

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): January 10, 2017

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: JD Form 1 of 3; SAC-2015-01451-DS SCDOT S-48 (Columbia Ave) Corridor Project in Lexington County, SCDOT PIN# 42383

C. PROJECT LOCATION AND BACKGROUND INFORMATION: The S-48 project is located along S-48 from the I-26 interchange to a location approx. 550 feet west of the intersection of S-48 and S-83 (Lexington Ave). This project will also include construction of a new roadway on new alignment from S-51 (Amicks Ferry Road) across S-83 (Lexington Ave), US 76, and S-82 (E. Boundary St) and will then connect directly to S-48 approximately 375 feet east of the intersection of S-82 (E. Boundary St) in Town of Chapin, South Carolina.

State: South Carolina County/parish/borough: **Lexington** City: **Chapin**
Center coordinates of site (lat/long in degree decimal format): Lat. **34.169632° N**, Long. **-81.335995° W**.
Universal Transverse Mercator: **NAD 83**

Name of nearest waterbody: **UT to Lake Murray**

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

Name of watershed or Hydrologic Unit Code (HUC): **03050109-13, Saluda River**

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date: **January 10, 2017**

Field Determination. Date(s): **September 13, 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 and are not** "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: **Tributary #1: 94 lf, Tributary #2: 220 lf, & Tributary #3: 209** linear feet: **Widths vary** width (ft) and/or acres.

Wetlands: acres.

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

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

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

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

2. **Non-regulated waters/wetlands (check if applicable):**³ [Including potentially jurisdictional features that upon assessment are NOT waters or wetlands]
- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: **During the field view on Sept. 13, 2016, an upland dug pond (Non-Jurisdictional Upland Excavated Pond 1) was observed adjacent to an office building and parking lot. This pond appears to have been excavated in uplands and may actually function as a facility that collects and provides the controlled release of stormwater collected from this property. Based on the fact that this facility was created in uplands for the collection and release of stormwater, the Corps has determined that this 0.153 acre impoundment (Non-Jurisdictional Upland Excavated Pond 1) is not subject to jurisdiction under the Clean Water Act.**

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. **TNW**
Identify TNW: .

Summarize rationale supporting determination: .
2. **Wetland adjacent to TNW**
Summarize rationale supporting conclusion that wetland is “adjacent”:

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

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

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

- (i) **General Area Conditions:**
Watershed size: **Pick List** ;
Drainage area: **Pick List**
Average annual rainfall: inches
Average annual snowfall: inches
- (ii) **Physical Characteristics:**
 - (a) **Relationship with TNW:**
 Tributary flows directly into TNW.

³ Supporting documentation is presented in Section III.F.

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

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;
 fine shell or debris deposits (foreshore) physical markings;
 physical markings/characteristics vegetation lines/changes in vegetation types.

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.

- 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:

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 1, 2, & 3 appear as dotted blue lines on the USGS map for this area. However, during the

field view on September 13, 2016, perennial flow regime was observed along with established bed and banks, an established ordinary high water mark, and observable flow. Based on the stream characteristics observed and available data, the Corps has determined that Tributaries 1, 2, & 3 each have a perennial flow regime and are Relatively Permanent Waters.

- 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: **Tributary #1: 94 lf, Tributary #2: 220 lf, & Tributary #3: 209** linear feet **widths vary** 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.

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.

- 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): During the field view on Sept. 13, 2016, an upland dug pond (Non-Jurisdictional Upland Excavated Pond 1) was observed adjacent to an office building and parking lot. This pond appears to have been excavated in uplands and may actually function as a facility that collects and provides the controlled release of stormwater collected from this property. Based on the fact that this facility was created in uplands for the collection and release of stormwater, the Corps has determined that this 0.153 acre impoundment (Non-Jurisdictional Upland Excavated Pond 1) is not subject to jurisdiction under the Clean Water Act.

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: **0.153** acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

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

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **Mead & Hunt-M. DeWitt.**
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.

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.

- Data sheets prepared by the Corps: .
- Corps navigable waters' study: **Nav. Study 1977.**
- U.S. Geological Survey Hydrologic Atlas: **HA 730-G, 1990.**
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps. 03050109-13 Saluda River (Lake Murray)
- U.S. Geological Survey map(s). Cite scale & quad name: **1:24,000: Chapin SC quadrangle.**
- USDA Natural Resources Conservation Service Soil Survey. Citation: Lexington County Soil Survey, page 1: Georgeville, Chenneby, Nason, Cecil, Enon, Herndon & Tatum series.
- National wetlands inventory map(s). Cite name: PUBHh & PEM1Ch.
- 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) 11207:108.
or Other (Name & Date): Photos provided with JD Request.
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): Field view on September 13, 2016.

B. ADDITIONAL COMMENTS TO SUPPORT JD: Tributaries 1, 2, & 3 appear as dotted blue lines on the USGS map for this area. However, during the field view on September 13, 2016, perennial flow regime was observed along with established bed and banks, an established ordinary high water mark, and observable flow. Based on the stream characteristics observed and available data, the Corps has determined that Tributaries 1, 2, & 3 each have a perennial flow regime and are Relatively Permanent Waters. Based on guidance provided, perennial RPW's are Waters of the U.S. and are subject to jurisdiction under the Clean Water Act.

As described above, SCDOT and their consultants have identified a feature called, "Non-jurisdictional Upland Excavated Pond 1". During the field view on Sept. 13, 2016, an upland dug pond (Non-Jurisdictional Upland Excavated Pond 1) was observed adjacent to an office building and parking lot. This pond appears to have been excavated in uplands and may actually function as a facility that collects and provides the controlled release of stormwater collected from this property. Based on the fact that this facility was created in uplands for the collection and release of stormwater, the Corps has determined that this 0.153 acre impoundment (Non-Jurisdictional Upland Excavated Pond 1) is not subject to jurisdiction under the Clean Water Act.

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A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): January 10, 2017

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: JD Form 2 of 3; SAC-2015-01451-DS SCDOT S-48 (Columbia Ave) Corridor Project in Lexington County , SCDOT PIN# 42383

C. PROJECT LOCATION AND BACKGROUND INFORMATION: The S-48 project is located along S-48 from the I-26 interchange to a location approx. 550 feet west of the intersection of S-48 and S-83 (Lexington Ave). This project will also include construction of a new roadway on new alignment from S-51 (Amicks Ferry Road) across S-83 (Lexington Ave), US 76, and S-82 (E. Boundary St) and will then connect directly to S-48 approximately 375 feet east of the intersection of S-82 (E. Boundary St) in Town of Chapin, South Carolina.

State: South Carolina County/parish/borough: **Lexington** City: **Chapin**
Center coordinates of site (lat/long in degree decimal format): Lat. **34.169632° N**, Long. **-81.335995° W**.
Universal Transverse Mercator: **NAD 83**

Name of nearest waterbody: **Wateree Creek**

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

Name of watershed or Hydrologic Unit Code (HUC): **03050106-07 Lower Broad River**

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date: **January 10, 2016**

Field Determination. Date(s): **September 13, 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 and are not** "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

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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: **Tributary #4: 324 lf & Tributary #5: 133** linear feet: **Widths vary** width (ft) and/or acres.

Wetlands: **Wetland 1: 0.472** acres.

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

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

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

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

2. **Non-regulated waters/wetlands (check if applicable):³ [Including potentially jurisdictional features that upon assessment are NOT waters or wetlands]**
 - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: **During the field view on Sept. 13, 2016, an upland dug pond (Non-Jurisdictional Upland Excavated Pond 2) was observed adjacent to an existing manufacturing building and parking lot. This pond appears to have been excavated in uplands specifically to function as a stormwater facility that collects and provides the controlled release of stormwater collected from this property. Based on the fact that this facility was created in uplands for the collection and release of stormwater, the Corps has determined that this 0.173 acre impoundment (Non-Jurisdictional Upland Excavated Pond 2) is not subject to jurisdiction under the Clean Water Act.**

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. **TNW**
Identify TNW: _____

Summarize rationale supporting determination: _____
2. **Wetland adjacent to TNW**
Summarize rationale supporting conclusion that wetland is “adjacent”: _____

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

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

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**
 - (i) **General Area Conditions:**
Watershed size: **Pick List** ;
Drainage area: **Pick List**
Average annual rainfall: _____ inches
Average annual snowfall: _____ inches
 - (ii) **Physical Characteristics:**
 - (a) **Relationship with TNW:**
 - Tributary flows directly into TNW.
 - Tributary flows through **Pick List** tributaries before entering TNW.

³ Supporting documentation is presented in Section III.F.

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

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;
 fine shell or debris deposits (foreshore) physical markings;
 physical markings/characteristics vegetation lines/changes in vegetation types.
 tidal gauges

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.

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.

other (list):

(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: Tributary 5 appears as a dotted blue lines on the USGS map for this area and Tributary 4 does not

appear as a blue line feature (solid or dotted) on the USGS map, but is located within a topographic feature that forms a small ravine. However, during the field view on September 13, 2016, perennial flow regime was observed in both of these tributaries (which are both directed under S-232-Crooked Creek Rd via culverts) along with established bed and banks, an established ordinary high water mark, and observable flow. Based on the stream characteristics observed and available data, the Corps has determined that Tributaries 4 & 5 each have 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: Tributary #4: 324 lf & Tributary #5: 133 linear feet **Widths vary** 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: Wetland 1 is directly abutting Tributary 4 within this project boundary. Tributary 4 has perennial flow above (upstream of) Wetland 1 and downstream (below) Wetland 1. As discussed above, Tributary 4 has a perennial flow regime and has been determined by the Corps to be a Relatively Permanent Water.
 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 1: 0.472 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:

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

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

Identify water body and summarize rationale supporting determination:

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

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

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

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- Other: (explain, if not covered above): During the field view on Sept. 13, 2016, an upland dug pond (Non-Jurisdictional Upland Excavated Pond 2) was observed adjacent to an existing manufacturing building and parking lot. This pond appears to have been excavated in uplands specifically to function as a stormwater facility that collects and provides the controlled release of stormwater collected from this property. Based on the fact that this facility was created in uplands for the collection and release of stormwater, the Corps has determined that this 0.173 acre impoundment (Non-Jurisdictional Upland Excavated Pond 2) is not subject to jurisdiction under the Clean Water Act.

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

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

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

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

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **Mead & Hunt-M. DeWitt.**
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.

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.

- Data sheets prepared by the Corps: .
- Corps navigable waters' study: **Nav. Study 1977.**
- U.S. Geological Survey Hydrologic Atlas: **HA 730-G, 1990.**

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.

- USGS NHD data.
- USGS 8 and 12 digit HUC maps. 03050106-07 Lower Broad River
- U.S. Geological Survey map(s). Cite scale & quad name: **1:24,000 ; Chapin SC quadrangle.**
- USDA Natural Resources Conservation Service Soil Survey. Citation: Lexington County Soil Survey, page 1: Georgeville, Chenneby, Nason, Cecil, Enon, Herndon & Tatum series..
- National wetlands inventory map(s). Cite name: **PUBHh & PEM1Ch.**
- 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) 11207:108.
or Other (Name & Date): Photos provided with JD Request.
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): Field view on September 13, 2016.

B. ADDITIONAL COMMENTS TO SUPPORT JD: Tributary 5 appears as a dotted blue lines on the USGS map for this area and Tributary 4 does not appear as a blue line feature (solid or dotted) on the USGS map, but is located within a topographic feature that forms a small ravine. However, during the field view on September 13, 2016, perennial flow regime was observed in both of these tributaries (which are both directed under S-232-Crooked Creek Rd via culverts) along with established bed and banks, an established ordinary high water mark, and observable flow. Based on the stream characteristics observed and available data, the Corps has determined that Tributaries 4 & 5 each have a perennial flow regime. Based on guidance provided, perennial RPW's are waters of the U.S. and are subject to jurisdiction under the Clean Water Act.

During the field view on Sept. 13, 2016, an upland dug pond (Non-Jurisdictional Upland Excavated Pond 2) was observed adjacent to an existing manufacturing building and parking lot. This pond appears to have been excavated in uplands specifically to function as a stormwater facility that collects and provides the controlled release of stormwater collected from this property. Based on the fact that this facility was created in uplands for the collection and release of stormwater, the Corps has determined that this 0.173 acre impoundment (Non-Jurisdictional Upland Excavated Pond 2) is not subject to jurisdiction under the Clean Water Act.

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): January 10, 2017

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: JD Form 3 of 3; SAC-2015-01451-DS SCDOT S-48 (Columbia Ave) Corridor Project in Lexington County, SCDOT PIN# 42383

C. PROJECT LOCATION AND BACKGROUND INFORMATION: The S-48 project is located along S-48 from the I-26 interchange to a location approx. 550 feet west of the intersection of S-48 and S-83 (Lexington Ave). This project will also include construction of a new roadway on new alignment from S-51 (Amicks Ferry Road) across S-83 (Lexington Ave), US 76, and S-82 (E. Boundary St) and will then connect directly to S-48 approximately 375 feet east of the intersection of S-82 (E. Boundary St) in Town of Chapin, South Carolina.

State: South Carolina County/parish/borough: **Lexington** City: **Chapin**
Center coordinates of site (lat/long in degree decimal format): Lat. **34.169632° N**, Long. **-81.335995° W**.
Universal Transverse Mercator: **NAD 83**

Name of nearest waterbody: **Risters Creek**

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

Name of watershed or Hydrologic Unit Code (HUC): 03050106-07, Lower Broad River

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date: **January 10, 2017**

Field Determination. Date(s): **September 13, 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):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: **Tributary #6: 145** linear feet: **Width varies** width (ft) and/or acres.

Wetlands: **Wetland 3: 0.043 acres, Wetland 2: 0.023 acres.**

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

Elevation of established OHWM (if known): .

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

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

2. **Non-regulated waters/wetlands (check if applicable):³ [Including potentially jurisdictional features that upon assessment are NOT waters or wetlands]**
 - Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: .

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: **148,599 acres** ; 03050106-07 Lower Broad River
Drainage area: **40 acres**
Average annual rainfall: **Based on Lexington County Soil Survey 46.8 inches**
Average annual snowfall: **Based on Lexington County Soil Survey: 0.4 inches**
 - (ii) **Physical Characteristics:**
 - (a) **Relationship with TNW:**
 - Tributary flows directly into TNW.
 - Tributary flows through **3** tributaries before entering TNW.
- Project waters are **20-25** river miles from TNW.
Project waters are **1 (or less)** river miles from RPW.
Project waters are **15-20** aerial (straight) miles from TNW.
Project waters are **1 (or less)** aerial (straight) miles from RPW.

³ Supporting documentation is presented in Section III.F.

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

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵: **Risters Creek to Wateree Creek to Broad River to Congaree River.**

Tributary stream order, if known: **First Order.**

(b) General Tributary Characteristics (check all that apply):

Tributary is: Natural
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain: **Some evidence of historic manipulation of Tributary 6 related to outflow and dam area of the former pond (Wetland 2).**

Tributary properties with respect to top of bank (estimate):

Average width: **4-6** feet

Average depth: **1-3** feet

Average side slopes: **Vertical (1:1 or less).**

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: Tributary 6 appears to be fairly stable, however some of the incised stream channel locations have some bank sloughing/erosion.

Presence of run/riffle/pool complexes. Explain: **None observed in project boundary.**

Tributary geometry: **Meandering.**

Tributary gradient (approximate average slope): **1.0** %

(c) Flow:

Tributary provides for: **Perennial flow**

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

Describe flow regime: Based field view and the observation of established bed and banks, ordinary high water mark and flow, the Corps determined that Tributary 6 is a Relatively Permanent Water. This is not to say that during times of drought that flow in this location would not be interrupted. However, during the typical year, flow in this tributary would continue throughout the calendar year.

Other information on duration and volume:

Surface flow is: **Discrete and confined.** Characteristics: Tributary 6 is within a defined stream channel with established bed and banks. Flow would be contained within this channel except during times of heavy precipitation.

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;

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.

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.

- 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: During the field view the water in Tributary 6 was clear, was not discolored nor did it have an oily film. In addition, the water was free of excessive silts or sedimentation. SCDHEC website indicates limited information related to Wateree Creek, which is downstream from Tributary 6 via Risters Creek. SCDHEC indicates that Wateree Creek (B-801)-Aquatic life uses are fully supported based on macroinvertebrate community data.

Identify specific pollutants, if known: **There is a possibility that pollutants from the nearby roadway and developments could enter this tributary during storm events.**

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

- Riparian corridor. Characteristics (type, average width): Tributary 6 is within a forested area dominated by mature hardwoods that provide a riparian corridor that is greater than 100 feet in width.
- Wetland fringe. Characteristics: Wetland 2 is a Palustrine Emergent/Palustrine Scrub-Shrub Wetland that directly abuts Tributary 6 and provides a hydrology source for Tributary 6.
- Habitat for:
 - Federally Listed species. Explain findings: .
 - Fish/spawn areas. Explain findings: .
 - Other environmentally-sensitive species. Explain findings: .
 - Aquatic/wildlife diversity. Explain findings: Tributary 6 is within a forested area dominated by mature hardwoods. Based on this, it is assumed that birds and animals such as deer, squirrels, turkeys, and song birds are likely to use this area for feeding, shelter, feeding, and/or raising young

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 2: 0.023 acres & Wetland 3: 0.043 acres

Wetland type. Explain: Palustrine Emergent and Scrub/shrub.

Wetland quality. Explain: **Due to location adjacent to I-26 and within an unmaintained pond, the wetland qualities of both of these areas is somewhat impaired.**

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

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: Wetland 2 abuts (and is a hydrology source for) Tributary 6. As such Wetland 2 has a more frequent flow frequency into Tributary 6. It is estimated that Wetland 2 provides numerous flow events into Tributary 6 throughout the year that are not directly associated with precipitation events. Wetland 3 is adjacent to Tributary 6 and flow events to Tributary 6 occur through a series of culverts/ditches placed to direct stormwater away from I-26. It is estimated that the flow events from Wetland 3 are more associated with precipitation events, but likely flow continues for some time after the cessation of the precipitation event.

Surface flow is: **Discrete and confined**

Characteristics: Flow from Wetland 2 follows a breach through the former dam prior to entering into Tributary 6.

This breach has a defined bed and banks.

Flow from Wetland 3 follows a series of culverts and roadside ditches prior to entering into Tributary 6.

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

Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting: Wetland 2

Not directly abutting

Discrete wetland hydrologic connection. Explain: Flow from Wetland 3 in within a series of culverts and roadside ditches prior to entering into Tributary 6.

Ecological connection. Explain: .

Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **20-25** river miles from TNW.

Project waters are **10-15** aerial (straight) miles from TNW.

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

Estimate approximate location of wetland as within the **2-year or less** 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 the water in the identified wetlands was clear, was not discolored nor did it have an oily film. In addition, the water was free of excessive silts or sedimentation. SCDHEC website indicates limited information related to Wateree Creek, which is downstream from these identified wetlands via Tributary 6 to Risters Creek. SCDHEC indicates that Wateree Creek (B-801)-Aquatic life uses are fully supported based on macroinvertebrate community data.

Identify specific pollutants, if known: .

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

- Riparian buffer. Characteristics (type, average width): Wetland 2 & Wetland 3 are located in the headwater regions of Tributary 6 and are just within or abutting the largely forested riparian buffer found along Tributary 6 in the project area.
- Vegetation type/percent cover. Explain: Identified wetlands (Wetland 2 & Wetland 3) are dominated by emergent and scrub/shrub vegetation.
- Habitat for:
 - Federally Listed species. Explain findings: .
 - Fish/spawn areas. Explain findings: .
 - Other environmentally-sensitive species. Explain findings: .
 - Aquatic/wildlife diversity. Explain findings: Wetland 2 & Wetland 3 provide an opportunity for both aquatic and terrestrial organisms to find food, shelter, and a location for raising young.

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

All wetland(s) being considered in the cumulative analysis: **Pick List**
Approximately (**15**) 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 3-No	0.043	Wetland 2-Yes	0.023

Summarize overall biological, chemical and physical functions being performed: Wetland 2 abuts Tributary 6, which has been identified by the Corps as having a perennial flow regime. Wetland 3 is adjacent to Tributary 6 but has a discrete hydrologic connection that is located within the project limits via culverts/ditches utilized to handle stormwater within the I-26 & S-48 interchange. Also along the relevant reach of the unnamed tributary to Risters Creek identified as Tributary 6 (from project location to the confluence with Wateree Creek), there are approximately 15 acres of wetlands and open waters (based upon available aerial photography).

Tributaries 6 is an unnamed tributary that flows to Risters Creek outside of this project limits (approximately 1.0 mile) then to Wateree Creek, then Broad River, and ultimately to the downstream TNW, Congaree River (approximately 20 miles). These wetlands provide an important hydrology source for Risters Creek and ultimately the downstream TNW (Congaree River).

These wetlands 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, these wetlands provide an attenuating function for the maintenance of seasonal and base flows within associated streams and rivers. These wetlands 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 provide a diverse ecosystem for aquatic and terrestrial species. This diversity in part is provided by the fact that wetlands provide benefits to 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 brooding area. Wetlands with 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.

It is based upon these functions that Wetland 2, Wetland 3 (via Tributary 6), and other unspecified wetlands have a significant nexus to Congaree River by providing a substantial contribution to the integrity of the physical, chemical and biological features of

tributaries to Risters Creek (RPW), Wateree Creek (RPW), Broad River (RPW), and ultimately the Congaree River (TNW). Based on the collective functions described above and their importance to the TNW, it has been determined that there is a significant nexus between the relevant reach of the tributary and its adjacent wetlands to the downstream TNW.

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: Wetland 3 is adjacent to this Relatively Permanent Water with perennial flow (Tributary 6). Flow from Wetland 3 to Tributary 6 does not typically occur throughout the entire year, but would occur at a frequency and duration beyond what would be expected from only precipitation events. Wetland area 3, although a small wetland adjacent to this Tributary 6 and connected to Tributary 6 via culverts/ditches associated with addressing stormwater from the I-26 & S-48 Interchange, does provide functions that assist or maintain the chemical and physical integrity of the RPW. 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 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. In addition, wetlands provide an area where sediments can be captured and prevented from entering receiving streams. The identified adjacent Wetland 3 is providing these functions with the corridor of Tributary 6 and as a result, has a significant nexus to Risters Creek and provides an important contribution to the chemical, physical, and biological integrity of Risters Creek, Wateree Creek, Broad River, and the downstream TNW (Congaree River).
4. **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: Tributary 6 does not appear as an aquatic feature on the USGS map for this area. However, The USGS map does show a topographic ravine feature in which storm water has been directed from the I-26 and S-48 Interchange area. During the field view on September 13, 2016, perennial flow regime was observed from a 36"-48" concrete culvert from under I-26 in the northwest quadrant of the interchange. At the outflow of this culvert (beginning of delineated Tributary 6) established bed and banks were observed with an established ordinary high water mark, and flow was observed in the channel. Based on the stream characteristics observed and available data, the Corps has determined that Tributary 6 has 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: **145** linear feet **Width varies** 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: As documented above, Tributary 6 has a perennial flow regime and has been determined to be a Relatively Permanent Water. During the September 13, 2016 field view, it was determined that Wetland 2 is directly abutting Tributary 6 and is providing a hydrology source for Tributary 6.
 - 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 2: 0.023** 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 3: 0.043** 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:

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

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

Identify water body and summarize rationale supporting determination:

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

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

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

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

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

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

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

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

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **Mead & Hunt- M. DeWitt.**
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.

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.

- Data sheets prepared by the Corps: .
- Corps navigable waters' study: **Nav. Study 1977.**
- U.S. Geological Survey Hydrologic Atlas: **HA 730-G, 1990.**
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps. 03050106-07 Lower Broad River
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000, Chapin SC quadrangle.

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.

- USDA Natural Resources Conservation Service Soil Survey. Citation: Lexington County Soil Survey, page 1: Georgeville, Chenneby, Nason, Cecil, Enon, Herndon & Tatum series..
- National wetlands inventory map(s). Cite name: PUBHh & PEM1Ch.
- 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) 11207:108.
or Other (Name & Date): Photos provided with JD Request .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): Field view on September 13, 2016.

B. ADDITIONAL COMMENTS TO SUPPORT JD: Tributary 6 does not appears as an aquatic feature on the USGS map for this area. However, The USGS map does show a topographic ravine feature in which storm water has been directed from the I-26 and S-48 Interchange area. During the field view on September 13, 2016, perennial flow regime was observed from a 36"-48" concrete culvert from under I-26 in the northwest quadrant of the interchange. At the outflow of this culvert (beginning of delineated Tributary 6) established bed and banks were observed with an established ordinary high water mark, and flow was observed in the channel. Based on the stream characteristics observed and available data, the Corps has determined that Tributary 6 has a perennial flow regime. In addition, during the September 13, 2016 field view, it was determined that Wetland 2 is directly abutting Tributary 6 and is providing a hydrology source for Tributary 6. Based on guidance provided, perennial RPW's and abutting wetlands are waters of the U.S. and are subject to jurisdiction under the Clean Water Act.

Wetland 3 is adjacent to this Relatively Permanent Water with perennial flow (Tributary 6). Flow from Wetland 3 to Tributary 6 does not typically occur throughout the entire year, but would occur at a frequency and duration beyond what would be expected from only precipitation events. Wetland area 3, although a small wetland adjacent to this Tributary 6 and connected to Tributary 6 via culverts/ditches associated with addressing stormwater from the I-26 & S-48 Interchange, does provide functions that assist or maintain the chemical and physical integrity of the RPW. 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 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. In addition, wetlands provide an area were sediments can be captured and prevented from entering receiving streams. The identified adjacent Wetland 3 is providing these functions with the corridor of Tributary 6 and as a result, has a significant nexus to Risters Creek and provides an important contribution to the chemical, physical, and biological integrity of Risters Creek, Wateree Creek, Broad River, and the downstream TNW (Congaree River). Adjacent wetlands (Wetland 3) are also jurisdictional under CWA, based upon information in support of a Significant Nexus Determination for these adjacent wetlands. The waters (Wetland 3) documented on this form have a Significant Nexus to downstream TNW and are jurisdictional Waters of the U.S.