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

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

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): December 2, 2

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Charleston, Dorchester County Public Works	, SAC 2011-01129-2NY
---	----------------------

ь.	DISTRICT OFFICE, FILE NAME, AND NUMBER: Charleston, Dorchester County Public Works, SAC 2011-01129-2N1
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Dorchester City: Center coordinates of site (lat/long in degree decimal format): Lat. 32.98281 °N, Long80.36916 °E. Universal Transverse Mercator: Name of nearest waterbody: Fishburne Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Rantowles Creek Name of watershed or Hydrologic Unit Code (HUC): 3050202-050 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): 8-5-2011
	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
	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:
В. (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 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: 30 linear feet: 8 width (ft) and/or acres. Wetlands: 0.023 acres.
	c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual Elevation of established OHWM (if known):
	 Non-regulated waters/wetlands (check if applicable): Including potentially jurisdictional features that upon assessment are NOT waters or wetlands Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain: Three upland cut surface water drainage ditches were noted in the project area. Ditch B is 3 feet wide and 39 feet long with a depth of from 1-2 feet. Ditch C is 3 feet wide and 192 feet long and varies from 0.3 to 3 feet deep. Ditch

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).

Supporting documentation is presented in Section III.F.

D is 3 feet by 472 feet long and varies from 0.75 to 3 feet in depth. Since these features were cut from uplands and do not drain a wetland, they were determined to be non-jurisdictional. These ditches were dry at the time of the site visit.

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	r	7	NT.	W
			N	vv

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: 157,400 acres
Drainage area: 223.5 acres

Average annual rainfall: 48 inches Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 2 tributaries before entering TNW.

Project waters are 10-15 river miles from TNW.

Project waters are 1-2 river miles from RPW.

Project waters are 10-15 aerial (straight) miles from TNW.

Project waters are 1-2 aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵: Fishburne Creek to Horse Savanna to Rantowles Creek (TNW).

Tributary stream order, if known: .

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

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.

	(b)		naracteristics (check all that apply Natural	_ 			
		[[☐ Artificial (man-made). Explai☐ Manipulated (man-altered). I				
		Average width: Average depth:		mate):			
		Primary tributary sub Silts Cobbles Bedrock Other. Expla	strate composition (check all that Sands Gravel Vegetation. Type/%			☐ Concrete ☐ Muck	
		Presence of run/riffle Tributary geometry:	tability [e.g., highly eroding, slow /pool complexes. Explain: Meandering pproximate average slope): ,1 %	ughing ba	anks]. l	Explain: Area appeared stab	le.
	(c)	Describe flow re	nber of flow events in review are	a/year: 1	1-20		
		Surface flow is: Disc	rete and confined. Characteristi	ics:			
			known . Explain findings: r) test performed:				
			ks neck all indicators that apply): atural line impressed on the bank in the character of soil con matted down, bent, or absent r disturbed or washed away t deposition aining	des the sed sco	struction e presendiment sour altiple o	nce of litter and debris on of terrestrial vegetation nce of wrack line sorting observed or predicted flow e ange in plant community	vents
		High Tide oil or so fine she		Mean H surve	ligh Wa ey to av sical ma	of CWA jurisdiction (check ater Mark indicated by: vailable datum; arkings; lines/changes in vegetation	
(iii)	Cha	Explain: Unknown, s	s: ., water color is clear, discolored tream was dry at time of site visits, if known: Unknown.		n; wate	er quality; general watershed	characteristics, etc.)

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)	Biological Characteristics. 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: Common Southeastern herptiles noted in area.
2.	Cha	aracteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW
	(i)	Physical Characteristics: (a) General Wetland Characteristics: Properties: Wetland size: 0.023 acres Wetland type. Explain: Palustrine forested. Wetland quality. Explain: Moderately high secondary growth. Project wetlands cross or serve as state boundaries. Explain:
		(b) General Flow Relationship with Non-TNW: Flow is: Intermittent flow. Explain: Seasonal.
		Surface flow is: Discrete Characteristics: .
		Subsurface flow: Unknown. Explain findings:
RPV	W.	(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: Hill Branch Road cuts directly through part of the wetland and season
		(d) Proximity (Relationship) to TNW Project wetlands are 10-15 river miles from TNW. Project waters are 10-15 aerial (straight) miles from TNW. Flow is from: Wetland to navigable waters. Estimate approximate location of wetland as within the 50 - 100-year floodplain.
	(ii)	Chemical Characteristics: Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Unknown, dry at time of site visit. Identify specific pollutants, if known:
	(iii)	Biological Characteristics. Wetland supports (check all that apply): ☐ Riparian buffer. Characteristics (type, average width): ☐ Vegetation type/percent cover. Explain: ☐ Habitat for: ☐ Federally Listed species. Explain findings: ☐ Fish/spawn areas. Explain findings: ☐ Other environmentally-sensitive species. Explain findings: ☐ Aquatic/wildlife diversity. Explain findings:Common Southeastern herptiles.
3.	Cha	Aracteristics of all wetlands adjacent to the tributary (if any) All wetland(s) being considered in the cumulative analysis: 3 Approximately (42.2796) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)Size (in acres)Directly abuts? (Y/N)Size (in acres)Wetland A Y0.007 acresWetland B Y0.015 acres

Off site wetlands Y 42.2566 acres

Summarize overall biological, chemical and physical functions being performed: The forested palustrine wetlands which are similarly situated and adjacent to the seasonal RPW are collectively performing functions consistent with the following: Biological – wetlands adjacent to the seasonal RPW include bottomland swamp wetlands. As such a broad variety of biological functions are being performed which include providing breeding grounds and shelter for aquatic herptile species, foraging areas for wetland dependent bird and mammal species, and important spawning areas for fish species that inhabit the main channel as adults. These wetlands are essential in providing organic carbon in the form of their collective primary productivity to downstream waters, resulting in the nourishment of the downstream food web. Chemical - Wetlands in the review area are providing the important collective functions of removal of excess nutrients which are contributed by runoff from the surrounding uplands, reducing nitrogen and phosphorus loading downstream, and effectively preventing oxygen depletion that can result from eutrophication. Physical – Wetlands in the review area are collectively performing flow maintenance functions including retaining runoff inflow and temporary flood water storage. Flow maintenance results in the reduction of downstream peak flows (discharge and volume), helping to maintain seasonal flow volumes

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:
- 4. Documentation for the record only: Significant nexus findings for seasonal RPW/or wetlands abutting seasonal RPWs: A significant nexus was conducted on this portion of the subject property since the wetlands abut a seasonal branch to Fishburne

Creek (RPW) that flows away from the project boundary. The Stono River watershed which includes this portion of the subject property is 157,400 acres in size. The Dorchester County soil survey, USGS quad maps, and aerial infra-red photos were reviewed to determine how the subject property fits into the context of its relevant reach, Fishburne Creek and Rantowles Creek. The relevant reach for this portion of the property includes approximately 43 acres of wetlands draining into Rantowles Creek. These wetlands represent 95% of the wetlands in the 223.5 acre drainage area. The subject relevant reach is 10.8 miles from the receiving Rantowles Creek, a TNW. Fishburne Creek is shown as named blue line stream on the USGS quad map. This feature is approximately 0.8 miles long and visible on aerial photos as a distinct dark line. Fishburne Creek flows southwest to Horse Savanna (RPW) then south to Rantowles Creek, a TNW. The forested palustrine wetlands which are similarly situated and adjacent to the perennial RPW are collectively performing functions consistent with the following: Biological - wetlands adjacent to the RPW include bottomland swamp and depressional wetlands. As such a broad variety of biological functions are being performed which include providing breeding grounds and shelter for aquatic species, foraging areas for wetland dependent species, and important spawning areas for fish species that inhabit the main channel as adults. These wetlands are essential in providing organic carbon in the form of their collective primary productivity to downstream waters, resulting in the nourishment of the downstream food web. Chemical - Wetlands in the review area are providing the important collective functions of removal of excess nutrients which are contributed by runoff from the surrounding uplands, reducing nitrogen and phosphorus loading downstream, and effectively preventing oxygen depletion that can result from eutrophication. Some of the adjacent wetlands in this review area have been ditched which likely has reduced the effectiveness of some of the wetlands' nutrient removal function. Physical – Wetlands in the review area are collectively performing flow maintenance functions including retaining runoff inflow and temporary flood water storage. Flow maintenance results in the reduction of downstream peak flows (discharge and volume), helping to maintain seasonal flow volumes. Based on the collective functions described above and their importance to the biological, chemical, and physical integrity of the traditional navigable waters of Rantowles Creek, this office has determined that there is a Significant Nexus between the review area Relevant Reach and its adjacent wetlands and the downstream TNW.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY): 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 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: Branch of Fishburne Creek is shown on the USGS Quad map as a blue-line stream. This feature was dry at the time of the site visit, but displayed evidence of recent flow and trees bordering the stream showed watermarks. Tributary waters: 30 linear feet 8 width (ft).

Other non-wetland water. Provide estimates for jurisdictional waters in the review area (check all that apply): Identify type(s) of waters: Non-RPWs⁸ 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: 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:

7

⁸See Footnote # 3.

		Provide acreage estimates for jurisdictional wetlands in the review area: 0.023 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. ⁹ As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional. Demonstrate that impoundment was created from "waters of the U.S.," or Demonstrate that water meets the criteria for one of the categories presented above (1-6), or Demonstrate that water is isolated with a nexus to commerce (see E below).
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).
dee	p. Dit	Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above): Three upland cut surface water drainage ditches were noted in the project area. Ditchet wide and 39 feet long with a depth of from 1-2 feet. Ditch C is 3 feet wide and 192 feet long and varies from 0.3 to 3 feet in depth. Since these features were cut from uplands and do not wetland, they were determined to be non-jurisdictional. These ditches were dry at the time of the site visit.

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: Wetlands directly border the run of the branch of Fishburne Creek.

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.

	vide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR tors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional
	gment (check all that apply):
ĬII.	Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
目	Lakes/ponds: acres.
目	Other non-wetland waters: acres. List type of aquatic resource: .
	Wetlands: acres.
a fin	71 1
\bowtie	National wetlands inventory map(s). Cite name: Clubhouse Crossroads 11204:67
	State/Local wetland inventory map(s):
	FEMA/FIRM maps:
	100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
\boxtimes	Photographs: Aerial (Name & Date): 99:11204:67.
	or ☐ Other (Name & Date): Previous determination(s). File no. and date of response letter:
H	Applicable/supporting case law:
Ħ	Applicable/supporting scientific literature:
H	Other information (please specify):
	The second of th

B. ADDITIONAL COMMENTS TO SUPPORT JD: Wetlands in the subject area are associated with the branch of Fishburne Creek, a blue-line stream crossed by Hill Branch Road and culverted at this point.