradient. The presence of hydric and partially hydric soils in the review area is an indicator of water storage capacity and the high saturated hydraulic conductivity (Ksat) and poor drainage, for hydric soils, demonstrate a hydraulic connection via shallow subsurface flow between the RPW and wetlands and surface waters. Of the 11 soil map units (excluding water) in the review area, 80% (or 8 of the soil map units) are either hydric with a 100% hydric rating or partially hydric with a 53%-99% hydric rating (Figure 6). An estimated 100% of soil map series are very poorly drained to somewhat poorly drained soils (Figure 7). This shows that a majority of the soils in the review area are saturated at shallow depths for significant periods during the growing season. Saturated conditions in poorly drained soils are caused by a slowly pervious layer within the soil profile, a high water table, seepage from continouous rainfall, or a combination of these factors (SAJ-2009-00833 Landstone Communities DRI, 9 Dec 2011). Additionaly, the majority of the soils within the review area have a high to very high Ksat value, which means that pores in the saturated soil transmits water with ease (Figure 8).

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

☒ Directly abutting

☒ Not directly abutting

☒ Discrete wetland hydrologic connection. Explain: Surface flow via ditches and culverts and shallow subsurface flow demonstrated by soil properties and hydrogeology. See section III.B.1(ii)c. above.

☒ Ecological connection. Explain: Through movements of plant and 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 and surface waters within the review area 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 OSW-1 (RPW) and downstream into South Creek (TNW).

☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **2-5** 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: Clear.
Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):
☐ Riparian buffer. Characteristics (type, average width): .
☒ Vegetation type/percent cover. Explain: Herbaceous and forested.
☒ Habitat for:
☒ Federally Listed species. Explain findings:Potential to be used by Florida scrub jay, Eastern indigo snake, and Wood stork. A Wood stork was observed foraging in one of the on-site wetlands (ECO Consultants 2018). Eastern indigo snake has been documented just 2.5 miles south of review area, down stream of South Creek, in a similar type of habitat. The closest documented occurrence of Florida scrub jays and potential habitat is located 2.5 miles south of review area in Oscar Scherer State Preserve. Scrub jays are non-migratory and sedentary with an average 5 mile dispersal distance.
☐ Fish/spawn areas. Explain findings: .
☒ Other environmentally-sensitive species. Explain findings:Potential to be used by Bald eagle and American Aligator There are 4 Bald Eagle nests located within 2 miles of review area.
☒ Aquatic/wildlife diversity. Explain findings:At site visit we observed uitilization by insects, reptiles, amphibians, mammals, and birds. In addition, nutrient/pollutant filtration functions of wetlands and surface waters are important for maintaining water qulaity for aquatic flora and fauna in South Creek and Blackburn Bay. South Creek and Blackburn bay is an important recreational fishing resource and is especially known for snook, scallops, and oyster populations (Southwest Florida Water Management District and Sarasota County 2012).

3. Characteristics of all wetlands adjacent to the tributary (if any)
All wetland(s) being considered in the cumulative analysis: **25-30**
Approximately (32.05 wetlands and 0.725 surface waters) 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)
Wetland D	Y	2.31		
Wetland F	Y	1.48		
Wetland K	Y	0.7		
Wetland L	Y	3.56		
Wetland N	Y	1.95		
Wetland O	Y	0.82		
Wetland Q	Y	0.57		
Wetland R	Y	0.71		
OSW 1-A	Y	0.053		
OSW 1-B	Y	0.018		
OSW 1-C	Y	0.014		
OSW1-D	Y	0.14		
Wetland A	N	3.89		
Wetland G	N	0.93		
Weland I	N	1.67		
Wetland J	N	1.66		
Wetland M	N	0.55		
Wetland P	N	3.06		
Wetland RR	N	4.79		
Wetland S	N	0.76		
Wetland T	N	0.34		
Wetland U	N	2.1		
SW-B	N	0.09		
SW-R	N	0.08		
SW-Y	N	0.33		

Summarize overall biological, chemical and physical functions being performed: Contributes freshwater inflow into South Creek (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 (OSW-1); wetlands/surface waters directly abutting RPW (Wetlands D, F, K, L, N, O, Q, R, OSW 1-A, OSW 1-B, OSW 1-C, OSW 1-D:); and wetlands/surface waters adjacent to RPW (Wetlands A, G, I, J, M, P, RR, S, T, U and Surface Waters B, R, Y) but that do not directly abut the RPW, that flows directly into TNW (tidally influenced section of South Creek):** Subject RPW (OSW-1) and Subject Wetlands (abutting Wetlands/Surface waters, in combination with adjacent wetlands/surface waters [or similarly situated waters]), have more than an insubstantial or speculative effect on the physical, chemical, and biological integrity of the downstream TNW:

   PHYSICAL-RPW contributes freshwater in flow into TNW, via surface water and shallow subsurface flow as shown in Figures 3, 4, and 5 and discussed in Section II.B.1(ii)c. Wetland functions of Subject Wetlands contribute to maintaining water flow (Smith et al 1995) in water shed (storing flood waters and recharging ground water), directly influencing fresh water flow rates into RPW and downstream to TNW. South Creek is the sole freshwater tributary to Blackburn Bay (Southwest Florida Water Management District and Sarasota County 2012). Current total freshwater inputs range from around 4,700 ac-ft/yr to almost 13,000 ac-ft/yr. (Southwest Florida Water Management District and Sarasota County 2012).

   CHEMICAL-Polutant 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, sediments, pollutants (bacteria, pesticides, metals, petroleum by-products), and nutrients into South Creek and downstream into the TNW, and into Blackburn Bay. Water quality data from South Creek (Station ID 700, SO-1 Oscar Scherer Park) and Blackburn Bay (Station ID Blackburn Bay 16-2) both show seasonal variations in nutrient (nitrogen and phosphorous) levels, exhibiting excess levels of nutrients during the wet season (www.sarsota.wateratlas.usf.edu). South Creek Basin contributes 84% of the nutrient and hydrologic load to Blackburn Bay (Southwest Florida Water Management District and Sarasota County 2012). Wetland functions of Subject Wetlands filter and remove nutrients from through-flowing water, contributing to the reduction of nutrient loading into TNW.

   BIOLOGICAL-Water quality of TNW is directly affected by the RPW's water quality and flow rate. Higher than normal flows are associated with pollutant and excess nutrient discharge into TNW which can lead to eutrophication (Stoker et al 1996) and the degradation of water quality in estuarine habitats (Johansson 1991 and 2006 Morrison et al). Small changes in water quality, such as low dissolved oxygen, high turbidity, and high nutrient levels, disrupt the normal functioning of the estuarine ecosystem causing a variety of problems such as algae blooms, fish kills, and sea grass die back. The marine portion of the South Creek Basin is impaired for low DO resulting from excessing BOD loading and from high nutrients as evidenced by high cholorophyll levels (SFWMD and Sarasota County 2012). Blackburn Bay supports 55 acres of mangrove habitat and 2 acres of saltmarsh. Mangrove coverage in the bay in 2003 was 104,090 linear feet or 61% of the total shoreline (Serviss and Saucer 2003 in SFWMD and Sarasota County 2012). Wetland functions of Subject Wetlands remove sediments, pollutants, and nutrients from through-flowing water and maintain water flow in the water shed, improving the water quality of fresh water being discharged into RPW and downstream to estuarine habitats found along the coastline of TNW.

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: A water sampling site (Station ID 700, SO-1 Oscar Scherer Park) found 2.5 miles south of project site shows that water flow in South Creek typically follows rainfall patterns (www.tampabaywateratlas). It rains on average 102 days a year in Venice, FL, just eight miles south of project site (Weather and Science Facts www.currentresults.com) with a typical wet (July-Sept) and dry (Oct-June) season. On July 11, 2018 water levels in South Creek were 7.24 ft and on October 22, 2018 water levels were 5.83 ft. South Creek has a historic water level range of 1.4-14.2 ft. (www.sarasota.wateratlas.usf.edu).

Provide estimates for jurisdictional waters in the review area (check all that apply):
☒ Tributary waters: **13, 200** linear feet **10-20**width
☒ (ft). Other non-wetland waters:4.89 acres.
Identify type(s) of waters: **Surface 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: Wetlands are within 10-20 feet of OSW-1, See Figure 2.

Provide acreage estimates for jurisdictional wetlands in the review area: **12.1 ac wetlands and 0.25 ac surface waters** .

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: **19.97 ac wetlands and 0.225 ac surface waters** 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).

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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.

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

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

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

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

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☒ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☒ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ 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: 4.69 acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☒ Wetlands: 0.12 acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

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

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:Birkitt Environmental Services Inc..
☒ 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 Web at https://casoilresource.lawr.ucdavis.edu.
☒ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .

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[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.***

☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date):Google Earth.
or ☐ Other (Name & Date): .
☒ Previous determination(s). File no. and date of response letter:SAJ-2009-00833 Landstone Communities DRI, 9 Dec 2011.
☐ Applicable/supporting case law: .
☒ Applicable/supporting scientific literature:

Brennan, N.P, Walter, C.J., Leber, K.M. 2008. Manipulations of Stocking Magnitude: Addressing Density-Dependence in a Juvenile Cohort of Common Snook (Centropomus undecimalis). Reviews in Fisheries Science, 16(1-3):2015-227.

Eco Consultants Incorporated. 2018. U.S. Army Corps of Engineers, Nationwide Permit Application for Grand Lakes , SAJ-2018-00328. Application submitted to Tampa Permits Section on 19 Dec 2017.

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.

Sarasota County Wateratlas. 2017. South Creek Condition Report for 2017.

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.

Southwest Florida Water Management District and Sarasota County. 2012. Little Sarasota Bay Water Quality Management Plan. Prepared by Jones Edmunds & Associates, INC and Janicki Environmental, INC.

Thurman II, Carl. 2005. A Comparison of Osmoregulation Among Subtropical Fiddler Crabs (Uca) From Southern Florida and California. Bulletin of Marine Science, 77(1):83-100.

☒ Other information (please specify): .

USDA NRCS Soil Web. 2017. https://casoilresource.lawr.ucdavis.edu

www.sarsota.wateratlas.usf.edu. Website accessed on October 22, 2018 and January 15, 2019

www.currentresults.com. Website accessed on October 22, 2018.

https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Website accessed on October 23, 2018.

https://soilseries.sc.egov.usda.gov/OSD_Docs/E/EAUGALLIE.html. Website accessed on January 11, 2019.

https://soilseries.sc.egov.usda.gov/OSD_Docs/H/HOLOPAW.html. Website accessed on January 11, 2019.

B. ADDITIONAL COMMENTS TO SUPPORT JD:

See Enclosed:

Fig. 1 JD Review Area,
Fig. 2 Wetland and Surface Waters in Project Area,
Fig. 3 Relevant Reach,
Fig. 4 1978 Aerial Image Showing Wetlands on Project Site as Compared to a 2009 Aerial Image of Project Site,
Fig. 5 Pictures of OSW-1 (RPW) and Water Flowing Througout and Off of Project Site,
Fig. 6 NRCS Web Soil Survey Hydric Rating by Map Unit,
Fig. 7 NRCS Web Soil Survey Hydraulic Conductivity (Ksat) by Map Unit,
Fig. 8 NRCS Web Soil Survey Drainage Class by Map Unit,
MFR: Description of Jurisdictional Waters.

Figure 1: Review Area for SAJ-2018-00328 Grand Lakes Project Area, Sarasota County, FL.

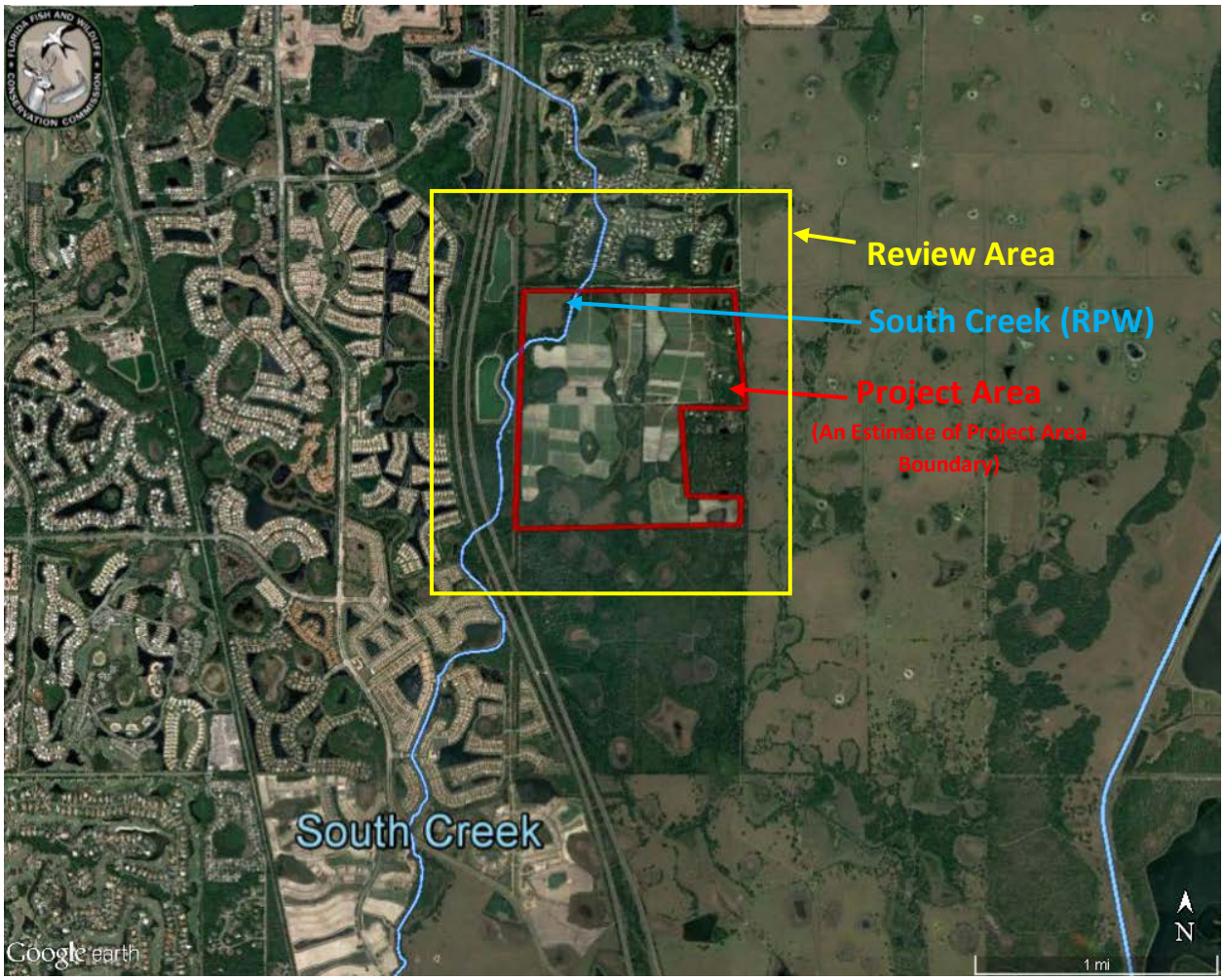


Figure 2: Wetlands and Surface Waters in Project Area (SAJ-2018-00328 Grand Lakes Project Area, Sarasota, County, FL).

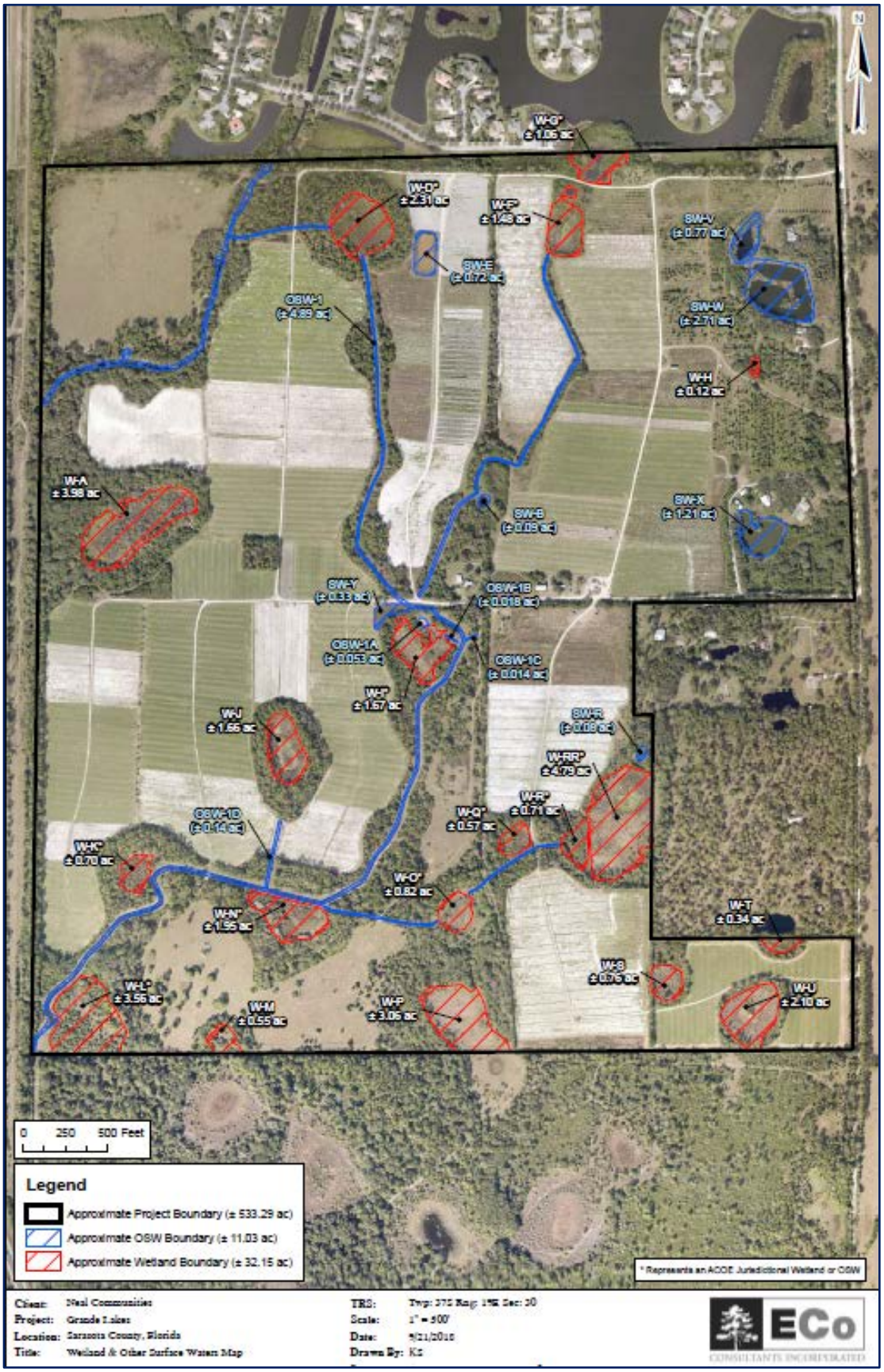


Figure 3: Relevant Reach for SAJ-2018-00328 Grand Lakes Project Area, Sarasota County, FL.

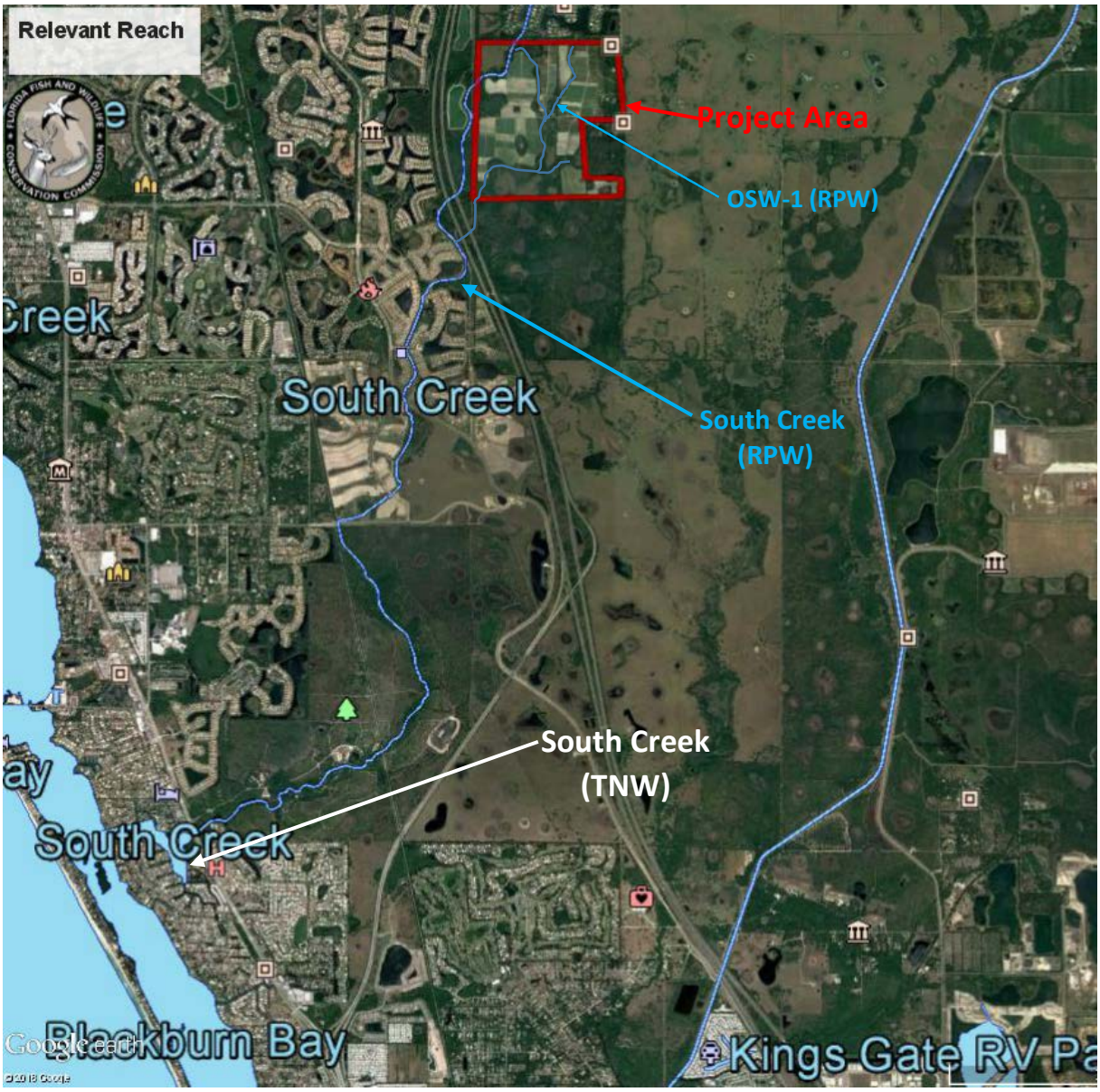
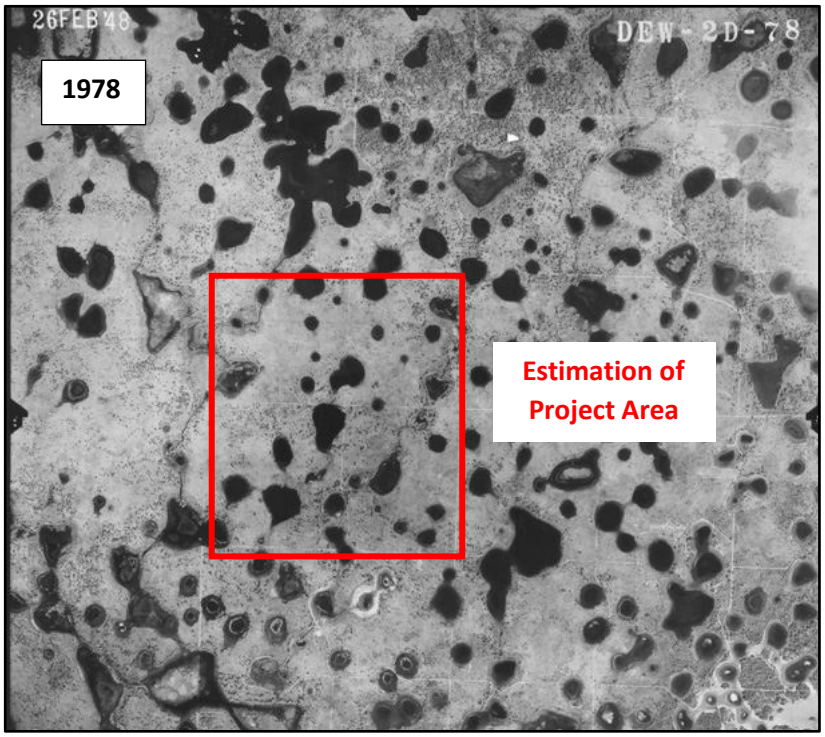


Figure 4: A 1978 Aerial Image Showing Wetlands on Project Site as Compared to a 2009 Aerial Image of the Project Site Showing Surface Water Ponds and the Channel (OSW-1) Created for Storing Water On-Site and Diverting Water Off-Site (for SAJ-2018-00328 Grand Lakes Project Area, Sarasota County, FL)



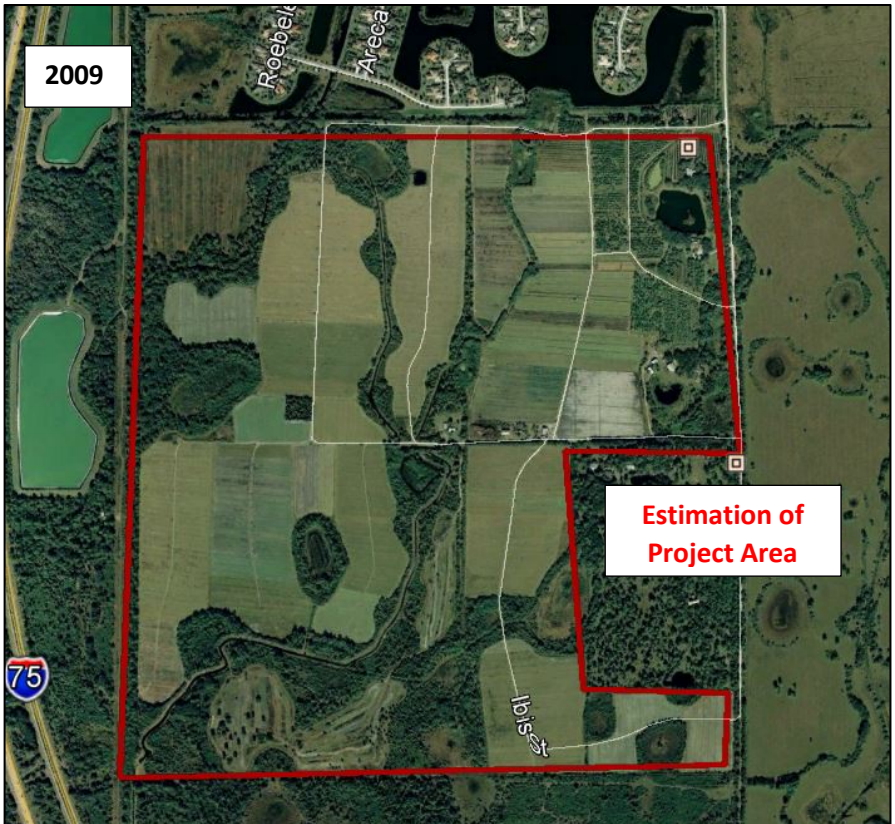


Figure 5: Location and Pictures (taken Aug 7, 2018) of RPW (OSW-1) and Water Flowing Throughout and Off of Project site (for SAJ-2018-00328 Grand Lakes Project Area, Sarasota County, FL)

Figure 6. NRCS Web Soil Survey Hydric Rating by Map Unit (for SAJ-2018-00328 Grand Lakes Project Area, Sarasota County, FL)

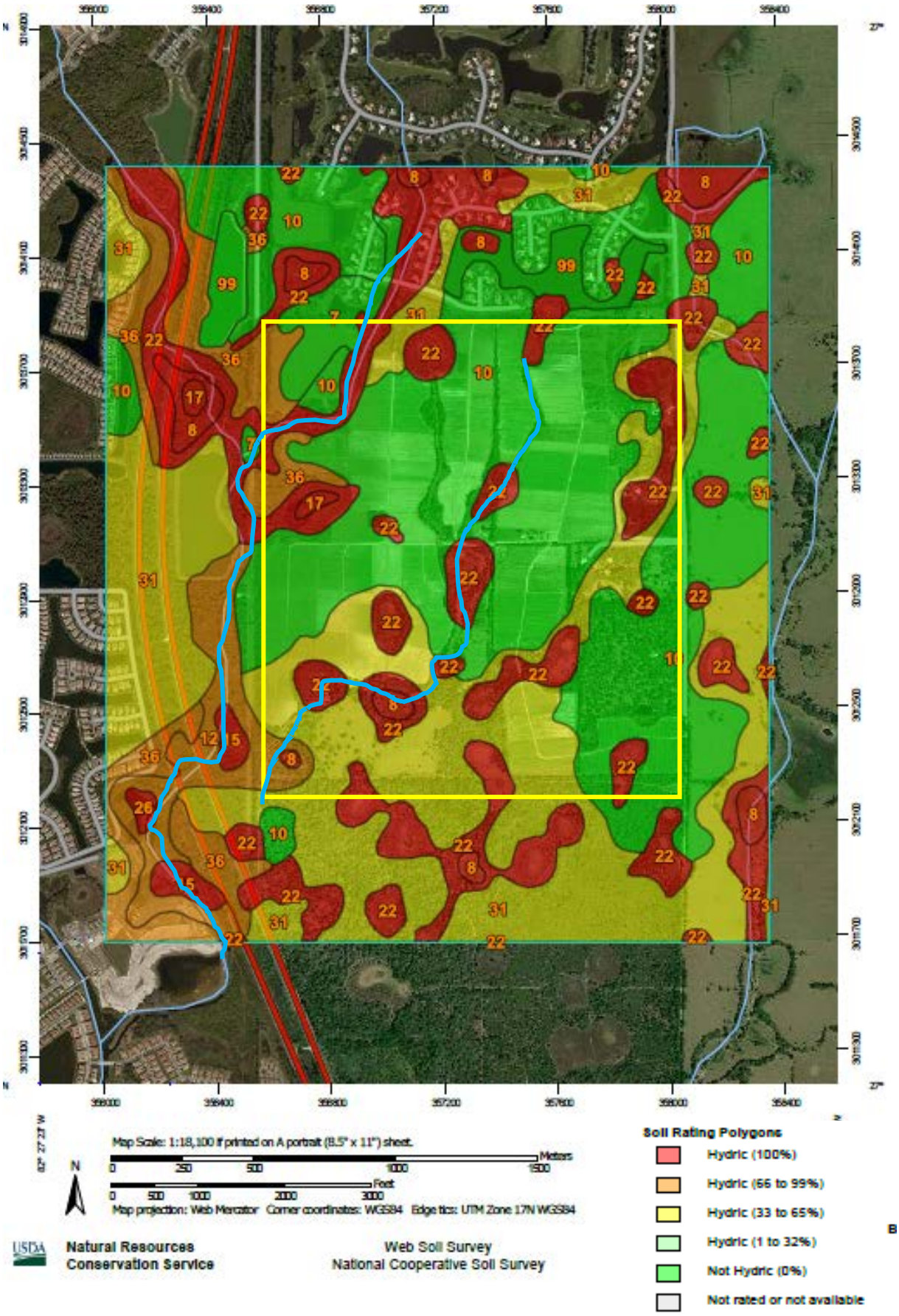


Figure 7: NRCS Web Soil Survey Hydraulic Conductivity (Ksat) by Map Unit
(for SAJ-2018-00328 Grand Lakes Project Area, Sarasota County, FL)

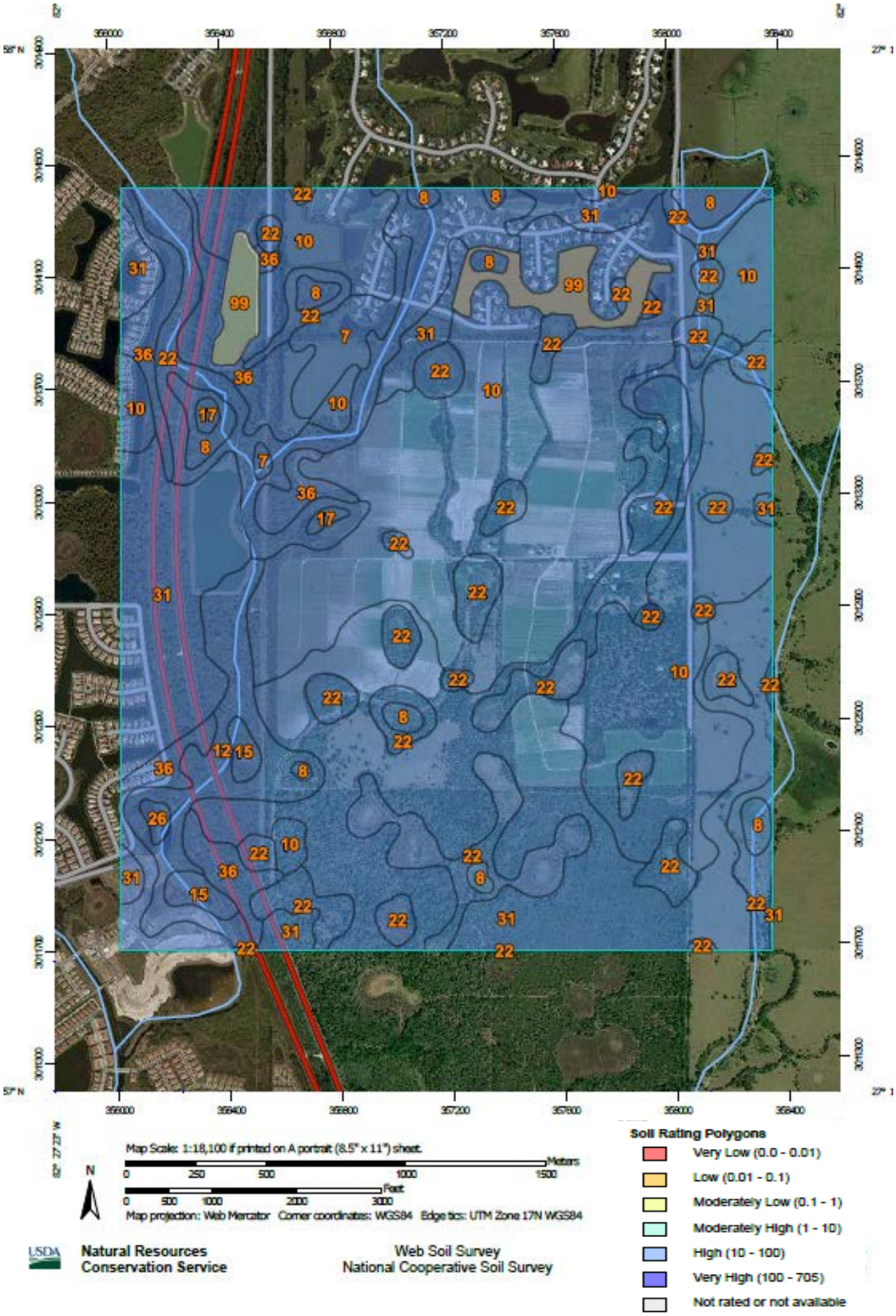
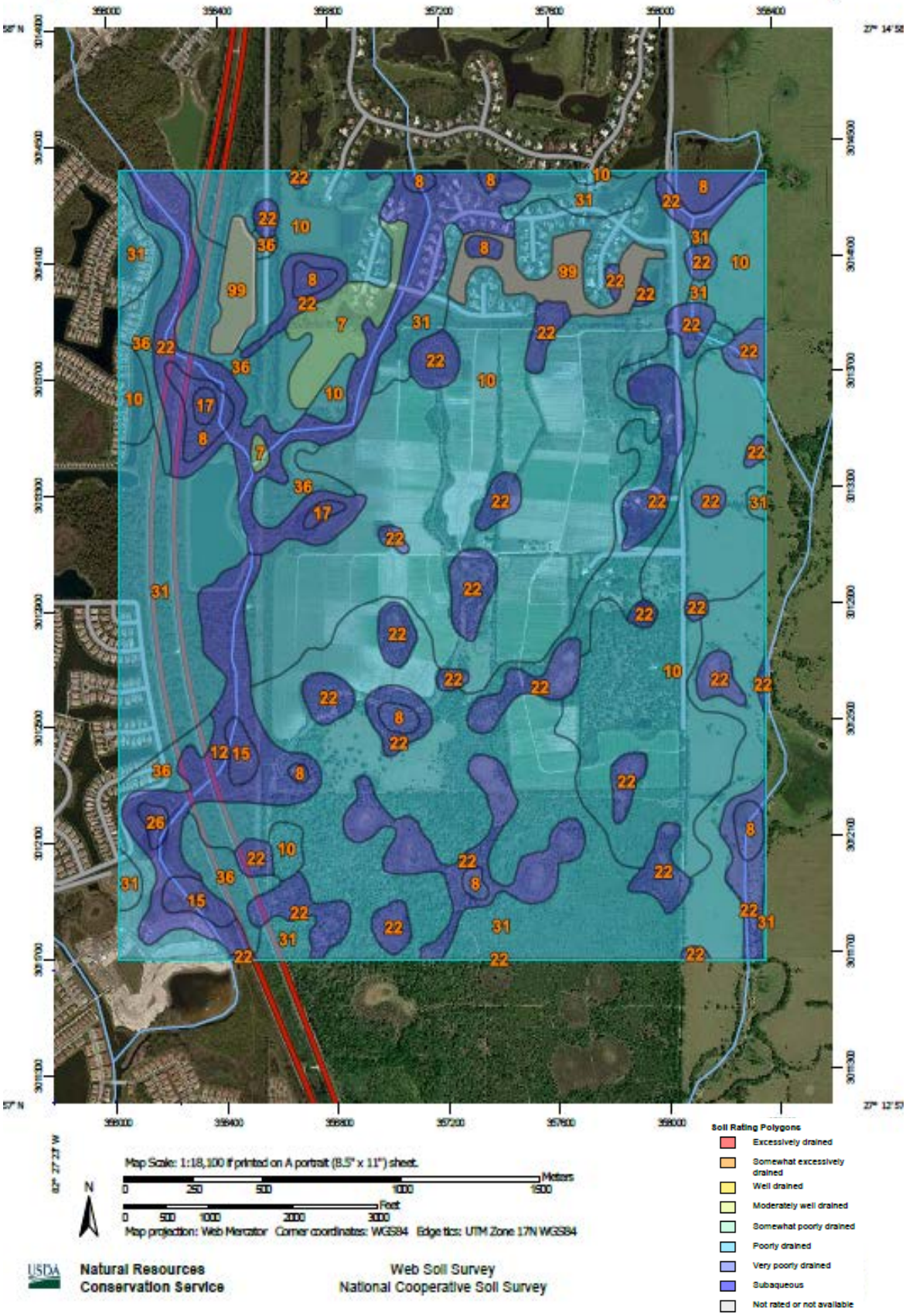


Figure 8: NRCS Web Soil Survey Drainage Class by Map Unit (for SAJ-2018-00328 Grand Lakes Project Area, Sarasota County, FL)



Memorandum for Record (MFR): Description of Jurisdictional Waters for Approved Jurisdictional Determination (AJD) Form CESAJ-RD-WT, SAJ-2018-00328 Grand Lakes Project Area, Sarasota County

April 9, 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>

   OSW-1 (4.89 ac):

   Rapanos Guidance states that the Corps should exert jurisdiction over non-navigable tributaries of TNWs that are a Relatively Permanent Waters (RPWs) where the tributaries typically flow year-round or has a continuous flow at least seasonally (3 months a year). The Corps has determined that OSW-1 satisfies this standard and is a jurisdictional RPW.

   This determination was made by taking into consideration the technical information available for the project area (i.e. scientific literature, soil surveys, topography maps, aerial photography, geological studies, watershed data, Lidar imagery, and NHD data) and observations made at site visit.

   A site visit was conducted by the Corps on August 7, 2018. The following was observed:

   a) A water conveyance system composed of a main channel (OSW-1) and a series of ditches, culverts, weirs, and water storage ponds was created on site to drain soils/wetlands to grow crops, to store water, and to convey water off site into South Creek.

   b) Project site is currently being used for sod production and the water conveyance system is regularly maintained to manipulate water flow on the site for irrigating crops and for diverting water off site.

c) OSW-1 had a bed and bank and an ordinary high water mark .

d) Water flowing in OSW-1 through culverts directly offsite into South Creek.

e) OSW-1 is a large channel (5.33 ac including connecting surface waters capable of capturing and retaining water. At least 90% of the channel had standing water in it with an average 2-3 foot depth along the margins. A DAREM Analysis showed that rainfall conditions were "normal" during the August 7 site visit during the wet season.

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

a) OSW-1 supports water flow year-round or has a continuous flow at least seasonally, typically following local rainfall patterns. It rains on average 102 days a year in Venice, FL, just eight miles south of project site (Weather and Science Facts www.currentresults.com) with a pronounced wet (July-Sept) and dry (Oct-June) season. Water sampling sites found 5 miles south of project site showed that on July 11, 2018 water levels in South Creek were 7.24 ft and on October 22, 2018 water levels were 5.83 ft. South Creek has a historic water level range of 1.4-14.2 ft. (www.sarasota.wateratlas.usf.edu).

b) OSW-1 currently functions as a tributary collecting and conveying water directly offsite into South Creek. Human manipulation of the site for land use has influenced the volume and timing of water entering OSW-1. A series of historic aerial photos ranging from 1948 to present day confirm that the foot print of historical wetlands were used to create a water conveyance system (comprised of ditches and concrete culverts) to divert water from the site into the channel and off site into South Creek. The water conveyance system has been in use for more than 10 years (prior to 2009), increasing the rate and quantity of surface water entering and leaving OSW-1.

2. Wetlands Directly Abutting RPWs that flow directly or indirectly into TNWs

Wetlands D, F, K, L, N, O, Q, R (12.1 ac) and Surface Waters OSW 1-A, OSW 1-B, OSW 1-C, OSW 1-D (0.225 ac):

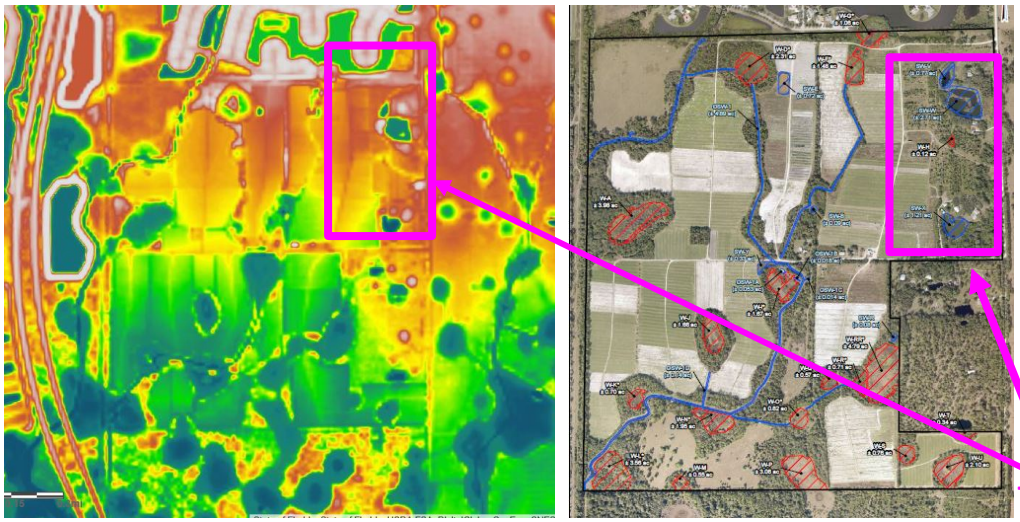
A review of the wetland map and observations made at the field site visit show that wetlands listed above directly abut the RPW (OSW-1) via man made ditches and culverts. The Rapanos Guidance state that the Corps will assert jurisdiction over wetlands that directly abut non-navigable tributaries of TNWs that are relatively permanent. In addition, a fact-specific analysis was conducted to show that these waters have a significant nexus with South Creek (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.

3. <u>Wetlands and Surface Waters Adjacent to but not Directly Abutting RPW, with a Significant Nexus to TNW</u>

   Wetlands A, G, I, J, M, P, RR, S, T, U (19.97 ac) and Surface Waters B, R, Y (0.5 ac):
   Wetlands and Surface Waters listed above were determined to be adjacent wetlands that do not have a continuous surface connection to OSW-1 the RPW. As per the Rapanos Guidance, aquatic resources listed above were determined to be "similarly situated" because they function alike and are sufficiently close (within 2000 feet of abuting wetlands) to function together in affecting downstream waters. A significant nexus analysis determined that these "similarly situated" wetlands in combination with the OSW-1 affects the chemical, physical, and biological integrity of the downstream TNW. See Significant Nexus analysis in Section III.B.C.4.

4. <u>Non-regulated waters/wetlands.</u>

   SW-E, SW-V, SW-W, SW-X, and W-H (5.53 ac):
   SW-E (0.72 ac) is an upland cut storm pond (Preamble to 33CFR Part 328 in the Nov 13, 1986 FR).
   SW-V, SW-W, SW-X, and W-H (4.81 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 U.S (listed above). Additionally, these waters 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).



Lidar Imagery of project area and wetland map for the property showing topographically isolated waters.