## APPROVED JURISDICTIONAL DETERMINATION FORM

**U.S. Army Corps of Engineers** 

\*\*Form 1 of 2\*\*

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

# **SECTION I: BACKGROUND INFORMATION**

## REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): July 8, 2015

# B. DISTRICT OFFICE, FILE NAME, AND NUMBER: SAC # 2015-00517-2T The Woodlands Form 1 of 2

<b>C.</b> 1	PROJECT LOCATION AND BACKGROUND INFORMATION:  State: South Carolina County/parish/borough: Dorchester County City: Summerville  Center coordinates of site (lat/long in degree decimal format): Lat. 33.029453° N, Long. – 81.194688° W.  Universal Transverse Mercator:
	Name of nearest waterbody: Sawmill Branch
	Name of nearest Traditional Navigable Water (TNW) Into which the aquatic resource flows: N/A  Name of watershed or Hydrologic Unit Code (HUC): 03050201  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 8, 2015  Field Determination. Date(s): June 25, 2015
	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
	Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the iew 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:
В.	CWA SECTION 404 DETERMINATION OF JURISDICTION.
The	ere Are no "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 waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands
	b. Identify (estimate) size of waters of the U.S. in the review area:  Non-wetland waters: linear feet: width (ft) and/or acres.  Wetlands: 2.016 acres.
	c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Pick List, Pick List Elevation of established OHWM (if known):
	2. Non-regulated waters/wetlands (check if applicable): [Including potentially jurisdictional features that upon
	accecement are NOT waters or wetlands

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

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

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

The project review area also contains multiple non-jurisdictional linear conveyances. The first linear conveyence is the roadside swale (LC#1) located on Maple Road. This feature is a swale and by definition is not jurisdictional and not regulated by Section 404 the CWA. The second linear conveyance is the second swale (LC #2) that is located on the opposite side of Wetland 1. This feature is also a swale and by definition is not jurisdictional and not regulated by Section 404 of the CWA. This swale terminates in uplands. A third linear conveyance (LC#3) is a roadside ditch that displayed no OHW mark, appeared to have been excavated, had no evidence of relatively permanent flow, was dry, and contained leaf litter. LC#3 flows through a portion of Wetland 2 and Wetland 3, where it then becomes a tributary. The portion of LC#3 above Wetland 3 is a non-jurisdictional linear conveyance and not regulated by Section 404 of the CWA. The jurisdictional status of the tributary, Wetland 2 and Wetland 3 is discussed on Form 2 of 2. A fourth linear conveyance (LC#4) appears to have been excavated from uplands, displayed no OHW mark, had no evidence of relatively permanent flow, was dry at the time of the visit, and contained leaf litter. LC#4 flows into the tributary/downstream portion of LC#3. LC#4 was determined to be a non-jurisdictional linear conveyance and not regulated by Section 404 of the CWA. The fifth and final linear conveyance (LC#5) appears to have been excavated from uplands, displayed no OHW mark, had no evidence of relatively permanent flow, was dry at the time of the site visit and contained leaf litter. LC#5 was determined to be a non-jurisdictional linear conveyance and not regulated by Section 404 of the CWA. LC#5 drains a pond located offsite on the adjacent property and LC#5 flows into LC#4.

There is one wetland located within the project review area that was determined to be isolated and non-jurisdictional. The wetland, Wetland 1, is 2.016 acres. The wetland is surrounded by uplands, is depressional and positioned lower in the landscape than the adjacent uplands. There were no ditches, swales, or other linear features coming out of the wetland. LC#1 is located adjacent to the wetland but is it separated from the wetland by a berm and uplands. There was no evidence that water from the wetland stages up out of the wetland and over the berm into the swale. There were also no apparent breaks in the berm that water could flow through to the roadside swale. LC#2 is located approximately 20 feet from the boundary of Wetland 1 but the swale terminates in uplands so does not provide a hydrologic connection. LC#3 is located approximately 50 feet from Wetland 1 but there was no evidence that water stages up out of the wetland and flows through the uplands to LC#3. LC#3 becomes a tributary approximately 1400 feet downstream, but no evidence of discrete flow through uplands from Wetland 1 to the tributary or other wetlands onsite was observed. There was also no apparent shallow subsurface hydrologic connection, and no apparent physical, chemical, or biological connection, to waters of the U.S. In addition, the wetland has no apparent ecological interconnection to waters of the U.S. For these reasons, the wetland was determined to be isolated and nonjurisdictionl, therefore not regulated by Section 404 of the CWA. The project review area also contains additional wetlands that are discussed in Form 2 of 2.

### **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:

Summarize rationale supporting determination:

## Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i)	Wat Drai Ave	teral Area Conditions: ershed size: Pick List; inage area: Pick List rage annual rainfall: inches rage annual snowfall: inches
(ii)	-	sical Characteristics:  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:
		Identify flow route to TNW <sup>5</sup> :  Tributary stream order, if known:
	(b)	General Tributary Characteristics (check all that apply):  Tributary is:  Natural Artificial (man-made). Explain: Manipulated (man-altered). Explain:
		Tributary properties with respect to top of bank (estimate):  Average width: feet  Average depth: feet  Average side slopes: Pick List.
		Primary tributary substrate composition (check all that apply):  Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain:
		Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Pick List.  Tributary gradient (approximate average slope):
	(c)	Flow: Tributary provides for: Pick List Estimate average number of flow events in review area/year: Pick List Describe flow regime: Other information on duration and volume:
		Surface flow is: Pick List. Characteristics:

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

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

				Subsurface flow: Pick List. Explain findings:  Dye (or other) test performed:
				Tributary has (check all that apply):  Bed and banks  OHWM <sup>6</sup> (check all indicators that apply):  clear, natural line impressed on the bank changes in the character of soil destruction of terrestrial vegetation shelving between the presence of wack line sediment sorting sediment sorting sediment deposition multiple observed or predicted flow events abrupt change in plant community other (list):  Discontinuous OHWM. 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:
		(iii)	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:
(iv)	Biol	logica	al Ch	aracteristics. Channel supports (check all that apply): Riparian corridor. Characteristics (type, average width): Wetland fringe. Characteristics: Habitat for: Federally Listed species. Explain findings: Fish/spawn areas. Explain findings: Other environmentally-sensitive species. Explain findings: Aquatic/wildlife diversity. Explain findings:
	2.	Cha	ract	eristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW
		(i)	Phy (a)	sical Characteristics:  General Wetland Characteristics: Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:
			(b)	General Flow Relationship with Non-TNW: Flow is: Pick List. Explain:  Surface flow is: Pick List
			(c)	Characteristics:  Subsurface flow: Pick List. Explain findings:  Dye (or other) test performed:  Wetland Adjacency Determination with Non-TNW:  Directly abutting  Not directly abutting  Discrete wetland hydrologic connection. Explain:

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

<sup>7</sup>Ibid.

			☐ Ecological connec☐ Separated by berm				
		(d)	Proximity (Relationship) to Project wetlands are Pick Lipider Project waters are Pick Lipider Flow is from: Pick List.  Estimate approximate local	List river miles from st aerial (straight) mi	iles from TNW.	lplain.	
	` /	Cha	emical Characteristics: racterize wetland system (e characteristics; etc.). Expl attify specific pollutants, if k	ain: .	ar, brown, oil film on su	ırface; water quality; ge	neral watershed
	(iii)	Biol	Riparian buffer. Character Vegetation type/percent co Habitat for:  Federally Listed specie Fish/spawn areas. Expl Other environmentally Aquatic/wildlife divers	ristics (type, average over. Explain: s. Explain findings: ain findings: . sensitive species. Explain findings: .	width): xplain findings:		
3.		All	eristics of all wetlands adj wetland(s) being considered roximately ( ) acres	I in the cumulative ar		ve analysis.	
For each	wetla	nd, s	specify the following:				
			Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N	Size (in acres)	

Summarize overall biological, chemical and physical functions being performed:

### C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

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

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

D.		FERMINATIONS 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:
		Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
		Provide estimates for jurisdictional waters in the review area (check all that apply):  Tributary waters: linear feet width (ft).  Other non-wetland waters: acres.  Identify type(s) of waters: .
	3.	Non-RPWs <sup>8</sup> that flow directly or indirectly into TNWs.  Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.
		Provide estimates for jurisdictional waters within the review area (check all that apply):  Tributary waters: linear feet width (ft).  Other non-wetland waters: acres.  Identify type(s) of waters: .
	4.	Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.  Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.  Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
		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.

<sup>&</sup>lt;sup>8</sup>See Footnote # 3.

	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.	DEC SUC 	LATED [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:
	Idei	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): The project review area also contains multiple non-jurisdictional linear conveyances.  The first linear conveyence is the roadside swale (LC#1) located on Maple Road. This feature is a swale and by definition is not jurisdictional and not regulated by Section 404 the CWA. The second linear conveyance is the second swale (LC#2) that is located on the opposite side of Wetland 1. This feature is also a swale and by definition is not jurisdictional and not regulated by Section 404 of the CWA. This swale terminates in uplands. A third linear conveyance (LC#3) is a roadside ditch that displayed no OHW mark, appeared to have been excavated, had no evidence of relatively permanent flow, was dry, and contained leaf litter. LC#3 flows through a portion of Wetland 2 and Wetland 3, where it then becomes a tributary. The portion of LC#3 above Wetland 3 is a non-jurisdictional linear conveyance and not regulated by Section 404 of the CWA. The jurisdictional status of the tributary, Wetland 2 and Wetland 3 is discussed on Form 2 of 2. A fourth linear conveyance (LC#4) appears to have been excavated from uplands, displayed no OHW mark, had no evidence of relatively permanent flow, was dry at the time of the visit, and contained leaf litter. LC#4 flows into the tributary/downstream portion of LC#3. LC#4 was determined to be a non-jurisdictional linear conveyance and no

<sup>&</sup>lt;sup>9</sup> To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
<sup>10</sup> Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

jua	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):
П	Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
H	Lakes/ponds: acres.
H	Other non-wetland waters: acres. List type of aquatic resource: .
$\square$	Wetlands: 2.015 acres.
Pro	vide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such
a fi	nding 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.
CECTIO	MILLY, DATA COLIDCEC
SECTIO	ON IV: DATA SOURCES.
A. SUP	PORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked
	requested, appropriately reference sources below):
	Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: <b>Passarella and Associates</b> .
$\overline{\boxtimes}$	
	But sheets prepared such the or
	Office concurs with data sheets/delineation report.
	☐ Office concurs with data sheets/delineation report. ☐ Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps:
	☐ 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:
	☐ 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:
	☐ 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.
	☐ 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.
	☐ 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:
	☐ 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: USDA Natural Resources Conservation Service Soil Survey. Citation: .
	☐ 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: USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name: PFO1/4Ad
	☐ 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: USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name: PFO1/4Ad State/Local wetland inventory map(s):
	☐ 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: USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name: PFO1/4Ad State/Local wetland inventory map(s): FEMA/FIRM maps:
	☐ 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: USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name: PFO1/4Ad State/Local wetland inventory map(s): FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
	☐ 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: USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name: PFO1/4Ad State/Local wetland inventory map(s): FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: ☒ Aerial (Name & Date): Google 2014
	☐ 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: USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name: PFO1/4Ad State/Local wetland inventory map(s): FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: ☐ Aerial (Name & Date): Google 2014 or ☐ Other (Name & Date):
	☐ 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: USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name: PFO1/4Ad State/Local wetland inventory map(s): FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: ☐ Aerial (Name & Date): Google 2014
	☐ 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: USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name: PFO1/4Ad State/Local wetland inventory map(s): FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: ☐ Aerial (Name & Date): Google 2014
	☐ 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: USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name: PFO1/4Ad State/Local wetland inventory map(s): FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: ☐ Aerial (Name & Date): Google 2014

B. ADDITIONAL COMMENTS TO SUPPORT JD: Wetland 1 was determined to be isolated and non-jurisdictional and not regulated by Section 404 of the CWA. Linear conveyances #1-#5 were also determined to be non-jurisdictional and not regulated by Section 404 of the CWA. The jurisdictional status of Wetlands 2, 3 and the tributary are discussed on Form 2 of 2.

## APPROVED JURISDICTIONAL DETERMINATION FORM

**U.S. Army Corps of Engineers** 

\*\*Form 2 of 2\*\*

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

## **SECTION I: BACKGROUND INFORMATION**

# REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): July 8, 2015

# B. DISTRICT OFFICE, FILE NAME, AND NUMBER: SAC # 2015-00517-2T The Woodlands Form 2 of 2

<b>C.</b> 1	PROJECT LOCATION AND BACKGROUND INFORMATION:
	State: South Carolina County/parish/borough: Dorchester County City: Summerville
	Center coordinates of site (lat/long in degree decimal format): Lat. 33.029453° N, Long. – 81.194688° W.
	Universal Transverse Mercator: Name of nearest waterbody: Sawmill Branch
	Name of nearest Traditional Navigable Water (TNW) Into which the aquatic resource flows: Ashley River Name of watershed or Hydrologic Unit Code (HUC): 03050201
	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.
_	DEVIEW DEDECORMED FOR CUTE EXALUATION (CHECK ALL THAT ARRIVE).
υ.	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):  Office (Desk) Determination. Date: July 8, 2015, August 24, 2015
	Field Determination. Date(s): June 25, 2015
SE(	CTION II: SUMMARY OF FINDINGS
Α.	RHA SECTION 10 DETERMINATION OF JURISDICTION.
The	ere <b>Are no</b> "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: .
В.	CWA SECTION 404 DETERMINATION OF JURISDICTION.
The	ere Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]
1110	He Are waters of the 0.5. Within Clean water Act (CWA) jurisdiction (as defined by 33 CFK part 328) in the review area. [Requirea]
	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
	<ul> <li>Wetlands adjacent to TNWs</li> <li>Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs</li> </ul>
	Relatively permanent waters <sup>2</sup> (RPWs) that flow directly or indirectly into TNWs  Non-RPWs that flow directly or indirectly into TNWs  Wetlands directly abutting RPWs that flow directly or indirectly into TNWs  Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs  Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs  Impoundments of jurisdictional waters  Isolated (interstate or intrastate) waters, including isolated wetlands
	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
	Isolated (interstate of intrastate) waters, including isolated wetlands
	b. Identify (estimate) size of waters of the U.S. in the review area:
	Non-wetland waters: 285 linear feet: width (ft) and/or acres.
	Wetlands: Wetland 2: 0.094 ac; Wetland 3: 0.100; Total: 0.194 acres acres.
	c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Pick List, Pick List
	Elevation of established OHWM (if known):
	2. Non regulated waters/watlands (sheek if applicable): <sup>3</sup> [Including retentially invisdiational features that upon

assessment are NOT waters or wetlands

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

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

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

### **SECTION III: CWA ANALYSIS**

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

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

#### 1. TNW

Identify TNW:

Summarize rationale supporting determination:

### 2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

If the waterbody 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: 86,887 acres;

Drainage area: **Approximately 150** acres Average annual rainfall: **48** inches

Average annual snowfall: inches

## (ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 3 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 5-10 aerial (straight) miles from TNW.

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

Project waters cross or serve as state boundaries. Explain:

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

Identify flow route to TNW <sup>3</sup> : <b>PRPW to Sawmill Branch to Dorchester Creek to the Ashley River</b> .  Tributary stream order, if known:
(b) General Tributary Characteristics (check all that apply):  Tributary is: Natural Artificial (man-made). Explain: Manipulated (man-altered). Explain: Appears to be natural with portions being manipulated (widened, straigtened, cleaned out) to maintain flow.
Tributary properties with respect to top of bank (estimate):  Average width: 5-6 feet  Average depth: 4-5 feet  Average side slopes: Vertical (1:1 or less).
Primary tributary substrate composition (check all that apply):  Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain:
Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: The portion of tributary onsite appeared to be stable. A portion of the tributary obseved offsite at a public accessible point also appeared to be stable.  Presence of run/riffle/pool complexes. Explain:  Tributary geometry: Relatively straight.  Tributary gradient (approximate average slope): 1 %
(c) Flow: Tributary provides for: Perennial flow Estimate average number of flow events in review area/year: 20 (or greater) Describe flow regime: Other information on duration and volume:
Surface flow is: Confined. Characteristics: .
Subsurface flow: Unknown. Explain findings:  Dye (or other) test performed:
Tributary has (check all that apply):  Bed and banks  OHWM <sup>6</sup> (check all indicators that apply):  clear, natural line impressed on the bank changes in the character of soil shelving vegetation matted down, bent, or absent 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):  High Tide Line indicated by:  Oil or scum line along shore objects  Fine shell or debris deposits (foreshore)  Physical markings/characteristics  Other (list):  Mean High Water Mark indicated by:  Survey to available datum;  Physical markings;  Vegetation lines/changes in vegetation types.
(iii) Chemical Characteristics:

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

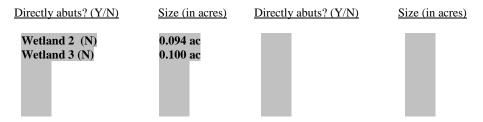
			Cha	racterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
			Ider	Explain: .  httify specific pollutants, if known: .
(iv)	Bio	logica	al Ch	raracteristics. Channel supports (check all that apply): Riparian corridor. Characteristics (type, average width):
				Wetland fringe. Characteristics:
				Habitat for:  Federally Listed species. Explain findings:
				Fish/spawn areas. Explain findings:
				Other environmentally-sensitive species. Explain findings:
incl	udin	g fisł	ı, rep	Aquatic/wildlife diversity. Explain findings: The tributary likely provides habitat for various aquatic organisms otiles, amphibians, as well as various birds and mammals.
	2.	Cha	ract	eristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW
		(i)		sical Characteristics:
			(a)	General Wetland Characteristics: Properties:
				Wetland size: <b>0.194</b> acres
				Wetland type. Explain: <b>Forested</b> .
				Wetland quality. Explain: Fair.
				Project wetlands cross or serve as state boundaries. Explain: .
			(b)	General Flow Relationship with Non-TNW: Flow is: Intermittent flow. Explain: Water flows from Wetland 2 through Linear Conveyance #3 (LC #3) to the
	PR	PW1	Wet	tland 3 flows through LC #3 to PRPW1. Flow from Wetlands 2 and 3 to through LC #3 to PRPW1 is intermittent
				equent flow events occuring during wetter times of the year and/or after rain events when surface water in the y be present.
	wei	ianus	, may	y be present.
				Surface flow is: Discrete and confined Characteristics: .
				Subsurface flow: <b>Unknown</b> . Explain findings: Dye (or other) test performed: .
			(c)	Wetland Adjacency Determination with Non-TNW:
	#3 (	LC#	<sup>‡</sup> 3) to	<ul> <li>Not directly abutting</li> <li>☑ Discrete wetland hydrologic connection. Explain: Water flows from Wetland 2 through Linear Conveyance</li> <li>the PRPW1. Wetland 3 flows through LC #3 to PRPW1. Flow from Wetlands 2 and 3 to through LC #3 to PRPW1</li> </ul>
	is ir	itern	iitten	at with more frequent flow events occuring during wetter times of the year and/or after rain events when surface wetlands may be present.
	wat	er iii	me v	Ecological connection. Explain:
				Separated by berm/barrier. Explain:
			(d)	Proximity (Relationship) to TNW
				Project wetlands are 5-10 river miles from TNW.
				Project waters are 5-10 aerial (straight) miles from TNW.
				Flow is from: Wetland to navigable waters. Estimate approximate location of wetland as within the 500-year or greater floodplain.
		(ii)	Che	emical Characteristics:
		( )		racterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed
				characteristics; etc.). Explain: Much of the area surrounding the wetlands and project review area is developed. No
				water was observed in the wetlands during the site visit, but water quality of the wetlands is anticipated to be good as there were no obvious signs of degradation.
			Ider	atify specific pollutants, if known:
		(iii	) Biol	logical Characteristics. Wetland supports (check all that apply):
		(111)		Riparian buffer. Characteristics (type, average width):
				Vegetation type/percent cover. Explain: .
			$\boxtimes$	Habitat for:
				Federally Listed species. Explain findings:  Fish/spawn areas. Explain findings:
				Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings: The wetland are forested and are surrounded by forested uplands. However, the project review area and adjacent parcels are surrounded by development that includes residential and commercial development. The vegetation present within the wetlands include Nyssa biflora, Liquidambar styraciflua, Lyonia lucida, Acer rubrum, and Arrundinaria gigantea. Aquatic organisms that may be found in the forested wetlands include various species of of insects, amphibians, reptiles, mammals, and birds, all of which may use the wetlands for all or part of their lives, such as for foraging, nesting and/or for shelter.

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

All wetland(s) being considered in the cumulative analysis: 2
Approximately (0.194) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:



Summarize overall biological, chemical and physical functions being performed: The drainage area is approximately 150 acres in size and includes 0.194 acre of wetlands (onsite Wetland 1 and 2), and approximately 1,600 linear feet of perennial RPW (285 lf located onsite). The wetlands are headwaters of Sawmill Branch. Headwater wetland systems provide a variety of functions that are important for the downstream waters and the watershed as a whole. The wetlands not only provide habitat for various aquatic and terrestrial organisms, including a variety of insects, amphibians, reptiles, mammals and birds, but are also a source of food, nutrients, and carbon for organisms located downstream. The headwater wetlands are especially important for the water quality of a watershed. Water runoff from adjacent uplands that may contain pollutants, sediments, excess nutrients, etc., that flow through the wetlands before entering the tributaries has the opportunity to be filtered out prior to flowing to downstream TNWs. In addition, excess water can temporarily be stored thereby minimizing potential flooding of downstream areas and can also slowly release water downstream to maintain seasonal flow volumes. Runoff water may also transport organisms, nutrients, and carbon from the wetlands into the tributaries, which continue to flow to downstream TNWs.

### 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:

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:

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 drainage area is approximately 150 acres in size and includes 0.194 acre of wetlands (onsite Wetland 1 and 2), and approximately 1,600 linear feet of perennial RPW (285 lf located onsite). The wetlands are headwaters of Sawmill Branch. Headwater wetland systems provide a variety of functions that are important for the downstream waters and the watershed as a whole. The wetlands not only provide habitat for various aquatic and terrestrial organisms, including a variety of insects, amphibians, reptiles, mammals and birds, but are also a source of food, nutrients, and carbon for organisms located downstream. The headwater wetlands are especially important for the water quality of a watershed. Water runoff from adjacent uplands that may contain pollutants, sediments, excess nutrients, etc., that flow through the wetlands before entering the tributaries has the opportunity to be filtered out prior to flowing to downstream TNWs. In addition, excess water can temporarily be stored thereby minimizing potential flooding of downstream areas and can also slowly release water downstream to maintain seasonal flow volumes. Runoff water may also transport organisms, nutrients, and carbon from the wetlands into the tributaries, which continue to flow to downstream TNWs.

Sawmill Branch flows into Dorchester Creek and then the Ashley River (TNW). SCDHEC has two monitoring stations on Sawmill Branch. According to SCDHEC's Watershed Water Quality Assessments, at the upstream monitoring station, CSTL-043, which is just upstream of the drainage area for this cumulative review and the discharge point from PRPW1 into Sawmill Branch, aquatic life uses are partially supported due to dissolved oxygen excursions. In addition, there is a significant increasing trend in turbidity. There is also a significant increasing trend in pH. Recreational uses are fully supported. And there is a decreasing trend in biological oxygen demand and fecal coliform bacteria concentration suggesting improved conditions. At the downstream monitoring station, RS-05563, aquatic lifes uses are fully supported, but recreational uses are not supported due to fecal coliform excursions. Sawmill Branch flows into/becomes Dorchester Creek downstream of Hwy 165. A monitoring station on Dorchester Creek, CSTL-013, indiactes that aquatic life uses are partially supported due to dissolved oxygen exursions. There is also a significant increasing trend in pH, significant decreasing trends in turbidity and total nitrogen concerntration suggesting improving conditions in these parameters. Recreational uses are partially supported due to fecal coliform bacteria excursions; however, a significant decreasing trend in fecal coliform bacteria concerntration suggests improving conditions for this parameter.

The watershed that the project review area is located in, HUC 03050201-06, has a high potential for growth amd includes the Town of Summerville, Ladson, and the Cities of Charleston and North Charleston. The area surrounding the project review consists of residential and commercial developments, with potential for future development to occur in the remaining undeveloped areas, including the project review area and adjacent parcels. When wetlands and streams are filled or altered, many of the services that they provide are compromised and the loss of those services affects downstream TNWs. Although the drainage area considered in this cummulative review is small as well as the amount of wetlands, the the wetlands and tributary within the review area have a significant nexus to downstream TNWs as they provide a source of carbon and nutrients, can provide water quality functions, can store excess water minimizing flooding impacts downstream, can maintain seasonal flow volumes, and can transport organisms, carbon, nutrients, sediments, clean water,

D.

	as well as pollutants, such as those associated with traffic, landscaping chemicals, etc. found within the review area, that may be present or could become present, to downstream TNWs.
Do	cumentation 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: PRPW1 was determined to be a perennial RPW as it appeared as a blue line stream on USGS topo maps, displayed an OHW mark, defined bed and bank, was flowing at the time of the site visit, and had water depths of several inches to approximately 1 foot or more at downstream locations.
	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: <b>285</b> linear feet width (ft).  Other non-wetland waters: acres.
	Page 6 of 8

	Identify type(s) of waters:
3.	Non-RPWs <sup>8</sup> that flow directly or indirectly into TNWs.  Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional waters within the review area (check all that apply):  Tributary waters: linear feet width (ft).  Other non-wetland waters: acres.  Identify type(s) of waters: .
4.	Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.  Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.  Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
	Wetlands 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: <b>0.194</b> 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:
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.

E.

 <sup>&</sup>lt;sup>8</sup>See Footnote # 3.
 <sup>9</sup> To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
 <sup>10</sup> Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

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):
	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):  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: cres.
		vide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such adding 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.
	SUP	PORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked requested, appropriately reference sources below):  Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Passarella and Associates.  Data sheets prepared/submitted by or on behalf of the applicant/consultant. Concurs with conclusions.  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:  USDA Natural Resources Conservation Service Soil Survey. Citation:
		National wetlands inventory map(s). Cite name: PFO1/4Ad  State/Local wetland inventory map(s):  FEMA/FIRM maps:  100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)  Photographs: Aerial (Name & Date): Google 2014  or Other (Name & Date):  Previous determination(s). File no. and date of response letter: SAC-2007-01990.
		Applicable/supporting case law: Applicable/supporting scientific literature: Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD: Wetland 2 and 3 and tributary PRPW1 are jurisdictional and subject to regulation under Section 404 of the CWA. The jurisdictional status of Wetlands 1 and the linear conveyances are discussed on Form 1 of 2.