

**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): June 30, 2016**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CESAC-RD-NE, JD Form 1 of 4; SAC 2011-00662 Catfish Farms Tract**

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

State: South Carolina County/parish/borough: **Marion** City:  
Center coordinates of site (lat/long in degree decimal format): Lat. **34.022727° N**, Long. **-79.387770° W**.  
Universal Transverse Mercator:

Name of nearest waterbody: **Terrells Bay Creek**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Great Pee Dee River**

Name of watershed or Hydrologic Unit Code (HUC): **03040201-12**

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:

Field Determination. Date(s): **November 23, 2015**

**SECTION II: SUMMARY OF FINDINGS**

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

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain: .

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

TNWs, including territorial seas

Wetlands adjacent to TNWs

Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs

Non-RPWs that flow directly or indirectly into TNWs

Wetlands directly abutting RPWs that flow directly or indirectly into TNWs

Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs

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

Impoundments of jurisdictional waters

Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: (**Terrells Bay**) **2628.44** linear feet: **4-6** width (ft) and/or acres.

Wetlands: (**Wetland 1**) **173.41 a.** + (**Wetland 2**) **38.68** + (**Wetland 3**) **29.49 a.** = **241.58** acres.

**c. Limits (boundaries) of jurisdiction based on: **1987 Delineation Manual**, **Established by OHWM**, **Pick List****

Elevation of established OHWM (if known):N/A.

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

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain:

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

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

**A. TNWs AND WETLANDS ADJACENT TO TNWs**

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

**1. TNW**

Identify TNW: **Great Pee Dee River.**

Summarize rationale supporting determination: **According to the USACE Navigability Study Report No. 11, the Great Pee Dee River's recommended limit of navigability is located at River Mile (RM) 187. The project waters enter the Great Pee Dee River at approximately RM 80..**

**2. Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is "adjacent": .

**B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):**

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

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

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

**(i) General Area Conditions:**

Watershed size: **Pick List** ;  
Drainage area: **Pick List**  
Average annual rainfall: 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 **Pick List** river miles from TNW.  
Project waters are **Pick List** river miles from RPW.  
Project waters are **Pick List** aerial (straight) miles from TNW.  
Project waters are **Pick List** aerial (straight) miles from RPW.  
Project waters cross or serve as state boundaries. Explain: **N/A.**

<sup>4</sup> 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<sup>5</sup>:  
Tributary stream order, if known:

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

**Tributary is:**  Natural  
 Artificial (man-made). Explain:  
 Manipulated (man-altered). Explain:

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

Average width: feet  
Average depth: feet  
Average side slopes: **Pick List.**

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:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Pick List.**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime:

Other information on duration and volume:

Surface flow is: **Pick List.** Characteristics:

Subsurface flow: **Pick List.** Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

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

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

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

(iii) **Chemical Characteristics:**

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

Explain:

Identify specific pollutants, if known:

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

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

<sup>7</sup>Ibid.

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

- Riparian corridor. Characteristics (type, average width): .
- Wetland fringe. Characteristics: .
- Habitat for:
  - Federally Listed species. Explain findings: .
  - Fish/spawn areas. Explain findings: .
  - Other environmentally-sensitive species. Explain findings: .
  - Aquatic/wildlife diversity. Explain findings: .

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

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size:            acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: .

Ecological connection. Explain: .

Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

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

- Riparian buffer. Characteristics (type, average width): .
- Vegetation type/percent cover. Explain: .
- Habitat for:
  - Federally Listed species. Explain findings: .
  - Fish/spawn areas. Explain findings: .
  - Other environmentally-sensitive species. Explain findings: .
  - Aquatic/wildlife diversity. Explain findings: .

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

All wetland(s) being considered in the cumulative analysis: **Pick List**

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

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)



Summarize overall biological, chemical and physical functions being performed:

### C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

Documentation for the Record only: Significant nexus findings for seasonal RPWs and/or wetlands abutting seasonal RPWs:

### 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: **The tributary named Terrells Bay Creek was determined to have perennial flow based on the topographic map, soil survey, NWIs and information obtained during the site visit. Terrells Bay Creek is depicted as a solid blue line on the topographic map and is mapped Cantey, a hydric soil. The NWIs map this area as palustrine forested wetlands (PFO1Bd). During the site visit, this feature was observed as having an OHWM, a defined channel within bed and banks, a firm sandy bottom, and sinuosity. This feature is surrounded on site and off site by saturated and inundated wetlands. Terrells Bay continues southwest where it flows into Bull Swamp.**  
 Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

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

- Tributary waters: **2628.44** linear feet **4-6** width (ft).
  - Other non-wetland waters:            acres.
- Identify type(s) of waters: .

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

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

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

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

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

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
  - Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **Wetlands 1, 2, and 3 are portions of a larger wetland system that directly abuts Terrells Bay Creek. According to the aerials, soil survey, NWIs, and site visit, Wetland 1, located along the northwestern property boundary, abuts Terrells Bay Creek on site. Wetland 2 is a portion of Wetland 1 and is separated by a 404(f) Exempt silviculture road. Wetland 3 continues northwest off of the site and directly abuts Terrells Bay Creek. This wetland system is mapped palustrine forested and scrub-shrub wetlands on the NWIs and as Cantey, a hydric soil, on the soil survey. Based on observations taken during the site visit, Terrells Bay Creek flows through the wetland system which comprises Wetlands 1, 2, and 3 on site.**
  - 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: **(Wetland 1) 173.41 a. + (Wetland 2) 38.68 + (Wetland 3) 29.49 a. = 241.58 acres.**

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

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

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

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

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

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

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

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

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

**Explain:**

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

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.

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

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

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

- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain: .
- Other factors. Explain: .

**Identify water body and summarize rationale supporting determination:**

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

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

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

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

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

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

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

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

**SECTION IV: DATA SOURCES.**

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

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **Report by Environmental Consulting & Technology, Inc.; plat by DDC Engineers dated 5/3/2016 and entitled "Map of Tracts 1 & 2 Containing 1848.50 +- Acres of Land / Near Centenary, Marion County, South Carolina / Wetland Exhibit"**.
- 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: **Friendship; The topographic map depicts Wetlands 1, 2, and 3 as forested uplands located adjacent to a solid blue line .**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **Page 32; The soil survey maps this area as Cantey, a hydric soil.**
- National wetlands inventory map(s). Cite name: **The NWIs map this wetland as palustrine forested (PFO1Bd) and palustrine scrub-shrub (PSS1Bd).**
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): **SCDNR 2006, 99:11223:4; The aerials depict the wetlands as forested.** or  Other (Name & Date): **Site photos dated November 23, 2015.**
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .

Other information (please specify): .

**B. ADDITIONAL COMMENTS TO SUPPORT JD:** The tributary named Terrells Bay Creek was determined to have perennial flow based on the topographic map, soil survey, NWIs and information obtained during the site visit. Terrells Bay Creek is depicted as a solid blue line on the topographic map and is mapped Cantey, a hydric soil. The NWIs map this area as palustrine forested wetlands (PFO1Bd). During the site visit, this feature was observed as having an OHWM, a defined channel within bed and banks, a firm sandy bottom, and sinuosity. This feature is surrounded on site and off site by saturated and inundated wetlands. Terrells Bay continues southwest where it flows into Bull Swamp

Wetlands 1, 2, and 3 are portions of a larger wetland system that directly abuts Terrells Bay Creek. According to the aerials, soil survey, NWIs, and site visit, Wetland 1, located along the northwestern property boundary, abuts Terrells Bay Creek on site. Wetland 2 is a portion of Wetland 1 and is separated by a 404(f) Exempt silviculture road. Wetland 3 continues northwest off of the site and directly abuts Terrells Bay Creek. This wetland system is mapped palustrine forested and scrub-shrub wetlands on the NWIs and as Cantey, a hydric soil, on the soil survey. Based on observations taken during the site visit, Terrells Bay Creek flows through the wetland system which comprises Wetlands 1, 2, and 3 on site.



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**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CESAC-RD-NE, JD Form 2 of 4; SAC 2011-00662 Catfish Farms Tract**

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

State: South Carolina County/parish/borough: **Marion** City:  
Center coordinates of site (lat/long in degree decimal format): Lat. **34.022727° N**, Long. **-79.387770° W**.  
Universal Transverse Mercator:

Name of nearest waterbody: **Bull Swamp**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Great Pee Dee River**

Name of watershed or Hydrologic Unit Code (HUC): **03040201-12**

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:

Field Determination. Date(s): **November 23, 2015**

**SECTION II: SUMMARY OF FINDINGS**

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

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.  
Explain: .

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
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- 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: (**Bull Swamp**) 2016 linear feet: **4-6** width (ft) and/or          acres.

Wetlands: (**Wetland 4**) **0.92 a.** + (**Wetland 5**) **20.24** = **21.16** acres.

**c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Established by OHWM, Pick List**

Elevation of established OHWM (if known):N/A.

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

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.  
Explain: **Several potentially jurisdictional ponds were assessed within the review area and determined to be non-jurisdictional. These ponds were determined to be excavated out of uplands and were not created out of any waters of the US.**

**SECTION III: CWA ANALYSIS**

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

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.

**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: **Great Pee Dee River.**

Summarize rationale supporting determination: **According to the USACE Navigability Study Report No. 11, the Great Pee Dee River's recommended limit of navigability is located at River Mile (RM) 187. The project waters enter the Great Pee Dee River at approximately RM 80..**

**2. Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is "adjacent": .

**B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):**

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

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

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

**(i) General Area Conditions:**

Watershed size: **Pick List** ;  
Drainage area: **Pick List**  
Average annual rainfall: 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 **Pick List** river miles from TNW.  
Project waters are **Pick List** river miles from RPW.  
Project waters are **Pick List** aerial (straight) miles from TNW.  
Project waters are **Pick List** aerial (straight) miles from RPW.  
Project waters cross or serve as state boundaries. Explain: N/A.

Identify flow route to TNW<sup>5</sup>: .  
Tributary stream order, if known: .

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

**Tributary is:**  Natural  
 Artificial (man-made). Explain: .  
 Manipulated (man-altered). Explain: .

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

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



Wetland size: \_\_\_\_\_ acres  
 Wetland type. Explain: \_\_\_\_\_  
 Wetland quality. Explain: \_\_\_\_\_  
 Project wetlands cross or serve as state boundaries. Explain: \_\_\_\_\_

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: \_\_\_\_\_

Surface flow is: **Pick List**

Characteristics: \_\_\_\_\_

Subsurface flow: **Pick List**. Explain findings: \_\_\_\_\_

Dye (or other) test performed: \_\_\_\_\_

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: \_\_\_\_\_

Ecological connection. Explain: \_\_\_\_\_

Separated by berm/barrier. Explain: \_\_\_\_\_

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: \_\_\_\_\_

Identify specific pollutants, if known: \_\_\_\_\_

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

Riparian buffer. Characteristics (type, average width): \_\_\_\_\_

Vegetation type/percent cover. Explain: \_\_\_\_\_

Habitat for:

Federally Listed species. Explain findings: \_\_\_\_\_

Fish/spawn areas. Explain findings: \_\_\_\_\_

Other environmentally-sensitive species. Explain findings: \_\_\_\_\_

Aquatic/wildlife diversity. Explain findings: \_\_\_\_\_

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

All wetland(s) being considered in the cumulative analysis: **Pick List**

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

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Summarize overall biological, chemical and physical functions being performed: \_\_\_\_\_

C. **SIGNIFICANT NEXUS DETERMINATION**

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

**Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:**

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

**Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:**

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

**Documentation for the Record only: Significant nexus findings for seasonal RPWs and/or wetlands abutting seasonal RPWs:**

**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: **The tributary named Bull Swamp was determined to have perennial flow based on the topographic map, soil survey, NWIs and information obtained during the site visit. Bull Swamp is depicted as a solid blue line on the topographic map and is mapped Cantey, a hydric soil. The NWIs map this area as palustrine forested wetlands (PFO1C) off site and as uplands (U21) on site. During the site visit, this feature was observed as having an OHWM, a defined channel within bed and banks, and sinuosity. This feature is surrounded on site and off site by saturated and inundated wetlands. Bull Swamp continues northwest off of the site and then southwest where it flows into the Great Pee Dee River.**

- Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

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

- Tributary waters: **2016** linear feet **4-6** width (ft).
  - Other non-wetland waters: acres.
- Identify type(s) of waters:

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

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

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

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

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

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
- Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **Wetlands 3 and 4 are portions of the same wetland system that directly abuts Bull Swamp. The topographic map depicts these wetlands as being intersected by a solid blue line. The soil survey**

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

maps this wetland system as Cantey, a hydric soil, and the NWIs map Wetland 4 as palustrine forested wetlands and Wetland 5 as uplands (U21). According to the site visit and aerials, Wetlands 4 and 5 are portions of the same wetland system that are separated by a berm that surrounds Wetland 5. However, both wetlands were determined to directly abut the perennial RPW named Bull Swamp.

- 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: **(Wetland 4) 0.92 a. + (Wetland 5) 20.24 = 21.16** acres.

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

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

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

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

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

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

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

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

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

**Explain:**

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

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

**Identify water body and summarize rationale supporting determination:** .

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

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

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

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.  
 Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.  
 Prior to the Jan 2001 Supreme Court decision in “SWANCC,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).

Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain: .

Other: (explain, if not covered above): **Several ponds were assessed within the review area and determined to be non-jurisdictional, upland excavated ponds.**

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

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

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

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



**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): June 30, 2016**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CESAC-RD-NE, JD Form 3 of 4; SAC 2011-00662 Catfish Farms Tract**

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

State: South Carolina County/parish/borough: **Marion** City:  
Center coordinates of site (lat/long in degree decimal format): Lat. **34.022727° N**, Long. **-79.387770° W**.  
Universal Transverse Mercator:

Name of nearest waterbody: **Cypress Creek**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Little Pee Dee River**

Name of watershed or Hydrologic Unit Code (HUC): **03040204-08**

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:

Field Determination. Date(s): **November 23, 2015**

**SECTION II: SUMMARY OF FINDINGS**

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

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.  
Explain: .

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

TNWs, including territorial seas

Wetlands adjacent to TNWs

Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs

Non-RPWs that flow directly or indirectly into TNWs

Wetlands directly abutting RPWs that flow directly or indirectly into TNWs

Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs

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

Impoundments of jurisdictional waters

Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands: **(Wetland 16) 50.22 a. + (Wetland 17) 14.62 + (Wetland 18) 2.61 = 67.45 acres.**

**c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Pick List, Pick List**

Elevation of established OHWM (if known):N/A.

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

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain: **Potentially jurisdictional linear features were assessed within the review area and determined to be non-jurisdictional. These linear features are located adjacent to a man-made roadway and provide a hydrological connection from Wetlands 17 & 18 to the downstream pRPW named Cypress Creek.**

**SECTION III: CWA ANALYSIS**

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

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.



**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: **Little Pee Dee River.**

Summarize rationale supporting determination: **According to the USACE Navigability Study, the Little Pee Dee River's recommended limit of navigability is located at River Mile (RM) 98. The project waters enter the Little Pee Dee River at approximately RM 31..**

**2. Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is "adjacent": .

**B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):**

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

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

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

**(i) General Area Conditions:**

Watershed size: **217,821 acres** ; HUC **03040204-08**

Drainage area: **1,732 acres**

Average annual rainfall: **50 inches**

Average annual snowfall: **0-1 inches**

**(ii) Physical Characteristics:**

**(a) Relationship with TNW:**

Tributary flows directly into TNW.

Tributary flows through **2** 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: **N/A.**

Identify flow route to TNW<sup>5</sup>: **The tributary, which is a 1<sup>st</sup> order stream, flows through a 2<sup>nd</sup> order tributary and then a 3<sup>rd</sup> order tributary prior to entering the downstream TNW.**

Tributary stream order, if known: **The tributary is a 1<sup>st</sup> order stream.**

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

**Tributary is:**  Natural

Artificial (man-made). Explain: .

Manipulated (man-altered). Explain: .

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

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

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

Average width: **4-6** feet

Average depth: **2-4** feet

Average side slopes: **Vertical (1:1 or less)**.

Primary tributary substrate composition (check all that apply):

- |  |  |                                   |
|--|--|-----------------------------------|
| <input checked="" type="checkbox"/> Silts  | <input checked="" type="checkbox"/> Sands          | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles           | <input type="checkbox"/> Gravel                    | <input type="checkbox"/> Muck     |
| <input type="checkbox"/> Bedrock           | <input type="checkbox"/> Vegetation. Type/% cover: |                                   |
| <input type="checkbox"/> Other. Explain: . |  |                                   |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: The tributary is relatively stable with no erosion or sloughing banks observed.

Presence of run/riffle/pool complexes. Explain: **No run/riffle/pool complexes were observed.**

Tributary geometry: **Meandering.**

Tributary gradient (approximate average slope): %

(c) **Flow:**

Tributary provides for: **Perennial flow**

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

Describe flow regime: **This tributary receives flow from the upstream and on-site wetlands via overland sheetflow and via discrete flow.**

Other information on duration and volume: **Several non-jurisdictional ditches were also observed flowing into the 1<sup>st</sup> order tributary.**

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

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

Dye (or other) test performed: .

Tributary has (check all that apply):

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

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

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

(iii) **Chemical Characteristics:**

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

Explain: **The tributary has a firm sandy bottom with clear water typical of the blackwater tributaries in this watershed. This tributary is located within the Little Pee Dee River Watershed, which consists of approximately 45% forested wetlands, 30% agricultural land, 16% Forested land, and 4% urban land. The remaining land uses in this watershed are scrub/shrub land, water, and non-forested wetlands.**

Identify specific pollutants, if known: **According to the SCDHEC Watersheds website, a review of the downstream monitoring station for the Little Pee Dee River (PD-189) shows that this area fully supports aquatic life and recreational uses. Although pH and dissolved oxygen excursions occur, these are typical of values seen in blackwater systems. Significant decreasing trends in five-day biochemical oxygen demand, total phosphorus concentration, and total nitrogen concentration suggest improving conditions for these parameters.**

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

- |   |
|---|
| <input checked="" type="checkbox"/> Riparian corridor. Characteristics (type, average width): <b>Forested, 100-200' wide.</b>   |
| <input checked="" type="checkbox"/> Wetland fringe. Characteristics: <b>The upstream portion of the 1<sup>st</sup> order tributary directly abuts a wetland system.</b> |

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

<sup>7</sup>Ibid.

- Habitat for:
  - Federally Listed species. Explain findings: .
  - Fish/spawn areas. Explain findings: .
  - Other environmentally-sensitive species. Explain findings: .
  - Aquatic/wildlife diversity. Explain findings: **This perennial RPW provides an important habitat and corridor for wildlife as well as a connection to the downstream TNW for aquatic species.**

**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 16) 50.22 a. + (Wetland 17) 14.62 + (Wetland 18) 2.61 = 67.45** acres

Wetland type. Explain: **Palustrine Forested.**

Wetland quality. Explain: **Fully functional.**

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

(b) General Flow Relationship with Non-TNW:

Flow is: **Ephemeral flow**. Explain: .

Surface flow is: **Discrete and confined**

Characteristics: **Wetlands 17 & 18 flow into the 1<sup>st</sup> order tributary named Cypress Creek via non-jurisdictional ditches. However, Wetland 16 flows into the 1<sup>st</sup> order tributary via overland sheetflow as it directly abuts Cypress Creek.**

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

Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: **Wetlands 17 & 18 flow into Cypress Creek via non-jurisdictional ditches.**

Ecological connection. Explain: .

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 **100 - 500-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: **These wetlands have been determined to be fully functional and seasonally saturated. No water was present on the surface during the site visit. These wetlands are located within the Little Pee Dee River Watershed, which consists of approximately 45% forested wetlands, 30% agricultural land, 16% Forested land, and 4% urban land. The remaining land uses in this watershed are scrub/shrub land, water, and non-forested wetlands.**

Identify specific pollutants, if known: **According to the SCDHEC Watersheds website, a review of the downstream monitoring station for the Little Pee Dee River (PD-189) shows that this area fully supports aquatic life and recreational uses. Although pH and dissolved oxygen excursions occur, these are typical of values seen in blackwater systems. Significant decreasing trends in five-day biochemical oxygen demand, total phosphorus concentration, and total nitrogen concentration suggest improving conditions for these parameters.**

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

Riparian buffer. Characteristics (type, average width): **approximately 100 feet.**

Vegetation type/percent cover. Explain: **Liquidambar styraciflua (FAC), Pinus taeda (FAC), Acer rubrum (FAC), Quercus nigra (FAC).**

Habitat for:

Federally Listed species. Explain findings: .

Fish/spawn areas. Explain findings: .

Other environmentally-sensitive species. Explain findings: .

Aquatic/wildlife diversity. Explain findings: .

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

All wetland(s) being considered in the cumulative analysis: **5**

Approximately ( **1255.5** ) acres in total are being considered in the cumulative analysis.

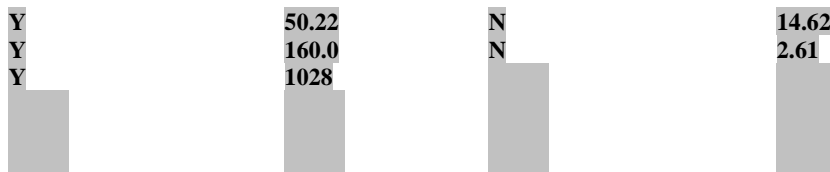
For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)



Summarize overall biological, chemical and physical functions being performed: **The 1<sup>st</sup> order perennial RPW named Cypress Creek and the approximately 1255.5 acres of wetlands located adjacent to this perennial RPW contribute vital biological, chemical, and physical functions to the downstream TNW. These wetlands and the adjacent pRPW make up an important ecological system with vital aquatic habitat that supports an abundance of wildlife in a watershed that consists predominately of agricultural and silvicultural land. Due to the prevalence of agriculture and silvicultural land use in this watershed, these wetlands and the adjacent pRPW are acting as a catch basin for the adjacent uplands by filtering sediments, herbicides, and other pollutants and by reducing the amount of flood waters reaching the downstream TNW.**

**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: **The 1<sup>st</sup> order perennial RPW named Cypress Creek and the nonabutting wetlands labeled Wetlands "17" and "18" contribute vital biological, chemical, and physical functions to the downstream TNW. The two wetlands provide important aquatic habitat used for feeding, nesting, and other functions that support wildlife within uplands that are predominately in use for agricultural and silvicultural purposes. These wetlands also act as a catch basin for the adjacent uplands by filtering sediments, herbicides, and other pollutants and by reducing the amounts of flood waters that can reach the downstream TNW. Wetlands "17" and "18" have a direct hydrologic connection to the downstream perennial RPW via non-jurisdictional ditches. Because of these connections, these wetlands have the capacity to transfer nutrients to the downstream pRPW that provide support to the aquatic wildlife in the perennial RPW and the downstream TNW. Due to the prevalence of agriculture land use in this watershed, these wetlands are a vital part of the perennial RPW's 1732 acre drainage area and were determined to have a significant nexus to the downstream TNW.**

Documentation for the Record only: Significant nexus findings for seasonal RPWs and/or wetlands abutting seasonal RPWs:

**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: **The 1<sup>st</sup> order tributary named Cypress Creek was determined to have perennial flow based on the topographic map, soil survey, NWIs and information obtained during the site visit. Cypress Creek is depicted as a solid blue line on the topographic map and is mapped Cantey, a hydric soil. The NWIs map this area as palustrine forested wetlands and palustrine scrub-shrub wetlands. During the site visit, this feature was observed as having an OHWM, a defined channel within bed and banks, and sinuosity. This feature is surrounded on site and off site by saturated and inundated wetlands. Cypress Creek continues on site where it becomes a 2<sup>nd</sup> order RPW and then a 3<sup>rd</sup> order RPW prior to flowing into the Little Pee Dee River.**

Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

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

Tributary waters: linear feet width (ft).

Other non-wetland waters: acres.

Identify type(s) of waters: .

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

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

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

Tributary waters: linear feet width (ft).

Other non-wetland waters: acres.

Identify type(s) of waters: .

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

Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **Wetland 16 is a portion of a larger wetland system that directly abuts Cypress Creek. The topographic map depicts this wetland as being intersected by a solid blue line. The soil survey maps this wetland system as Cantey, a hydric soil, and the NWIs map Wetland 16 as palustrine forested wetlands (PFO1Cd & PFO1Bd).**

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: **(Wetland 16) 50.22** acres.

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

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

Provide acreage estimates for jurisdictional wetlands in the review area: **(Wetland 17) 14.62 + (Wetland 18) 2.61 = 17.23** acres.

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

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

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

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

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

Demonstrate that impoundment was created from “waters of the U.S.,” or

Demonstrate that water meets the criteria for one of the categories presented above (1-6), or

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

**Explain:**

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

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

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

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

**Identify water body and summarize rationale supporting determination:**

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

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

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

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

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

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

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

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

**SECTION IV: DATA SOURCES.**

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

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **Report by Environmental Consulting & Technology, Inc.; plat by DDC Engineers dated 5/3/2016 and entitled "Map of Tracts 1 & 2 Containing 1848.50 +- Acres of Land / Near Centenary, Marion County, South Carolina / Wetland Exhibit".**
- 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: **Friendship; The topographic map depicts these wetlands as forested uplands located adjacent to a solid blue line named Cypress Creek .**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **Page 32; The soil survey maps this area as Cantey, a hydric soil.**
- National wetlands inventory map(s). Cite name: **The NWIs map these wetlands as Palustrine Forested (PFO1Bd & PFO1Cd).**
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): **SCDNR 2006, 99:11223:4; The aerials depict the wetlands as forested.**  
or  Other (Name & Date): **Site photos dated November 23, 2015.**
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .

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

Other information (please specify): .

- B. **ADDITIONAL COMMENTS TO SUPPORT JD:** The 1st order tributary named Cypress Creek was determined to have perennial flow based on the topographic map, soil survey, NWIs and information obtained during the site visit. Cypress Creek is depicted as a solid blue line on the topographic map and is mapped Cantey, a hydric soil. The NWIs map this area as palustrine forested wetlands and palustrine scrub-shrub wetlands. During the site visit, this feature was observed as having an OHWM, a defined channel within bed and banks, and sinuosity. This feature is surrounded on site and off site by saturated and inundated wetlands. Cypress Creek continues on site where it becomes a 2nd order RPW and then a 3rd order RPW prior to flowing into the Little Pee Dee River.

Wetland 16 is a portion of a larger wetland system that directly abuts the 1<sup>st</sup> order tributary named Cypress Creek. Wetlands 17 & 18 flow into Cypress Creek via non-jurisdictional ditches and have a direct hydrological connection. All three of these wetlands were determined to have a significant nexus to the downstream TNW in Section IIIC above.

**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): June 30, 2016**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CESAC-RD-NE, JD Form 4 of 4; SAC 2011-00662 Catfish Farms Tract**

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

State: South Carolina County/parish/borough: **Marion** City:  
Center coordinates of site (lat/long in degree decimal format): Lat. **34.022727° N**, Long. **-79.387770° W**.  
Universal Transverse Mercator:

Name of nearest waterbody: **Cypress Creek**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Little Pee Dee River**

Name of watershed or Hydrologic Unit Code (HUC): **03040204-08**

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:

Field Determination. Date(s): **November 23, 2015**

**SECTION II: SUMMARY OF FINDINGS**

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

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.  
Explain: .

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

TNWs, including territorial seas

Wetlands adjacent to TNWs

Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs

Non-RPWs that flow directly or indirectly into TNWs

Wetlands directly abutting RPWs that flow directly or indirectly into TNWs

Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs

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

Impoundments of jurisdictional waters

Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands: (Wetland 7) 214.84 a. + (Wetland 8) 30.47 + (Wetland 9) 14.30 + (Wetland 10) 19.30 a. + (Wetland 11) 71.55 a. + (Wetland 12) 33.29 a. + (Wetland 13) 11.05 a. + (Wetland 14) 4.16 a. + (Wetland 15) 0.17 a. = 399.13 acres.

**c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Established by OHWM, Pick List**

Elevation of established OHWM (if known):N/A.

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

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain:

**SECTION III: CWA ANALYSIS**

**A. TNWs AND WETLANDS ADJACENT TO TNWs**

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

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.



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: **Little Pee Dee River.**

Summarize rationale supporting determination: **According to the USACE Navigability Study, the Little Pee Dee River's recommended limit of navigability is located at River Mile (RM) 98. The project waters enter the Little Pee Dee River at approximately RM 31.**

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": .

**B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):**

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

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

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

(i) General Area Conditions:

Watershed size: **217,821 acres** ; HUC **03040204-08**

Drainage area: **2321 acres**

Average annual rainfall: **50 inches**

Average annual snowfall: **0-1 inches**

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through **1** 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: **N/A.**

Identify flow route to TNW<sup>5</sup>: **The tributary, which is a 2<sup>nd</sup> order stream, flows through a 3<sup>rd</sup> order tributary prior to entering the downstream TNW.**

Tributary stream order, if known: **The tributary, named Cypress Creek, is a 2<sup>nd</sup> order stream.**

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

Tributary is:  Natural

Artificial (man-made). Explain: .

Manipulated (man-altered). Explain: .

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

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

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

Average width: **6-10** feet  
Average depth: **2-4** feet  
Average side slopes: **Vertical (1:1 or less)**.

Primary tributary substrate composition (check all that apply):

- |  |  |                                   |
|--|--|-----------------------------------|
| <input checked="" type="checkbox"/> Silts  | <input checked="" type="checkbox"/> Sands          | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles           | <input type="checkbox"/> Gravel                    | <input type="checkbox"/> Muck     |
| <input type="checkbox"/> Bedrock           | <input type="checkbox"/> Vegetation. Type/% cover: |                                   |
| <input type="checkbox"/> Other. Explain: . |  |                                   |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: The tributary is relatively stable with no erosion or sloughing banks observed.

Presence of run/riffle/pool complexes. Explain: **No run/riffle/pool complexes were observed.**

Tributary geometry: **Meandering.**

Tributary gradient (approximate average slope): %

(c) **Flow:**

Tributary provides for: **Perennial flow**

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

Describe flow regime: **This tributary receives flow from the upstream and on-site wetlands via overland sheetflow and flow from the upstream 1<sup>st</sup> order stream.**

Other information on duration and volume: .

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

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

Dye (or other) test performed: .

Tributary has (check all that apply):

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

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

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

(iii) **Chemical Characteristics:**

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

Explain: **The tributary has a firm sandy bottom with clear water typical of the blackwater tributaries in this watershed. This tributary is located within the Little Pee Dee River Watershed, which consists of approximately 45% forested wetlands, 30% agricultural land, 16% Forested land, and 4% urban land. The remaining land uses in this watershed are scrub/shrub land, water, and non-forested wetlands.**

Identify specific pollutants, if known: **According to the SCDHEC Watersheds website, a review of the downstream monitoring station for the Little Pee Dee River (PD-189) shows that this area fully supports aquatic life and recreational uses. Although pH and dissolved oxygen excursions occur, these are typical of values seen in blackwater systems. Significant decreasing trends in five-day biochemical oxygen demand, total phosphorus concentration, and total nitrogen concentration suggest improving conditions for these parameters.**

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

Riparian corridor. Characteristics (type, average width): **Forested, 200-400' wide.**  
 Wetland fringe. Characteristics: **The onsite and upstream portions of the 2<sup>nd</sup> order tributary flow through a wetland system.**

Habitat for:

Federally Listed species. Explain findings: .

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

<sup>7</sup>Ibid.

- Fish/spawn areas. Explain findings:
- Other environmentally-sensitive species. Explain findings:
- Aquatic/wildlife diversity. Explain findings: **This perennial RPW provides an important habitat and corridor for**

wildlife as well as a connection to the downstream TNW for aquatic species.

## 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 7) 214.84 a. + (Wetland 8) 30.47 + (Wetland 9) 14.30 + (Wetland 10) 19.30 a. + (Wetland 11) 71.55 a. + (Wetland 12) 33.29 a. + (Wetland 13) 11.05 a. + (Wetland 14) 4.16 a. + (Wetland 15) 0.17 a. = 399.13 acres

Wetland type. Explain: **Palustrine Forested.**

Wetland quality. Explain: **Fully functional.**

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

#### (b) General Flow Relationship with Non-TNW:

Flow is: **Ephemeral flow**. Explain:

Surface flow is: **Overland sheetflow**

Characteristics: **Wetlands 7, 8, 9, 10, 11, 12, 13, and 14 flow directly into the 2<sup>nd</sup> order tributary via overland sheetflow. Wetland 15 is a portion of a larger wetland system, of which Wetland 14 is a part. This wetland is separated from the 2<sup>nd</sup> order stream by a berm/barrier.**

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

Dye (or other) test performed:

#### (c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain: **Wetland 15 has an ecological connection to the downstream RPW, which is described in Section B.3 below.**

Separated by berm/barrier. Explain: **Wetland 15 is a portion of a larger wetland system, of which Wetland 14 is a part.**

#### (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 **100 - 500-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: **These wetlands have been determined to be fully functional and seasonally saturated. No water was present on the surface during the site visit. These wetlands are located within the Little Pee Dee River Watershed, which consists of approximately 45% forested wetlands, 30% agricultural land, 16% Forested land, and 4% urban land. The remaining land uses in this watershed are scrub/shrub land, water, and non-forested wetlands.**

Identify specific pollutants, if known: **According to the SCDHEC Watersheds website, a review of the downstream monitoring station for the Little Pee Dee River (PD-189) shows that this area fully supports aquatic life and recreational uses. Although pH and dissolved oxygen excursions occur, these are typical of values seen in blackwater systems. Significant decreasing trends in five-day biochemical oxygen demand, total phosphorus concentration, and total nitrogen concentration suggest improving conditions for these parameters.**

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

Riparian buffer. Characteristics (type, average width): **approximately 200 feet wide.**

Vegetation type/percent cover. Explain: **Liquidambar styraciflua (FAC), Pinus taeda (FAC), Acer rubrum (FAC), Quercus nigra (FAC).**

Habitat for:

Federally Listed species. Explain findings:

Fish/spawn areas. Explain findings:

Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings: **The wetlands are providing important aquatic habitat and diversity**

within the drainage area.

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

All wetland(s) being considered in the cumulative analysis: **11**

Approximately ( **1486.13** ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
Y	214.84	Y	30.47
Y	14.30	Y	19.30
Y	71.55	Y	33.29
Y	11.05	Y	4.16
N	0.17	Y	169
Y	918		

Summarize overall biological, chemical and physical functions being performed: **The 2<sup>nd</sup> order perennial RPW named Cypress Creek and the approximately 1486.13 acres of wetlands located adjacent to this perennial RPW contribute vital biological, chemical, and physical functions to the downstream TNW. These wetlands and the adjacent pRPW make up an important ecological system with vital aquatic habitat that supports an abundance of wildlife in a watershed that consists predominately of agricultural and silvicultural land. Due to the prevalence of agriculture and silvicultural land use in this watershed, these wetlands and the adjacent pRPW are acting as a catch basin for the adjacent uplands by filtering sediments, herbicides, and other pollutants and by reducing the amount of flood waters reaching the downstream TNW. Besides the obvious functions of stormwater attenuation, absorption, and overstory biomass input into the food web, the wetlands provide a uniquely important ecological connection to other adjacent wetlands and Cypress Creek. The normal movement of aquatic fauna, which is a criteria of the natural hydrologic condition, is expressively obvious in the current proximal location as well as historic connections prior to the construction of the berm/barrier between Wetlands 15 and 14. Additionally, Wetland 15, which is separated by a berm that is approximately 15' wide, is comprised of the same seed source and therefore, the same plant community. All of the wetlands in the drainage area represent a sensitive and increasingly valuable ecosystem that comprises a critical biological connection. Therefore, the wetlands, which are a portion of the larger wetland system, also have an important ecological connection to the adjacent tributary and wetland system. These wetlands, in conjunction with the other adjacent wetlands and Cypress Creek, collectively have a significant nexus to the downstream Little Pee Dee River.**

### 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: **The 2<sup>nd</sup> order perennial RPW named Cypress Creek and the nonabutting wetland labeled Wetland "15" contribute vital biological, chemical, and physical functions to the downstream TNW. The wetland provides important aquatic habitat used for feeding, nesting, and other functions that support wildlife within uplands that are predominately in use for agricultural and silvicultural purposes. This wetland also acts as a catch basin for the adjacent uplands by filtering sediments, herbicides, and other pollutants and by reducing the amounts of flood waters that can reach the downstream TNW. Wetland "15" is a portion of the larger wetland system that is located on and off-site within the drainage area but is separated by a berm/barrier. This wetland has the capacity to transfer nutrients to the downstream pRPW that provide**

support to the aquatic wildlife in the perennial RPW and the downstream TNW. Due to the prevalence of agriculture and silvicultural land use in this watershed, this wetland is a vital part of the perennial RPW's 2321 acre drainage area and was determined to have a significant nexus to the downstream TNW.

Documentation for the Record only: Significant nexus findings for seasonal RPWs and/or wetlands abutting seasonal RPWs:

**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: **The 2<sup>nd</sup> order tributary named Cypress Creek was determined to have perennial flow based on the topographic map, soil survey, NWIs and information obtained during the site visit. Cypress Creek is depicted as a solid blue line on the topographic map and is mapped Cantey, a hydric soil. The NWIs map this area as palustrine forested wetlands and palustrine scrub-shrub wetlands. During the site visit, this feature was observed as having an OHWM, a defined channel within bed and banks, and sinuosity. This feature is surrounded on site and off site by saturated and inundated wetlands. Cypress Creek continues off site where it becomes a 3<sup>rd</sup> order RPW prior to flowing into the Little Pee Dee River.**

Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

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

- Tributary waters: **1992** linear feet **6-10** width (ft).  
 Other non-wetland waters: acres.  
Identify type(s) of waters:

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

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

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

- Tributary waters: 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: **Based on information obtained during the site visit, as well as a review of the aerials, topographic map, soil survey, and NWIs, Wetlands 7, 8, 9, 10, 11, 12, 13, and 14 directly abut the 2<sup>nd</sup> order tributary named Cypress Creek. Wetlands 12 and 13 directly abut Cypress Creek on site. The topographic map depicts Cypress Creek, a named blue line, as intersecting the boundary of these two wetlands, and the site visit confirmed that these two wetlands directly abut Cypress Creek. Wetlands 7, 8, 9, 10, 11, and 14 were determined to be portions of a larger wetland system that continues south off of the project site. Utilizing aerials, soil survey, and NWIs, these six wetlands were found to directly abut Cypress Creek immediately off site.**
- 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: **(Wetland 7) 214.84 a. + (Wetland 8) 30.47 + (Wetland 9) 14.30 + (Wetland 10) 19.30 a. + (Wetland 11) 71.55 a. + (Wetland 12) 33.29 a. + (Wetland 13) 11.05 a. + (Wetland 14) 4.16 a. = 398.96 acres.**

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

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

Provide acreage estimates for jurisdictional wetlands in the review area: **(Wetland 15) 0.17 acres.**

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

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

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

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

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

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

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

**Explain:**

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

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

**Identify water body and summarize rationale supporting determination:**

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

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

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

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.  
 Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.  
 Prior to the Jan 2001 Supreme Court decision in “SWANCC,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).  
 Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain: \_\_\_\_\_  
 Other: (explain, if not covered above): \_\_\_\_\_

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): \_\_\_\_\_ linear feet \_\_\_\_\_ width (ft).  
 Lakes/ponds: \_\_\_\_\_ acres.  
 Other non-wetland waters: \_\_\_\_\_ acres. List type of aquatic resource: \_\_\_\_\_  
 Wetlands: \_\_\_\_\_ acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): \_\_\_\_\_ linear feet, \_\_\_\_\_ width (ft).  
 Lakes/ponds: \_\_\_\_\_ acres.  
 Other non-wetland waters: \_\_\_\_\_ acres. List type of aquatic resource: \_\_\_\_\_  
 Wetlands: \_\_\_\_\_ acres.

**SECTION IV: DATA SOURCES.**

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

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **Report by Environmental Consulting & Technology, Inc.; plat by DDC Engineers dated 5/3/2016 and entitled "Map of Tracts 1 & 2 Containing 1848.50 +- Acres of Land / Near Centenary, Marion County, South Carolina / Wetland Exhibit".**  
 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.

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

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

- 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: **Friendship; The topographic map depicts these wetlands as forested uplands located adjacent to a solid blue line named Cypress Creek .**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **Page 32; The soil survey maps this area as Cantey, a hydric soil.**
- National wetlands inventory map(s). Cite name: **The NWIs map these wetlands as Palustrine Forested.**
- State/Local wetland inventory map(s):
- FEMA/FIRM maps:
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): **SCDNR 2006, 99:11223:4; The aeriels depict the wetlands as forested.**  
 or  Other (Name & Date): **Site photos dated November 23, 2015.**
- Previous determination(s). File no. and date of response letter:
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify):

**B. ADDITIONAL COMMENTS TO SUPPORT JD: The 2nd order tributary named Cypress Creek was determined to have perennial flow based on the topographic map, soil survey, NWIs and information obtained during the site visit. Cypress Creek is depicted as a solid blue line on the topographic map and is mapped Cantey, a hydric soil. The NWIs map this area as palustrine forested wetlands and palustrine scrub-shrub wetlands. During the site visit, this feature was observed as having an OHWM, a defined channel within bed and banks, and sinuosity. This feature is surrounded on site and off site by saturated and inundated wetlands. Cypress Creek continues off site where it becomes a 3rd order RPW prior to flowing into the Little Pee Dee River.**

**Based on information obtained during the site visit, as well as a review of the aeriels, topographic map, soil survey, and NWIs, Wetlands 7, 8, 9, 10, 11, 12, 13, and 14 directly abut the 2nd order tributary named Cypress Creek. Wetlands 12 and 13 directly abut Cypress Creek on site. The topographic map depicts Cypress Creek, a named blue line, as intersecting the boundary of these two wetlands, and the site visit confirmed that these two wetlands directly abut Cypress Creek. Wetlands 7, 8, 9, 10, 11, and 14 were determined to be portions of a larger wetland system that continues south off of the project site. Utilizing aeriels, soil survey, and NWIs, these six wetlands were found to directly abut Cypress Creek immediately off site. Wetland 15 is adjacent, non-abutting to the perennial RPW and was determined to have a significant nexus to the downstream TNW in Section IIIC above.**