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): 17 March 2020

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Jacksonville District, SAJ-2019-00581-State College of Florida

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: Florida County/parish/borough: Manatee City: Parrish
Approximate center coordinates of site (in degree decimal format): Latitude: 27.586967°, Longitude: -82.438832°Universal Transverse Mercator Zone:
Name of nearest waterbody: Buffalo Canal
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Tidal portion of Frog Creek
Name of watershed or Hydrologic Unit Code (HUC): HUC 0310020605—Cockroach Bay-Terra Ceia Bay Frontal
☒ 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: 14 February 2020
☒ Field Determination – Date(s): 02 July 2019

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

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
   - ☐ TNWs, including territorial seas
   - ☐ Wetlands adjacent to TNWs
   - ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
   - ☐ Non-RPWs that flow directly or indirectly into TNWs
   - ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
   - ☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
   - ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
   - ☐ Impoundments of jurisdictional waters
   - ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
   Non-wetland waters: Buffalo Canal (also referred to as Buffalo Creek): 2,040 lf; Ditch 1/2: 1,620 lf; Ditch 3: 1,060 lf; N-S ditch along eastern property boundary: 1,400 lf
   Wetlands: Wetland A: 6.78 acres; Wetland B: 0.16 acre

   c. **Limits (boundaries) of jurisdiction** based on: OHWM; 1987 Wetland Delineation Manual and Regional Supplement
   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 non-jurisdictional. Explain:

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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.

1. Ditch 4/5: The Corps determined this surface water does not support tributary characteristics such as a well-defined bed, bank and OHWM throughout its entire extent, and does not appear to carry regular flow throughout its entire extent. This ditch appears to have been excavated in uplands and drains only uplands. The ditch does not serve as a connection between a wetland or other water of the U.S. and a downstream TNW. The Corps determined this feature is non-jurisdictional based on the preamble to 33 CFR Part 328 in the November 13, 1986, Federal Register (51 FR 41217, Section 328.3) and agency guidance post Rapanos v. United States.

2. Ditch 6: The Corps determined this surface water does not support tributary characteristics such as a well-defined bed, bank and OHWM throughout its entire extent, and does not appear to carry regular flow throughout its entire extent. This ditch appears to have been excavated in uplands and drains only uplands. The ditch does not serve as a connection between a wetland or other water of the U.S. and a downstream TNW. The Corps determined this feature is non-jurisdictional based on the preamble to 33 CFR Part 328 in the November 13, 1986, Federal Register (51 FR 41217, Section 328.3) and agency guidance post Rapanos v. United States.

3. Wetland C: The Corps determined this wetland is a hydrologically isolated intrastate water for which the only potential basis for the exercise of Corps jurisdiction would be migratory bird use. Migratory bird use by itself is not a sufficient basis for the exercise of CWA regulatory jurisdiction (Solid Waste Agency of Northern Cook County v. 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) if there is a significant nexus. A wetland that directly abuts an RPW is also jurisdictional if there is a significant nexus. A wetland that is adjacent to but that does not directly abut an RPW also 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 (and its adjacent wetlands if any) and a traditional navigable water.

If a significant nexus is required, 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 a significant nexus is required, 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: 874 sq miles (HUC 8)
Drainage area: 11,793 acres (HUC 12)
Average annual rainfall: 50.9 inches
Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☒ Tributary flows through 1 tributary before entering TNW.

Project waters are **5-10** river miles from TNW.
Project waters are **1 or less** river miles from RPW.
Project waters are **5-10** 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[4]: Ditch 1/2, Ditch 3, Ditch 6 and the N-S ditch along the eastern property line all flow north-northwest into Buffalo Canal (which is located along the northern property boundary). Buffalo Canal flows west into Frog Creek. Frog Creek becomes tidal at its western extent before entering Terra Ceia Bay.
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural
☒ Artificial (man-made). Explain: The tributaries are straight and appear to be man-made. Historical aerial photos depict these straight-line features with berms. It appears the ditches were excavated to prepare the land for citrus farming.
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: 15 feet
Average depth: 5 feet
Average side slopes: Vertical (1:1 or less)**.**

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: Relatively stable.
Presence of run/riffle/pool complexes. Explain: None observed.
Tributary geometry: Relatively straight
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: Seasonal flow.
Estimate average number of flow events in review area/year: 20 (or greater)
Describe flow regime: The tributaries within the review area are large ditches which likely flow year-round or have at least seasonal flow. A water is "seasonal" when it has predictable flow during wet seasons in most years. During the 02 July 2019 field assessment, the Corps observed large volumes of flow in each of the tributaries. The field assessment was conducted during a period of normal rainfall conditions. The tributaries have relatively permanent flowing or standing water at least seasonally, characterized by steady flow in the rainy season and lighter flow in the dry season.
Other information on duration and volume: The tributaries within the review area transport water from off-site as well as on-site sources. Ditch 3 is a continuation of a tributary which originates south of the review area; Ditch 1/2 is a continuation of a tributary which originates east of the review area. The tributaries converge at an intersection in the northwestern part of the site where substantial flow was observed during the 02 July 2019 field assessment. The water flows north-northwest into the Buffalo Canal where it is transported west to the TNW. The Buffalo Canal is a major transporter of agricultural runoff in this drainage basin.

Surface flow is: Discrete and confined. Characteristics: Water flows within the channels and is confined to culverts under crossings.

Subsurface flow: Yes. Explain findings: Most intermittent streams are fed by both groundwater and precipitation. In riverine systems, hyporheic flow is exchanged back and forth across the streambed interface. Hyporheic exchange is influenced by watershed topography. The Corps did not perform any site-specific tests for measuring subsurface flow in the review area for this JD; however, the tributaries within the review area, which flow at least seasonally, were excavated in soils classified as hydric soils, several feet below the natural grade of the adjacent wetlands and below the water table. Based on available information obtained from the USDA NRCS, the water table is estimated at between 0 and 30 cm (11.8 in) below land surface at the site. Water is exchanged between the tributaries and these wetlands.
☐ Dye (or other) test performed: .

[4] 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.

Tributary has (check all that apply):

- ☒ Bed and banks
- ☒ OHWM[5] (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.[6] Explain: .

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

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

(iii) Chemical Characteristics:

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

Explain: Water did not appear discolored during 02 July 2019 field assessment. Water enters the tributaries within the review area from adjacent land uses, primarily agricultural. The tributaries transport flow from off-site as well as on-site sources. The Corps observed pipes from agricultural fields discharging directly into Buffalo Canal. The most dominant land uses in the Lower Tampa Bay watershed are agriculture and urban/built-up.

Identify specific pollutants, if known: Buffalo Canal is designated as an impaired water by the Florida Department of Environmental Protection and the U.S. Environmental Protection Agency for dissolved oxygen and fecal coliform bacteria. Terra Ceia Bay (TNW downstream of Frog Creek) is designated as impaired for chlorophyll-a and mercury in fish tissue. Water quality sampling locations for Buffalo Canal begin less than 1/3 mile downstream of the review area. The wetlands within the review area capture and assimilate pollutants/nutrients from adjacent land uses before discharge downstream.

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

☒ Riparian corridor. Characteristics (type, average width): Ditch 3 was excavated through a forested community and supports mature vegetation along its banks. Ditch 1/2 and the Buffalo Canal support trees along their banks.

☒ Wetland fringe. Characteristics: Wetland A is located directly adjacent to Ditch 3. The wetland line is approximately 10 feet from the ditch bank. Wetland B is located directly adjacent to a large N-S ditch along the western property line. The wetland line is approximately 55 feet from that tributary.

☒ Habitat for:

- ☒ Federally Listed species. Explain findings: Potential for utilization by wood stork.
- ☒ Fish/spawn areas. Explain findings: Capable of supporting fish.
- ☐ Other environmentally-sensitive species. Explain findings: .
- ☒ Aquatic/wildlife diversity. Explain findings: Habitat for small fish, reptiles, amphibians, macroinvertebrates, insects.

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: Wetland A: 6.78 acres; Wetland B: 0.16 acre.

Wetland type. Explain: Forested palustrine. Wetland A has a contiguous shallow open water component.

Wetland quality. Explain: Moderate. Hydrology affected by adjacent ditches; inappropriate vegetation observed.

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

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent**. Explain: Hydrologic exchange between the wetlands and the tributaries is at least intermittent.

Surface flow is**: Overland sheet flow.**

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[5]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.

[6]Ibid.

Characteristics: Adjacent wetlands capture water from overbank flow and store excess water from tributaries. As streamflow decreases after hydrologic events, the water temporarily stored in the adjacent wetlands can flow back into the channel, supporting baseflow. The wetlands are

Subsurface flow: **Yes**. Explain findings: The Corps did not perform any site-specific tests for measuring subsurface flow in the review area for this JD; however, the tributaries within the review area, which flow at least seasonally, were excavated in soils classified as hydric soils, several feet below the natural grade of the adjacent wetlands and below the water table. Based on available information obtained from the USDA NRCS, the water table is estimated at between 0 and 30 cm (11.8 in) below land surface at the site. Water is exchanged between the tributaries and these wetlands.

☐ 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: These wetlands are reasonably close and ecologically interconnected to the large tributaries, exhibiting the exchange of matter and organisms via passive dispersal when water levels are high and surface exchange is ongoing, or active dispersal by motile species.

☒ Separated by berm/barrier. Explain: Wetland A is located directly adjacent to Ditch 3. The wetland line is approximately 10 feet from the ditch bank, separated by uplands/berm. Wetland B is located directly adjacent to a large N-S ditch along the western property line. The wetland line is approximately 55 feet from that tributary, separated by uplands/berm.

(d) Proximity (Relationship) to TNW

Project wetlands are 5-10 river miles from TNW.

Project waters are 5-10 aerial (straight) miles from TNW.

Flow is from: Wetland to navigable waters.

Estimate approximate location of wetland as within the 100 year 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: No observable indicators of poor water quality in the wetlands at the time of the field assessment. The most dominant land uses in the Lower Tampa Bay watershed are agriculture and urban/built-up.

Identify specific pollutants, if known: Buffalo Canal is designated as an impaired water by the Florida Department of Environmental Protection and the U.S. Environmental Protection Agency for dissolved oxygen and fecal coliform bacteria. Terra Ceia Bay (TNW downstream of Frog Creek) is designated as impaired for chlorophyll-a and mercury in fish tissue. Water quality sampling locations for Buffalo Canal begin less than 1/3 mile downstream of the review area. The wetlands within the review area capture and assimilate pollutants/nutrients from adjacent land uses before discharge downstream.

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

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

☒ Vegetation type/percent cover. Explain: Forested palustrine wetlands.

☒ Habitat for:

☒ Federally Listed species. Explain findings: Potential for utilization by wood stork and eastern indigo snake.

☒ Fish/spawn areas. Explain findings: Potentially provide habitat for small fish during periods of overbank flow.

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings: Habitat for small fish, reptiles, amphibians, macroinvertebrates, insects.

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

All wetland(s) being considered in the cumulative analysis: 8

Approximately 91 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)
N	6.78	N	0.16
N	7.4	N	16.5
N	5	N	11.5
Y	37	N	7

Summarize overall biological, chemical and physical functions being performed: The subject wetlands, in combination with similarly situated wetlands, perform the following functions: Storage of flood waters; reduction of downstream peak discharges and volumes; recharge of aquifer; maintenance of seasonal/baseflows; maintenance of groundwater supplies; removal of sediments and nutrients; provision of breeding grounds and wildlife habitat (e.g. feeding/foraging, nesting, spawning, rearing of young); support diverse community of benthic invertebrates, a major food source for vertebrates.

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 an RPW where the RPW flows directly or indirectly into a TNW.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

4. **Significant nexus findings for wetlands adjacent to an RPW where the RPW flows directly or indirectly into a TNW.** 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:

The Corps determined that the RPW and its adjacent wetlands have a significant nexus to the downstream TNW.

The Guidance states that agencies will consider the flow and functions of the tributary together with the functions performed by all the wetlands adjacent to that tributary in evaluating whether a significant nexus is present. Similarly, where evaluating significant nexus for an adjacent wetland, the agencies will consider the flow characteristics and functions performed by the tributary to which the wetland is adjacent along with the functions performed by the wetland and all other wetlands adjacent to that tributary. The following significant nexus determination therefore satisfies this obligation for both the subject tributaries and the wetlands discussed in this JD.

PHYSICAL: The tributaries receive rainfall and stormwater runoff from the adjacent land uses and transport this water and sediment load downstream. The on-site tributaries are large and capable of transporting large volumes of runoff. The tributaries have at least seasonal flow and likely continuous flow for most months out of the year. Flows from these tributaries and similarly situated tributaries affect the duration, frequency and volume of freshwater flow into the downstream TNW. The tributaries and other similarly situated waters in the watershed therefore have more than an insubstantial or speculative effect on the physical integrity of the downstream TNW. Adjacent wetlands connected to the stream network by channelized flow or overland flow are sources of downstream water and baseflow. They can also be sinks for water by intercepting overland or subsurface flow, if available water storage capacity of the wetlands is not exceeded, which can reduce or attenuate flow to downstream waters and flooding. The wetlands can temporarily store water following overbank flow, which can then move back to the stream over time as baseflow during drier periods. Riparian/floodplain forested wetlands such as those in the review area are sources of woody debris that can affect stream morphology and flow regime. The adjacent wetlands therefore affect the duration, frequency and volume of flow in the tributaries and the downstream TNW. The wetlands provide a means of slowing water's velocity and reducing the amount of sediments entering downstream waters. The holding capacity of adjacent wetlands helps control flooding. The braking action of wetland trees, roots and groundcover lowers flood heights and reduces erosion. The cumulative assessment includes approximately 91 acres of adjacent wetlands performing the aforementioned functions. These wetlands have more than an insubstantial or speculative effect on the physical integrity of the downstream TNW.

CHEMICAL: A close connection exists between the water quality of upstream tributaries and the water quality of downstream water bodies. Activities such as discharging a pollutant into one part of the tributary system are well documented to affect other parts of the system, even when the point of discharge is far upstream from the navigable water that experiences the effect of the discharge. The tributary transfers pollutants from the adjacent land uses to the downstream TNW. The most dominant land uses within the watershed are agriculture and urban/built-up. Pollutants in the watershed and adjacent land uses include fertilizers and pesticides (excess nitrogen and phosphorus), residential chemicals (from lawn maintenance), etc., which cumulatively have led to an impairment rating of Buffalo Canal and Terra Ceia Bay (TNW downstream of Frog Creek). Among these impairments is dissolved oxygen and chlorophyll-a. Low dissolved oxygen in water bodies is associated with excessive nutrient enrichment upstream, which fuels algal growth. These chemical contributions occurring upstream negatively affect aquatic resources downstream and can contribute to eutrophication and algal blooms. Adjacent wetlands can be sinks for sediments and chemical contaminants, such as pesticides, metals, mercury and excess nutrients carried by overland or subsurface flow, potentially reaching downstream waters. They can be sinks for water, sediment, pesticides, and nutrients from overbank flow events, reducing or attenuating downstream peak flows and materials entrained in the water column. The wetlands can also be sinks for nitrogen by converting oxidized forms of nitrogen to molecular nitrogen through denitrification, which is then lost to the atmosphere. In the wetland areas, the water table is near the surface for most of the year. The wetlands in this analysis assimilate decades of pesticide and fertilizer runoff from the former on-site agricultural land uses prior to discharge to the TNW. As the wetlands have a more intermittent surface hydrologic connection with the subject RPWs, they effectively hold pollutants back and thus perform filtering and storage functions for a longer period, further reducing pollutant loads downstream. These functions are essential to the integrity of the water quality downstream and are more than speculative or insubstantial.

BIOLOGICAL: The subject tributary, in combination with similarly situated tributaries, provide foraging habitat for wading birds where appropriate depths occur, as well as habitat for reptiles, amphibians, small fish and aquatic insects, including species which move between aquatic and upland environments during their life cycles. Aquatic resources downstream may be negatively affected by water quality impairments from upstream pollutants, including low dissolved oxygen resulting from toxic algae blooms due to eutrophication. Adjacent wetlands are sources of dissolved organic matter that aquatic food webs use. They are sources of organisms, including plants, invertebrates, amphibians, reptiles, and fish, to downstream waters transported via passive or active dispersal. The wetlands provide feeding habitat for organisms during periods of overbank flow. They provide refuge for fish, aquatic insects, or other lotic organisms from predators or other environmental stressors, facilitating individual or population survival. The adjacent wetlands can provide refuge during certain life stages for lotic organisms. For example, they are breeding sites for frogs and other amphibians that reside in streams as adults. The subject wetlands and similarly situated wetlands are important biologically since a substantial amount of the historical wetland coverage in the watershed has been altered for agriculture and residential and commercial development. The adjacent wetlands of the subject tributaries form an important intact corridor for the passage of wildlife and biological material, including detrital material transported to downstream food webs. The biological functions provided by the wetlands discussed in this JD are exported downstream to, and provide benefits to, the downstream 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: The tributaries within the review area are large ditches which likely flow year-round or have at least seasonal flow. A water is "seasonal" when it has predictable flow during wet seasons in most years. During the 02 July 2019 field assessment, the Corps observed large volumes of flow in each of the tributaries. The field assessment was conducted during a period of normal rainfall conditions. The tributaries have relatively permanent flowing or standing water at least seasonally, characterized by steady flow in the rainy season and lighter flow in the dry season.

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☒ Tributary waters: Buffalo Canal (also referred to as Buffalo Creek): 2,040 lf; Ditch 1/2: 1,620 lf; Ditch 3: 1,060 lf; N-S ditch along eastern property boundary: 1,400 lf
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[7] 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).

[7]See Footnote # 3.

☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

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

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

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
☒ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: Wetland A: 6.78 acres; Wetland B: 0.16 acre.

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.**[8]
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):[9]
☐ 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): Ditch 4/5 and Ditch 6. See Section II.B.2.

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[8] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[9] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

Provide 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; i.e., SWANCC Decision), using best professional judgment (check all that apply):

☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☒ Wetlands: Wetland C: 0.26 acre.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard (i.e., Rapanos Decision), 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:
☒ USDA Natural Resources Conservation Service Soil Survey: https://websoilsurvey.sc.egov.usda.gov/
☐ National wetlands inventory map(s):
☐ State/Local wetland inventory map(s):
☐ FEMA/FIRM maps:
☐ 100-year Floodplain Elevation:
☒ Photographs: ☒ Aerial: Google Earth imagery (1995-2019); aerials provided by JD requestor; historical aerials obtained from https://ufdc.ufl.edu/ (1951, 1957, 1970)
  or ☐ Other:
☒ Previous determination(s): Ditch 1/2, Ditch 3 and Buffalo Canal were determined jurisdictional in their upstream extents in the Approved JD for SAJ-2018-00606, finalized on 07 January 2019.
☒ Applicable/supporting case law: Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001), Rapanos v. U.S., 126 S. Ct. 2208 (2006), U.S. V. McWane Inc, et al, 505 F.3d1208 (11th Cir. 2007) .
☐ Applicable/supporting scientific literature:
☒ Other information (please specify):

- Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States and Carabell v. United States, EPA, December 2008.
- Manatee County Water Atlas (https://manatee.wateratlas.usf.edu/rainfall/estimates/)
- Antecedent Rainfall Calculator (USACE)
- USGS The National Map (https://viewer.nationalmap.gov/advanced-viewer/)
- Tampa Bay Water Atlas (https://www.tampabay.wateratlas.usf.edu/)
- FEMA floodplain maps (https://msc fema.gov/)

B. ADDITIONAL COMMENTS TO SUPPORT JD:

The N-S ditch along the eastern property boundary was filled in its northern extent at the time of the 02 July 2019 field assessment, and appears to be completely filled as of the date of this JD. The Corps' determination relies on the conditions observed in the un-filled portion during the field assessment, as well as all other available information.

Additional information in support of Section III.C:

If it can be demonstrated that the tributary has a bed, bank and an OHWM, and is part of a tributary system to a traditional navigable water or an interstate water, and, therefore, can transport pollutants, flood waters or other materials to a traditional navigable water or interstate water, it is generally expected that the tributary, along with the other tributaries in the watershed and their adjacent wetlands (the "similarly situated" waters), can be demonstrated to have a significant nexus with the downstream TNW. This expectation is based on the significant harm that

pollutants can have on the physical, chemical or biological integrity of the downstream TNW. The presence of a bed, bank and an OHWM in the subject tributary are physical indicators of flow. The presence of standing and/or flowing water has also been documented in field inspections. Flows through all of the tributaries collectively in the watershed with the above characteristics are sufficient to transport pollutants or other materials downstream to the TNW in amounts that significantly affect its chemical, physical or biological integrity. In addition, the analysis considers the functions performed cumulatively by all wetlands that are adjacent to the tributaries, such as storage of flood water and runoff; pollutant trapping and filtration; improvement of water quality; support of habitat for aquatic species; and other functions that contribute to the maintenance of water quality, aquatic life, commerce, navigation, recreation and public health in the downstream TNW. These functions, considered cumulatively, have more than a speculative or insubstantial effect on the physical, chemical and biological integrity of the downstream TNW. In general, tributaries and their adjacent wetlands function as an integrated hydrologic system, and as a unit they affect the amount of pollutants and floodwaters that reach the downstream TNW.

Additional information in support of isolated determination for Wetland C:

This wetland is considered isolated and not adjacent because:
1. There is not an unbroken surface or shallow sub-surface connection to jurisdictional waters. There are no surface hydrological conveyances that serve to hydrologically connect the wetland to an RPW or downstream TNW.
2. The wetlands are not physically separated from jurisdictional waters by man-made dikes or barriers, natural river berms, beach dunes, and the like.
3. The proximity to the RPW is not reasonably close to support a science-based inference of ecological interconnectedness.