

**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): December 16, 2019**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CESAC-RD-NE; SAC# 22019-01137- Forestbrook South Tract, JD Form 1 of 2**

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

State: South Carolina County/parish/borough: **Horry** City: **Myrtle Beach**  
Center coordinates of site (lat/long in degree decimal format): Lat. **33.709456° N**, Long. **-78.968664° W**.  
Universal Transverse Mercator:

Name of nearest waterbody: **Socastee Creek**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Socastee Creek becomes tidally influenced downstream from the subject property.**

Name of watershed or Hydrologic Unit Code (HUC): **3040206-09 Waccamaw River**

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 6, 2019**

**SECTION II: SUMMARY OF FINDINGS**

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

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

Waters subject to the ebb and flow of the tide.

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

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

There **Are** "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: **1,370 (PRPW2)** linear feet: **15 (Average)** width (ft) and/or acres.

Wetlands: **3.29 (W1)+0.29(W3)= 3.58** acres.

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

Elevation of established OHWM (if known): .

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

<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.

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: **Several man-made ditches were assessed and determined to be non-jurisdictional. These ditches were excavated out of uplands and drain only uplands. A map in the file depicts these ditches.**

### SECTION III: CWA ANALYSIS

#### A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW

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

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 136,317 acres ;

Drainage area: 318 acres

Average annual rainfall: 45.72 inches

Average annual snowfall: 1.8 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 1 tributaries before entering TNW.

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

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

Project waters are 1 (or less) 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: .

<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>: **The tributary (PRPW 1) flows into another tributary (Socastee Creek) which becomes tidally influenced downstream. Socastee Creek was determined to be a TNW once it becomes tidally influenced. Socastee Creek is assessed in further detail on JD Form 2 of 2.**  
Tributary stream order, if known: 1.

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

Tributary is:  Natural  
 Artificial (man-made). Explain: .  
 Manipulated (man-altered). Explain: **The tributary has been mechanically straightened and is maintained on the North Tract. However, the tributary remains natural (meandering) on the South Tract. The tributary is depicted as a solid blue line on topographic maps.**

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

Average width: **15'** feet  
Average depth: **5** feet  
Average side slopes: **Vertical (1:1 or less).**

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Slightly eroding due to perennial flow.

Presence of run/riffle/pool complexes. Explain: .

Tributary geometry: **Relatively straight. The tributary is relatively straight on the North Tract due to manipulation and is natural and meandering as it traverses the South Tract.**

Tributary gradient (approximate average slope): **1 %**

(c) Flow:

Tributary provides for: **Perennial flow**

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

Describe flow regime: **The tributary flows directly into Socastee Creek (perennial RPW) which becomes tidally influenced downstream.**

Other information on duration and volume: .

Surface flow is: **Discrete and confined.** Characteristics: **Flows within channelized bed and banks of tributary under normal climatic conditions.**

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

Dye (or other) test performed: .

Tributary has (check all that apply):

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

Discontinuous OHWM.<sup>7</sup> Explain: .

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

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

<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.

other (list):

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).  
Explain: **Water was relatively clear at the time of the site visit.**  
Identify specific pollutants, if known: **None known.**

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

Riparian corridor. Characteristics (type, average width): **The riparian corridor consists of forested and non-forested uplands and wetlands with adjacent residential development. The upland and wetland forest areas shade and buffer the tributary and provide filtering of runoff before it enters the tributary.**

Wetland fringe. Characteristics: **Palustrine Forested Wetland.**

Habitat for:

Federally Listed species. Explain findings: .

Fish/spawn areas. Explain findings: .

Other environmentally-sensitive species. Explain findings: .

Aquatic/wildlife diversity. Explain findings: **The tributary supports breeding grounds and shelter for aquatic dependent species such as fish and amphibians. Minnows were observed in the tributary during the site visit. In addition, evidence of foraging, nesting and travel within and around tributary of various upland wildlife species was observed to include Whitetailed deer and Neotropical Songbirds.**

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: **3.29 (W1)+0.29(W3)= 3.58** acres

Wetland type. Explain: **Palustrine Forested. Predominately hardwoods with some loblolly pine.**

Wetland quality. Explain: **Wetland is forested and fully functional.**

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

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: **During wetter months and after rainfall.**

Surface flow is: **Discrete and confined**

Characteristics: **Wetland 1 directly abuts the perennial RPW which discharges into another perennial RPW (Socastee Creek). Surface flow for Wetland 3 is discussed in Section B.2.c below. Socastee Creek is assessed on JD Form 2 of 2.**

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

Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: .

Ecological connection. Explain: .

Separated by berm/barrier. Explain: **Wetland 3 is separated from the tributary by a natural upland barrier that is approximately 10' wide. Drainage patterns were observed in the field indicating that water flows from the wetland to the tributary periodically.**

(d) Proximity (Relationship) to TNW

Project wetlands are **1 (or less)** river miles from TNW.

Project waters are **1 (or less)** 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: **There was no surface water present in the wetlands at the time of the site visit.**

**General watershed characteristics include 44.6% forested wetland, 19% forested land, 15.5% urban land, 14.8% agricultural land, 2.8% scrub/shrub land, 1.6% water, and 0.2% barren land.**

Identify specific pollutants, if known: **There are no known pollutants. The wetlands are surrounded by forested and unforested uplands which provide a buffer to the wetlands. However, this site is surrounded by major roads and commercial and residential development creating the potential for some pollution runoff into the wetlands.**

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

Riparian buffer. Characteristics (type, average width): **While the wetlands are not truly a riparian, they do act as a buffer to the adjacent tributary which is a direct conduit to the downstream TNW (Socastee Creek). The wetlands retain and filter runoff before it enters the adjacent tributary.**

Vegetation type/percent cover. Explain: **Within the 30' plot size represented on the Data Sheets, dominant vegetation consisted of : Tree Stratum- Nyssa biflora (Swamp Tupelo) (35%), Acer rubrum (Red Maple) (20%); Sapling/Shrub Stratum - Persea borbonia (Red Bay)(10%), Ilex opaca (American Holly)(20%); Herb Stratum - Woodwardia aereolata (Netted Chainfern)(40%), Osmunda spectabilis (Royal Fern)(10%); Woody Vine Stratum - Decumaria barbara (Woodvamp)(5%)..**

Habitat for:

Federally Listed species. Explain findings:

Fish/spawn areas. Explain findings:

Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings: **Evidence of foraging, nesting and travel within and around the**

**tributary of various upland wildlife was observed to include Whitetail deer and Neotropical songbirds..**

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

All wetland(s) being considered in the cumulative analysis: **4**

Approximately ( **3.63** ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

| <u>Directly abuts? (Y/N)</u> | <u>Size (in acres)</u> | <u>Directly abuts? (Y/N)</u> | <u>Size (in acres)</u> |
|------------------------------|------------------------|------------------------------|------------------------|
| Y<br>N                       | 3.29<br>0.29           |                              |                        |

Summarize overall biological, chemical and physical functions being performed: **All wetlands evaluated in this significant nexus determination (SND) which are similarly situated and adjacent (both directly abutting and non-abutting) to the RPW are collectively performing biological, chemical, and physical functions. The wetlands in the review area are situated less than 1 river mile from the nearest TNW. Water discharging from the wetlands enter an onsite perennial RPW that flows directly into Socastee Creek. Socastee Creek becomes tidally influenced offsite just south of the bridge on McCormick Road and was determined to be a TNW. Wetland 1 directly abuts the tributary and water flows directly from the wetlands into the tributary. Wetland 3 is non-abutting the tributary and water flows from the wetland over approximately 10 feet of uplands and then into the tributary. The wetlands are mixed pine/hardwood depressional wetlands that provide breeding grounds and shelter for aquatic species, foraging areas for wetland dependent species, and spawning areas for species that inhabit the main channel as adults. These wetlands also provide organic carbon to the downstream tributaries and ultimately into the Atlantic Ocean, resulting in the nourishment of the downstream food web. The wetlands evaluated in this SND provide the important collective functions of removal of excess nutrients which are contributed by runoff from the surrounding urban areas. The wetlands reduce nitrogen and phosphorus loading downstream, and effectively prevent oxygen depletion that can result from eutrophication. The wetlands also collectively perform flow maintenance functions, including retaining runoff inflow and storing flood water temporarily.**

## 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 tributary in combination with its adjacent wetlands have the capacity to carry pollutants or flood waters to the downstream TNW. They provide habitat and lifecycle support functions for fish and other species, such as feeding grounds, nesting, spawning, or rearing young for species that are present in the downstream TNW. The tributary in combination with its adjacent wetlands also have the capacity to transfer nutrients and organic carbon that support downstream foodwebs. This office has determined that there is a significant nexus for the tributary in combination with its adjacent wetlands 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 tributary exhibited signs of constant flowing water at least 90% of the year under normal climatic conditions with a channel within bed and banks, hard sandy bottom, sinuosity, sediment sorting, free of debris and vegetation, presence of wrack lines, and a clearly defined OHWM. Multiple flow events have been observed and the tributary was previously determined to be a seasonal RPW in a letter dated April 28, 2009 (SAC# 1998-40253-3JB). However, after observing the tributary again in April of 2014, it was determined that the tributary was perennial.**
  - Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
 

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

    - Tributary waters: **1,370** linear feet **15** 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

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

directly abutting an RPW: **The boundary of Wetlands 1 intersects the OHWM of the adjacent tributary (perennial RPW).**

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

Provide acreage estimates for jurisdictional wetlands in the review area: **3.29 (W1)+0.29(W3)= 3.58** 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: **Wetland 3 = 0.29** 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 man-made ditches were assessed and determined to be non-jurisdictional.**

**These ditches were excavated out of uplands and drain only uplands. A map in the file depicts these ditches.**

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

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

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

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: 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: **Survey plat prepared by Thomas and Hutton dated July 11, 2019, titled "WETLAND SURVEY / OF SIX TRACTS / OF LAND / TOTALING 174.48 AC. / SOCASTEE TOWNSHIP / HORRY COUNTY, SOUTH CAROLINA / prepared for / EASTERN SHORES / FORESTBROOK SOUTH TRACTS"**.
- 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. 3040206
- U.S. Geological Survey map(s). Cite scale & quad name: **7.5 min Myrtle Beach (tributaries (blue lines) and wetlands (blue symbols) are depicted on the topo map).**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **p.82, Yongs (100% of soil component is hydric), Bladen (100% of soil component is hydric), Eulonia (2% of soil component is hydric), Ogeechee (100% of soil component).**
- National wetlands inventory map(s). Cite name: **PFO1/4Bd (Palustrine, Forested, Broad-Leaved Deciduous, Needle-Leaved Deciduous, Saturated, Partially Drained/Ditched), U21 (Upland).**
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: **45051C0679.**
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): **99-11222:169, SCDNR 2006, .**  
or  Other (Name & Date): **Photos taken during site visit dated 4/29/2014 and photos submitted by the agent dated April 1, 2019.**
- Previous determination(s). File no. and date of response letter: **SAC# 1998-40253-3JB Letter dated 4/28/2009; SAC# 1992-19410-3JB Letter dated 3/28/2009, SAC# 2013-01370 Letter dated November 6, 2014.**
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

**B. ADDITIONAL COMMENTS TO SUPPORT JD: This JD Form assesses Perennial RPW 2 and its adjacent wetlands (Wetlands 1 and 6). Perennial RPW 1 (Socastee Creek) and its adjacent wetlands (Wetlands 2,3,4,5,7) are assessed on JD Form 2 of 2. The wetlands evaluated on this form total 3.58 acres. Wetland 1 directly abuts Perennial RPW 2. Wetland 3 is adjacent non-abutting to Perennial RPW 2. Perennial RPW 2 flows directly into Perennial RPW 1 (Socastee Creek). Socastee Creek becomes tidal just downstream of the subject property as it flows under the bridge on McCormick Road. Perennial RPW 2 in combination with its adjacent wetlands have the capacity to carry pollutants or flood waters to the downstream TNW. They provide habitat and lifecycle support functions for fish and other species, such as feeding grounds, nesting, spawning, or rearing young for species that are present in the downstream TNW. The tributary in combination with its adjacent wetlands also have the capacity to transfer nutrients and organic carbon that support downstream foodwebs. This office has determined that there is a significant nexus for the tributary in combination with its adjacent wetlands to the downstream TNW.**

Perennial RPW 2 was previously determined to be a seasonal RPW (SAC# 1998-40253-3JB, 1992-19410-3JB). However, after observing the tributary in April 2014 and with the stream characteristics described above, the Corps determined the tributary to be perennial in a letter dated November 6, 2014. While the tributary does have perenial flow downstream the most up to date desktop resources (including USGS topo maps, NWIs, Soil Maps and arials) and a site visit conducted on November 6, 2019 revealed that upstream portions of pRPW 2 where man-made drainage excavated out of uplands and draining only uplands. This portion of the feature was determined to be a man-made non-jurisdictional ditch that ties into pRPW 2 which begins closer to Socastee Creek.

**The site in review contains several other non-jurisdictional ditches that were determined to be excavated out of uplands and drain only uplands. A depiction of these features can be found in the file.**

**Several site visits have been performed on this property (6/11/2008, 9/29/2008, 4/29/2014, 11/6/19) .**

**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): December 16, 2019**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CESAC-RD-NE; CESAC-SAC 2019-01137 Forestbrook South Tract, JD Form 2 of 2**

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

State: South Carolina County/parish/borough: **Horry** City: **Myrtle Beach**  
Center coordinates of site (lat/long in degree decimal format): Lat. **33.709456° N**, Long. **-78.968664° W**.  
Universal Transverse Mercator:

Name of nearest waterbody: **Socastee Creek**  
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Socastee Creek becomes tidally influenced downstream from the subject property.**  
Name of watershed or Hydrologic Unit Code (HUC): **3040206-09 Waccamaw River**  
 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 6, 2019**

**SECTION II: SUMMARY OF FINDINGS**

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

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

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

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

There **Are** "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: **3,434** linear feet: **45** width (ft) and/or **3.49** acres.  
Wetlands: **0.69(W2)+0.32(W4)+6.04(W5)+0.04(W6)+26.75(W7) = 33.84** acres.

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

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

<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.

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: **Several non-jurisdictional ditches were observed. These ditches were excavated entirely out of uplands and drain only uplands. A map in the file depicts these ditches.**

### SECTION III: CWA ANALYSIS

#### A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW

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

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 136,317 acres ;

Drainage area: 3,400 acres

Average annual rainfall: 45.72 inches

Average annual snowfall: 1.8 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 1 tributaries before entering TNW. Tributary becomes a TNW downstream from the site as it flows under the bridge on McCormick Road. The tributary becomes tidally influenced at this point.

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

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

Project waters are 1 (or less) 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: .

<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 becomes a TNW downstream from the subject property.**  
Tributary stream order, if known: **2.**

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

Tributary is:  Natural  
 Artificial (man-made). Explain: .  
 Manipulated (man-altered). Explain: **Socastee Creek is a natural creek that has been mechanically straightened and is maintained. Socastee Creek is depicted as a solid blue line on topographic maps. Several weirs have also been installed to regulate the flow rate along the creek.**

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

Average width: **45** feet  
Average depth: **Unknown** feet  
Average side slopes: **Vertical (1:1 or less).**

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Slightly eroding with moderate sloughing banks as a result of perennial flow.

Presence of run/riffle/pool complexes. Explain: .

Tributary geometry: **Relatively straight. The tributary is relatively straight on the property as a result of mechanical manipulation.**

Tributary gradient (approximate average slope): **1 %**

(c) Flow:

Tributary provides for: **Perennial flow**

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

Describe flow regime: **The tributary is a large feature that flows directly into the Atlantic Intracoastal**

Waterway.

Other information on duration and volume: .

Surface flow is: **Discrete and confined.** Characteristics: **Flows within channelized bed and banks of tributary.**

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

Dye (or other) test performed: .

Tributary has (check all that apply):

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

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

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

<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.

(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:

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

Riparian corridor. Characteristics (type, average width): **The riparian corridor consists of forested and non-forested uplands and wetlands with adjacent residential development. The upland and wetland forest areas shade and buffer the tributary and provide filtering of runoff before it enters the tributary.**

Wetland fringe. Characteristics: **Palustrine Forested Wetland.**

Habitat for:

Federally Listed species. Explain findings:

Fish/spawn areas. Explain findings: **Large mouth bass, Bream, and minnows were observed in the tributary.**

Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings: **Blue crab were also observed in the tributary just downstream from**

**the subject property.**

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: **0.69(W2)+0.32(W4)+6.04(W5)+0.04(W6)+26.75(W7) = 33.84** acres

Wetland type. Explain: **Palustrine Forested, Predominately hardwoods with some Loblolly pine.**

Wetland quality. Explain: **Wetlands are forested and fully functional.**

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: **During wetter months and after rainfall.**

Surface flow is: **Discrete and confined**

Characteristics: **Wetlands 5, 6, and 7 directly abut Socastee Creek. Surface flow for Wetlands 2 and 4 is discussed in Section B.2.c below.**

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

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain: **Wetlands 2 and 4 are separated by a man-made berm approximately 40'-50" wide that was created when Socastee Creek was mechanically manipulated. These wetlands are jurisdictional due to the fact that man-made berms do not sever jurisdiction. According to CFR 328.3(c), "The term adjacent means bordering, contiguous, or neighboring. Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are 'adjacent wetlands'.**

(d) Proximity (Relationship) to TNW

Project wetlands are **1 (or less)** river miles from TNW.

Project waters are **1 (or less)** 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: **There was no surface water present in the wetlands at the time of the site visit.**

**General watershed characteristics include 44.6% forested wetland, 19% forested land, 15.5% urban land, 14.8% agricultural land, 2.8% scrub/shrub land, 1.6% water, and 0.2% barren land.**

Identify specific pollutants, if known: **There are no known pollutants. The wetlands are surrounded by forested and unforested uplands which provide a buffer to the wetlands. However, this site is surrounded by major roads and commercial and residential development creating the potential for some pollution runoff into the wetlands.**

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

Riparian buffer. Characteristics (type, average width): **While the wetlands are not truly a riparian, they do act as a buffer to the adjacent tributary which is a direct conduit to the downstream TNW (Socastee Creek). The wetlands retain and filter runoff before it enters the adjacent tributary.**

Vegetation type/percent cover. Explain: **Within the 30' plot size represented on the data sheets, dominant vegetation consisted of: Tree Stratum - Acer rubrum (Red Maple) (40%), Pinus taeda (Loblolly pine) (5%), Liquidambar styraciflua (Sweetgum) (30%); Sapling/Shrub Stratum - Ligustrum sinense (Chinese Privet) (12%), Morella cerifera (Southern Wax myrtle) (10%), Persea borbonia (Redbay) (8%); Herb Stratum (Polystichum acrostichoides (Christmas fern) (5%); Woody Vine Stratum - Lonicera japonica (Japanese Honeysuckle) (10%), Smilax bona-nox (Greenbriar) (10%).**

Habitat for:

- Federally Listed species. Explain findings:
- Fish/spawn areas. Explain findings:
- Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings: **Evidence of foraging, nesting and travel within and around the tributary of various upland wildlife was observed to include Whitetail deer and Neotropical songbirds..**

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

All wetland(s) being considered in the cumulative analysis: **7**

Approximately ( **234.84** ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

| <u>Directly abuts? (Y/N)</u> | <u>Size (in acres)</u> | <u>Directly abuts? (Y/N)</u> | <u>Size (in acres)</u> |
|------------------------------|------------------------|------------------------------|------------------------|
| N                            | 0.69                   | Y                            | 35                     |
| N                            | 0.32                   |                              |                        |
| Y                            | 6.04                   |                              |                        |
| Y                            | 0.04                   |                              |                        |
| Y                            | 26.75                  |                              |                        |
| Y                            | 166.0                  |                              |                        |

Summarize overall biological, chemical and physical functions being performed: **All wetlands evaluated in this significant nexus determination (SND) which are similarly situated and adjacent (both directly abutting and non-abutting) to the RPW (Socastee Creek) are collectively performing biological, chemical, and physical functions. The wetlands in the review area are situated less than 1 river mile from the nearest TNW. Water discharging from the wetlands enter an onsite perennial RPW (Socastee Creek) which becomes a TNW downstream. Socastee Creek becomes tidally influenced offsite just south of the bridge on McCormick Road and was determined to be a TNW. Wetlands 5,6, and 7 directly abut the tributary and water flows directly from the wetlands into the tributary. Wetlands 2 and 4 are adjacent non-abutting the tributary via a man-made berm. The wetlands are mixed pine/hardwood depressional wetlands that provide breeding grounds and shelter for aquatic species, foraging areas for wetland dependent species, and spawning areas for species that inhabit the main channel as adults. These wetlands also provide organic carbon to the downstream tributaries and ultimately into the Atlantic Ocean, resulting in the nourishment of the downstream food web. The wetlands evaluated in this SND provide the important collective functions of removal of excess nutrients which are contributed by runoff from the surrounding urban areas. The wetlands reduce nitrogen and phosphorus loading downstream, and effectively prevent oxygen depletion that can result from eutrophication. The wetlands also collectively perform flow maintenance functions, including retaining runoff inflow and storing flood water temporarily.**

**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 tributary in combination with its adjacent wetlands have the capacity to carry pollutants or flood waters to the downstream TNW. They provide habitat and lifecycle support functions for fish and other species, such as feeding grounds, nesting, spawning, or rearing young for species that are present in the downstream TNW. The tributary in combination with its adjacent wetlands also have the capacity to transfer nutrients and organic carbon that support downstream foodwebs. This office has determined that there is a significant nexus for the tributary in combination with its adjacent wetlands 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 tributary exhibited signs of constant flowing water at least 90% of the year under normal climatic conditions with a channel within bed and banks, hard sandy bottom, sinuosity, sediment sorting, free of debris and vegetation, and a clearly defined OHWM. Socastee Creek is a named tributary that is depicted as a solid blue line on topographic maps and is visible on aerial photography. Multiple flow events have been observed and the tributary was previously determined to be jurisdictional in a letter dated March 28, 2009 (SAC# 1992-19410-3JB).**

- 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: **3,434** linear feet **45** 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

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

directly abutting an RPW: **The boundary of Wetlands 5,6, and 7 intersect the OHWM of the adjacent tributary (perennial RPW).**

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

Provide acreage estimates for jurisdictional wetlands in the review area: **6.04(W5)+0.04(W6)+26.75(W7)=32.83** 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: **0.69(W2)+0.32(W4)=1.01** 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 non-jurisdictional ditches were observed. These ditches were excavated entirely out of uplands and drain only uplands. A map in the file depicts these ditches.**

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

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

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

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: 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: **Survey plat prepared by Thomas and Hutton dated July 11, 2019, titled "WETLAND SURVEY / OF SIX TRACTS / OF LAND / TOTALING 174.48 AC. / SOCASTEE TOWNSHIP / HORRY COUNTY, SOUTH CAROLINA / prepared for / EASTERN SHORES / FORESTBROOK SOUTH TRACTS".**
- 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. 3040206
- U.S. Geological Survey map(s). Cite scale & quad name: **7.5 min Myrtle Beach - Topo map depicts wet areas and Socastee Creek as a solid blue line.**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **p.82, Yongs (100% of soil component is hydric), Bladen (100% of soil component is hydric), Eulonia (2% of soil component is hydric), Ogeechee (100% of soil component).**
- National wetlands inventory map(s). Cite name: **PFO1/4Bd (Palustrine, Forested, Broad-Leaved Deciduous, Needle-Leaved Deciduous, Saturated, Partially Drained/Ditched), U21 (Upland).**
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: **45051C0679.**
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): **99-11222:169, SCDNR 2006.**
  - or  Other (Name & Date): **Photos taken during site visit dated 4/29/2014 and photos submitted by the agent dated April 1, 2019.**
- Previous determination(s). File no. and date of response letter: **SAC# 1998-40253-3JB Letter dated 4/28/2009; SAC# 1992-19410-3JB Letter dated 3/28/2009, SAC# 2013-01370 Letter dated November 6, 2014, .**
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

**B. ADDITIONAL COMMENTS TO SUPPORT JD: This JD Form assesses Perennial RPW 1 (Socastee Creek) and its adjacent wetlands (Wetlands 2,3,4,5,,7). The wetlands evaluated on this form total 33.84 acres. Wetlands 3,5, and 7 directly abut Socastee Creek. Wetlands 2 and 4 are adjacent non-abutting to Socastee Creek. Socastee Creek was determined to be a TNW at the limits of tidal influence. Previously, Socastee Creek was determined to be a TNW on the subject property (SAC# 1992-19410-3JB). However, after further field observations, research of the best available information, and discussions with EN-H, it was determined that the upstream tidal limits of Socastee Creek begin at the bridge along McCormick Road just downstream of the subject property. Therefore, this JD Form has determined that Socastee Creek is a perennial RPW on the subject property. Socastee Creek in combination with its adjacent wetlands have the capacity to carry pollutants or flood waters to the downstream TNW. They provide habitat and lifecycle support functions for fish and other species, such as feeding grounds, nesting, spawning, or rearing young for species that are present in the downstream TNW. The tributary in combination with its adjacent wetlands also have the capacity to transfer nutrients and organic carbon that support downstream food webs. This office has determined that there is a significant nexus for the tributary in combination with its adjacent wetlands to the downstream TNW.**

The site in review contains several non-jurisdictional ditches that were determined to be excavated out of uplands and drain only uplands.

Several site visits have been performed on this property (6/11/2008, 9/29/2008, 4/29/2014, 11/6/19) .

