# 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.

	<u>CCTION I: BACKGROUND INFORMATION</u> REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):	MAR	2 2	2017
	<b>DISTRICT OFFICE, FILE NAME, AND NUMBER:</b> CESAC-RD-S; JD Form 1 of 2; US Air Force / Joint Base hanced Use Lease at Area 2000; SAC-2015-01150	Charles	ton/	
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: The 31.4 acre site is located on both sides of 100 Fighter Drive, Joint Base Charleston State: South Carolina County/parish/borough: Charleston City: Center coordinates of site (lat/long in degree decimal format): Lat. 32.8922° N, Long80.0237 ° W.  Universal Transverse Mercator:  Name of nearest waterbody: Filbin Creek  Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Filbin Creek/Cooper R  Name of watershed or Hydrologic Unit Code (HUC): Watershed 2 Cooper River HUC 0305020107  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 redifferent JD form.	River		nue a
D.	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):  Office (Desk) Determination. Date:  Field Determination. Date(s): 12/1/2015			
	<u>CTION II: SUMMARY OF FINDINGS</u> RHA SECTION 10 DETERMINATION OF JURISDICTION.			
	ere are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR pa a. [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 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. [R	lequir	ed]
	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: pRPW Tributary 1- 383 linear feet.  Wetlands: 0.69 acres.			
	<b>c. Limits (boundaries) of jurisdiction</b> based on: 1987 Delineation Manual and OHWM Elevation of established OHWM (if known):			
	2. Non-regulated waters/wetlands (check if applicable): <sup>3</sup> [Including potentially jurisdictional features that u assessment are NOT waters or wetlands]	ıpon		

Boxes checked below shall be supported by completing the appropriate sections in Section III below.
 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.

	600 1500	Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:
SEC	CTION I	II: CWA ANALYSIS
A.	TNWs	AND WETLANDS ADJACENT TO TNWs
	Section	encies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete 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 ction III.D.1.; otherwise, see Section III.B below.
		NW entify TNW:
	Su	immarize rationale supporting determination:
		etland adjacent to TNW mmarize rationale supporting conclusion that wetland is "adjacent":  .
В.	CHAR	ACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):
		ction summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps ine whether or not the standards for jurisdiction established under <i>Rapanos</i> have been met.
	waters' months (pereni	encies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 s). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round nial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, Section III.D.4.
	EPA re	and that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and gions will include in the record any available information that documents the existence of a significant nexus between a ely permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even a significant nexus finding is not required as a matter of law.
	waterb conside analytic the trib the trib	vaterbody <sup>4</sup> is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the ody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must be the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for cal purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is outary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for outary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite site. The determination whether a significant nexus exists is determined in Section III.C below.
	1. Ch	aracteristics of non-TNWs that flow directly or indirectly into TNW
	(i)	General Area Conditions: Watershed size: Pick List; Drainage area: Pick List Average annual rainfall: inches Average annual snowfall: inches
	(ii)	Physical Characteristics:  (a) Relationship with TNW:  Tributary flows directly into TNW.  Tributary flows through Pick List tributaries before entering TNW.  Project waters are Pick List river miles from TNW.

Project waters are Pick List river miles from RPW.

Project waters are Pick List aerial (straight) miles from TNW.

Project waters are Pick List aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

<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>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:
		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 shelving vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition water staining other (list):  Discontinuous OHWM. <sup>7</sup> Explain:  the presence of litter and debris destruction of terrestrial vegetation the presence of wrack line sediment sorting sediment sorting scour multiple observed or predicted flow events abrupt change in plant community
		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)	Char	mical Characteristics: racterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: tify specific pollutants, if known:

<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.

	(iv)	Bio	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	aract	teristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW
	(i)	Phy (a)	ysical 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 Characteristics: .
			Subsurface flow: Pick List. Explain findings:  Dye (or other) test performed:
		(c)	Wetland Adjacency Determination with Non-TNW:  ☐ Directly abutting ☐ Not directly abutting ☐ Discrete wetland hydrologic connection. Explain: ☐ Ecological connection. Explain: ☐ Separated by berm/barrier. Explain:
		(d)	Proximity (Relationship) to TNW Project wetlands are Pick List river miles from TNW. Project waters are Pick List aerial (straight) miles from TNW. Flow is from: Pick List. Estimate approximate location of wetland as within the Pick List floodplain.
	(ii)	Cha	emical Characteristics:  aracterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:  artify specific pollutants, if known:
	(iii)	Bio	logical 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:
3.	Cha	All	wetland(s) being considered in the cumulative analysis: Pick List proximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

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

1.	TNWs and	Adjacent Wetlands.	Check all that apply	and provide size estimates in review area:	
	TNWs:	linear feet	width (ft), Or,	acres.	
	Wetland	s 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: pRPW 1 is located at the southeastern property boundary. Approximately 383 linear feet of this pRPW

	12 feet, and exhibits physical and hydrological characteristics commonly associated with perennial flow including undercut banks, benches, and a clearly defined stream channel. The pRPW was flowing on the day of the site visit. The substrate consists of mostly sand/silt with the channel exhibiting low sinuosity. Topographic maps indicate that this unnamed tributary is a blue-line stream. The tributary flow path is clearly observed on aerial imagery. Jurisdictional pRPW 1 flows to the south from the southwest corner of the property boundary, crossing under South Aviation Avenue towards Outfall 007A (shown on flow map) which connects to Filbin Creek and then to the Cooper River (TNW).
	Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
	Provide estimates for jurisdictional waters in the review area (check all that apply):  Tributary waters: 383 linear feet 3-12 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: Wetland A is abutting onsite pRPW 1 and shares a direct hydrological connection with the RPW. This onsite wetland (Wetland A) drains directly into pRPW 1 just offsite. When the RPW overflows, the water enters the abutting Wetland A. The pRPW is an unnamed tributary that flows offsite and drains into Filbin Creek, which drains into the Cooper River, TNW.
	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: 0.69 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. <sup>9</sup> 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:

are located on the site. The remainder of this pRPW is offsite. This pRPW exhibits an OHWM, varies in width from 3 feet to

 <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.

Ŀ.	DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY): 10  which are or could be used by interstate or foreign travelers for recreational or other purposes.  from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.  which are or could be used for industrial purposes by industries in interstate commerce.  Interstate isolated waters. Explain:  Other factors. Explain:
	Identify water body and summarize rationale supporting determination:
	Provide estimates for jurisdictional waters in the review area (check all that apply):  Tributary waters: linear feet width (ft).  Other non-wetland waters: acres.  Identify type(s) of waters:  Wetlands: acres.
F.	NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):  If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.  Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.  Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).  Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:  Other: (explain, if not covered above):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):  Non-wetland waters (i.e., rivers, streams): linear feet width (ft).  Lakes/ponds: acres.  Other non-wetland waters: acres. List type of aquatic resource: .  Wetlands: acres.
	Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):  Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).  Lakes/ponds: acres.  Other non-wetland waters: acres. List type of aquatic resource: .  Wetlands: acres.
SEC	CTION IV: DATA SOURCES.
<b>A.</b> ;	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: Information submitted by HDR.  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: 1:24,000 Ladson Quad.  USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Sheet 34 UR urban land, Yauhanna, Yemassee and Ogeechee soils.  National wetlands inventory map(s). Cite name: PFO1A forested shrub wetland.  State/Local wetland inventory map(s):  FEMA/FIRM maps:
	100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

 $<sup>^{10}</sup>$  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.

$\boxtimes$	Photographs: ☑ Aerial (Name & Date): 1999:11228:31.
	or ☐ Other (Name & Date):
	Previous determination(s). File no. and date of response letter:
	Applicable/supporting case law: .
	Applicable/supporting scientific literature: .
$\boxtimes$	Other information (please specify): Sketch entitled "Approximate Boundaries of Wetlands and Waters of US SAC-2015-01150
Enh	nanced Use Lease Area 2000 Joint Base Charleston".

**B. ADDITIONAL COMMENTS TO SUPPORT JD:** It is the determination of this office that the 31.3 acre site in question contains approximately 0.69 acres of a jurisdictional wetland and three sections of a perennial RPW totaling approximately 383 feet. The wetland onsite directly abuts the pRPW which flows into Filbin Creek which drains into the Cooper River which is a TNW. These areas were determined to be jurisdictional and subject to regulation under Section 404 of the Clean Water Act. The jurisdictional status of several ditches and an additional wetland onsite are documented on Form 2 of 2.

# 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.

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:

One non-jurisdictional isolated freshwater wetland (Non-jurisdictional Isolated Wetland B) is located on the property:

### Non-jurisdictional Isolated Wetland B

Non-jurisdictional Wetland B is a 0.50 acre forested wetland located in the southeastern section of the property. Non-jurisdictional Isolated Wetland B is a depressional wetland dominated by *Liquidambar styraciflua* and *Acer rubrum and Ligustrum japonica*. On the day of the site visit the pm investigated the perimeter of Non-jurisdictional Wetland B and beyond the project boundary to the north, east, and south to determine if hydrological connections exist between Non-jurisdictional Isolated Wetland B and another wetland/water feature. This wetland is surrounded by uplands that include undeveloped uplands, residential development, and an existing dirt road. The surrounding uplands are 2-3 feet higher in elevation. The primary source of hydrology appears to be from the adjacent uplands as overland flow. This wetland does not appear to make any on-site or off-site hydrological connections that would support adjacency.

For this wetland, there is a clear elevation change from the upland to the wetland. There was no apparent surface or shallow subsurface hydrologic connection, no apparent connection to interstate or foreign commerce and no apparent evidence of ecological interconnectivity between the isolated wetland and jurisdictional waters of the U.S. Therefore this wetland was determined to be non-jurisdictional and not regulated by Section 404 of the Clean Water Act.

There are six non-jurisdictional ditches (Non-Jurisdictional Ditchés 1-6) located on the property: These are all shown on a supplementary sketch.

Non-Jurisdictional Ditch 1 is located near the northeastern project boundary on the east side of South Aviation Avenue. This ditch is approximately 240 LF in length and approximately 5 feet in width. This ditch appears to have been constructed in uplands and drains only uplands. Non-jurisdictional Ditch 1 does not exhibit an ordinary highway mark (OHWM) and appears to only transport stormwater runoff during precipitation events. Non-jurisdictional Ditch 1 does not connect to any jurisdictional features. For these reasons, this ditch was determined to be non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.

The following Non-jurisdictional Ditches 2-5 are located to the west of South Aviation Avenue, an area that primarily consists of developed and maintained uplands with no hydrology or vegetation indicators. Non-jurisdictional Ditches 2-5 were constructed out of uplands, drain uplands, and do not have an OHWM. Non-jurisdictional Ditches 2-5 do not connect to any jurisdictional features.

Non-jurisdictional Ditch 2 flows north to south and parallels South Aviation Avenue on its western side. Non-jurisdictional Ditch 2 conveys stormwater from roadside drainage on South Aviation Ave and is approximately 510 LF in length and approximately 3 to 7 feet in width. This ditch does not connect to any jurisdictional features. For these reasons, and the reasons stated above, this ditch was determined to be non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.

Non-jurisdictional Ditch 3 flows west to east and conveys stormwater from drainage associated with an abandoned airplane storage area. Non-jurisdictional Ditch 3 is approximately 343 LF in length and approximately 4 feet in width and empties into Non-jurisdictional Ditch 2. This ditch does not connect to any jurisdictional features. For these reasons, and the reasons stated above, this ditch was determined to be non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.

Non-jurisdictional Ditch 4 flows west and east toward a central stormwater drainage area on the north side of Fighter Drive. Non-jurisdictional Ditch 4 conveys stormwater from roadside drainage on Fighter Drive and is approximately 400 LF in length and approximately 5 to 7 feet in width. Non-jurisdictional ditch 4 flows into a culvert that outfalls near the southwestern property boundary; however, no wetlands or waters were noted at the outfall. This ditch does not connect to any jurisdictional features. For these reasons, and the reasons stated above, this ditch was determined to be non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.

Non-jurisdictional Ditch 5 flows north to south and appears to convey stormwater from drainage associated with an abandoned airplane storage and facility area. Non-jurisdictional Ditch 5 is approximately 119 LF in length and approximately 3 feet in width and empties into Non-jurisdictional Ditch 4. This ditch does not connect to any jurisdictional features. For these reasons, and the reasons stated above, this ditch was determined to be non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.

Non-Jurisdictional Ditch 6 is located west of South Aviation Avenue near the southern property boundary and flows south off of the property. Non-Jurisdictional Ditch 6 is approximately 343 LF in length on the site. Although this ditch exhibited an OHWM and appears to regularly contain some water, this feature was excavated from uplands and drains only uplands. It conveys the stormwater captured by Non-Jurisdictional Ditches 2-5 just upstream. This ditch does not connect to any jurisdictional features. For these reasons, this ditch was determined to be non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.

#### 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<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) General Area Conditions:

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

# (ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.

Project waters are Pick List river miles from RPW.

Project waters are Pick List aerial (straight) miles from TNW.

Project waters are Pick List aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW5:

Tributary stream order, if known:

<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.

	(0)	Tributary is: Natural Artificial (man-made). Explain: Manipulated (man-altered). Explain:
		Tributary properties with respect to top of bank (estimate):  Average width: feet  Average depth: feet  Average side slopes: Pick List.
		Primary tributary substrate composition (check all that apply):  Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain:
		Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:  Presence of run/riffle/pool complexes. Explain:  Tributary geometry: Pick List.  Tributary gradient (approximate average slope): %
	(c)	Flow: Tributary provides for: Pick List Estimate average number of flow events in review area/year: Pick List Describe flow regime: Other information on duration and volume:
		Surface flow is: Pick List. Characteristics: .
		Subsurface flow: Pick List. Explain findings:  Dye (or other) test performed:
		Tributary has (check all that apply):  Bed and banks  OHWM <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. <sup>7</sup> 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)	Char	mical 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)		ogical Characteristics. Channel supports (check all that apply): Riparian corridor. Characteristics (type, average width): Wetland fringe. Characteristics: Habitat for:

<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.

	ı		Federally Listed species Fish/spawn areas. Expla Other environmentally-s Aquatic/wildlife diversit	in findings: . ensitive species. Ex		
2.	Cha	aract	eristics of wetlands adjacen	t to non-TNW that	flow directly or indirectly in	nto TNW
	(i)		ysical Characteristics:  General Wetland Characteri Properties:  Wetland size: acr Wetland type. Explain: Wetland quality. Explai Project wetlands cross or se	es .n: .	ies. Explain:	
		(b)	General Flow Relationship v Flow is: <b>Pick List</b> . Explain			
			Surface flow is: Pick List Characteristics:			
			Subsurface flow: Pick List.  Dye (or other) test pe		·	
		(c)	Wetland Adjacency Determine Directly abutting Not directly abutting Discrete wetland hyder Ecological connection Separated by berm/b	drologic connection. on. Explain: .		
		(d)	Proximity (Relationship) to Project wetlands are Pick List Project waters are Pick List Flow is from: Pick List. Estimate approximate location	st river miles from 7 aerial (straight) mil	es from TNW.	
	(ii)	Cha	emical Characteristics: racterize wetland system (e.g. characteristics; etc.). Explai atify specific pollutants, if kno	n: .	r, brown, oil film on surface; v	water quality; general watershed
	(iii)	Bio	Riparian buffer. Characteristics. Wet Riparian buffer. Characteristics Vegetation type/percent coverability. Habitat for:  Federally Listed species. Fish/spawn areas. Explair Other environmentally-searches. Aquatic/wildlife diversity.	tics (type, average ver. Explain:  Explain findings: n findings: ensitive species. Explain findings:	vidth): . plain findings:	
3.	Cha	All	eristics of all wetlands adjact wetland(s) being considered it proximately ( ) acres in	n the cumulative and		sis.
		For each wetland, 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.	DETERMIN THAT APPL		RISDICTIONAL FINDI	NGS. THE SUB	JECT WATERS/W	ETLANDS ARE (	(CHECK ALL
	1. TNWs a	U	lands. Check all that appet width (ft), Or,	ly and provide si acres.	ze estimates in revie	w area:	

	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 flow 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: <b>0.69</b> 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).  Explain:
DE	OLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY CH WATERS (CHECK ALL THAT APPLY): 10 which are or could be used by interstate or foreign travelers for recreational or other purposes.
	from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce.  Interstate isolated waters. Explain:  Other factors. Explain:
Ide	ntify water body and summarize rationale supporting determination:
Pro	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.
NO	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.

E.

F.

<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.

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 Ried Rule" (MRR)
"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): Non-jurisdictional ditches 1-6 (approximately 2534 linear feet total) are located in the northwestern central portion of the property. These ditches are all upland cut and drain only upland areas for stormwater drainage. These features were examined in the field. No connections to jurisdictional features were observed in the field on the day of the site visit. There are approximately 2534 linear feet of non-jurisdictional ditches on the site.
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: 0.50 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):
<ul><li>Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).</li><li>Lakes/ponds: acres.</li></ul>
Other non-wetland waters: acres. List type of aquatic resource:  Wetlands: acres.
SECTION IV: DATA SOURCES.
A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked
and requested, appropriately reference sources below):
Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Information submitted by Jason McMaster, HDR 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: 1:24,000 Ladson Quad.
USDA Natural Resources Conservation Service Soil Survey. Citation: Soil sheet 34 Yauhannah, Yemassee, Ogeechee partially
hydric soils and UR urban land.  Mational wetlands inventory map(s). Cite name: USFWS NWI PFO1A forested/shrub wetland.
State/Local wetland inventory map(s):
FEMA/FIRM maps:
<ul><li>100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)</li><li>✓ Photographs: ✓ Aerial (Name &amp; Date): 1999:11228:31.</li></ul>
or \(\times\) Other (Name & Date): Site photographs 7/17/2015.
Previous determination(s). File no. and date of response letter:
<ul><li>Applicable/supporting case law:</li><li>Applicable/supporting scientific literature:</li></ul>
Other information (please specify): Sketch entitled "Approximate Boundaries of Wetlands and Waters of US SAC-2015-01150
Enhanced Use Lease Area 2000 Joint Base Charleston" for Non-jurisdictional Wetland B and Sketch entitled "Supplemental Ditch Mar SAC-2015-01150 Enhanced Use Lease Area 2000 Joint Base Charleston"
B. ADDITIONAL COMMENTS TO SUPPORT JD:  This office has determined that the isolated wetland documented in Section III Part E of this form has no physical chemical or historical

This office has determined that the isolated wetland documented in Section III Part F of this form has no physical, chemical, or biological connection to waters of the U.S., including any apparent surface or shallow subsurface hydrologic connection. There is no apparent connection to interstate or foreign commerce. In addition, there is no apparent evidence of ecological interconnectivity between the isolated wetland and waters of the U.S. On this basis, this office has determined that Non-Jurisdictional Wetland B is isolated from waters of the U.S. and is not subject to regulation under Section 404 of the Clean Water Act. Ditches 1-6 were determined to be non-jurisdictional and therefore not subject to regulation under Section 404 of the Clean Water Act. The jurisdictional status of Jurisdictional Wetland A and Jurisdictional pRPW 1 is discussed on Form 1 of 2.