

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): 03 MAR 2017

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: JD Form 1 of 2; SAC-2016-01330 City of Orangeburg Site

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Sprinkle Road

State: South Carolina County/parish/borough: **Orangeburg** City: **Orangeburg**
Center coordinates of site (lat/long in degree decimal format): Lat. **33.4780° N**, Long. **-80.84538° W**.
Universal Transverse Mercator:

Name of nearest waterbody: **Middle Pen Swamp**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **N/A**

Name of watershed or Hydrologic Unit Code (HUC): **03050205**

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: **December 15, 2016**

Field Determination. Date(s): **November 17, 2016**

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: 1987 Delineation Manual, 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: **Two wetlands are located within the project review area that were determined to be isolated and non-**

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.

jurisdictional. Wetland A is 0.0097 acre and Wetland B is 0.010 acre in size, both are surrounded by uplands, are positioned lower in the landscape than the adjacent uplands, and had no linear features coming out of the wetlands. The surrounding uplands slope into the Wetlands with no outlet for the water that collects there. No evidence of discrete surface hydrologic connections through the uplands to other waters of the U.S. was observed. There was also no apparent shallow subsurface hydrologic connections, and no apparent physical, chemical, or biological connections, to waters of the U.S. In addition, the wetlands had no apparent ecological interconnection to waters of the U.S. There is also an onsite 0.496 acre upland excavated pond. During the November 17, 2016 site visit, the pond was dry and had a vegetated bottom. As stated in the Preamble to the November 13, 1986, Regulations found on page 41217 (Federal Register vol. 51 No. 219) "water-filled 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. For these reasons, the wetlands were determined to be isolated and non-jurisdictional, and, therefore not regulated by 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**

(i) **General Area Conditions:**

Watershed size: **Pick List** ;

Drainage area: **Pick List**

Average annual rainfall: inches

Average annual snowfall: inches

(ii) **Physical Characteristics:**

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

(a) Relationship with TNW:

- Tributary flows directly into TNW.
 Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.
Project waters are **Pick List** river miles from RPW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Project waters are **Pick List** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵:
Tributary stream order, if known:

(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;

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.

- fine shell or debris deposits (foreshore)
- physical markings/characteristics
- tidal gauges
- other (list):
- 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:
 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.

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.

- Interstate isolated waters. Explain: .
- Other factors. Explain: .

Identify water body and summarize rationale supporting determination:

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

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

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: **0.107** 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: **Project information provided by Chris Handley of S&ME, Inc.**
- Data sheets prepared/submitted by or on behalf of the applicant/consultant. **Data sheets prepared by Chris Handley.**
 - Office concurs with data sheets/delineation report. **Office concurs with the general findings reported in the data sheets.**
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps: .
- Corps navigable waters' study: .
- U.S. Geological Survey Hydrologic Atlas: .
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: **1:24000 USGS Orangeburg South Quad Map provided by Chris Handley.**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **NRCS Soils map provided by Chris Handley.**
- National wetlands inventory map(s). Cite name: **NWI resources map provided by Chris Handley.**
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): **Aerial imagery provided by Chris Handley.**
or Other (Name & Date): **Site photos provided by Chris Handley.**
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): **Plat provided by Chris Handley prepared by Dangerfield Engineering and Surveying, entitled, "A Wetland Plat TMS No. 0172-07-02-018.000 Prepared for: City of Orangeburg, Department of Public Utilities Sprinkle Avenue Orangeburg County, S.C.," dated December 7, 2016.**

B. ADDITIONAL COMMENTS TO SUPPORT JD: This is a 39.089 acres site with a 0.107 acre of non-jurisdictional wetlands. There is no discernible connection between the wetlands and any other waters of the U.S; therefore the wetlands are not subject to regulation under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act. Form 2 of 2 discusses the jurisdictional status of the remaining wetlands.

APPROVED JURISDICTIONAL DETERMINATION FORM

U.S. Army Corps of Engineers

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SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 03 MAR 2017

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: JD Form 2 of 2; SAC-2016-01330 City of Orangeburg Site

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Sprinkle Road

State: South Carolina County/parish/borough: **Orangeburg** City: **Orangeburg**

Center coordinates of site (lat/long in degree decimal format): Lat. **33.4780° N**, Long. **-80.8453° W**.

Universal Transverse Mercator:

Name of nearest waterbody: **Middle Pen Swamp**

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

Name of watershed or Hydrologic Unit Code (HUC): **03050205-1**

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: **December 15, 2016**

Field Determination. Date(s): **November 17, 2016**

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): ¹¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters¹² (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: **0.105** acres.

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

Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):¹³ [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 also an onsite 0.496 acre upland excavated pond. During the November 17, 2016 site visit, the pond was dry and had a vegetated bottom. As stated in the Preamble to the November 13, 1986, Regulations found on page 41217 (Federal**

¹¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

¹² 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).

¹³ Supporting documentation is presented in Section III.F.

Register vol. 51 No. 219) "water-filled 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.

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 waterbody¹⁴ 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**

Cow Castle Creek is located outside the project area.

(i) **General Area Conditions:**

Watershed size: **167,561** acres ;
Drainage area: **135** acres
Average annual rainfall: **48** inches
Average annual snowfall: inches

(ii) **Physical Characteristics:**

(a) **Relationship with TNW:**

- Tributary flows directly into TNW.
 Tributary flows through **2** tributaries before entering TNW.

Project waters are **30 (or more)** river miles from TNW.
Project waters are **1-2** river miles from RPW.
Project waters are **1-2** aerial (straight) miles from TNW.
Project waters are **1-2** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .

¹⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW¹⁵: **Water flows from Jurisdictional Wetland C outside the project area via an upland dug linear conveyance. The linear conveyance flows into Cow Castle Creek pRPW which flows into Four Hole Swamp, which flows into the Edisto River, a TNW.**

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: **10-15** feet
 Average depth: **Unknown** feet
 Average side slopes: **3:1** .

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: .

Presence of run/riffle/pool complexes. Explain: .

Tributary geometry: **Meandering**.

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Perennial flow**

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

Describe flow regime: .

Other information on duration and volume: .

Surface flow is: **Confined**. Characteristics: .

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

Dye (or other) test performed: .

Tributary has (check all that apply):

Bed and banks

OHWM¹⁶ (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.¹⁷ 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:**

¹⁵ 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.

¹⁶A 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.

¹⁷Ibid.

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: **Water quality is expected to be fair to good. Cow Castle Creek pRPW starts in an industrial area and then flows through rural farmland. Runoff and discharges of various pollutants are expected including pesticide and fertilizer residue.**

Identify specific pollutants, if known:

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

- Riparian corridor. Characteristics (type, average width): **The riparian corridor is fairly consistent throughout the length of the pRPW. Aerial imagery of Cow Castle Creek indicates a range from 8 feet to 10 feet.**
- 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 tributary likely provides habitat for various aquatic organisms including fish, reptiles, amphibians, as well as various birds and mammals.**

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: **0.107** acres

Wetland type. Explain: **Forested.**

Wetland quality. Explain: **Wetland quality appeared to be good. There were no obvious signs of degradation.**

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow.** Explain: **During storm events, water flows from the wetland to the upland dug stormwater feature offsite to pRPW, Cow Castle Creek. From the pRPW water flows to the pRPW, Four Hole Swamp then to the Edisto River, which a TNW. Flow from the wetland to the offsite pRPW, is intermittent and only occurs when storm water from rain events is high enough to exit the wetland and enter the onsite upland dug stormwater feature.**

Surface flow is: **Confined**

Characteristics:

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

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: **During storm events, water flows from the wetland to the upland dug stormwater feature offsite to pRPW, Cow Castle Creek. From the pRPW water flows to the pRPW, Four Hole Swamp then to the Edisto River, which a TNW. Flow from the wetland to the offsite pRPW, is intermittent and only occurs when storm water from rain events is high enough to exit the wetland and enter the onsite upland dug stormwater feature.**

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **30 (or more)** river miles from TNW.

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

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

Estimate approximate location of wetland as within the **5 - 10-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: **Water quality is expected to be fair to good. The wetland is in a forested area surrounded by an industrial area. Runoff and discharges of various pollutants are expected.**

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: **The wetland area is forested with a mix of various deciduous species with approximately 95% coverage.**
- 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: **6**

Approximately **(47.607)** 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>
	Onsite Wetland C (N)		0.107
	Offsite Wetland 1 (N)		14.5
	Offsite Wetland 2 (N)		12.5
	Offsite Wetland 3 (N)		2.5
	Offsite Wetland 4 (Y)		16.75
	Offsite Wetland 5 (Y)		1.25

Summarize overall biological, chemical and physical functions being performed: **The review area includes the onsite Jurisdictional Wetland C, and 5 offsite wetlands. The wetlands are a source of food, nutrients, and carbon for organisms located downstream. The wetlands are especially important for the water quality of a watershed. Water runoff from adjacent uplands that may contain pollutants, sediments, excess nutrients, etc. that flow 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.**

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:
- 4. 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:
- 5. 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: **The review area includes the onsite Jurisdictional Wetland C, and 5 offsite wetlands. The wetlands are a source of food, nutrients, and carbon for organisms located downstream. The wetlands are especially important for the water quality of a watershed. Water runoff from adjacent uplands that may contain pollutants, sediments, excess nutrients,**

etc. that flow 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. Watershed 03050205-01 (formerly 03050206-010, 020, 030) is located in Orangeburg and Calhoun Counties and consists primarily of Four Hole Swamp and its tributaries from its origin to Cow Castle Creek. The watershed occupies 167,561 acres of the Upper and Lower Coastal Plain regions of South Carolina. Land use/land cover in the watershed includes: 47.9% agricultural land, 28.1% forested land, 15.5% forested wetland (swamp), 8.1% urban land, 0.2% water, and 0.2% nonforested wetland (marsh).

Cow Castle Creek is a blackwater system, characterized by naturally low dissolved oxygen concentrations. Although dissolved oxygen excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. Aquatic life uses are fully supported. There are significant increasing trends in pH. Recreational uses are not supported due to fecal coliform bacteria excursions. Four Hole Swamp has two SCDHEC monitoring stations. This is a blackwater system, characterized by naturally low dissolved oxygen concentrations. At the upstream site (E-059), aquatic life uses are fully supported; however, there is a significant low increasing trend in five-day biochemical oxygen demand. Significant decreasing trends in turbidity and total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are not supported due to fecal coliform bacteria excursions. At the downstream site (E-111), aquatic life uses are fully supported. Although dissolved oxygen excursions occurred at this site, they were typical of values seen in blackwater systems and were considered natural, not standards violations. Significant decreasing trends in turbidity and total phosphorus concentration suggest improving conditions for these parameters. Recreational uses are partially supported due to fecal coliform bacteria excursions.

There is a low to moderate potential for growth in this watershed, which contains the Towns of Cameron and Bowman, and portions of the City of Orangeburg and the Town of Elloree. Interstate 26 bisects the watershed at US 601, US 301, SC 33, and SC 210 and should encourage some growth around the interchanges. Rail lines parallel US 601 and SC 33, which run out of the City of Orangeburg. US 176 parallels I-26 and runs through the Town of Cameron.

Documentation for the Record only: Significant nexus findings for seasonal RPWs and/or wetlands abutting seasonal RPWs:

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D. Determinations of Jurisdictional Findings. The subject waters/Wetlands are (check all that apply):

3. 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.

4. 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: Cow Castle Creek is a pRPW that is outside the project area. Cow Castle Creek was not visited during the November 17, 2016 site visit, however, it is depicted as a named blue line feature on USGS topographic maps and is visible in aerial imagery. For this reason it was determined that Cow Castle Creek had perennial flow. Cow Castle Creek flows into the pRPW Four Hole Swamp, which flows into the Edisto River, a TNW.

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

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

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters:

3. Non-RPWs¹⁸ 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:

¹⁸See Footnote # 3.

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.

7. 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.

8. 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: **0.107** acres.

7. Impoundments of jurisdictional waters.¹⁹

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):²⁰

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain: .
- Other factors. Explain: .

Identify water body and summarize rationale supporting determination:

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

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.

Identify type(s) of waters: .

- Wetlands: acres.

F. Non-jurisdictional waters, including wetlands (check all that apply):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
- Prior to the Jan 2001 Supreme Court decision in “SWANCC,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).
 - Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain: .
 - Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: **0.107** acres.

¹⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
²⁰ 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 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: **Project information provided by Chris Handley of S&ME, Inc.**
- Data sheets prepared/submitted by or on behalf of the applicant/consultant. **Data sheets prepared by Chris Handley.**
 - Office concurs with data sheets/delineation report. **Office concurs with the general findings reported in the data sheets.**
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps: .
- Corps navigable waters' study: .
- U.S. Geological Survey Hydrologic Atlas: .
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: **1:24000 USGS Orangeburg South Quad Map provided by Chris Handley.**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **NRCS Soils map provided by Chris Handley.**
- National wetlands inventory map(s). Cite name: **NWI resources map provided by Chris Handley.**
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): **Aerial imagery provided by Chris Handley.**
or Other (Name & Date): **Site photos provided by Chris Handley.**
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): **Plat provided by Chris Handley prepared by Dangerfield Engineering and Surveying, entitled, "A Wetland Plat TMS No. 0172-07-02-018.000 Prepared for: City of Orangeburg, Department of Public Utilities Sprinkle Avenue Orangeburg County, S.C.," dated December 7, 2016.**

B. ADDITIONAL COMMENTS TO SUPPORT JD: This is a 39.089 acres site with a 0.105 acre of jurisdictional wetlands. Water from the wetland flows into a non-jurisdictional upland dug stormwater feature then into Cow Castle Creek, which flows into Four Hole Swamp, which flows into the Edisto River, a TNW; therefore the wetlands are subject to regulation under Section 404 of the Clean Water Act. The jurisdictional status of the remaining wetlands is discussed in form 1 of 2.