

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): October 7, 2014

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: JD Form 1 of 1; Charleston District, SCDOT, S-29 (Cooks Bridge Road) Intersection Project, SAC# 2014-00516-DS

C. PROJECT LOCATION AND BACKGROUND INFORMATION: This project is located on S-29 (Cooks Bridge Road) at the intersection of S-29 and S-49 (Wire Road) in Aiken County, South Carolina

State: South Carolina County/parish/borough: **Aiken** City:
Center coordinates of site (lat/long in degree decimal format): Lat. ° 33.602290 **N**, Long. ° 81.669197 **W**.
Universal Transverse Mercator:

Name of nearest waterbody: **Shaw Creek**

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

Name of watershed or Hydrologic Unit Code (HUC):

- 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: **October 2, 2014**
 Field Determination. Date(s): **September 10, 2014**

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: **Shaw Creek 135** linear feet: **20-30** width (ft) and/or _____ acres.

Wetlands: **Wetland A: 0.29 acres, Wetland C: 0.18 acres, Wetland D: 0.01 acres, Wetland E: 0.6 acres, Wetland F: 0.34 acres, and Wetland G: 0.27 acres.**

c. Limits (boundaries) of jurisdiction based on: **1987 Delineation Manual, Atlantic/Gulf Coastal Plan Regional Supplement 2.0**, **Established by OHWM.**

Elevation of established OHWM (if known): **Unknown.**

2. Non-regulated waters/wetlands (check if applicable):³ [Including potentially jurisdictional features that upon

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.

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: **The Jurisdictional Determination includes a feature identified as non-jurisdictional Ditch B. Based on the field review on September 10, 2014, this feature was found by the Corps to be a roadside ditch that was excavated in uplands, did not have any flow and had very limited evidence of flow. It appears that there may be flow within the ditch, due to accumulated Styrofoam cups and empty soda bottles. However, it appears that this flow is directly associated with precipitation event driven stormwater being conveyed away from the roadway and surrounding areas. Due to the lack of flow and/or evidence of flow, the Corps has determined that Ditch B would not be considered to be a tributary. In addition, the applicant has identified that within Ditch B, there are hydrophytic plants and some hydric soils indicators, but wetland hydrology indicators were not present. It is reasonable to assume that Ditch B is conveying stormwater and may have standing water long enough to support hydrophytic plants and to allow development of hydric soils. Based on the lack of hydrology indicators and since the plants and soils are located within a stormwater conveyance ditch, the Corps determined that Ditch B would not be considered to contain jurisdictional wetlands. Since Ditch B is not a tributary and is not a wetland area, the Corps has determined that this feature is not a Water of the U.S.**

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: South Fork Edisto River (03050204-01) 223,559 acres ;

Drainage area: **estimated project Drainage area at S-29 Bridge across Shaw Creek 55,750 acres**

Average annual rainfall: **Aiken Soil Survey Data: 47.65 inches**

Average annual snowfall: **Aiken Soil Survey Data: 1.6 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 **10-15** river miles from TNW.

Project waters are **1 (or less)** river miles from RPW.

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

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

Project waters cross or serve as state boundaries. Explain: **N/A.**

Identify flow route to TNW⁵: **Shaw Creek to South Fork Edisto River.**

Tributary stream order, if known: **Shaw Creek –Fourth Order.**

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

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) 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: **20-30** feet
Average depth: **estimated at 8-15** feet
Average side slopes: **2:1**.

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: Shaw Creek appears to be fairly stable at this location and banks are almost entirely vegetated with a mature forested riparian corridor.

Presence of run/riffle/pool complexes. Explain: **riffle pool complexes observed from S-29 bridge.**

Tributary geometry: **Meandering.**

Tributary gradient (approximate average slope): **Unknown** %

(c) Flow:

Tributary provides for: **Perennial flow**

Estimate average number of flow events in review area/year: **20 (or greater)**

Describe flow regime: **Shaw Creek at the S-29 Bridge has a perennial flow regime.**

Other information on duration and volume:

Surface flow is: **Pick List.** Characteristics: **flow is confined within the established bed and banks of Shaw Creek.**

Subsurface flow: **Unknown.** 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:**

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

Explain: **No discoloration was observed during the field view and the water was free of oily sheen.**

Identify specific pollutants, if known: **Unknown.**

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

⁷Ibid.

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

- Riparian corridor. Characteristics (type, average width): **Shaw Creek has a wide forested floodplain/wetland system on both sides of the stream at this location.**
- 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: **Wetland C: 0.18 acres, Wetland D: 0.01 acres, and Wetland G: 0.27 acres**

Wetland type. Explain: **Wetland areas mainly forested wetlands with some area that are emergent.**

Wetland quality. Explain: **Wetland areas adjacent to roadway are impaired due to mowing and other right of way activities, and some areas of Wetland G are within a pasture and are experiencing grazing. The remaining wetland areas that are forested appear to be less impaired.**

Project wetlands cross or serve as state boundaries. Explain: **N/A.**

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: **Flow from these adjacent wetlands is intermittent throughout the year.**

During precipitation events and times of the year when the groundwater level is close to the surface, these wetlands will be providing flow (via other wetlands or non-jurisdictional ditch B) to Shaw Creek.

Surface flow is: **Discrete and confined**

Characteristics: **Flow from Wetlands C, D, & G flow through culverts under SCDOT roadways. From these culverts, flow is either directed through non-jurisdictional Ditch B or through Wetland E to Shaw Creek.**

Subsurface flow: **Unknown**. Explain findings: **No subsurface flow testing was performed.**

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: **Wetland C via non-jurisdictional Ditch B and Wetland D & G via Wetland E (Shaw Creek floodplain wetland).**

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 **5-10** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **10 - 20-year** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: **During the field view no water was observed in Wetland C. Water in Wetland G was cloudy and contained a large amount of filamentous algae; this may be due to nutrient enrichment from its location within a cattle pasture. No water was observed in Wetland D.**

Identify specific pollutants, if known: **Wetland G, nutrient enrichment from location within cattle pasture and pollutants from adjacent roadways.**

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain: **Wetland C and D are dominated by emergent vegetation due to mowing and grazing, Wetland D is mostly forested.**
- 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: **8**
Approximately (**approximately 25.0**) 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>
Wetland A-Yes	0.29	Wetland F-Yes	0.34
Wetland C-No	0.18	Wetland D-No	0.01
Wetland E-Yes	Approx 4.0	Wetland G-No	0.27
Other wetlands within Shaw Creek Floodplain near project	20.0		

Summarize overall biological, chemical and physical functions being performed:

This project includes wetlands that are directly abutting Shaw Creek and wetlands which are adjacent to Shaw Creek. This includes the wetlands identified within this project (Wetlands A, C, D, E, F, & G) and other wetlands outside the project area but located in and along the floodplain of Shaw Creek. These wetlands provide some important functions for Shaw Creek and the downstream TNW (South Fork of Edisto River). Wetlands have been shown to provide floodwater attenuation which reduces peak discharge rate and volume therefore protecting downstream streams and rivers. This attenuation also protects the receiving streams from accelerated erosion and sedimentation associated with stream scour. In addition wetlands and headwater tributaries have been shown to provide an attenuating function for the maintenance of seasonal and base flows within associated streams and rivers. Wetlands have also been shown to provide water quality improvement to receiving stream through sediment and nutrient retention/uptake. These wetlands provide a sink for nutrient runoff and play an important role in nutrient cycling for nutrients such as nitrogen and phosphorus. Wetlands provide an area where sediments can be captured and prevented from entering receiving streams. Wetlands and headwater tributaries provide a diverse ecosystem for aquatic and terrestrial species. This diversity in part is provided by the fact that the wetland provides benefits of both terrestrial and aquatic habitats. This is especially important for species that require aquatic habitats for completion of a portion of their life cycle and a terrestrial habitat for another stage. In addition numerous terrestrial species rely upon wetlands such as these, to provide a source of food, shelter, and/or breeding area. In wetlands which provide a diversity of plant types and water regimes (open water, emergent, scrub/shrub, forest) provide a richer habitat which can be utilized by a larger number of species. This is especially true in the "edge" (ecotone) between aquatic systems and upland systems. In watersheds that contain forested wetlands, such as at this location, it has been shown that the wetlands export a large amount of carbon from the wetland areas. This carbon is critical for downstream aquatic organisms. Especially the macroinvertebrates that utilize the carbon as a food source and which in turn provide the basis for numerous food webs within streams and rivers.

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: This project includes wetlands that are directly abutting Shaw Creek and wetlands which are adjacent to Shaw Creek. This includes the wetlands identified within this project (Wetlands A, C, D, E, F, & G) and other wetlands outside the project area but located in and along the floodplain of Shaw Creek. These wetlands provide some important functions for Shaw Creek and the downstream TNW (South Fork of Edisto River). Wetlands have been shown to provide floodwater attenuation which reduces peak discharge rate and volume therefore protecting downstream streams and rivers. This attenuation also protects the receiving streams from accelerated erosion and sedimentation associated with stream scour. In addition wetlands and headwater tributaries have been shown to provide an attenuating function for the maintenance of seasonal and base flows within associated streams and rivers. Wetlands have also been shown to provide water quality improvement to receiving stream through sediment and nutrient retention/uptake. These wetlands provide a sink for nutrient runoff and play an important role in nutrient cycling for nutrients such as nitrogen and phosphorus. Wetlands provide an area where sediments can be captured and prevented from entering receiving streams. Wetlands and headwater tributaries provide a diverse ecosystem for aquatic and terrestrial species. This diversity in part is provided by the fact that the wetland provides benefits of both terrestrial and aquatic habitats. This is especially important for species that require aquatic habitats for completion of a portion of their life cycle and a terrestrial habitat for another stage. In addition numerous terrestrial species rely upon wetlands such as these, to provide a source of food, shelter, and/or breeding area. In wetlands which provide a diversity of plant types and water regimes (open water, emergent, scrub/shrub, forest) provide a richer habitat which can be utilized by a larger number of species. This is especially true in the “edge” (ecotone) between aquatic systems and upland systems. In watersheds that contain forested wetlands, such as at this location, it has been shown that the wetlands export a large amount of carbon from the wetland areas. This carbon is critical for downstream aquatic organisms. Especially the macroinvertebrates that utilize the carbon as a food source and which in turn provide the basis for numerous food webs within streams and rivers. Based on the collective functions described above and their important to the biological, chemical, and physical integrity of the traditional navigable waters of South Fork Edisto River, this office has determined that there is a significant nexus between the identified waters and the downstream TNW.
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: **Shaw Creek appears as a solid blue line stream on the USGS mapping within this project area. In addition, during the field view the Corps observed Shaw Creek to have established bed and banks, a prominent ordinary high water mark, and observable flow. This stream is 20-30 feet wide within the project limits. Based on these observations, the Corps determined that this tributary is relatively permanent water with a perennial flow regime.**
 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: Shaw Creek 135 linear feet **20-30** width (ft).
 Other non-wetland waters: acres.
 Identify type(s) of waters:
3. **Non-RPW⁸ 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.

⁸See Footnote # 3.

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 and F are wetlands directly abutting the main channel of Shaw Creek (as identified above a RPW) and are found within the floodplain of Shaw Creek within the project limits. Wetland E is a larger contiguous wetland that extends beyond the project limits to a location that is located within the floodplain of Shaw Creek and abuts Shaw Creek.**
- 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: Wetland A: 0.29 acres, Wetland F: 0.34, and Wetland E: 0.6 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: Wetland C: 0.18 acres, Wetland D: 0.01 acres, and Wetland G: 0.27 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.

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.

- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- Other: (explain, if not covered above): The Jurisdictional Determination includes a feature identified as non-jurisdictional Ditch B. Based on the field review on September 10, 2014, this feature was found by the Corps to be a roadside ditch that was excavated in uplands, did not have any flow and had very limited evidence of flow. It appears that there may be flow within the ditch, due to accumulated Styrofoam cups and empty soda bottles. However, it appears that this flow is directly associated with precipitation event driven stormwater being conveyed away from the roadway and surrounding areas. Due to the lack of flow and/or evidence of flow, the Corps has determined that Ditch B would not be considered to be a tributary. In addition, the applicant has identified that within Ditch B, there are hydrophytic plants and some hydric soils indicators, but wetland hydrology indicators were not present. It is reasonable to assume that Ditch B is conveying stormwater and may have standing water long enough to support hydrophytic plants and to allow development of hydric soils. Based on the lack of hydrology indicators and since the plants and soils are located within a stormwater conveyance ditch, the Corps determined that Ditch B would not be considered to contain jurisdictional wetlands. Since Ditch B is not a tributary and is not a wetland area, the Corps has determined that this feature is not a Water of the U.S.

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): **Ditch B: 669** linear feet, **3-5** 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: **SCDOT.**
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
- Office concurs with data sheets/delineation report.

Although the Corps may not agree with all the information provided by the agent in the data forms describing delineated wetlands, the Corps agrees with the conclusion and boundary established from site information documented.

- 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: **Aiken, SC quadrangle.**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **Pg 35; Vacluse, Fuquay, Ogeechee, and Johnston.**
- National wetlands inventory map(s). Cite name: **U21, PEM1F_x, PFO1C, U14, & PFO1B.**
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): **(1999) 11188:165.**
 - or Other (Name & Date): **Site photographs provided by SCDOT.**
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: Shaw Creek appears as a solid blue line stream on the USGS mapping within this project area. In addition, during the field view the Corps observed Shaw Creek to have established bed and banks, a prominent ordinary high

water mark, and observable flow. This stream is 20-30 feet wide within the project limits. Based on these observations, the Corps determined that this tributary is relatively permanent water with a perennial flow regime. In addition, Wetland A and F are wetlands directly abutting the main channel of Shaw Creek (RPW) and are found within the floodplain of Shaw Creek within the project limits. Wetland E is a larger contiguous wetland that extends beyond the project limits to a location that is located within the floodplain of Shaw Creek and abuts Shaw Creek.

This project includes wetlands that are directly abutting Shaw Creek and wetlands which are adjacent to Shaw Creek. This includes the wetlands identified within this project (Wetlands A, C, D, E, F, & G) and other wetlands outside the project area but located in and along the floodplain of Shaw Creek. These wetlands provide some important functions for Shaw Creek and the downstream TNW (South Fork of Edisto River). Wetlands have been shown to provide floodwater attenuation which reduces peak discharge rate and volume therefore protecting downstream streams and rivers. This attenuation also protects the receiving streams from accelerated erosion and sedimentation associated with stream scour. In addition wetlands and headwater tributaries have been shown to provide an attenuating function for the maintenance of seasonal and base flows within associated streams and rivers. Wetlands have also been shown to provide water quality improvement to receiving stream through sediment and nutrient retention/uptake. These wetlands provide a sink for nutrient runoff and play an important role in nutrient cycling for nutrients such as nitrogen and phosphorus. Wetlands provide an area where sediments can be captured and prevented from entering receiving streams. Wetlands and headwater tributaries provide a diverse ecosystem for aquatic and terrestrial species. This diversity in part is provided by the fact that the wetland provides benefits of both terrestrial and aquatic habitats. This is especially important for species that require aquatic habitats for completion of a portion of their life cycle and a terrestrial habitat for another stage. In addition numerous terrestrial species rely upon wetlands such as these, to provide a source of food, shelter, and/or breeding area. In wetlands which provide a diversity of plant types and water regimes (open water, emergent, scrub/shrub, forest) provide a richer habitat which can be utilized by a larger number of species. This is especially true in the "edge" (ecotone) between aquatic systems and upland systems. In watersheds that contain forested wetlands, such as at this location, it has been shown that the wetlands export a large amount of carbon from the wetland areas. This carbon is critical for downstream aquatic organisms. Especially the macroinvertebrates that utilize the carbon as a food source and which in turn provide the basis for numerous food webs within streams and rivers.

The Jurisdictional Determination includes a feature identified as non-jurisdictional Ditch B. Based on the field review on September 10, 2014, this feature was found by the Corps to be a roadside ditch that was excavated in uplands, did not have any flow and had very limited evidence of flow. It appears that there may be flow within the ditch, due to accumulated Styrofoam cups and empty soda bottles. However, it appears that this flow is directly associated with precipitation event driven stormwater being conveyed away from the roadway and surrounding areas. Due to the lack of flow and/or evidence of flow, the Corps has determined that Ditch B would not be considered to be a tributary. In addition, the applicant has identified that within Ditch B, there are hydrophytic plants and some hydric soils indicators, but wetland hydrology indicators were not present. It is reasonable to assume that Ditch B is conveying stormwater and may have standing water long enough to support hydrophytic plants and to allow development of hydric soils. Based on the lack of hydrology indicators and since the plants and soils are located within a stormwater conveyance ditch, the Corps determined that Ditch B would not be considered to contain jurisdictional wetlands. Since Ditch B is not a tributary and is not a wetland area, the Corps has determined that this feature is not a Water of the U.S.

The waters documented on this form include a RPW with directly abutting wetlands, and with adjacent wetlands. Based on guidance in RGL 07-01, perennial RPW's and all directly abutting wetlands are subject to jurisdiction under the Clean Water Act. Also, based on guidance in RGL 07-01, RPW's with adjacent wetlands are subject to jurisdiction under the Clean Water Act when a Significant Nexus to downstream Traditionally Navigable Waters can be demonstrated. This office performed the required Significant Nexus determination and on this basis made the determination that adjacent Wetland C, Wetland G, and Wetland D, as documented in Section III. Part C of this form have a significant nexus to the downstream TNW (South Fork Edisto River) and are within jurisdiction of the Clean Water Act.