

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): September 23, 2019

B. DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 1 of 2; Charleston District, SAC-2019-00174, Carolina Bay

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: South Carolina County/parish/borough: **Dorchester** City: **Ridgeville**
Center coordinates of site (lat/long in degree decimal format): Lat. **33.0667°**, Long. **-80.3370°**.

Universal Transverse Mercator:

Name of nearest waterbody: **Captains Creek**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Ashley River**

Name of watershed or Hydrologic Unit Code (HUC): **HUC – 10: 03050201-06 Ashley River**

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): **March 12, 2019**

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** “navigable waters of the U.S.” within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** “waters of the U.S.” within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

TNWs, including territorial seas

Wetlands adjacent to TNWs

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: **Total: 16,000 linear feet: Jurisdictional Tributary 1 – 7,600 linear feet: 12’ average width (ft) and/or 2.09 acres, Jurisdictional Tributary 2 – 4,200 linear feet: 5’ average width (ft) and/or 0.48 acres, Jurisdictional Tributary 3 – 3,200 linear feet: 3’ average width (ft) and/or 0.22 acres, and Jurisdictional Tributary 4 – 1,000 linear feet: 3’ average width (ft) and/or 0.06 acres.**

Wetlands: **Total: 127.292: Jurisdictional Wetland 1 – 0.851 acre, Jurisdictional Wetland 4 – 118.717 acres, Jurisdictional Wetland 5 – 2.727 acres, and Jurisdictional Wetland 6 – 4.997 acres.**

c. Limits (boundaries) of jurisdiction based on: **1987 Delineation Manual, Established by OHWM, Pick List**

Elevation of established OHWM (if known): .

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).

2. **Non-regulated waters/wetlands (check if applicable):³ [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: **There is an approximate 1.5 acre vegetated stormwater control pond at the southeast end of the site actively receiving upland stormwater from impervious surfaces of the residential development located north of the pond. The stormwater control pond was excavated from uplands and initially served as a borrow pit for the adjacent residential development. As stated in the Preamble to the November 13, 1986, Regulations found on page 41217 (Federal Register vol. 51 No. 219) "waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and resulting body of water meets the definition of waters of the United States" are generally not considered waters of the U.S. One (1) non-jurisdictional ditch was identified along the north boundary of the site. This ditch does provide a surface connection for a wetland to other downstream waters detailed later in this form. This feature did not exhibit hydrologic indicators such as: ordinary high water mark, bed, bank, substrate and sediment sorting. Flow was not observed during the site visit. Therefore, for these reasons these features were determined to be non-jurisdictional under Section 404 of the CWA.**

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 waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

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

***** Braided Seasonal RPW System– Jurisdictional Tributary 2, 3, and 4 *****

(i) General Area Conditions:

Watershed size: **86,887 acres** ; 03050201-06

Drainage area: **894 acres**

³ Supporting documentation is presented in Section III.F.

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

- sediment deposition
- water staining
- other (list):
- Discontinuous OHWM.⁷ Explain: .
- 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
 - tidal gauges
 - other (list):
- Mean High Water Mark indicated by:
 - survey to available datum;
 - physical markings;
 - vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: **The water quality of braided Jurisdictional Tributaries 2, 3, and 4 appeared to be good as the water was clear and flowing (observed during the site visit). The surrounding land consists of mixed deciduous forest and forested wetlands with some residential land use in the northeastern portion of the drainage area.**

Identify specific pollutants, if known: .

(iv) Biological Characteristics. Channel supports (check all that apply):

Riparian corridor. Characteristics (type, average width): **Jurisdictional Tributary 2 has abutting wetlands (Jurisdictional Wetlands 4 and 5) on both sides of the tributary that forms a riparian corridor along its entire length. Where present, the riparian corridor consists of bottomland hardwood forested wetlands and mixed deciduous/coniferous forest ranging from 1,600ft to 3,000ft in width. Jurisdictional Tributary 3 has abutting wetlands (Jurisdictional Wetlands 4 and 6) on both sides of the tributary that forms a riparian corridor along its entire length. Where present, the riparian corridor consists of bottomland hardwood forested wetlands and mixed deciduous/coniferous forest ranging from 785ft to 1,400ft in width. Jurisdictional Tributary 4 has abutting wetlands (Jurisdictional Wetland 4) on both sides of the tributary that forms a riparian corridor along its entire length. Where present, the riparian corridor consists of bottomland hardwood forested wetlands and mixed deciduous/coniferous forest ranging from 600ft to 1,800ft in 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: **The channels of braided Jurisdictional Tributary 2, 3 and 4 may provide habitat for small organisms such as small fish, insects, and amphibians. Larger wildlife such as mammals and wading birds may also utilize the channels as a food and water source. The braided tributaries may also provide a corridor for movement of aquatic organisms through Jurisdictional Wetland 4, 5 and 6 as these wetlands directly abut the entire length of the tributaries.**

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

Wetlands 4, 5 and 6 also abut the braided seasonal RPW discussed above in Section B(1). However, wetlands 4, 5 and 6 are also part of one large wetland system that abuts the perennial tributary, Jurisdictional Tributary 1 (Captains Creek), a perennial RPW; therefore a significant nexus determination is not being performed on wetlands 4, 5 and 6.

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: **Jurisdictional Wetland 1 - 0.851 acres**

Wetland type. Explain: **Palustrine Forested.**

Wetland quality. Explain: **Fully Functional.**

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: **Jurisdictional Wetland 1 is connected to Jurisdictional Tributary 2 by means of the non-jurisdictional ditch and through Jurisdictional Wetland 4.**

Surface flow is: **Discrete and confined**

Characteristics: .

Subsurface flow: **Unknown**. Explain findings: .

⁷Ibid.

Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- Directly abutting
- Not directly abutting
 - Discrete wetland hydrologic connection. Explain: **As described above, water discretely flows during rainfall and other storm events into the non-jurisdictional ditch and through Jurisdictional Wetland 4 to Jurisdictional Tributary 2.**
 - Ecological connection. Explain: .
 - Separated by berm/barrier. Explain: .

(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 **500-year or greater** 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: **During the site visit, the wetland was saturated. Land use within this watershed and smaller drainage area is comprised of residential, forested land and forested wetland.**
 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: **Vegetation type consists mainly of mature forest canopy with sapling and herbaceous layers comprising the understory.**
- Habitat for:
 - Federally Listed species. Explain findings: .
 - Fish/spawn areas. Explain findings: .
 - Other environmentally-sensitive species. Explain findings: .
 - Aquatic/wildlife diversity. Explain findings: **Jurisdictional Wetland 1 is a forested wetland that is associated with Jurisdictional Wetland 4, Jurisdictional Tributary 2, and adjacent undeveloped forested and vegetated uplands. The vegetation present within this wetland is diverse and may include *Nyssa sylvatica*, *Acer rubrum*, and *Liquidambar styraciflua*. A diverse forested wetland often attracts diverse wildlife, which may include various species of insects, amphibians, reptiles, mammals, and birds, all of which may use the wetland for all or part of their lives, such as for foraging, nesting and/or for shelter.**

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

All wetland(s) being considered in the cumulative analysis: **5**
 Approximately (**78.93**) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
Jurisdictional Wetland 1 (N)	0.851		
Jurisdictional Wetland 4 (Y)	53.355		
Jurisdictional Wetland 5 (Y)	2.727		
Jurisdictional Wetland 6 (Y)	4.997		
Wetland 1 (Off-site) (Y)	17		

Summarize overall biological, chemical and physical functions being performed: **The wetlands listed above are providing important biological, chemical, and physical functions. These wetlands act as a catch basin to help filter out pollutants from the neighboring uplands and hold runoff prior to it flowing downstream into Captains Creek and ultimately into the TNW. Besides the obvious functions of stormwater attenuation, absorption, and overstory biomass input into the food web, these wetlands provide a uniquely important ecological connection to the downstream TNW. These wetlands are providing important biological, chemical, and physical functions within a watershed comprised primarily of urban land use. The biological functions being performed include providing breeding grounds and shelter for aquatic animals and diversifying the plant life within the watershed. As a result, these wetlands in the drainage area supply food sources for a variety of water dependent species, such as invertebrates, amphibians, reptiles, and mammals. The chemical functions being performed consist of the removal of excess pollutants, which are contributed by runoff from the**

surrounding uplands, from reaching the downstream tributary and ultimately, the TNW. This reduces nitrogen and phosphorus loading downstream and effectively prevents oxygen depletion that can result from eutrophication. Physically, these wetlands help reduce stormwater flow. Not only does this prevent the accumulation of sediment downstream, which can smother fish and other aquatic wildlife, but it also reduces the amount of pollutants downstream because these pollutants are usually transported by sediment particles.

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: **Land use within this watershed is comprised of 43.3% urban land, 20.0% forested land, 19.5% forested wetland (swamp), 9.4% nonforested wetland, 4.9% water, 2.5% agricultural land, and 0.4% barren land. According to the SCDHEC description for the Ashley River Watershed, there is a high potential for growth in this watershed, which contains portions of the Towns of Summerville and Ladson and the Cities of Charleston and North Charleston. Due to the presence of residential land use in this watershed and in the drainage area, increased runoff from impervious surfaces and pollutants associated with these areas are likely to enter the onsite tributary and downstream TNW. Furthermore, the onsite wetlands referenced above provide stormwater attenuation, absorption, and overstory biomass input into the food web. These wetlands also provide an important ecological connection to the downstream TNW via important biological, chemical, and physical functions within a watershed comprised primarily of agricultural land use. The biological functions being performed include providing breeding grounds and shelter for aquatic animals and diversifying the plant life within the watershed. The onsite wetlands and other waters of the US within the drainage area also supply food sources for a variety of water dependent species, such as invertebrates, amphibians, reptiles, and mammals. The chemical functions being performed consist of the removal of excess pollutants, which are contributed by runoff from the surrounding residential areas and uplands, from reaching the downstream TNW. This reduces nitrogen and phosphorus loading downstream and effectively prevents oxygen depletion that can result from eutrophication. Physically, the wetlands help reduce stormwater flow. This prevents the accumulation of sediment downstream, which can smother fish and other aquatic wildlife, and also reduces the amount of pollutants downstream because these pollutants are usually transported by sediment particles. Therefore, based on the collective functions described above and their importance to the biological, chemical, and physical integrity of the traditional navigable waters of the Ashley River, it has been determined that there is a significant nexus between the relevant reach of Jurisdictional Tributary 2 and its adjacent wetlands, that ultimately flow to the TNW, the Ashley River.**

Documentation for the Record only: Significant nexus findings for seasonal RPWs and/or wetlands abutting seasonal RPWs: The braided Seasonal RPWs, Jurisdictional Tributary 2, 3, and 4 as well as their abutting wetlands, Jurisdictional Wetlands 4, 5, and 6 have a significant nexus to downstream TNWs. The review area is approximately 894 acres in size, comprised of approximately 78.93 acres of wetlands (Jurisdictional Wetlands 1, 4, 5 and 6) and approximately 8,400 linear feet of braided

tributaries. The review area is the headwaters of a larger braided system that is comprised of perennial and seasonal tributaries, as well as abutting and adjacent wetlands, which is discussed as a whole on this JD Basis Form 1 of 2. The review areas consists of three "branches" which include Jurisdictional Tributary 2, Jurisdictional Wetland 1, Jurisdictional Wetland 4, and Jurisdictional Wetland 5; Jurisdictional Tributary 3, Jurisdictional Wetland 4, and Jurisdictional Wetland 6; and Jurisdictional Tributary 4 and Jurisdictional Wetland 4. Headwater systems provide a variety of functions that are important for the downstream waters and the watershed as a whole. The wetlands and tributaries not only provide habitat for various aquatic and terrestrial organisms, including a variety of insects, amphibians, reptiles, mammals and birds, but are also a source of food, nutrients, and carbon for organisms located downstream. The headwater wetlands and tributaries are especially important for the water quality of a watershed. Water runoff from adjacent uplands that may contain pollutants, sediments, excess nutrients, etc., that flows through the wetlands before entering the tributaries has the opportunity to be filtered out prior to flowing to downstream TNWs. In addition, excess water can temporarily be stored thereby minimizing potential flooding of downstream areas and can also slowly release water downstream to maintain seasonal flow volumes. Runoff water may also transport organisms, nutrients, and carbon from the wetlands into the tributaries, which continue to flow to downstream TNWs. The small headwater tributaries often have shallow water, low volume, and slow flow, which allows for more surface area of the water column to come into contact with channel substrate and any vegetation that may be present, allowing for sediments and pollutants to settle out of or be filtered from the water column before flowing to downstream TNWs. When headwater wetlands and streams are filled or altered, many of the services that they provide are compromised and the loss of those services affects downstream TNWs. The review area drains to a perennial RPW, Jurisdictional Tributary 1 (Captains Creek), then to the Ashley River, which is the TNW. According to the closest water monitoring station (CSTL-102), approximately 13.5 miles downstream of the review area, aquatic life uses in the Ashley River are fully supported for both fresh and saltwater classifications; however, there is a significant increasing trend in total phosphorus concentration for both classifications. Although dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standard violations. There is a significant increasing trend in pH. A significant decreasing trend in total nitrogen concentration suggests improving conditions for this parameter. Recreational uses are partially supported due to fecal coliform bacteria excursions for both classifications. Although no known source of pollutants is located within the review area, the headwater wetlands and streams within the review area have a significant nexus to downstream TNWs as they provide a source of carbon and nutrients, can provide water quality functions, can store excess water minimizing flooding impacts downstream, can maintain seasonal flow volumes, and can transport organisms, carbon, nutrients, sediments, clean water, as well as any pollutants that may be present or could become present, to downstream TNWs

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.
 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: **The reach discussed on this JD basis Form 1 of 2 consists of a braided system of tributaries comprised of Perennial and Seasonal RPWs, as well as abutting and adjacent wetlands (discussed in #4 and #5 below).**

Jurisdictional Tributary 1 (Captains Creek) appears on topo maps as both a blue line and named tributary. The tributary, including the channel and water within the tributary, are visible in aerial photography. Water and flow was observed during the site visit, evidence of perennial flow included sediment sorting, lack of leaf litter within the channel and an ordinary high water mark. According to the United States Geological Service's (USGS) web-based geographic information system (GIS) application, StreamStats, the tributary has a drainage area of 10,048 acres in size. The United States Fish and Wildlife Service's (USFWS) National Wetland Inventory (NWI), classifies Jurisdictional Tributary 1 as a riverine, unknown perennial, unconsolidated bottom, and permanently flooded (R2UBH) habitat. For these reasons, Jurisdictional Tributary 1 was determined to have perennial flow.

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: **The reach discussed on this JD basis Form 1 of 2 consists of a braided system of tributaries comprised of Perennial and Seasonal RPWs, as well as abutting and adjacent wetlands (discussed in #4 and #5 below).**

Jurisdictional Tributary 2 appears on topo maps as a blue line tributary. Water and flow were observed within the channel of the tributary during the site visit. However, leaf litter lack of sediment deposition within the channel would indicate the tributary flows seasonally. According to the United States Geological Service's (USGS) web-based geographic information system (GIS) application, StreamStats, the tributary has a drainage area of 568 acres in size. The United States Fish and Wildlife Service's (USFWS) National Wetland Inventory (NWI), classifies Jurisdictional Tributary 2 as a riverine, intermittent, streambed, and seasonally flooded (R4SBC) habitat. For these reasons, Jurisdictional Tributary 2 was determined to have seasonal flow.

Jurisdictional Tributary 3 appears on topo maps as a blue line tributary. Water and flow were observed within the channel of the tributary during the site visit. However, leaf litter lack of sediment deposition within the channel would indicate the tributary flows seasonally. According to the United States Geological Service's (USGS) web-based

geographic information system (GIS) application, StreamStats, the tributary has a drainage area of 153 acres in size. The United States Fish and Wildlife Service's (USFWS) National Wetland Inventory (NWI), classifies Jurisdictional Tributary 3 as a riverine, intermittent, streambed, and seasonally flooded (R4SBC) habitat. For these reasons, Jurisdictional Tributary 3 was determined to have seasonal flow.

Jurisdictional Tributary 4 is within Jurisdictional Wetland 4. Water and flow were observed within the channel of the tributary during the site visit. However, leaf litter lack of sediment deposition within the channel would indicate the tributary flows seasonally. According to the United States Geological Service's (USGS) web-based geographic information system (GIS) application, StreamStats, the tributary has a drainage area of 128 acres in size. For these reasons, Jurisdictional Tributary 4 was determined to have seasonal flow.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: **Jurisdictional Tributary 1 – 7,600; Jurisdictional Tributary 2 – 4,200; Jurisdictional Tributary 3 – 3,200; and Jurisdictional Tributary 4 – 1,000** linear feet **5.75'** average width (ft).
 Other non-wetland waters: acres.
Identify type(s) of waters: .

3. **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: .

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: **The reach discussed on this JD basis Form 1 of 2 consists of a braided system of tributaries comprised of Perennial and Seasonal RPWs, as well as abutting and adjacent wetlands. Details supporting the abutting determinations are as follows:**

Jurisdictional Wetland 4 abuts perennial RPW Jurisdictional Tributary 1 (Captains Creek). Jurisdictional Tributary 1 is located in the middle of Jurisdictional Wetland 4 (the wetland continues south off-site), and therefore, Jurisdictional Wetland 4 shares a boundary with Jurisdictional Tributary 1 and has a direct surface hydrologic connection to Jurisdictional Tributary 1. Similarly, during periods of high flow, water from Jurisdictional Tributary 1 can overtop the banks and flow directly into the surrounding Jurisdictional Wetland 4.

Jurisdictional Wetlands 5 and 6 are separated from Jurisdictional Wetland 4 by a road and have a direct surface hydrologic connection via a culvert under the road. Based on a jurisdictional determination NWP2007-428, the US EPA determined on February 25, 2008, that wetlands separated by an artificial barrier, which is a road/berm in this instance, does not sever the areas from functioning as one wetland. Therefore, Jurisdictional Wetlands 5 and 6 are part of Jurisdictional Wetland 4. Jurisdictional Wetlands 5 and 6 are contiguous parts of Jurisdictional Wetland 4 and therefore, would be considered to be abutting Jurisdictional Tributary 1. However, Jurisdictional Wetlands 4, 5 and 6 also abut seasonal RPWs Jurisdictional Tributary 2, 3, and 4. Details supporting the aforementioned abutting determinations for Jurisdictional Wetlands 5 and 6 are included below.

- 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: **The reach discussed on this JD basis Form 1 of 2 consists of a braided system of tributaries comprised of Perennial and Seasonal RPWs, as well as abutting and adjacent wetlands. Details supporting the abutting determinations are as follows:**

Jurisdictional Wetland 5 abuts seasonal RPW Jurisdictional Tributary 2. Jurisdictional Tributary 2 is located in the middle of Jurisdictional Wetland 5, and therefore, Jurisdictional Wetland 5 shares a boundary with Jurisdictional Tributary 2 and has a direct surface hydrologic connection to Jurisdictional Tributary 2. Similarly, during periods of high flow, water from Jurisdictional Tributary 2 can overtop the banks and flow directly into the surrounding Jurisdictional Wetland 5.

Jurisdictional Wetland 6 abuts seasonal RPW Jurisdictional Tributary 3. Jurisdictional Tributary 3 is located in the middle of Jurisdictional Wetland 6, and therefore, Jurisdictional Wetland 6 shares a boundary with Jurisdictional Tributary 3 and has a direct surface hydrologic connection to Jurisdictional Tributary 3. Similarly,

⁸See Footnote # 3.

during periods of high flow, water from Jurisdictional Tributary 3 can overtop the banks and flow directly into the surrounding Jurisdictional Wetland 6.

Provide acreage estimates for jurisdictional wetlands in the review area: **76.096** 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 jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: **0.851** 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:

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): **There is an approximate 1.5 acre vegetated stormwater control pond at the southeast end of the site actively receiving upland stormwater from impervious surfaces of the residential development located north of the pond. The stormwater control pond was excavated from uplands and initially served as a borrow pit for the adjacent residential development. As stated in the Preamble to the November 13, 1986, Regulations found on page 41217 (Federal Register vol. 51 No. 219) "waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and resulting body of water meets the definition of waters of the United States" are generally not considered waters of the U.S. One (1) non-jurisdictional ditch was identified along the north boundary of the site. This ditch does provide a surface connection for a wetland to other downstream waters detailed later in this form. This feature did not exhibit hydrologic indicators such as: ordinary high water mark, bed, bank, substrate and sediment sorting. Flow was not observed during the site visit. Therefore, for these reasons these features were determined to be non-jurisdictional under Section 404 of the CWA.**

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.

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.

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: **"WETLAND MAP" dated August 2, 2019.**
- 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: **Topographic Map – Ridgeville Quadrangle Darby Carolina Bay**
- Dorchester County, SC dated January 14, 2019.**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **Mapped Soils Darby Carolina Bay Dorchester County, SC dated January 14, 2019.**
- National wetlands inventory map(s). Cite name: **NWI Map Darby Carolina Bay Dorchester County, SC dated January 14, 2019.**
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): .
 - or Other (Name & Date): **Photographs submitted a part of the JD request.**
- Previous determination(s). File no. and date of response letter: **SAC 81-2005-1987 verified on October 12, 2005.**
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: The reach discussed on this JD basis Form 1 of 2 consists of a braided system of tributaries comprised of Perennial and Seasonal RPWs, as well as abutting and adjacent wetlands. All of the tributaries and wetlands discussed on Form 1 of 2 are jurisdictional and subject to regulation by Section 404 of the Clean Water Act. The tributaries are as follows: Jurisdictional Tributary 1, Jurisdictional Tributary 2, Jurisdictional Tributary 3, and Jurisdictional Tributary 4. The jurisdictional wetlands are : Jurisdictional Wetland 1, Jurisdictional Wetland 4, Jurisdictional Wetland 5, and Jurisdictional Wetland 6. In addition, there is an approximate 1.5 acre vegetated stormwater control pond at the southeast end of the site actively receiving upland stormwater from impervious surfaces of the residential development located north of the pond. The stormwater control pond was excavated from uplands and initially served as a borrow pit for the adjacent residential development. As stated in the Preamble to the November 13, 1986, Regulations found on page 41217 (Federal Register vol. 51 No. 219) "waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and resulting body of water meets the definition of waters of the United States" are generally not considered waters of the U.S. One (1) non-jurisdictional ditch was identified along the north boundary of the site. This ditch does provide a surface connection for a wetland to other downstream waters detailed later in this form. This feature did not exhibit hydrologic indicators such as: ordinary high water mark, bed, bank, substrate and sediment sorting. Flow was not observed during the site visit. Therefore, for these reasons these features were determined to be non-jurisdictional under Section 404 of the CWA.

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): September 23, 2019

B. DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 2 of 2; Charleston District, SAC-2019-00174, Carolina Bay

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: South Carolina County/parish/borough: **Dorchester** City: **Ridgeville**
Center coordinates of site (lat/long in degree decimal format): Lat. **33.0667°**, Long. **-80.3370°**.
Universal Transverse Mercator:

Name of nearest waterbody: **Captains Creek**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Ashley River**

Name of watershed or Hydrologic Unit Code (HUC): **HUC – 8: 03050201 Cooper River**

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): **March 12, 2019**

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** “navigable waters of the U.S.” within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are no** “waters of the U.S.” within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on: **Pick List, Pick List, Pick List**

Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):³ [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: **This office has determined that isolated Non-Jurisdictional Wetland 2 (0.071 Acre) and Non-Jurisdictional**

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least “seasonally” (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

Wetland 3 (0.704 Acre) documented in Section III Part F of this form have no physical, chemical, or biological connection to waters of the U.S., including any apparent surface or shallow subsurface hydrologic connection. According to best available Lidar data Non-Jurisdictional Wetlands 2 and 3 are approximately 3 feet below surrounding uplands and are entirely surrounded by uplands. There is no apparent connection to interstate or foreign commerce. In addition, there is no apparent evidence of ecological interconnectivity between the isolated wetlands and waters of the U.S. On this basis, this office has determined that these wetlands are isolated from waters of the U.S. and are not within the jurisdiction 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 waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

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

(i) General Area Conditions:

Watershed size: **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.

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

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:

(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
 OHWM⁶ (check all indicators that apply):
 clear, natural line impressed on the bank the presence of litter and debris
 changes in the character of soil destruction of terrestrial vegetation
 shelving the presence of wrack line
 vegetation matted down, bent, or absent sediment sorting
 leaf litter disturbed or washed away scour
 sediment deposition multiple observed or predicted flow events
 water staining abrupt change in plant community
 other (list):
 Discontinuous OHWM.⁷ Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

High Tide Line indicated by: Mean High Water Mark indicated by:
 oil or scum line along shore objects survey to available datum;
 fine shell or debris deposits (foreshore) physical markings;
 physical markings/characteristics vegetation lines/changes in vegetation types.
 tidal gauges
 other (list):

(iii) **Chemical Characteristics:**

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.

⁶ 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.

⁷Ibid.

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

(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: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) 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) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

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: .

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

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>

Summarize overall biological, chemical and physical functions being performed: _____

C. SIGNIFICANT NEXUS DETERMINATION

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.
 - Wetlands adjacent to TNWs: _____ acres.
2. **RPWs that flow directly or indirectly into TNWs.**
 - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: _____

- Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
 Other non-wetland waters: acres.
Identify type(s) of waters: .

3. Non-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: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
 Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. 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:

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: .

⁸See Footnote # 3.

⁹To 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.

