APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

Form 1 of 2

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): 11/24/14

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Charleston District, Gregg Tract, SAC-2008-00045-2JU Form 1 of 2

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: South Carolina County/parish/borough: **Charleston** City: **Mt. Pleasant**
Center coordinates of site (lat/long in degree decimal format): Lat. 32.82938° **N**, Long. -79.83684° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: **Boone Hall Creek**
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **NA**
Name of watershed or Hydrologic Unit Code (HUC): 03050201-04
☒ 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: **9/3/14, 11/24/14**
☒ Field Determination. Date(s): **9/11/14**

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: linear feet: width (ft) and/or acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **Pick List**, **Pick List**, **Pick List**
      Elevation of established OHWM (if known): .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

2. **Non-regulated waters/wetlands (check if applicable):**[3] **[Including potentially jurisdictional features that upon assessment are NOT waters or wetlands]**

☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: **There is a stormwater facility that includes a detention pond and drainage ditch located on-site. This area is part of a SCDOT Quitclaim Deed from 2007 with the designated use for stormwater detention of water from Highway 17 and is depicted as such on the associated figure. Based on aerial imagery, construction of the facility began in 2005 and it has been used for stormwater since then. Therefore the stormwater facility is determined to be non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.**

There are two other ditches on-site that are depicted on a supplemental figure in the administrative record. During the 9/11/14 site visit, there was no evidence of an ordinary high water mark, bed and bank, or other signs of relatively permanent flow. In addition, one of the ditches contained a large amount of forest floor litter indicating lack of relatively permanent flow. Therefore these ditches are considered to be non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.

Wetland 4 is an isolated depression that sits lower in the landscape than the surrounding uplands. This is evident on the topographic survey from the submitted wetland plat which depicts this area as approximately 1-2 feet lower in landscape position. During the 9/11/14 site visit, the perimeter of Wetland 4 was walked and confirmed to be surrounded by non-hydric soils, exhibited no apparent connection to waters of the U.S., including no physical, chemical, or biological connections, and no apparent shallow subsurface flow connections to other waters. In addition, there was no apparent ecological interconnectivity with other water features, including any waters of the U.S. or no apparent connection to interstate or foreign commerce. Wetland 4 was also determined to be non-jurisdictional in letter dated July 16, 2008 for project number SAC-2008-45-2JV. Based on the above information, it has been determined that the wetland is non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.

Wetland 5 is a small isolated depression 0.067 acres in size. During the 9/11/14 site visit, the perimeter of Wetland 5 was walked and confirmed to be surrounded by non-hydric soils, exhibited no apparent connection to waters of the U.S., including no physical, chemical, or biological connections, and no apparent shallow subsurface flow connections to other waters. In addition, there was no apparent ecological interconnectivity with other water features, including any waters of the U.S. or no apparent connection to interstate or foreign commerce. Therefore the wetland is determined to be non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

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

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

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

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

[3] Supporting documentation is presented in Section III.F.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

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

(i) General Area Conditions:
Watershed size: **Pick List ;**
Drainage area: **Pick List**
Average annual rainfall: inches
Average annual snowfall: inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☐ Tributary flows through **Pick List** tributaries before entering TNW.

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

Identify flow route to TNW[5]: .
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: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary has (check all that apply):
- ☐ Bed and banks
- ☐ OHWM[6] (check all indicators that apply):
  - ☐ clear, natural line impressed on the bank
  - ☐ changes in the character of soil
  - ☐ shelving
  - ☐ vegetation matted down, bent, or absent
  - ☐ leaf litter disturbed or washed away
  - ☐ sediment deposition
  - ☐ water staining
  - ☐ other (list):
  - ☐ the presence of litter and debris
  - ☐ destruction of terrestrial vegetation
  - ☐ the presence of wrack line
  - ☐ sediment sorting
  - ☐ scour
  - ☐ multiple observed or predicted flow events
  - ☐ abrupt change in plant community
- ☐ 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:
  - ☐ oil or scum line along shore objects
  - ☐ fine shell or debris deposits (foreshore)
  - ☐ physical markings/characteristics
  - ☐ tidal gauges
  - ☐ other (list):
- ☐ Mean High Water Mark indicated by:
  - ☐ survey to available datum;
  - ☐ physical markings;
  - ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

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

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

[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.
[7]Ibid.

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:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

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

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

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

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

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

     Provide estimates for jurisdictional waters in the review area (check all that apply):
     - ☐ Tributary waters: linear feet width (ft).
     - ☐ Other non-wetland waters: acres.
       Identify type(s) of waters: .

3. **Non-RPWs[8] 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 jurisidictional. Data supporting this conclusion is provided at Section III.C.

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

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   - ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

[8]See Footnote # 3.

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

7. Impoundments of jurisdictional waters.[9]

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
- ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

Explain:

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

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

Identify water body and summarize rationale supporting determination: .

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

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

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

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

There is a stormwater facility that includes a detention pond and drainage ditch located on-site. This area is part of a SCDOT Quitclaim Deed from 2007 with the designated use for stormwater detention of water from Highway 17 and is depicted as such on the associated figure. Based on aerial imagery, construction of the facility began in 2005 and it has been used for stormwater since then. Therefore the stormwater facility is determined to be non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.

There are two other ditches on-site that are depicted on a supplemental figure in the administrative record. During the 9/11/14 site visit, there was no evidence of an ordinary high water mark, bed and bank, or other signs of relatively permanent flow. In addition, one of the ditches contained a large amount of forest floor litter indicating lack of relatively permanent flow. Therefore these ditches are considered to be non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.

Wetland 4 is an isolated depression that sits lower in the landscape than the surrounding uplands. This is evident on the topographic survey from the submitted wetland plat which depicts this area as approximately 1-2 feet lower in landscape position. During the 9/11/14 site visit, the perimeter of Wetland 4 was walked and confirmed to be surrounded by non-hydric soils, exhibited no apparent connection to waters of the U.S., including no physical, chemical, or biological connections, and no apparent shallow subsurface flow connections to other waters. In addition, there was no apparent ecological interconnectivity with other water features, including any waters of the U.S. or no apparent connection to interstate or foreign commerce. Wetland 4 was also determined to be non-jurisdictional in letter dated July 16, 2008 for project number SAC-2008-45-2JV. Based on the above information, it has been determined that the wetland is non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.

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

[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

Wetland 5 is a small isolated depression 0.067 acres in size. During the 9/11/14 site visit, the perimeter of Wetland 5 was walked and confirmed to be surrounded by non-hydric soils, exhibited no apparent connection to waters of the U.S., including no physical, chemical, or biological connections, and no apparent shallow subsurface flow connections to other waters. In addition, there was no apparent ecological interconnectivity with other water features, including any waters of the U.S. or no apparent connection to interstate or foreign commerce. Therefore the wetland is determined to be non-jurisdictional and not subject to regulation under Section 404 of 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: **Wetland 4 = 0.523 acres, Wetland 5 = 0.067 acres.**

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

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

SECTION IV: DATA SOURCES.

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

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **Wetland Delineation Submittal, Ballou Associates**.
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  ☐ Office concurs with data sheets/delineation report. **Office concurs with determination.**
  ☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
  ☐ USGS NHD data.
  ☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: **Fort Moultrie Quadrangle**.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: **NRCS Web Soil Survey, Charleston County**.
☒ National wetlands inventory map(s). Cite name: **NWI Wetlands Mapper, Charleston County**.
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): **Google Earth 2005-2014.**
  or ☐ Other (Name & Date): .
☒ Previous determination(s). File no. and date of response letter: **SAC-2008-45-2JV letter dated July 16, 2008.**
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

There is a stormwater facility that includes a detention pond and drainage ditch located on-site. This area is part of a SCDOT Quitclaim Deed from 2007 with the designated use for stormwater detention of water from Highway 17 and is depicted as such on the associated figure. Based on aerial imagery, construction of the facility began in 2005 and it has been used for stormwater since then. Therefore the stormwater facility is determined to be non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.

There are two other ditches on-site that are depicted on a supplemental figure in the administrative record. During the 9/11/14 site visit, there was no evidence of an ordinary high water mark, bed and bank, or other signs of relatively permanent flow. In addition, one of the ditches contained a large amount of forest floor litter indicating lack of relatively permanent flow. Therefore these ditches are considered to be non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.

Wetland 4 is an isolated depression that sits lower in the landscape than the surrounding uplands. This is evident on the topographic survey from the submitted wetland plat which depicts this area as approximately 1-2 feet lower in landscape position. During the 9/11/14 site visit, the perimeter of Wetland 4 was walked and confirmed to be surrounded by non-hydric soils, exhibited no apparent connection to waters of the U.S., including no physical, chemical, or biological connections, and no apparent shallow subsurface flow connections to other waters. In addition, there was no apparent ecological interconnectivity with other water features, including any waters of the U.S. or no apparent connection to interstate or foreign commerce. Wetland 4 was also determined to be non-jurisdictional in letter dated July 16, 2008 for project number SAC-2008-45-2JV. Based on the above information, it has been determined that the wetland is non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.

Wetland 5 is a small isolated depression 0.067 acres in size. During the 9/11/14 site visit, the perimeter of Wetland 5 was walked and confirmed to be surrounded by non-hydric soils, exhibited no apparent connection to waters of the U.S., including no physical, chemical, or biological connections, and no apparent shallow subsurface flow connections to other waters. In addition, there was no apparent ecological interconnectivity with other water features, including any waters of the U.S. or no apparent connection to interstate or foreign commerce. Therefore the wetland is determined to be non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

Form 2 of 2

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): 11/24/14

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Charleston District, Gregg Tract, SAC-2008-00045-2JU Form 2 of 2

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: South Carolina County/parish/borough: **Charleston** City: **Mt. Pleasant**
Center coordinates of site (lat/long in degree decimal format): Lat. 32.82938° **N**, Long. -79.83684° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: **Boone Hall Creek**
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Boone Hall Creek**
Name of watershed or Hydrologic Unit Code (HUC): 03050201-04
☒ 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: **9/3/14, 11/24/14**
☒ Field Determination. Date(s): **9/11/14**

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 waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☒ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: linear feet: width (ft) and/or **Impoundment of WOUS = 1.174 acres.**
      Wetlands: **Wetland 1 – 0.496 acres, Wetland 2 = 0.103 acres, Wetland 3 = 0.070 acres.**

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      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: **Boone Hall Creek**.

Summarize rationale supporting determination: **Boone Hall Creek is subject to the ebb and flood of the tides**. **It is a tidal creek associated with the Wando River which flows to the Cooper River and ultimately the Charleston Harbor/Atlantic Ocean.**

2. **Wetland adjacent to TNW**
Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

If the waterbody[4] **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: **HUC 03050201-04 = 72,370 acres ;**
Drainage area: **554 acres**

Drainage area was approximated for the tributary that was evaluated as part of the Significant Nexus Determination performed for this Jurisdictional Determiantion. This area was drawn based on apparent flow pathways and drainage areas associated with the subject relevant reach using USGS quadrangle mapping, USGS National Hydrography Dataset mapping, aerial photography, and observations of connectivity and direction of flow made in the field. The intended value of the drainage area map is to document the full collection of wetlands adjacent to the relevant reach and not to assert that the mapping represents more than approximation with respect to actual area.

Average annual rainfall: **51** inches
Average annual snowfall: **0.5** inches

[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.

(ii) Physical Characteristics:

(a) Relationship with TNW:

☒ Tributary flows directly into TNW.

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

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

Identify flow route to TNW[5]: **The RPW is a Jurisdictional Impoundment of WOUS that was created from impounding Boone Hall Creek which is subject to the ebb and flood of the tides. The impoundment at Boone Hall Creek (TNW) has an overflow allowing discharge into Boone Hall Creek. The Jurisdictional Impoundment of WOUS flows from west to east along the northern project/property boundary and continuing off-site for approximately 2,800 feet before turning north and flowing for approximately 3,500 feet through Snee Farm Country Club Golf Course to the point of impoundment at Boone Hall Creek.**
Tributary stream order, if known: .

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

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: **The 1.174 acre area described as a Jurisdictional Impoundment of WOUS was created from impounding Boone Hall Creek which is subject to the ebb and flood of the tides. It is unclear whether the tidal influence extended beyond the point of impoundment due to it having been impounded since at least 1969. Boone Hall Creek is depicted as being impounded in the original Charleston County Soil Survey aerial image which was compiled in 1969 with an impounded tidal area on one side and an impounded area of water on the other side. All of this is located off-site. At the end of the impounded water area, hydric soils and what appears to be wetland based on aerial imagery and the USGS map, extended to and through the project area. At some point between 1969 and 1989 (first available Google Earth aerial image), the impoundment was expanded by excavation through the project area creating what is present on-site today.**

Tributary properties with respect to top of bank (estimate):
Average width: **The tributary/impoundment ranges from approximately 4 feet wide to approximately 160 feet wide and is irregularly shaped.**
Average depth: **Unknown**
Average side slopes: **Variable.**

Primary tributary substrate composition (check all that apply): **Tributary substrate is unknown. The portion visible from on-site consists of open water with an unknown depth. The bottom was not visible.**

☐ Silts	☐ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: **Based on aerial imagery and on-site observation, banks appear to be relatively stable as high velocity flows are not likely**.
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List. Irregular**
Tributary gradient (approximate average slope): **1** %

(c) Flow:

Tributary provides for: **Perennial flow**
Estimate average number of flow events in review area/year: **20 (or greater)**
Describe flow regime: **Tributary is an impoundment with an overflow culvert. The overflow culvert is not visible from a publicly accessible location, although it is visible from aerial imagery. Google Earth aerial imagery depicts water in the tributary in every available image from 1989 to 2014 with images being taken at varying times of the year.**
Other information on duration and volume: .

Surface flow is: **Confined.** Characteristics: **Surface flow is confined to within the impounded area.**

Subsurface flow: **Unknown**. Explain findings: .
☐ Dye (or other) test performed: .

[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.

Tributary has (check all that apply):

☐ Bed and banks

☒ OHWM[6] (check all indicators that apply):

☒ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☒ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

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

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

(iii) Chemical Characteristics:

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

Explain: **There was no apparent evidence of poor or degraded water quality in the tributary during the site visit.**

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: **The tributary/impoundment provides support for water dependent species, including native fish communities that move within the relative reach and move downstream between the impoundment and the TNW and between the stream and its adjacent wetlands, amphibians during breeding periods, and numerous wading birds and small mammals that feed on the aquatic species, including numerous categories of macroinvertebrates.**

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 1 = 0.496 acres, Wetland 2 = 0.103 acres, Wetland 3 = 0.070 acres.**

Wetland type. Explain: **Wetland 1 and 2 are forested wetlands. Wetland 3 is an emergent wetland.**

Wetland quality. Explain: **Wetlands appear to be of high quality providing water quality and habitat functions**.

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

(b) General Flow Relationship with Non-TNW:

Flow is: **Ephemeral flow**. Explain: **Flow for the on-site wetlands would be in response to precipitation events when the soils within the wetlands become saturated and reach storage capacity. Water would then be transported via discrete unconfined flow through the uplands to the associated ditches that carry water to the RPW/Impoundment and ultimately the TNW (Boone Hall Creek). Additionally, based on the topography of the site, proximity of ditches to the wetlands (approximately 20 feet to contiguous), and the deep nature of the ditches (greater than 3 feet), it is likely that the zone of influence from the ditches on the water table extends to the wetlands allowing for sustained shallow subsurface flow as stormwaters percolate through the soil profile.**

Surface flow is**: Discrete and confined**

Characteristics: **Surface flow is discrete within the wetlands and confined when it reaches the non-jurisdicitonal drainage ditches that provide the hydrologic connection to the 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.

[7]Ibid.

Subsurface flow: **Unknown**. Explain findings: **Based on the topography of the site, proximity of ditches to the wetlands (approximately 20 feet to contiguous), and the deep nature of the ditches (greater than 3 feet), it is likely that the zone of influence from the ditches on the water table extends to the wetlands allowing for sustained shallow subsurface flow as stormwaters percolate through the soil profile. Additionally, redoxymorphic features within the soil profile that indicate the depth to and presence of a seasonally high water table were observed between the wetlands and ditches during the site visit.**

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☒ Not directly abutting

☒ Discrete wetland hydrologic connection. Explain:

Wetland 1 flows via discrete unconfined flow through the uplands during high precipitation events to an off-site drainage ditch that flows to a Jurisdictional Impoundment of WOUS. The jurisdictional impoundment is impounded at Boone Hall Creek (TNW) with an overflow allowing discharge into Boone Hall Creek. Wetland 1 also flows during high precipitation events via discrete unconfined flow through the uplands to a non-jurisdictional ditch located on-site that connects to the jurisdictional impoundment. Wetland 1 is approximately 20 feet from both ditches. Based on the topography of the site slightly sloping to the ditches, proximity of ditches to the wetland (approximately 20 feet), and the deep nature of the ditches (greater than 3 feet), it is likely that the zone of influence from the ditches on the water table extends to the wetland allowing for sustained shallow subsurface flow as stormwaters percolate through the soil profile. Additionally, redoxymorphic features within the soil profile that indicate the depth to and presence of a seasonally high water table were observed between the wetland and ditches during the site visit.

Wetland 2 flows during high precipitation events to a non-jurisdictional ditch on-site located approximately 5 feet away that connects to a Jurisdictional Impoundment of WOUS. The jurisdictional impoundment is impounded at Boone Hall Creek (TNW) with an overflow allowing discharge into Boone Hall Creek. Based on the topography of the site slightly sloping to the ditch, proximity of the ditch to the wetland (approximately 5 feet), and the general configuration of the ditch getting deeper as it approaches the RPW/Impoundment, it is likely that the zone of influence from the ditch on the water table extends to the wetland allowing for sustained shallow subsurface flow as stormwaters percolate through the soil profile. Additionally, redoxymorphic features within the soil profile that indicate the depth to and presence of a seasonally high water table were observed between the wetland and the ditch during the site visit.

Wetland 3 is contiguous with and flows into the non-jurisdictional drainage ditch that is part of the SCDOT stormwater facility. This ditch extends off-site and connects to a Jurisdictional Impoundment of WOUS. The jurisdictional impoundment is impounded at Boone Hall Creek (TNW) with an overflow allowing discharge into Boone Hall Creek.

☐ Ecological connection. Explain: .

☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **1-2** river miles from TNW.

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

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

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: **There was no apparent evidence of poor or degraded water quality in the wetlands during the site visit.**

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: **The wetlands provide support for wetland dependent species, including amphibians during breeding periods, and numerous wading birds and small mammals that feed on the aquatic species, including numerous categories of macroinvertebrates.**

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

All wetland(s) being considered in the cumulative analysis: **4**

Approximately (**1.169**) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)
On-site Wetland 1 (N)	**0.496 acres**
On-site Wetland 2 (N)	**0.103 acres**
On-site Wetland 3 (N)	**0.070 acres**
Off-site Wetland A (Y)	**0.05 acres**

Summarize overall biological, chemical and physical functions being performed: **Wetlands 1, 2, 3, and A within the drainage area encompassed by the relevant reach tributary intercept runoff from the surrounding uplands. This water helps to concentrate and route detritus from the uplands, as well as that produced by the wetland vegetation itself, to the waters and TNW further down the landscape. Specifically, large quantities of decomposing biomass are conveyed to the RPW and TNW thereby providing important primary productivity toward the biological maintenance of the food web supported by the TNW. The residence time of water may be relatively short during periods of peak flow when water levels are highest, and therefore would favor rapid delivery of pollutants, including both dissolved and particulate chemicals typically found in roadside runoff as well as those typically found in moderately developed suburban to rural landscapes. However, during much of the year flow volumes are much lower and residence times are substantially increased, allowing dissolved and suspended pollutants to interact with sediments and vegetation, thus likely ameliorating the poorer water quality conditions present during higher flow periods. Wetland A is likely to be functioning with regards to pollutant removal based on its proximity to the Snee Farm Golf Course. Pollutants being contributed to this wetland by surrounding uplands are reasonably concluded to include constituents typical of golf course related fertilizers and pesticides. Additional important chemical and physical water quality functions such as denitrification, carbon storage, and sediment and phosphorous retention are also provided by Wetlands 1, 2, 3, and A.**

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:

The project area is located in watershed 03050201-04 and consists primarily of the Wando River and its tributaries which include Boone Hall Creek (TNW) and the impoundment of Boone Hall Creek on-site. The watershed occupies 72,370 acres of the Coastal Zone region of South Carolina. There is a high potential for growth projected for this watershed, which contains portions of the Towns of Mt. Pleasant and Awendaw, and the City of Charleston as water and sewer services are readily available. Additional stresses to aquatic resources within the watershed are expected as development pressure and economic growth within the region increases. Boone Hall Creek is particularly sensitive to potential development pressures as it is listed as Essential Fish Habitat (EFH) by the National Marine Fisheries Service (NMFS). The majority of the impoundment to Boone Hall Creek located off-site and downstream from the project area is surrounded by residential development and Snee Farm Golf Course. Application of fertilizers and pesticides related to individual homeowner lawn care and golf course grounds maintenance have the potential to enter the impoundment and ultimately Boone Hall Creek as the impoundment (relative reach tributary) is minimally buffered by vegetation in this area. It appears through aerial imagery that only one wetland (Wetland A off-site) besides the project area wetlands is present within and adjacent to the relative reach. Wetland A is the only wetland located in close enough proximity to the golf course to have any potential golf course related pollutant buffering potential. The project area including its associated wetlands is the last undeveloped tract located within the relevant reach. In addition, part of the project area is a large stormwater pond that receives runoff associated with Highway 17.

Wetlands 1, 2, 3, and A within the drainage area encompassed by the relevant reach tributary intercept runoff from the surrounding uplands. This water helps to concentrate and route detritus from the uplands, as well as that produced by the wetland vegetation itself, to the waters and TNW further down the landscape. Specifically, large quantities of decomposing biomass are conveyed to the RPW and TNW thereby providing important primary productivity toward the biological maintenance of the food web supported by the TNW. The residence time of water may be relatively short during periods of peak flow when water levels are highest, and therefore would favor rapid delivery of pollutants, including both dissolved and particulate chemicals typically found in roadside runoff as well as those typically found in moderately developed suburban to rural landscapes. However, during much of the year flow volumes are much lower and residence times are substantially increased, allowing dissolved and suspended pollutants to interact with sediments and vegetation, thus likely ameliorating the poorer water quality conditions present during higher flow periods. Wetland A is likely to be functioning with regards to pollutant removal based on its proximity to the Snee Farm Golf Course. Pollutants being contributed to this wetland by surrounding uplands are reasonably concluded to include constituents typical of golf course related fertilizers and pesticides. Additional important chemical and physical water quality functions such as denitrification, carbon storage, and sediment and phosphorous retention are also provided by Wetlands 1, 2, 3, and A.

Considering that the project area is the last undeveloped tract of land within the relevant reach and is located upstream of an area surrounding the relevant reach that consists of a golf course and residential development, the functions of the wetlands in the project area play an important role relating to downstream water quality. Based on the biological, chemical, and physical functions described above, this office has concluded that a Significant Nexus exists between this relevant reach, its similarly situated adjacent wetlands and the downstream TNW Boone Hall Creek.

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: **The tributary/RPW on-site is the Impoundment of WOUS discussed in Sections III. B. and III. D. 7. of this document.**

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

     Provide estimates for jurisdictional waters in the review area (check all that apply):
     - ☐ Tributary waters: linear feet width (ft).
     - ☐ Other non-wetland waters: acres.
       Identify type(s) of waters: .

3. **Non-RPWs[8] 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 jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: **Wetland 1 – 0.496 acres, Wetland 2 = 0.103 acres, Wetland 3 = 0.070 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: The 1.174 acre area described as a Jurisdictional Impoundment of WOUS was created from impounding Boone Hall Creek which is subject to the ebb and flood of the tides. It is unclear whether the tidal influence extended beyond the point of impoundment due to it having been impounded since at least 1969. Boone Hall Creek is depicted as being impounded in the original Charleston County Soil Survey aerial image which was compiled in 1969 with an impounded tidal area on one side and an impounded area of water on the other side. All of this is located off-site. At the end of the impounded water area, hydric soils and what appears to be wetland based on aerial imagery and the USGS map extended to and through the project area. At some point between 1969 and 1989 (first available Google Earth aerial image), the impoundment was expanded by excavation through the project area creating what is present on-site today. Since the area located on-site is an expansion of an existing impoundment that flows into a TNW, it is considered to be jurisdictional. Considering the extent of tidal influence prior to impoundment is unknown, this area is determined to be subject to regulation under Section 404 of the Clean Water Act.

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.

[8] See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

☐ 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:

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **Wetland Delineation Submittal, Ballou Associates**.
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report. **Office concurs with determination.**
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: **Fort Moultrie Quadrangle**.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: **NRCS Web Soil Survey, Charleston County**. **Original 1969 NRCS Soil Survey**
☒ National wetlands inventory map(s). Cite name: **NWI Wetlands Mapper, Charleston County**.
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): **Google Earth 1989-2014.**
or ☐ Other (Name & Date): .
☒ Previous determination(s). File no. and date of response letter:
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

The 1.174 acre area described as a Jurisdictional Impoundment of WOUS was created from impounding Boone Hall Creek which is subject to the ebb and flood of the tides. It is unclear whether the tidal influence extended beyond the point of impoundment due to it having been impounded since at least 1969. Boone Hall Creek is depicted as being impounded in the original Charleston County Soil Survey aerial image which was compiled in 1969 with an impounded tidal area on one side and an impounded area of water on the other side. All of this is located off-site. At the end of the impounded water area, hydric soils and what appears to be wetland based on aerial imagery and the USGS map extended to and through the project area. At some point between 1969 and 1989 (first available Google Earth aerial image), the impoundment was expanded by excavation through the project area creating what is present on-site today. Since the area located on-site is an expansion of an existing impoundment that flows into a TNW, it is considered to be jurisdictional. Considering the extent of tidal influence prior to impoundment is unknown, this area is determined to be subject to regulation under Section 404 of the Clean Water Act.

Based on the biological, chemical, and physical functions described above, this office has concluded that a Significant Nexus exists between Wetlands 1, 2, and 3, the relevant reach, its similarly situated adjacent wetlands and the downstream TNW Boone Hall Creek. Therefore Wetlands 1, 2, and 3 have been determined to be jurisdictional and subject to regulation under Section 404 of the Clean Water Act.