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 28, 2016

B.	DISTRICT OFFICE, FILE NAME, AND NUMBER: CESAC-RD-NE; JD Form 1 of 2; SAC 2015-01771 Immanuel Farm
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. 34.725499° N, Long79.947491° W. Universal Transverse Mercator: Name of nearest waterbody: 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: Field Determination. Date(s): July 20, 2016
	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
revi	re Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the ew 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: CWA SECTION 404 DETERMINATION OF JURISDICTION.
The	re 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): 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: 2200 linear feet: 4-6width (ft) and/or acres. Wetlands: (Jurisdictional Wetland ") 19.0 a. + Jurisdictional Wetland "B") 0.70 = 19.7 acres.
	c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Established by OHWM., Pick List Elevation of established OHWM (if known): N/A.

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: A potentially jurisdictional linear feature was assessed within the review area and determined to be nonjurisdictional. This feature originates south of the project site and continues north through Jurisdictional Wetland "B" and Jurisdictional Wetland "A" before reaching Goodman's Creek. It is not depicted on the topographic map or

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.

aerials. Based on a review of the aerials, topographic map, and information obtained during the site visit, this feature was determined to be man-made on site. During the site visit, this feature was observed as having water stained leaf litter and debris in the bottom and no OHWM. This linear feature was determined to be a non-jurisdictional ditch. This non-jurisdictional ditch provides a direct hydrological connection from Jurisdictional Wetland "B" to the downstream TNW.

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: The Great Pee Dee River was determined to be a TNW based on a review of the USACE Navigability Study Report No. 11. According to the Navigability Study, the Great Pee Dee River's recommended practical limit of navigability is located at River Mile (RM) 188.2. The project waters enter the Great Pee Dee River at approximately RM 169.

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 waterbody⁴ 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: 212,351 acres; HUC 03040201-05

Drainage area: 940 acres

Average annual rainfall: **47.84** inches Average annual snowfall: **2.2** inches

(ii) Physical Characteristics:

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

(a)	Relationship with TNW: ☐ Tributary flows directly into TNW. ☐ Tributary flows through 1 tributaries before entering TNW.
	Project waters are 2-5 river miles from TNW. Project waters are 1 (or less) river miles from RPW. Project waters are 2-5 aerial (straight) miles from TNW. Project waters are 1 (or less) aerial (straight) miles from RPW. Project waters cross or serve as state boundaries. Explain: N/A.
	Identify flow route to TNW ⁵ : The tributary named Goodmans Creek flows east where it enters Westfield Creek, a perennial RPW, prior to flowing in to the Great Pee Dee River, a TNW. Tributary stream order, if known: The tributary is a 3 rd 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: 4-6 feet Average depth: 2-4 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:
erosion or slo	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: The tributary is relatively stable with no ughing banks observed. Presence of run/riffle/pool complexes. Explain: No run/riffle/pool complexes were observed. Tributary geometry: Meandering. 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: This tributary receives flow from the abutting wetlands via overland sheetflow. Other information on duration and volume:
	Surface flow is: Discrete and confined. Characteristics:
	Subsurface flow: Unknown. Explain findings:
	Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): clear, natural line impressed on the bank changes in the character of soil changes in the character of soil chapter in the presence of litter and debris destruction of terrestrial vegetation the presence of wrack line sediment sorting sediment sorting leaf litter disturbed or washed away sediment deposition water staining other (list): Discontinuous OHWM. Explain:
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

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. ⁶A 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. ⁷Ibid.

			☐ Figh 11de Line indicated by: ☐ Mean High Water Mark indicated by: ☐ oil or scum line along shore objects ☐ survey to available datum; ☐ physical markings; ☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types. ☐ tidal gauges ☐ other (list):
In a	nitori additi	Cha Ider ing st	emical Characteristics: tracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: The tributary named Goodmans Creek is typical of the tributaries in this watershed. This tributary is located within the Great Pee Dee River watershed, which consists of approximately 33% forested land, 29% agricultural land, 27% forested wetland, and 7% urban land. The remaining land uses in this watershed are water, non-forested wetland, and barren land. Intify specific pollutants, if known: According to the SCDHEC Watersheds website, a review of the downstream tation for the Great Pee Dee River (PD 012) shows that this area does not support aquatic uses due to excess copper. There are significant increasing trends in five-day biochemical oxygen demand and total phosphorus concentration. uses are fully supported; however, there is a significant increasing trend in fecal coliform bacteria.
vildlife :			Riparian corridor. Characteristics (type, average width): 200-400'. Wetland fringe. Characteristics: The entire length of the on-site tributary intersects 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: This perennial RPW provides an important habitat and corridor for a connection to the downstream TNW for aquatic species.
2.	Cha	ract	eristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW
	(i)		Assical Characteristics: General Wetland Characteristics: Properties: Wetland size: (Jurisdictional Wetland ") 19.0 a. + Jurisdictional Wetland "B") 0.70 = 19.7 acres Wetland type. Explain: Palustrine. Wetland quality. Explain: Fully functional. Project wetlands cross or serve as state boundaries. Explain: N/A.
		(b)	General Flow Relationship with Non-TNW: Flow is: Ephemeral flow. Explain: Surface flow is: Overland sheetflow
Goo	odma	ns C	Characteristics: Wetland "A" flows into the perennial RPW via overland sheetflow. Wetland "B" flows into treek via discrete and confined flow through a non-jurisdictional ditch.
			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: Wetland "B" flows directly into the tributary via a non-
juri	sdict	ional	Discrete wedalid hydrologic connection. Explain: Wedalid Hows directly into the tributary via a non-limitation. Ecological connection. Explain: Separated by berm/barrier. Explain: .
		(d)	Proximity (Relationship) to TNW Project wetlands are 2-5 river miles from TNW. Project waters are 2-5 aerial (straight) miles from TNW. Flow is from: Wetland to navigable waters. Estimate approximate location of wetland as within the 100 - 500-year floodplain.
	(ii)	Che	emical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: The wetland has been determined to be seasonally inundated with clear water present. This wetland is located within the Great Pee Dee River watershed, which consists of approximately 33%

forested land, 29% agricultural land, 27% forested wetland, and 7% urban land. The remaining land uses in this watershed are water, non-forested wetland, and barren land.

Identify specific pollutants, if known: According to the SCDHEC Watersheds website, a review of the downstream monitoring station for the Great Pee Dee River (PD 012) shows that this area does not support aquatic uses due to excess copper. In addition, there are significant increasing trends in five-day biochemical oxygen demand and total phosphorus concentration. Recreational uses are fully supported; however, there is a significant increasing trend in fecal coliform bacteria.

	(iii) Biological Characteristics. W	Vetland supports (ch	neck all that apply):	
	Riparian buffer. Characte	ristics (type, average	width):	
	☐ Vegetation type/percent co	over. Explain:		
	☐ Federally Listed specie	es. Explain findings:		
	☐ Fish/spawn areas. Exp	lain findings: .		
	Other environmentally	-sensitive species. E	Explain findings: .	
	Aquatic/wildlife divers	sity. Explain finding	s: These wetlands provide in	nportant aquatic habitat for wildlife.
3.	Characteristics of all wetlands adj All wetland(s) being considere Approximately (230.7) acres For each wetland, specify the f	d in the cumulative a in total are being con	nalysis: 3	lysis.
	Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
	N N	0.70 13	Y Y	19 198

Summarize overall biological, chemical and physical functions being performed: The 3rd order perennial RPW, named Goodmans Creek, and the approximately 230.7 acres of wetlands located adjacent to this perennial RPW contribute vital biological, chemical, and physical functions to the downstream TNW. These wetlands and the adjacent pRPW make up an important ecological system with vital aquatic habitat that supports an abundance of wildlife in a watershed that consists predominately of uplands. Due to the prevalence of agriculture land use and residential development in this watershed, these wetlands and the adjacent pRPW are acting as a catch basin for the adjacent uplands by filtering sediments, herbicides, and other pollutants and by reducing the amount of flood waters reaching the downstream TNW.

C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: The 3rd order perennial RPW, which is named Goodmans Creek, and the nonabutting wetlands contribute vital biological, chemical, and physical functions to the downstream TNW. The wetlands provide important aquatic habitat used for feeding, nesting, and other functions that support wildlife within uplands that are predominately in use for residential development purposes. These wetlands also act as a catch basin for the adjacent uplands by filtering sediments, herbicides, and other pollutants and by reducing the amounts of flood waters that can reach the downstream TNW. These wetlands have a direct hydrologic connection to the downstream perennial RPW via non-jurisdictional ditches. Because of this connection, these wetlands have the capacity to transfer nutrients to the downstream pRPW that provide support to the aquatic wildlife in the perennial RPW and the downstream TNW. Due to the prevalence of developed land in this watershed, these wetlands are a vital part of the perennial RPW's 940 acre drainage area and were determined to have a significant nexus to the downstream TNW.

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

	TERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL AT 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: Based on a review of the aerials, topographic map, soil survey, and NWIs, the 3 rd order tributary was determined to have perennial flow. The aerials depict this tributary as a shaded linear feature, and the topographic map depicts this tributary as a blue line. The soil survey maps this tributary as Chewacla-Chastain, a hydric soil. The NWIs map this tributary as palustrine wetlands. This 3 rd order tributary flows into Westfield Creek, pRPW, prior to entering 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: linear feet 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 "A" was determined to directly abut the on site tributary named Goodmans Creek. The topographic map depicts this wetland as forested wetlands that are part of a larger wetland system that Goodmans Creek flows through. The NWIs map this wetland as palustrine forested and the

⁸See Footnote # 3.

		soil survey maps this wetland system as Chewacla-Chastain, a hydric soil. During the site visit, this wetland was viewed and determined to directly abut Goodmans Creek .
		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 "A") 19.0 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 "B") 0.70 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. 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:
Е.	SUC	DLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY CH 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:
	Ide	ntify water body and summarize rationale supporting determination:
		vide 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.		N-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): A linear feature was assessed within the review area and determined to be a non-tional ditch.
	fact	vide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR ors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional gment (check all that apply):

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.

	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.
	ovide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such inding 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.
SECTI	ON IV: DATA SOURCES.
and	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: Cheraw; The topographic map depicts Wetland "A" as forested stlands and Wetland "B" as cleared uplands. Goodmans Creek is depicted as a solid blue line. USDA Natural Resources Conservation Service Soil Survey. Citation: Page 15; The soil survey maps the wetlands on site as newacla-Chastain, a hydric soil, and Emporia, which is partially hydric. National wetlands inventory map(s). Cite name: The NWIs map the wetlands on site as palustrine forested (PFO4/1B, TO1B, and PFO1/4B). The uplands are mapped as uplands planted pine (U42P) and upland agriculture (U21). State/Local wetland inventory map(s): FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

B. ADDITIONAL COMMENTS TO SUPPORT JD: Jurisdictional Wetland "A" was determined to directly abut the 3rd order tributary named Goodmans Creek. Based on a review of the aerials, topographic map, soil survey, and NWIs, the 3rd order tributary was determined to have perennial flow. The aerials depict this tributary as a shaded linear feature, and the topographic map depicts this tributary as a blue line. The soil survey maps this tributary as Chewacla-Chastain, a hydric soil. The NWIs map this tributary as palustrine wetlands. This 3rd order tributary flows into Westfield Creek, pRPW, prior to entering the Great Pee Dee River, a TNW.

A potentially jurisdictional linear feature was assessed within the review area and determined to be non-jurisdictional. This feature originates south of the project site and continues north through Jurisdictional Wetland "B" and Jurisdictional Wetland "A" before reaching Goodman's Creek. It is not depicted on the topographic map or aerials. Based on a review of the aerials, topographic map, and information obtained during the site visit, this feature was determined to be man-made on site. During the site visit, this feature was observed as having water stained leaf litter and debris in the bottom and no OHWM. This linear feature was determined to be a non-jurisdictional ditch. This non-jurisdictional ditch provides a direct hydrological connection from Jurisdictional Wetland "B" to the downstream TNW. The Jurisdictional Wetland "B" on site was determined to be adjacent, non-abutting, to the downstream TNW in Section IIIC above.

APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

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SECTION I: BACKGROUND INFORMATION

Δ	REPORT COMPLETION	DATE FOR A	APPROVED.	HIRISDICTIONAL.	DETERMINATION	(ID)
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B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CESAC-RD-NE; JD Form 2 of 2; SAC 2015-01771 Immanuel Farm 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. 34.725499° N, Long. -79.947491° W. Universal Transverse Mercator: Name of nearest waterbody: 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: Field Determination. Date(s): July 20, 2016 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. 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

	_	Wettands adjacent to 11005
	\boxtimes	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: **800** linear feet: **2-4**width (ft) and/or acres Wetlands: acres.

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

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.

TNW

Identify TNW: Great Pee Dee River.

Summarize rationale supporting determination: The Great Pee Dee River was determined to be a TNW based on a review of the USACE Navigability Study Report No. 11. According to the Navigability Study, the Great Pee Dee River's recommended practical limit of navigability is located at River Mile (RM) 188.2. The project waters enter the Great Pee Dee River at approximately RM 169.

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 waterbody⁴ 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.

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

(i) General Area Conditions:

Watershed size: Pick List: Drainage area: **Pick List** Average annual rainfall: inches Average annual snowfall: inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW. Tributary flows through **Pick List** tributaries before entering TNW. Project waters are **Pick List** river miles from TNW. Project waters are **Pick List** river miles from RPW. Project waters are **Pick List** aerial (straight) miles from TNW. Project waters are **Pick List** aerial (straight) miles from RPW. Project waters cross or serve as state boundaries. Explain:

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 : Tributary stream order, if known: .
(b)	General Tributary Characteristics (check all that apply): Tributary is: Natural Artificial (man-made). Explain: Manipulated (man-altered). Explain:
	Tributary properties with respect to top of bank (estimate): Average width: feet Average depth: feet Average side slopes: Pick List.
	Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain:
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Pick List. Tributary gradient (approximate average slope): %
(c)	Flow: Tributary provides for: Pick List Estimate average number of flow events in review area/year: Pick List Describe flow regime: Other information on duration and volume:
	Surface flow is: Pick List. Characteristics: .
	Subsurface flow: Pick List. Explain findings: Dye (or other) test performed:
	Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): clear, natural line impressed on the bank changes in the character of soil destruction of terrestrial vegetation the presence of wrack line shelving vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition destruction of terrestrial vegetation the presence of wrack line sediment sorting scour multiple observed or predicted flow events 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: 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.
Cha	emical Characteristics: racterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.) Explain: tify specific pollutants, if known:

(iii)

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. ⁶A 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. ⁷Ibid.

	(iv)	Bio	logical Characteristics. Channel supports (check all that apply):
		H	Riparian corridor. Characteristics (type, average width): Wetland fringe. Characteristics:
		H	Habitat for:
			Federally Listed species. Explain findings:
			Fish/spawn areas. Explain findings:
			☐ Other environmentally-sensitive species. Explain findings: ☐ Aquatic/wildlife diversity. Explain findings:
2.	Cha	aract	eristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW
	(i)	Phy	vsical Characteristics:
			General Wetland Characteristics:
			Properties: Wetland size: acres
			Wetland size: acres Wetland type. Explain: .
			Wetland quality. Explain: .
			Project wetlands cross or serve as state boundaries. Explain:
		(b)	General Flow Relationship with Non-TNW:
			Flow is: Pick List . Explain: .
			Surface flow is: Pick List
			Characteristics: .
			Subsurface flow: Pick List. Explain findings: .
			Dye (or other) test performed:
		(c)	Wetland Adjacency Determination with Non-TNW:
			☐ Directly abutting
			Not directly abutting
			☐ Discrete wetland hydrologic connection. Explain: ☐ Ecological connection. Explain:
			Separated by berm/barrier. Explain:
		(4)	Dravimity (Polationship) to TNW
		(u)	Proximity (Relationship) to TNW Project wetlands are Pick List river miles from TNW.
			Project waters are Pick List aerial (straight) miles from TNW.
			Flow is from: Pick List.
			Estimate approximate location of wetland as within the Pick List floodplain.
	(ii)		emical Characteristics: aracterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed
		CII	characteristics; etc.). Explain:
		Ide	ntify specific pollutants, if known:
	(iii)) Bio	logical Characteristics. Wetland supports (check all that apply):
			Riparian buffer. Characteristics (type, average width):
		H	Vegetation type/percent cover. Explain: Habitat for:
		ш	Federally Listed species. Explain findings:
			Fish/spawn areas. Explain findings:
			☐ Other environmentally-sensitive species. Explain findings: ☐ Aquatic/wildlife diversity. Explain findings:
			Aquatic/winding diversity. Explain inidings.
3.	Cha		eristics of all wetlands adjacent to the tributary (if any)
			wetland(s) being considered in the cumulative analysis: Pick List
			proximately () 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>

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

D.

seasonally:

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:

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

	TERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL AT 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: Based on a review of the aerials, soil survey, NWIs, and site visit, the unnamed tributary of
	Goodmans Creek was determined to have perennial flow. The aerials depict this tributary as a shaded linear feature
	The soil survey maps this tributary as Chewacla-Chastain, a hydric soil. The NWIs map this tributary as palustrine
	wetlands. During the site visit, this tributary was viewed as having an OHWM and a sinous channel within bed and
	banks. This 1st order tributary flows into Goodmans Creek, a pRPW discussed on JD Form 1 of 2. Goodmans Creek
	flows into Westfield Creek, pRPW, prior to entering 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

	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: 800 linear feet 2-4 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:		
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.		
5.	Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.		
	Provide acreage estimates for jurisdictional wetlands in the review area: 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. 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:		
DE SU	OLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY CH 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):			

E.

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

	☐ 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 <u>sole</u> 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.
SEC	CTION 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 submitted by Mr. Andrecioli. 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: Cheraw; The topographic map depicts this tributary as forested
	uplands. ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: Page 15; The soil survey maps this tributary on site as Chewacla-Chastain, a hydric soil. ☐ National wetlands inventory map(s). Cite name: The NWIs map this tributary as palustrine forested (PFO1B and PFO1/4B). ☐ 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 tributary as a shaded linear feature.
	or Other (Name & Date): 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: Based on a review of the aerials, soil survey, NWIs, and site visit, the unnamed tributary of Goodmans Creek was determined to have perennial flow. The aerials depict this tributary as a shaded linear feature. The soil survey maps this tributary as Chewacla-Chastain, a hydric soil. The NWIs map this tributary as palustrine wetlands. During the site visit, this tributary was viewed as having an OHWM and a sinous channel within bed and

banks. This 1st order tributary flows into Goodmans Creek, a pRPW discussed on JD Form 1 of 2. Goodmans Creek flows into Westfield Creek, pRPW, prior to entering the Great Pee Dee River, a TNW.