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

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): October 25, 2018

B. DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 1 of 1; CESAC-RDE; SAC-2018-01093; CDP Coward JD

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: **South Carolina** County/parish/borough: **Florence County** City: **Coward**
Center coordinates of site (lat/long in degree decimal format): Lat. **33.9668 ° N**, Long. **-79.7500 ° W**.
Universal Transverse Mercator: **17S 615481 3758994**
Name of nearest waterbody: **Unnamed tributary of Lynches River**

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Unnamed tributary of Lynches River**
Name of watershed or Hydrologic Unit Code (HUC): **03040202-07 (Lower Lynches River)**
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☒ Field Determination. Date(s): **September 10, 2018**

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 acres.
Wetlands: **0.10** acres.

c. Limits (boundaries) of jurisdiction based on: **1987 Delineation Manual**, **Pick List**, **Pick List**
Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):[3]
☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain: **One upland excavated pond is on-site, this pond totals 0.19 acres with 0.15 acres of the pond within the**

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

project boundaries. This pond was engineered and excavated for the sole purpose of storm-water containment and does not have any outflowing conveyances.

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: **Lynches River**.

Summarize rationale supporting determination: **U.S. Army Corps of Engineers Charleston District Navigability Study 1977 Report 10, Lynches River Basin, states the present limit of navigability is located at river mile 42.5, the tributary that flows through off-site adjacent wetlands meets the Lynches River at river mile 32, within the limits of navigability**.

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: **86,935 acres ;**
Drainage area: **1,883.45 acres**
Average annual rainfall: **40-50** inches; per the National Weather Service's Advanced Hydrological Prediction Service
Average annual snowfall: **0** 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 **5-10** river miles from TNW.
Project waters are **2-5** river miles from RPW.
Project waters are **2-5** aerial (straight) miles from TNW.
Project waters are **2-5** aerial (straight) miles from RPW.

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

Project waters cross or serve as state boundaries. Explain: **The project waters do not cross into adjacent states nor serve as cross-state boundaries**.

Identify flow route to TNW[5]: **Jurisdictional water from the onsite wetland flows off-site via a ditch running first through the wetland, then offsite into a roadside ditch adjacent to, then under, Highway 52. The water then flows immediately south, adjacent to a train track for 0.45 miles before crossing under the track via an underground culvert, the water then moves east-southeast through a series of connected excavated ditches within agricultural fields and pine plantations for 3.25 miles. At that point, the water inflows to an unnamed man-altered 1.09 mile long RPW, known in this project as Reach Area 1, after passing under Anderson Bridge Road and North Old Georgetown Road the water then flows directly into the Lynches River (TNW). The total aerial distance from the project site to the TNW (Lynches River) is: 3.88 miles. The total river miles from the project site to the TNW (Lynches River) is: 5.08 miles**.
Tributary stream order, if known: **1**.

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: **Tributary has been channelized for direct flow into the Lynches River.**.

Tributary properties with respect to top of bank (estimate):
Average width: **3** feet
Average depth: **2-3** feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):
☐ Silts ☒ Sands ☐ Concrete
☐ Cobbles ☐ Gravel ☐ Muck
☐ Bedrock ☐ Vegetation. Type/% cover:
☐ Other. Explain: **Leaf fine sandy loam through entire extent of reach area**.

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: **Banks stabilized due to anthropogenic channelization and vegetative growth**.
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Meandering.**
Tributary gradient (approximate average slope): **0-1 (estimated)** %

(c) Flow:
Tributary provides for: **Seasonal flow**
Estimate average number of flow events in review area/year: **20 (or greater)**
Describe flow regime: **Based on a review of aerial photography, topographic maps, and LiDAR, the tributary provides flow during the seasonal wet period, from late fall to early spring. In addition, inflows from numerous excavated ditches converge into the tributary**.
Other information on duration and volume: .

Surface flow is: **Discrete and confined.** Characteristics: .

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

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: .

[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.

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: **Tributary is involved in the capture and attenuation of silt, pollutants, and nutrients from the surrounding area that is a mixture of development and forested areas. Water source is obtained from surface flow, groundwater recharge, and stormwater runoff in this tributary**.

Identify specific pollutants, if known: **Because a large portion of the watershed is comprised of agricultural land and urban land, the potential exists for herbicides and other pollutants, as well as runoff from land disturbing activities such as plowing and harvesting, to enter the tributary. Because agricultural land use requires regular manipulation of the soils, agricultural activities can create an increase in suspended sediments in the downstream tributaries. According to the SCDHEC Watershed Assessment, there are two SCDHEC monitoring stations along this section of the Lynches River. At the upstream site (PD-041), aquatic life uses are partially supported due to pH excursions. In addition, there are significant decreasing trends in dissolved oxygen and increasing trends in five-day biochemical oxygen demand. Recreational uses are partially supported due to fecal coliform excursions, which are compounded by significant increasing fecal coliform bacteria concentration. At the downstream site (PD-281), aquatic life and recreational uses are fully supported. Although dissolved oxygen excursions occurred at this site, they were typical of values seen in blackwater systems and were considered natural, not standards violations. However, there are significant decreasing trends in dissolved oxygen concentration and increasing trends in five-day biochemical oxygen demand, total phosphorus concentration, and fecal coliform bacteria.**.

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

☒ Riparian corridor. Characteristics (type, average width): **This wetland consists of a mixed pine and hardwood ecosystem. This riparian corridor averages 700-1000 feet in width and contributes to the health of the overall aquatic system by filtering out pollutants and preventing erosion**.

☐ 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: **Habitat supports flora and fauna typically found in tributaries and adjacent wetlands**.

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

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: **0.10 acres** Wetland type. Explain: **Palustrine forested wetlands**.

Wetland quality. Explain: **Functioning wetlands**.

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

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: **Wetlands receive flow from heavy seasonal rainfall (late spring to early fall)**.

Surface flow is**: Overland sheetflow**

Characteristics: **Typical runoff from a low gradient, nearly flat wetland that discharges directly into the abutting seasonal RPW**.

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

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☒ Not directly abutting

☒ Discrete wetland hydrologic connection. Explain: **Wetlands within project area directly abutt ditch which provides off-site conveyance through a series of ditches to Lynches River (TNW)**.

☐ Ecological connection. Explain: .

☐ Separated by berm/barrier. Explain:.

[7] Ibid.

(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 **100 - 500-year** floodplain. Located within Zone A of the Special Flood Hazard Area.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: **No surface water was present at the time of the site visit, however the wetland is within agricultural fields and potentially is influenced by chemicals used in the management of agricultural operations**.

Identify specific pollutants, if known: **Because a large portion of the watershed is comprised of agricultural land and urban land, the potential exists for herbicides and other pollutants, as well as runoff from land disturbing activities such as plowing and harvesting, to enter the tributary. Because agricultural land use requires regular manipulation of the soils, agricultural activities can create an increase in suspended sediments in the downstream tributaries. According to the SCDHEC Watershed Assessment, there are two SCDHEC monitoring stations along this section of the Lynches River. At the upstream site (PD-041), aquatic life uses are partially supported due to pH excursions. In addition, there are significant decreasing trends in dissolved oxygen and increasing trends in five-day biochemical oxygen demand. Recreational uses are partially supported due to fecal coliform excursions, which are compounded by significant increasing fecal coliform bacteria concentration. At the downstream site (PD-281), aquatic life and recreational uses are fully supported. Although dissolved oxygen excursions occurred at this site, they were typical of values seen in blackwater systems and were considered natural, not standards violations. However, there are significant decreasing trends in dissolved oxygen concentration and increasing trends in five-day biochemical oxygen demand, total phosphorus concentration, and fecal coliform bacteria.**.

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

☐ Riparian buffer. Characteristics (type, average width): .

☒ Vegetation type/percent cover. Explain: **Wetlands in reach area are of homogenous mid-successon growth. Vegetation percent coverage ranges from 50-80% (estimated)**.

☐ Habitat for:

☐ Federally Listed species. Explain findings: .

☒ Fish/spawn areas. Explain findings: **Functioning wetland which supports typical fauna species of South Carolina coastal floodplain**.

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings: **Functioning wetland which supports typical aqautic fauna/flora species of South Carolina coastal floodplain**.

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

All wetland(s) being considered in the cumulative analysis: **7**

Approximately (**1788.90**) 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)
Y	**450.03**	**N**	**0.90**
Y	**80.89**		
Y	**26.05**		
N	**219.98**		
N	**2.54**		
N	**8.51**		

Summarize overall biological, chemical and physical functions being performed: **1.09 mile (~5,752 ln. ft.) tributary in Reach Area 1 and its 788.90 acre adjacent wetlands (seven wetlands: 0.90, 8.51, 2.54, 219.98, 450.03, 80.89, and 26.05 acres) provide a broad variety of biological, chemical, and physical functions. This tributary and its wetlands provide breeding grounds and shelter for aquatic species and foraging areas for wetland dependent species. These wetlands are essential in providing organic carbon in the form of their collective primary productivity to downstream waters, resulting in the nourishment of the downstream food web. The wetlands in the review area provide the important function of collecting and eventually removing of excess nutrients which are contributed by surface and groundwater runoff from surrounding upland agricultural operations and residential housing. This reduction results in lowered nitrogen and phosphorus loading downstream and effectively prevents oxygen depletion that can result from eutrophication. While the RPW and some of its adjacent tributaries within the review area have been ditched, which likely has reduced the effectiveness of some of the wetlands nutrient removal functions, they still appear to be functioning ecosystems of high monetary and non-monetary (ecosystem) value. Furthermore, the wetlands in the review area are collectively performing flow maintenance functions, including sustaining essential flow for downstream tributaries, temporary water storage, and flooding abatement. Based on the collective functions described above and their importance to the biological, chemical, and physical integrity of the**

traditional navigable waters of the Lynches River, this office has determined that there is a Significant Nexus between the review area, its adjacent wetlands, and 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: **The unnamed tributary and the adjacent wetlands are collectively performing important biological, chemical, and physical functions within a watershed largely comprised of agricultural land uses. The biological functions being performed include providing breeding grounds and shelter for aquatic animals and diversifying the plant life within the watershed. As a result, these wetlands supply food sources for a variety of wetland dependent species, such as invertebrates, amphibians, reptiles, and mammals. These wetlands and tributary are essential in providing organic carbons in the form of their collective primary productivity to downstream waters, resulting in the nourishment of the downstream food web. The chemical functions being performed consist of the removal of excess pollutants, which are contributed by runoff from the surrounding uplands, from the downstream TNW. This reduces nitrogen and phosphorus loading downstream and effectively prevents oxygen depletion that can result from eutrophication. Physically, the adjacent wetlands help reduce stormwater flow, and the landscape position of these wetlands and their vegetation prevent soil from eroding and traveling downstream. Not only does this prevent the accumulation of sediment downstream, which can smother fish and other aquatic wildlife, but it also reduces the amount of pollutants downstream because these pollutants are usually transported by sediment particles. These wetlands temporarily store flood waters and reduce downstream peak flows by retaining large amounts of water within the soil and through evapo-transpiration. This helps to maintain seasonal flow volumes. Based on the collective functions described above and their importance to the biological, chemical, and physical integrity of the traditional navigable waters of the Lynches River, it has been determined that there is a significant nexus between the relevant reach of the tributary and adjacent wetlands to the downstream TNW**.

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: **This tributary receives flow from numerous excavated ditches and despite being man-altered it still maintains some naturally occurring sinuosity due to flow from heavy summer-fall rains, which average 40-50 inches of precipitation per year**.

Provide estimates for jurisdictional waters in the review area (check all that apply):
☒ Tributary waters: **5,752** linear feet **12** 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: **0.10** 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]

[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.*

☐ 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): **One upland excavated pond is on-site, this pond totals 0.19 acres with 0.15 acres of the pond within the project boundaries. This pond was engineered and excavated for the sole purpose of storm-water containment and does not have any outflowing conveyances.**

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: **Data sheets and depictions provided by Palmetto Environmental Consulting, Inc. Jurisdictional wetland map prepared by the USACE. Map titled: "**CDP Coward Jurisdictional Wetland Map**", and dated October 23, 2018.**
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☒ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps:
☐ Corps navigable waters' study:
☒ U.S. Geological Survey Hydrologic Atlas: **03040202-07 (Lower Lynches River)**.
☐ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: **USGS Scranton and Mill Bay Quads depict a non-forested upland site with no aquatic features on-site or adjacent to the site boundaries**.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: **Florence County Soil Survey depicts three soils: Lynchburg sandy loam, Coxville fine sandy loam, and Rains sandy loam. All three soils are listed on the 2016 South Carolina Hydric Soil list for Florence County.**
☒ National wetlands inventory map(s). Cite name: **The National Wetland Inventory map depicts the site as Upland Cropland/Pasture (U21) and Residential (U11).**

☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): **Florence 1999 Aerial Index 11226:4; SC DNR 2006; Google Earth 2017;**
or ☒ Other (Name & Date): **Site Phots provided by Palmetto Environmental Consulting, Inc.; Google Earth Street View 2017;**
☐ Previous determination(s). File no. and date of response letter:
☐ Applicable/supporting case law:
☐ Applicable/supporting scientific literature:
☒ Other information (please specify): **LiDAR Digital Elevation Model (DEM) utilizing a monochrome "Hillshade" curve depicts the site as a generally flat area with two ditch features, these features are discussed in Section B, Additional Comments.**

B. ADDITIONAL COMMENTS TO SUPPORT JD:

This 2.0 acre site consists primarily of uplands historically used as agricultural land. Aerials depict the site as mostly upland with grassy vegetation. On imagery the following potentially jurisdictional features are visible: 0.10 acre wetland, a 0.15 acre pond, and the remnants of a ~300 ft. ditch; all of these features and there jurisdictional determinations are discussed below. Florence County Soil Survey depicts three soils onsite: Lynchburg sandy loam, Coxville fine sandy loam, and Rains sandy loam. All three soils are listed on the 2016 South Carolina Hydric Soil list for Florence County. USGS Scranton and Mill Bay Quads depict a non-forested upland site with no aquatic features on-site or adjacent to the site boundaries.

On-site are two non-jurisdictional ditch features totaling ~560 linear feet. The first ditch, ~300 ft. in length, is the remnants of a drainage ditch that runs from the wetland on the northern boundary of the site through the agricultural field the site is within. This ditch is currently ~6-10 inches in depth and has mostly been filled in with soil and vegetation. The second ditch, ~260 ft. in length, which is visible onsite and via LiDAR offsite, runs directly through the wetland on the northern boundary and connects on either side to off-site ditches excavated out of upland agricultural land and roadside ditches. Neither of these ditches convey more than occasional stormwater and neither exhibit the characteristics of flow of a jurisdictional tributary.

One upland excavated pond is on-site, this pond totals 0.19 acres with 0.15 acres of the pond within the project boundaries. This pond was engineered and excavated for the sole purpose of storm-water containment and does not have any outflowing conveyances; therefore, this pond is non-jurisdictional per the USACE's authority.

On-site there is one 0.10 acre jurisdictional wetland that has an indirect hydrologic connection with the Lynches River (TNW). During a September 10, 2018 site visit hydric soil, hydrophytic vegetation, and wetland hydrology were observed within this wetland by the USACE and the applicant's consultant.

Jurisdictional water from the onsite wetland flows off-site via a ditch running first through the wetland, then offsite into a roadside ditch adjacent to, then under, Highway 52. The water then flows immediately south, adjacent to a train track for 0.45 miles before crossing under the track via an underground culvert, the water then moves east-southeast through a series of connected excavated ditches within agricultural fields and pine plantations for 3.25 miles. At that point, the water inflows to an unnamed man-altered 1.09 mile long RPW, known in this project as Reach Area 1, after passing under Anderson Bridge Road and North Old Georgetown Road the water then flows directly into the Lynches River (TNW). The total aerial distance from the project site to the TNW (Lynches River) is: 3.88 miles. The total river miles from the project site to the TNW (Lynches River) is: 5.08 miles.

1.09 mile (~5,752 ln. ft.) tributary in Reach Area 1 and its 788.90 acre adjacent wetlands (seven wetlands: 0.90, 8.51, 2.54, 219.98, 450.03, 80.89, and 26.05 acres) provide a broad variety of biological, chemical, and physical functions. This tributary and its wetlands provide breeding grounds and shelter for aquatic species and foraging areas for wetland dependent species. These wetlands are essential in providing organic carbon in the form of their collective primary productivity to downstream waters, resulting in the nourishment of the downstream food web. The wetlands in the review area provide the important function of collecting and eventually removing of excess nutrients which are contributed by surface and groundwater runoff from surrounding upland agricultural operations and residential housing. This reduction results in lowered nitrogen and phosphorus loading downstream and effectively prevents oxygen depletion that can result from eutrophication. While the RPW and some of its adjacent tributaries within the review area have been ditched, which likely has reduced the effectiveness of some of the wetlands nutrient removal functions, they still appear to be functioning ecosystems of high monetary and non-monetary (ecosystem) value. Furthermore, the wetlands in the review area are collectively performing flow maintenance functions, including sustaining essential flow for downstream tributaries, temporary water storage, and flooding abatement. Based on the collective functions described above and their importance to the biological, chemical, and physical integrity of the traditional navigable waters of the Lynches River, this office has determined that there is a Significant Nexus between the review area, its adjacent wetlands, and the downstream TNW.
This site was assessed on a single basis form and per the maps provided by the applicant's consultant.