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

## \*Form # 2 of 2 for Project Number SAC 2008-163-2JV\*

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

SEC A.	CTION I: BACKGROUND INFORMATION REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): February 15, 2008
B.	DISTRICT OFFICE, FILE NAME, AND NUMBER: Charleston Office, Irick Family Properties Tract, SAC 2008-163-2JV
C.	PROJECT LOCATION AND BACKGROUND INFORMATION:  State: South Carolina County/parish/borough: Orangeburg City: Vance Center coordinates of site (lat/long in degree decimal format): Lat. 33.44978° N, Long80.41462° W.  Universal Transverse Mercator:  Name of nearest waterbody: Mill Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Marion Name of watershed or Hydrologic Unit Code (HUC): Santee River/Lake Marion Watershed (03050111-010)  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): 2/11/08
<u>SE(</u>	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 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
	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: 12.66 acres.
	c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual Elevation of established OHWM (if known):
	2. Non-regulated waters/wetlands (check if applicable):  Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional Explain:  .

<sup>&</sup>lt;sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>&</sup>lt;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).

Supporting documentation is presented in Section III.F.

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

### A. TNWs AND WETLANDS ADJACENT TO TNWs

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

2.	Wetland adjacent to TNW	
	Summarize rationale supporting determination: .	
1.	Identify 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: 223,194 acres Drainage area: 755 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 Pick List tributaries before entering TNW. Project waters are 1 (or less) river miles from TNW. Project waters are NA river miles from RPW. Project waters are 1 (or less) aerial (straight) miles from TNW. Project waters are NA aerial (straight) miles from RPW. Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW<sup>5</sup>: Flow within this unnamed seasonal RPW continues to the north west for approximately 0.4 miles and empties directly into Lake Marion (TNW).

<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.

	Tributary stream order, if known:			
		iain: Tributary seems to be a natural feature that has been		
dammed/dyke	ed in order to create a man mad pond/lake.			
	<b>Tributary</b> properties with respect to top of bank (estimat Average width: 2 - 3 feet Average depth: 2 - 4 feet Average side slopes: <b>2 - 1.</b>	re):		
	Primary tributary substrate composition (check all that ap Silts Sands Gravel Bedrock Vegetation. Type/% co	oply):  Concrete  Muck  ver: No Vegetation present within banks		
	Tributary condition/stability [e.g., highly eroding, slough Presence of run/riffle/pool complexes. Explain:  Tributary geometry: <b>relatively straight</b> Tributary gradient (approximate average slope):			
(c)	Flow: Tributary provides for: Seasonal Flow Estimate average number of flow events in review area/y. Describe flow regime: Other information on duration and volume:  Surface flow is: Confined. Characteristics:  Subsurface flow: Unknown. Explain findings:  Dye (or other) test performed:	ear: <b>20 or greater</b>		
	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):	destruction of terrestrial vegetation the presence of wrack line sediment sorting		
	☐ Discontinuous OHWM. <sup>7</sup> Explain:			
	oil or scum line along shore objects fine shell or debris deposits (foreshore)	lateral extent of CWA jurisdiction (check all that apply): ean High Water Mark indicated by: ] survey to available datum; ] physical markings; ] vegetation lines/changes in vegetation types.		
Cha	emical Characteristics: aracterize tributary (e.g., water color is clear, discolored, oi Explain: . ntify specific pollutants, if known:	ly film; water quality; general watershed characteristics, etc.)		

<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.

	(IV)	B10	Riparian corridor. Characte					
					xists in areas of the tributary.			
		$\boxtimes$	Habitat for:					
			☐ Federally Listed species ☐ Fish/spawn areas. Expla		•			
			Other environmentally-s		un findings:			
			Aquatic/wildlife diversi					
2.	Cha	aract	eristics of wetlands adjacen	nt to non-TNW that flo	w directly or indirectly into TNV	V		
	(i)		sical Characteristics:					
		(a)	General Wetland Character	istics:				
			Properties: Wetland size:10.3 acres					
			Wetland type. Explain:	PEM1Ch.				
			Wetland quality. Expla		F 1:			
			Project wetlands cross or se	erve as state boundaries.	Explain: .			
		(b)	General Flow Relationship	with Non-TNW:				
			Flow is: intermittent. Expla	in: .				
			Surface flow is: Confined					
			Characteristics: .					
			Subsurface flow: Unknown	Evaloin findings:				
			Dye (or other) test p		•			
		(c)	Wetland Adjacency Determ  ☑ Directly abutting	ination with Non-TNW	<u>'·</u>			
			☐ Not directly abutting					
			☐ Discrete wetland hy		xplain: .			
			Ecological connecti Separated by berm/					
			Separated by berni/	barrier. Explain.	•			
		(d)	Proximity (Relationship) to					
			Project wetlands are 1 (or less Project waters are 1 (or less Project waters are 1)					
			Flow is from: <b>Wetland to r</b>		s nom 11vv.			
			Estimate approximate locat		the 10 - 20 floodplain.			
	(ii)	Cha	emical Characteristics:					
	(11)			g., water color is clear,	orown, oil film on surface; water qu	ality; general watershed		
			characteristics; etc.). Expla					
		Idei	ntify specific pollutants, if kn	own: .				
	(iii) Biological Characteristics. Wetland supports (check all that apply):							
		$\boxtimes$	Riparian buffer. Characteri					
			Vegetation type/percent cov Habitat for:	ver. Explain: Highly V	egetated.			
			Federally Listed species	. Explain findings:				
			Fish/spawn areas. Expla					
			Other environmentally-s  Aquatic/wildlife diversi		in findings: .			
			-		•			
3.	Cha		eristics of all wetlands adja					
			wetland(s) being considered proximately (54.2) acres in t		ed in the cumulative analysis.			
			, , , , , , , , , , , , , , , , , , , ,					
	For	each	wetland, specify the following	ng:				
			Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)		
			Yes	10.3	Yes	41.4		
			Yes	2.5				

Summarize overall biological, chemical and physical functions being performed: Chemical – PEM1Ch wetlands have been proved to absorb both sediments and nutrients. The wetlands associated with the onsite tributary catch rain water run off from the nearby highway (S.C. Highway 6) and the nearby agricultural fields, and absorb and filter out the sediment and pollution associated with this runoff. Physical – PEM1Ch wetlands have been proven to maintain seasonal flows and play a vital part in floodwater storage for the downstream TNW. This dyked area provides for important floodwater storage for the downstream TNW (Lake Marion). Biological – PEM1Ch wetlands have been proven to provide foraging grounds for snakes and amphibians that reside in the surrounding uplands. While not seen during the site visit, it would not be unreasonable to conclude that the tributary (Seasonal RPW) and the associated wetlands (both on site and offsite) provide foraging grounds for these animals.

### 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: As a matter of jurisdiction, wetlands that directly abut an RPW are jurisdictional. As a matter of policy, a significant nexus determination is necessary for wetlands that directly abut a RPW that has less than perennial flow, which is the case in this jurisdictional determination. The significance of the wetlands can be broken down into three categories; chemical, physical and biological. Chemical PEM1Ch wetlands have been proved to absorb both sediments and nutrients. The wetlands associated with the onsite tributary catch rain water run off from the nearby highway (S.C. Highway 6) and the nearby agricultural fields, and absorb and filter out the sediment and pollution associated with this runoff. Physical PEM1Ch wetlands have been proven to maintain seasonal flows and play a vital part in floodwater storage for the downstream TNW. This dyked area provides for important floodwater storage for the downstream TNW (Lake Marion). Biological PEM1Ch wetlands have been proven to provide foraging grounds for snakes and amphibians that reside in the surrounding uplands. While not seen during the site visit, it would not be unreasonable to conclude that the tributary (Seasonal RPW) and the associated wetlands (both on site and offsite) provide foraging grounds for these animals. Additionally, seasonal RPW's and intermittent streams have been shown to aid in the maintenance of biodiversity in downstream waters by providing both movement corridors for plants and animals across the landscape. In so doing, they provide for a recovery of downstream systems following a disturbance.

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

1.	TNWs and Adj	acent Wetlands.	<ul> <li>Check all that apply</li> </ul>	y and provide size estimates in 1	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: Unnamed tributary located on site is believed to be a Seasonally flowing RPW based on the following information The banks of the tributary in question are approximately 2 – 4 feet tall and 2 - 3 feet wide. Additionally, water was observed flowing on the day of the site visit, and the bed of the tributary contained no vegetation within the bed and banks. Furthermore, the tributary is shown as a blue line perennial stream on the USGS Topographic Maps. However it is believed that the man made berm/dyke located on site has limited this tributary to only have seasonal flow, and flow would not be expected during the dry season due to this obstruction.
	Provide estimates for jurisdictional waters in the review area (check all that apply):  Tributary waters: 1,400 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.	<ul> <li>Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.</li> <li>Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.</li> <li>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 located adjacent to this unnamed tributary run contiguous with and directly abut this seasonally flowing tributary.</li> <li>■ 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</li> </ul>
	abutting an RPW:  Provide acreage estimates for jurisdictional wetlands in the review area: 10.3 (acreage includes unnamed tributary) acres.
5.	Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.  Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.
6.	Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.  Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional wetlands in the review area: acres.
7.	Impoundments of jurisdictional waters.  As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.  Demonstrate that impoundment was created from "waters of the U.S.," or  Demonstrate that water meets the criteria for one of the categories presented above (1-6), or  Demonstrate that water is isolated with a nexus to commerce (see E below).

 $<sup>^8</sup> See$  Footnote # 3.  $^9$  To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

E.	ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY): 10  which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:
	Identify water body and summarize rationale supporting determination:
	Provide estimates for jurisdictional waters in the review area (check all that apply):  Tributary waters: linear feet width (ft).  Other non-wetland waters: acres.  Identify type(s) of waters:  Wetlands: acres.
F.	NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):  If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.  Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.  Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).  Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:  Other: (explain, if not covered above):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):  Non-wetland waters (i.e., rivers, streams): linear feet width (ft).  Lakes/ponds: acres.  Other non-wetland waters: acres. List type of aquatic resource: .  Wetlands: acres.
	Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):  Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).  Lakes/ponds: acres.  Other non-wetland waters: acres. List type of aquatic resource: .  Wetlands: acres.
SEC	CTION IV: DATA SOURCES.
A.	SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):    Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:   Data sheets prepared/submitted by or on behalf of the applicant/consultant.   Office concurs with data sheets/delineation report.   Office does not concur with data sheets/delineation report.   Data sheets prepared by the Corps:   Corps navigable waters' study:   U.S. Geological Survey Hydrologic Atlas:   USGS NHD data.   USGS 8 and 12 digit HUC maps.   U.S. Geological Survey map(s). Cite scale & quad name: Nance Quad.   USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Sheet # 44.

 $<sup>^{10}</sup>$  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  $\it Memorandum~Regarding~CWA~Act~Jurisdiction~Following~Rapanos.$ 

$\boxtimes$	National wetlands inventory map(s). Cite name: MapInfo.			
	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): Orange~94:7465-186.			
	or 🛛 Other (Name & Date): Orange~99:11204:131.			
	Previous determination(s). File no. and date of response letter: .			
	Applicable/supporting case law: .			
	Applicable/supporting scientific literature: .			
	Other information (please specify):			

**B. ADDITIONAL COMMENTS TO SUPPORT JD:** JD form 2 of 2 for juisdictional wetlands that run contiguous with the Unnamed Tributary located on site (perennial RPW).