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 8, 2017

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: JD Form 1 of 1; SAC 2017-00529 GE Building Expansion Site

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: South Carolina County/parish/borough: **Florence** City:
Center coordinates of site (lat/long in degree decimal format): Lat. **34.188589°** **N**, Long. **-79.845388°** **W**.
Universal Transverse Mercator:
Name of nearest waterbody: **Jeffries 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): **03040201-09**

☒ 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): **May 23, 2017**

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

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

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

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

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: **(Jurisdictional Perennial RPW 1) 550** linear feet: width (ft) and/or **(Impoundment of WoUS) 1.71** acres.
      Wetlands: **(Jurisdictional Wetland 1) 9.00 a. + (Jurisdictional Wetland 2) 1.55 a. = 10.55** 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):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain:.

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

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

Summarize rationale supporting determination: **According to USACE Navigability Study Report No. 11, the recommended limit of navigability for the Great Pee Dee River is located at River Mile (RM) 188.2. The project waters, named Jeffries Creek, enter the Great Pee Dee River at RM 87**.

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": .

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

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

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

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

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

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

(i) General Area Conditions:
Watershed size: **137,175 acres ; HUC 03040201-09**
Drainage area: **1,663 acres**
Average annual rainfall: **44.89** inches
Average annual snowfall: **2.5** inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☒ Tributary flows directly into TNW.
☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **15-20** river miles from TNW.
Project waters are **1 (or less)** river miles from RPW.
Project waters are **15-20** aerial (straight) miles from TNW.
Project waters are **1 (or less)** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: **N/A**.

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

Identify flow route to TNW[5]: **The tributary, a pRPW named Jeffries Creek, flows directly into the Great Pee Dee River, a TNW**.
Tributary stream order, if known: **This tributary is a 3rd 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):
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: **The tributary is relatively stable with no erosion or sloughing banks observed**. **According to aerial photographs, the entire reach of this 3rd order tributary is surrounded by palustrine forested wetlands, which further indicates that this tributary is stable**.
Presence of run/riffle/pool complexes. Explain: **No run/riffle/pool complexes observed**.
Tributary geometry: **Meandering. A review of the topographic map and aerials reveals that this tributary meanders through forested wetlands**
Tributary gradient (approximate average slope): **0-1** %

(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 provides year-round flow based on a review of the aerials and topographic map, which depict the tributary as a shaded linear feature and a solid blue line, respectively. This tributary originates northwest of the project site and flows southeast to its confluence with the Great Pee Dee River, a TNW**.
Other information on duration and volume: **In addition to being recharged by groundwater, the tributary receives overland sheetflow from the adjacent wetlands and uplands in the drainage area and discrete and confined flow from the upstream portion of Jeffries Creek**.

Surface flow is: **Discrete and confined**. Characteristics: **Surface flow is restricted under normal conditions between the bed and banks of the tributary**.

Subsurface flow: **Unknown**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):

☒ clear, natural line impressed on the bank	☐ 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.[7] Explain: .

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

☐ High Tide Line indicated by:	☐ 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;

[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
[6] A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7] Ibid.

☐ 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: **The tributary is a blackwater system with clear flowing water present. Land use in this watershed is comprised of approximately 28% forested wetland, 28% agricultural land, 24% forested land, and 18% urban land. The remaining land uses in this watershed include non-forested wetlands, water, and barren land. The SCDHEC Watersheds website states that there is a high potential for growth in this watershed, which contains most of the City of Florence**.

Identify specific pollutants, if known: **Because a large portion of the watershed is comprised of agricultural land and forested land, the potential exists for herbicides and other pesticides, as well as runoff from land disturbing activities such as plowing and harvesting, to enter the tributary. Because this land use requires regular manipulation of the soils, agricultural activities can create an increase in suspended sediments in the downstream tributaries. According to the SCDHEC website, the downstream monitoring station on Jeffries Creek (PD-256) states that aquatic life and recreational uses are not supported due to dissolved oxygen excursions and fecal coliform bacteria excursions**.

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

☒ Riparian corridor. Characteristics (type, average width): **This tributary supports a riparian zone approximately 200 linear feet wide that contributes to the health of the aquatic system by filtering out pollutants and preventing erosion**.

☒ Wetland fringe. Characteristics: **The entire reach of this tributary is located within a wetland system**.

☒ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings: **Based on information obtained using aerials and NWIs, approximately 10% of the site is comprised of waters of the US. Therefore, this tributary and the adjacent wetlands provide important aquatic habitat for wildlife and a travel corridor for aquatic fauna**.

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: **(Jurisdictional Wetland 1) 9.00 a. + (Jurisdictional Wetland 2) 1.55 a. = 10.55** acres

Wetland type. Explain: **Palustrine forested**.

Wetland quality. Explain: **Fully functional; The project wetlands have not been impacted by minor drainage or vegetation manipulation**.

Project wetlands cross or serve as state boundaries. Explain: **The project wetlands are located on site and do not cross or serve as state boundaries**.

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: **Jurisdictional Wetlands 1 and 2 flow into Jeffries Creek during and after major storm events or during the wetter months of the year**.

Surface flow is**: Overland sheetflow**

Characteristics: **The project wetlands have a direct hydrological connection to the adjacent tributary. Jurisdictional Wetland 1 flows into Jeffries Creek via overland sheetflow. Jurisdictional Wetland 2 flows into Jeffries Creek via pond with a water control structure**.

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: **Jurisdictional Wetland 2 and the adjacent impoundment are separated from the adjacent tributary by a man-made berm**.

(d) Proximity (Relationship) to TNW

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

Project waters are **15-20** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **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: **Water was not observed on the surface of the wetland during the site visit. Land use in this watershed is comprised of approximately 28% forested wetland, 28% agricultural land, 24% forested land, and 18% urban land. The remaining land uses in this watershed include non-forested wetlands, water, and barren land**.

Identify specific pollutants, if known: **Because a large portion of the watershed is comprised of agricultural land and forested land, the potential exists for herbicides and other pesticides, as well as runoff from land disturbing activities such as plowing and harvesting, to enter the tributary. Because this land use requires regular manipulation of the soils, agricultural activities can create an increase in suspended sediments in the downstream tributaries. Additionally, the uplands in this drainage area are comprised primarily of residential and commercial/industrial development. According to the SCDHEC website, the downstream monitoring station on Jeffries Creek (PD-256) states that aquatic life and recreational uses are not supported due to dissolved oxygen excursions and fecal coliform bacteria excursions**.

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

☒ Riparian buffer. Characteristics (type, average width): **While the on-site wetlands are not truly riparian, they do act as a buffer to the adjacent tributary and retain and filter runoff prior to it entering the tributary**.

☒ Vegetation type/percent cover. Explain: **A data point taken by the agent within Jurisdictional Wetland 1 determined that the dominant vegetation is FAC and FACW**.

☒ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings: **The wetland is providing important aquatic habitat and diversity**.

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

All wetland(s) being considered in the cumulative analysis: **3**

Approximately (**210**) 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)
Y	**9.00**		
N	**1.55**		
Y	**355**		

Summarize overall biological, chemical and physical functions being performed: **The tributary, a perennial RPW named Jeffries Creek, and its adjacent wetlands, are providing important biological, chemical, and physical functions. According to the SCDHEC Watersheds website, this watershed is comprised of approximately 28% forested wetland, 28% agricultural land, 24% forested land, and 18% urban land. Due to the predominance of agricultural land use and silvicultural land use in the watershed, herbicides and other pesticides as well as sediment from soil manipulation activities are likely to enter the tributary and downstream TNW. Additionally, the uplands in the drainage area are dominated by residential and commercial development. Runoff from this development is also likely to enter the downstream TNW. The tributary named Jeffries Creek, together with its adjacent wetlands, act as a catch basin to help filter out pollutants from the neighboring uplands and to hold runoff prior to it flowing downstream into the TNW. Besides the obvious functions of stormwater attenuation, absorption, and overstory biomass input into the food web, the onsite wetlands provide a uniquely important ecological connection to other adjacent wetlands and Jeffries 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. Both the on-site wetlands and the wetland system that directly abuts the tributary support a diverse variety of animal species that utilize both the abutting and non-abutting wetlands. Additionally, the on-site wetlands and off-site wetlands are comprised of the same seed source and, therefore, the same plant community. Also, it is well documented that wetland and riparian zones are utilized as travel corridors and foraging grounds by a host of game and non-game species. The on-site wetlands represent a sensitive and increasingly valuable ecosystem that comprises a critical biological connection. Therefore, the on-site wetlands, which are a portion of the larger wetland system that has been separated by a man-made berm, also have an important ecological connection to the adjacent tributary and wetland system. These wetlands, in conjunction with the other adjacent wetlands and Jeffries Creek, collectively have a significant nexus to the downstream Great 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 tributary named Jeffries Creek (pRPW) and the adjacent wetlands are collectively performing important biological, chemical, and physical functions within a watershed largely comprised of agricultural land use. The biological functions being performed include providing breeding grounds and shelter for aquatic animals and diversifying the plant life within the watershed. As a result, these wetlands supply food sources for a variety of wetland dependent species, such as invertebrates, amphibians, reptiles, and mammals. These wetlands and tributary are essential in providing organic carbons in the form of their collective primary productivity to downstream waters, resulting in the nourishment of the downstream food web. The chemical functions being performed consist of the removal of excess pollutants, which are contributed by runoff from the surrounding uplands, from the downstream TNW. The berm separating the on-site wetland and impoundment from the adjacent tributary contribute to the storage of stormwater runoff and prevents sediments and other pollutants from entering the downstream TNW by allowing the suspended pollutants time to settle out of the water. This reduces nitrogen and phosphorus loading downstream and effectively prevents oxygen depletion that can result from eutrophication. Physically, the adjacent wetlands help reduce stormwater flow, and the landscape position of these wetlands and their vegetation prevent soil from eroding and traveling downstream. Not only does this prevent the accumulation of sediment downstream, which can smother fish and other aquatic wildlife, but it also reduces the amount of pollutants downstream because these pollutants are usually transported by sediment particles. These wetlands temporarily store flood waters and reduce downstream peak flows by retaining large amounts of water within the soil and through evapo-transpiration. This helps to maintain seasonal flow volumes. Based on the collective functions described above and their importance to the biological, chemical, and physical integrity of the traditional navigable waters of the Great Pee Dee River, it has been determined that there is a significant nexus between the relevant reach of the tributary and adjacent wetlands to the downstream TNW.**.

Documentation for the Record only: Significant nexus findings for seasonal RPWs and/or wetlands abutting seasonal RPWs:
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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 Jeffries Creek was determined to have perennial flow based on a review of**

the topographic map, aerials, NWIs, soil survey, and information obtained during the site visit. The topographic map depicts this tributary as a solid blue line, which represents a tributary, and the aerials depict this tributary as a shaded linear feature. The NWIs map this tributary as palustrine wetlands (PFO1/2F), and the soil survey maps this area as having hydric soils (Wehadkee and Johnston). During the site visit, this tributary was observed at its intersection with Ebenezer Road. An OHWM and other flow indicators such as a lack of terrestrial vegetation, disturbed leaf litter and debris, and flowing water were observed. Jeffries Creek continues southeast where it flows into the Great Pee Dee River, a TNW .

☐ 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: **550** linear feet **15** width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. Non-RPWs[8] that flow directly or indirectly into TNWs.
☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.
☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☒ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **Jurisdictional Wetland 1 was determined to directly abut the tributary named Jeffries Creek based on a review of the aerials, topo map, soil survey, and NWIs. The topographic map depicts the blue line as intersecting a wetland system. The NWIs map this wetland system as PFO1B, and the soil survey maps these wetlands as hydric soils (Wehadkee and Johnston)..**

☐ 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: **(Jurisdictional Wetland 1) 9.00** acres.

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

Provide acreage estimates for jurisdictional wetlands in the review area: **(Jurisdictional Wetland 2) 1.55** acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.
☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

7. Impoundments of jurisdictional waters.[9]
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☒ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).
Explain: Based on a review of the topographic map, this impoundment was created out of a linear feature that continues south into Jeffries Creek. Although this tributary was not observed during the site visit, wetlands adjacent to and downstream of the impoundment were observed during the site visit. A man-made berm was observed at the downstream end of the impoundment.

[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

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

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

Identify water body and summarize rationale supporting determination: .

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

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

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

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: 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 and sketch by Terracon**.
☒ 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: **Florence West; The topographic map depicts Jeffries Creek as a solid blue line. Jurisdictional Wetlands 1 and 2 are depicted as forested and the impoundment is depicted as a pond created out of a blue line tributary.**.

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

☒ USDA Natural Resources Conservation Service Soil Survey. Citation: **Pg. 9; The soil survey maps Jeffries Creek and Jurisdictional Wetland 1 as Wehadkee & Johnston, a hydric soil. The impoundment is mapped as Water. Jurisdictional Wetland 2 is mapped Sunsweet, a non-hydric soil**.
☒ National wetlands inventory map(s). Cite name: **The NWIs map these wetlands as palustrine scrub-shrub and forested wetlands (PFO1B and PFO1/2F). The impoundment is mapped PUBHx**.
☐ 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, 99:11227:69; The aerials depict these wetlands as forested areas. The impoundment is depicted as open water**.
or ☒ Other (Name & Date): **Site photographs dated February 2, 2017**.
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

ADDITIONAL COMMENTS TO SUPPORT JD: The tributary named Jeffries Creek was determined to have perennial flow based on a review of the topographic map, aerials, NWIs, soil survey, and information obtained during the site visit. The topographic map depicts this tributary as a solid blue line, which represents a tributary, and the aerials depict this tributary as a shaded linear feature. The NWIs map this tributary as palustrine wetlands (PFO1/2F), and the soil survey maps this area as having hydric soils (Wehadkee and Johnston). During the site visit, this tributary was observed at its intersection with Ebenezer Road. An OHWM and other flow indicators such as a lack of terrestrial vegetation, disturbed leaf litter and debris, and flowing water were observed. Jeffries Creek continues southeast where it flows into the Great Pee Dee River, a TNW .

Jurisdictional Wetland 1 was determined to directly abut the tributary named Jeffries Creek based on a review of the aerials, topo map, soil survey, and NWIs. The topographic map depicts the blue line as intersecting a wetland system. The NWIs map this wetland system as PFO1B, and the soil survey maps these wetlands as hydric soils (Wehadkee and Johnston). Based on a review of the topographic map, the on-site impoundment was created out of a linear feature that continues south into Jeffries Creek. Although this tributary was not observed during the site visit, wetlands adjacent to and downstream of the impoundment were observed during the site visit. A man-made berm was observed at the downstream end of the impoundment. The on-site wetland labeled Jurisdictional Wetland 2 on the drawing was determined to have a significant nexus to the downstream TNW in Section IIIC above.

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