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): July 8, 2015

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: JD Form 1 of 1; SAC 2015-00552-4E Cheraw Airport Site

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: South Carolina County/parish/borough: **Chesterfield** City:
Center coordinates of site (lat/long in degree decimal format): Lat. **34.726400**° **N**, Long. **-79.972048**° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: **Unnamed tributary of Goodmans 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): **03040201-05**
☒ 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: **July 6, 2015**
☐ Field Determination. Date(s):

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: **80** linear feet: **+/-4**width (ft) and/or acres.
Wetlands: **0.2** acres.

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

2. Non-regulated waters/wetlands (check if applicable):[3]
☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain: .

SECTION III: CWA ANALYSIS

[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.

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: **The Great Pee Dee River**.

Summarize rationale supporting determination: **Based on the U.S. Army Corps of Engineers Charleston District Navigability Study of 1977, the Great Pee Dee River has been determined to be a TNW. The confluence of the named tributary, Goodmans Creek, and the Great Pee Dee River is located at River Mile (RM) 168. The 1977 Navigability Study depicts the "Practical Limits of Navigation" and "Limits of Navigable Waters of the U.S." as located at RM 187.**

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: **225,838 acres ; HUC 03040201-05**
Drainage area: **42 acres**
Average annual rainfall: 43.73 to 51.39 inches according to the NRCS WETS Data
Average annual snowfall: 2.2 inches according to the NRCS WETS Data

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☒ Tributary flows through **2** tributaries before entering TNW.

Project waters are **5-10** river miles from TNW.
Project waters are **1 (or less)** river miles from RPW.
Project waters are **2-5** aerial (straight) miles from TNW.
Project waters are **1 (or less)** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: Project waters do not cross or serve as state boundaries; all waters are located within Chesterfield County, South Carolina**.**.

[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 unnamed 1st order tributary, a seasonal RPW (sRPW), flows into a 2nd order stream named Goodmans Creek, a perennial RPW. Goodmans Creek flows into Westfield Creek, a pRPW. Westfield Creek continues southeast where it flows into into the Great Pee Dee River, a TNW**.

Tributary stream order, if known: **This tributary is a 1st order stream**.

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

Tributary is: ☒ Natural: **The unnamed tributary has not been manipulated and has a sinous channel within bed and banks.**

☐ Artificial (man-made). Explain: .

☐ Manipulated (man-altered). Explain:

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

Average width: **4** feet

Average depth: **2** 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: **Photos depict vegetation along banks which run through adjoining wetlands, suggesting fairly stable banks.. The tributary is relatively stable with no erosion or sloughing of banks observed.** .

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

Tributary geometry: **Meandering. Review of aerial photos reveals the tributary meanders through forested wetlands**

Tributary gradient (approximate average slope): **0-1** %

(c) Flow:

Tributary provides for: **Seasonal flow**

Estimate average number of flow events in review area/year: **11-20**

Describe flow regime: **The tributary provides seasonal flow based on a review of the aerial photographs, the topographic map, and information submitted by the agent. The aerials depict this tributary as a shaded linear feature, and the topographic map shows a decrease in elevation at the location of the tributary; however, it does not depict this tributary as a blue line. Seasonal flow is defined as flow typically for three months out of the year under normal climatic conditions. The tributary begins south of the project area and flows north to its confluence with another 1st order tributary named Goodmans Creek. At this confluence, the tributary becomes a 2nd order tributary that continues flowing east until its confluence with Westfield Creek. Westfield Creek continues southeast where it drains into the Great Pee Dee River, a TNW.** .

Other information on duration and volume: **Photos submitted by the agent, dated March 2, 2015, depict flowing water within this seasonal RPW. Additional evidence of flow includes a lack of terrestrial vegetation within the channel, water staining, wrack lines, and a defined OHWM. In addition to being recharged by groundwater, this tributary receives overland sheetflow from the adjacent wetlands and uplands in the drainage area. The tributary has a low gradient and low velocity, which allows for suspended pollutants to settle out of the water and into the substrate located in the bottom of the streambed** .

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

[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.

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

☐ Mean High Water Mark indicated by:
- ☐ survey to available datum;
- ☐ physical markings;
- ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

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

Explain: **The tributary is a blackwater system with clear flowing water present. Land use in this watershed is comprised of approximately 33% agricultural land, 29% forested land, 25% forested wetlands, and 6% urban land. The remaining land uses in this watershed include scrub/shrub land, non-forested wetlands, barren land, and water. SCDHEC website states that there is a low to moderate potential for growth in this watershed, and a significant portion of this watershed is rural with large tracts of land used for agricultural or silvicultural purposes.**.

Identify specific pollutants, if known: **Because a large portion of the watershed is in agricultural or silvicultural production, the potential exists for herbicides and other pesticides used in these practices, as well as sediment runoff associated with land disturbing activities such as plowing, harvesting and cultivating, to enter the tributary. These land uses require regular manipulation of the soils, which creates an increase in suspended sediments within the downstream tributaries. Furthermore, a review of the SCDHEC website revealed a downstream monitoring station on the Great Pee Dee River(PD-012) that states aquatic life and recreational uses are fully supported. Although there is a significant increasing trend in five-day biochemical oxygen and pH, decreasing trends in turbidity, total phosphorus concentration, and fecal coliform bacteria concentrations indicate improving conditions for these parameters**.

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

☒ Riparian corridor. Characteristics (type, average width): **This tributary supports a 100' wide riparian zone that contributes to the health of the aquatic system by filtering out pollutants and preventing erosion**.

☒ Wetland fringe. Characteristics: **The upstream and downstream portions of this tributary are 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: .

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: **0.2** acres

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

Wetland quality. Explain: **Fully Functional; The project wetland has not been manipulated**.

Project wetlands cross or serve as state boundaries. Explain: **The project wetland is located on site and does not cross or serve as state boundaries**.

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: **Hydrologic connectivity from the wetland into the abutting tributary is continuous, as the tributary flows through the wetland. Flow through the tributary is normally during wetter months and after rainfall events. Physical evidence observed indicates that uninterrupted flow occurs several times per year**.

Surface flow is**: Overland sheetflow**

Characteristics: **Flow from the abutting wetland into the tributary is via overland sheetflow.** .

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

☐ Dye (or other) test performed: **No**.

(c) Wetland Adjacency Determination with Non-TNW:

☒ Directly abutting

☐ Not directly abutting
- ☐ Discrete wetland hydrologic connection. Explain: .
- ☐ Ecological connection. Explain: .

[7] Ibid.

☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **5-10** river miles from TNW.
Project waters are **2-5** aerial (straight) miles from TNW.
Flow is from: **Wetland to navigable waters.**
Estimate approximate location of wetland as within the **100 - 500-year** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: **Based on information submitted by the applicant, water was observed on the surface of the wetland and no discoloration was noted. Land use in this watershed is comprised of approximately 33% agricultural land, 29% forested land, 25% forested wetlands, and 6% urban land. The remaining land uses in this watershed include scrub/shrub land, non-forested wetlands, barren land, and water.** .

Identify specific pollutants, if known: **Upland areas adjacent to the on-site wetland have been clearcut in the past; however, no mechanical site prep has occurred on site. Because the dominant land use in this watershed is agriculture, the freshwater wetlands located within the project area and off site are likely impacted by various pesticides used during normal crop rotations. A review of the SCDHEC website revealed a downstream monitoring station on the Great Pee Dee River(PD-012) that states aquatic life and recreational uses are fully supported. Although there is a significant increasing trend in five-day biochemical oxygen and pH, decreasing trends in turbidity, total phosphorus concentration, and fecal coliform bacteria concentrations indicate improving conditions for these parameters**.

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

☒ Riparian buffer. Characteristics (type, average width): **The on site wetlands are a portion of a larger wetland system that provides a 100' wide riparian buffer adjacent to a tributary. The wetlands retain and filter runoff from the surrounding uplands before it enters the adjacent tributary**.

☒ Vegetation type/percent cover. Explain: **Dominant vegetation is FACW and FAC. Dominant species include Acer rubrum, Magnolia virginiana, Quercus nigra, and Arundinaria gigantea.**

☒ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings: **This wetland system enhances wildlife diversity through timber type changes and the transition between upland and aquatic systems.**

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

All wetland(s) being considered in the cumulative analysis: **1**
Approximately (**5.2**) 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)
Onsite Wetlands		Offsite Wetlands	
Y	**0.2**	**Y**	**5.0**

Summarize overall biological, chemical and physical functions being performed: **The seasonal RPW that is an unnamed tributary of Goodmans Creek, and its adjacent wetlands, are providing important biological, chemical, and physical functions within a predominately upland drainage area. According to the SCDHEC Watersheds website, this watershed consists of approximately 33% agricultural land, 29% forested land, 25% forested wetlands, and 7% urban land. The remaining land uses in this watershed include scrub/shrub land, non-forested wetlands, barren land, and water. The watershed is predominately rural with a large portion of the land in agriculture or silviculture production. The wetland system within the drainage area is a depressional wetland that is situated relatively low in the landscape and receives and stores runoff from the surrounding uplands. This water storage prevents flood flows from high rainfall events from moving quickly downstream. The seasonal RPW and its adjacent wetlands act as a catch basin to help filter out pollutants from the neighboring uplands. This wetland system enhances wildlife diversity, supports the downstream food web, and provides nutrient fixation, flood attenuation and flow maintenance functions. See III.C.3. below for more details.**

C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

Documentation for the Record only: Significant nexus findings for seasonal RPWs and/or wetlands abutting seasonal RPWs: The tributary (seasonal RPW) and all similarly situated and adjacent freshwater wetlands are collectively performing functions consistent with following: Biological- wetlands adjacent to this RPW include depressional wetlands. As such, a variety of biological functions are being performed which include providing breeding grounds and shelter for aquatic species and foraging areas for wetland dependent species. 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. Chemical- wetlands and tributary within the review area are providing the important collective functions of removal of excess nutrients into the downstream TNW. These pollutants, which are contributed by runoff from surounding uplands, are prevented from being discharged downstream due to suspended sediments and other pollutants being retained within the wetlands. This reduces nitrogen and phosphorus loading downstream and effectively prevents oxygen depletion that can result from eutrophication. According to the SCDHEC website, the downstream monitoring station located on the Great Pee Dee River (PD-012) shows that aquatic life and recreational uses are fully supported. Although there is a significant increasing trend in five-day biochemical oxygen and pH, decreasing trends in turbidity, total phosphorus concentration, and fecal coliform bacteria concentrations indicate improving conditions for these parameters. Therefore, the loss of the sRPW and similarly situated wetlands would have a direct effect on the chemical integrity of the TNW by allowing additional pollutants to be released downstream. Physical- Wetlands and tributary in the review area are collectively performing flow maintenance functions, including retaining runoff inflow and storing rain water temporarily. Flow maintenance results in the reduction of downstream peak flows (discharge and volumes), helping to maintain seasonal flow volumes and reducing the frequency of overbank events which flood adjacent properties. Increased water velocity also increases the rate of erosion downstream, which not only leads to a loss of land but also increases the amount of sediments and other pollutants in the TNW. 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 all adjacent wetlands to the downstream TNW..

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   ☐ TNWs: linear feet width (ft), Or, acres.

☐ Wetlands adjacent to TNWs: acres.

2. RPWs that flow directly or indirectly into TNWs.

☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:

☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: **The tributary was determined to be an RPW with seasonal flow based on a review of the aerials, topographic map, soil survey, NWIs, and information submitted by the agent. Aerials depict this tributary as a shaded linear feature with a meandering channel that discharges into Goodmans Creek downstream. Although the topographic map does not depict this tributary as a blue line, it does show that there is a decrease in gradient at this location which usually represents a drainage feature. The soil survey maps this tributary as Coxville, which is a hydric soil, and the NWIs map this area as wetlands (PFO1/4B & PSS1/3B). Information submitted by the agent showed that this tributary has several indicators of flow including sediment sorting, the removal of leaf litter and debris in the channel, and a lack of vegetation in the bottom of the tributary. This tributary flows into Goodmans Creek, a perennial RPW, which flows into Westfield Creek, a perennial RPW. Westfield Creek continues southeast where it flows into the Great Pee Dee River, a TNW** .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☒ Tributary waters: **80** linear feet **4** 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: **.**

☒ 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: **The on-site wetland was determined to directly abut the seasonal RPW from a review of the aerials, soil survey, NWIs, and information submitted by the agent. The aerials depict a meandering linear feature that flows through the wetland system. The NWIs map this area as palustrine wetlands (PFO1/4B & PSS1/3B). The soil survey maps the wetland system as Coxville, a hydric soil. Information submitted by the agent, including data points taken adjacent to the on-site tributary, verify that this wetland system directly abuts the unnamed seasonal RPW**.

Provide acreage estimates for jurisdictional wetlands in the review area: **0.20** 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: 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.

[8]See Footnote # 3.

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:

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 by Terracon Consulting, Inc**.
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☒ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .

[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[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.*

☐ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: **Cheraw; The topographic map depicts the site as forested uplands. A decrease in the topographic gradient represents a drainage feature that is depicted on the drawing as "Seasonal RPW"**.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: **Sheet 15; The soil survey depicts the onsite wetland as Coxville a hydric soil listed on the National Hydric Soil List. The remainder of the site is mapped Candor, which is partially hydric**.
☒ National wetlands inventory map(s). Cite name: **The NWIs depict the onsite wetland as PFO1/4B & PSS1/3B, a palustrine forested/scrub-shrub wetland that is saturated**.
☐ 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, 99:12093:33; The aerials depict the site as forested with a shaded linear feature present within the project area** .
or ☒ Other (Name & Date): **Photos provided by the agent dated March 2, 2015**.
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: The on-site wetland was determined to directly abut the seasonal RPW from a review of the aerials, soil survey, NWIs, and information submitted by the agent. The aerials depict a meandering linear feature that flows through the wetland system. The NWIs map this area as palustrine wetlands (PFO1/4B & PSS1/3B). The soil survey maps the wetland system as Coxville, a hydric soil. Information submitted by the agent, including data points taken adjacent to the on-site tributary, verify that this wetland system directly abuts the unnamed seasonal RPW.

The tributary was determined to be an RPW with seasonal flow based on a review of the aerials, topographic map, soil survey, NWIs, and information submitted by the agent. Aerials depict this tributary as a shaded linear feature with a meandering channel that discharges into Goodmans Creek downstream. Although the topographic map does not depict this tributary as a blue line, it does show that there is a decrease in gradient at this location which usually represents a drainage feature. The soil survey maps this tributary as Coxville, which is a hydric soil, and the NWIs map this area as wetlands (PFO1/4B & PSS1/3B). Information submitted by the agent showed that this tributary has several indicators of flow including sediment sorting, the removal of leaf litter and debris in the channel, and a lack of vegetation in the bottom of the tributary. This tributary flows into Goodmans Creek, a perennial RPW, which flows into Westfield Creek, a perennial RPW. Westfield Creek continues southeast where it flows into the Great Pee Dee River, a TNW .