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): 8/17/15

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Charleston District, Pointe Salkehatchee Industrial Park, SAC-2005-5544-2JU

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: South Carolina County/parish/borough: **Allendale** City:
Center coordinates of site (lat/long in degree decimal format): Lat. 32.97634° **N**, Long. -81.26604° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: **Duck Branch**
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: **Coosawhatchie River downstream of Route 17.**
Name of watershed or Hydrologic Unit Code (HUC): 03050208-02
☒ 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: **1/26/15, 8/17/15**
☒ Field Determination. Date(s): **2/10/15**

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: **Jurisdictional pRPW 1 = 1940 linear feet, Jurisdictional Ditch = 222 linear Feet.**
      Wetlands: **Wetland A = 1.14 acres, Wetland B = 11.50 acres, Wetland C = 0.04 acres.**

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual, Established by OHWM.**
      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 pond on site that was confirmed during the site visit to be surrounded by non-hydric soils and dug out of uplands. The pond was constructed under SCDHEC Stormwater Permit # SCR109402. Therefore it has been determined that the stormwater pond is non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.**

There are two ditches on site that did not display signs of relatively permanent flow. Both ditches were full of leaf litter and other organic debris indicating lack of relatively permanent flow. Ditch B did not display an OHW or bed and bank. Ditch A did not display bed and bank, but did have evidence of an OHW. This is due to several plugs within the ditch consisting of downed trees and other debris retaining water and not a result of relatively permanent flow. Based on the above information, it has been determined that Ditches A and B are 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.

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: **80,614 acres**
Drainage area: **812 Acres**

[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.

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 an approximation with respect to actual area.

Average annual rainfall: **46.57 inches**
Average annual snowfall: **0.2 inches**

(ii) Physical Characteristics:

(a) Relationship with TNW:

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

Project waters are **30 (or more)** river miles from TNW.
Project waters are **1 (or less)** river miles from RPW.
Project waters are **30 (or more)** 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 unnamed tributary flows into Duck Branch which flows into the Coosawhatchie River which becomes tidal downstream of Route 17.**
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply): **Unknown due to a flow event during the site visit which resulted in the tributary overtopping its banks allowing for discrete unconfined flow within the flood plain wetland. The majority of the tributary was submerged within the wetland with a discontinuous OHW.**

Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate): **Unknown (see above)**
Average width: feet
Average depth: feet
Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply): **Unknown (see above)**

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: **Unknown (see above)**.
Presence of run/riffle/pool complexes. Explain: **Unknown (see above)**.
Tributary geometry: **Meandering.**
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: **The tributary has a perennial flow regime.**
Other information on duration and volume: .

Surface flow is: **Discrete and confined.** Characteristics: **Flow is confined to the tributary channel until flow events result in overtopping of banks and discrete unconfined flow throughout the floodplain wetland.**

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

Tributary has (check all that apply): **Bed and bank as well as OHW was observed downstream of the project area at a culverted road crossing.**
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):

[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.

☐ 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: **A flow event during the site visit resulted in the tributary overtopping its banks allowing for discrete unconfined flow within the flood plain wetland. The majority of the tributary was submerged within the wetland with a discontinuous OHW.**

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: **The tributary did not display any signs of degraded water quality during the site visit.**

Identify specific pollutants, if known: **Pollutants typical of agricultural runoff are likely to be present as the headwaters of the tributary drain an agricultural operation.**

(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 provides support for water dependent species, including native fish communities that move within the relative reach and move downstream between the tributary 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 A = 1.14 acres, Wetland B = 11.50 acres, Wetland C = 0.04 acres.**

Wetland type. Explain: **Forested**.

Wetland quality. Explain: **Fully Functional**.

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

(b) General Flow Relationship with Non-TNW:

Wetland B:

Flow is: **Perennial flow**. Explain: **Wetland B is a floodplain wetland that is contiguous with pRPW 1. The flow regime is consistent with that of the tributary with a perennial exchange of hydrology between the wetland and tributary in response to the local climate and season. Stronger interaction is present during the wet season as the tributary commonly overtops its banks and becomes discontinuous within the wetland. In addition, precipitation events concentrate water within the wetland as it is the lowest spot within the landscape. Due to the topography, precipitation that infiltrates the upland soils is discharged into the wetland before reaching the tributary. In the dry season as water tables within the uplands recede, local hydrology is concentrated within the wetland which contributes hyporheic flow that supports the perennial nature of the tributary/wetland system.**

[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.

Surface flow is**: Discrete and confined**
Characteristics: **Surface flow is discrete within the wetlands and confined when it reaches the tributary channel**.

Subsurface flow: **Yes**. Explain findings: P**recipitation events concentrate water within the wetland as it is the lowest spot within the landscape. Due to the topography, precipitation that infiltrates the upland soils is discharged into the wetland before reaching the tributary. In the dry season as water tables within the uplands recede, local hydrology is concentrated within the wetland which contributes hyporheic flow that supports the perennial nature of the tributary/wetland system.**
☐ Dye (or other) test performed: .

Wetlands A & C:

Flow is: **Ephemeral flow**. Explain: **Flow for Wetlands A & C 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 the ditches associated with these wetlands to the tributary.**

Surface flow is**: Discrete and confined**
Characteristics: **Surface flow is discrete within the wetlands and confined when it reaches the ditches that provide the hydrologic connection to the tributary.**

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

(c) Wetland Adjacency Determination with Non-TNW:
☒ Directly abutting . **Wetland B is contiguous with the tributary as it is the associated floodplain wetland.**
☒ Not directly abutting
☒ Discrete wetland hydrologic connection. Explain:

Wetland A flows during the wet season and in response to larger precipitation events to the tributary via Non-jurisdictional Ditch A that connects the two systems. This ditch has several plugs consisting of downed trees, soil, and other debris that retain water within the ditch. Due to the plugs, water is retained in the ditch and infiltrates into the soil where indicators of subsurface flow are present. Soil within ditch consists of sand with chromas of 2 or less and presence of redox features indicating subsurface saturation and a fluctuating water table within ditch. This subsurface hydrologic connection was observed throughout the ditch from Wetand A to its confluence with Wetland B and the pRPW.

Wetland C flows during the wet season and in response to larger precipitation events to the tributary via Jurisdictional Ditch 1 which connects the two systems. It is common for water from the tributary to back up into Wetland C via Jurisdictional Ditch 1 during the wet season and larger precipitation events.

☐ Ecological connection. Explain: .
☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW
Project wetlands are **30 (or more)** river miles from TNW.
Project waters are **30 (or more)** 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: **Pollutants typical of agricultural runoff are likely to be present as the headwaters of the tributary drain an agricultural operation.**

(iii) Biological Characteristics. Wetland supports (check all that apply):
☒ Riparian buffer. Characteristics (type, average width): **Wetland B is a forested floodplain wetland associated with the tributary. This riparian wetland appears to extend off site and follow the tributary system in excess of 30 miles to the TNW.**
☐ 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: **6**

Approximately (**100**) acres in total are being considered in the cumulative analysis.

For the purpose of this determination, five wetlands outside of the project area within the relative reach drainage area are being evaluated as adjacent to the relative reach. This estimate is approximate, based on a review of aerial and NWI imagery, and is likely an underestimate. In addition, Wetland B consists of 11.5 acres on site and extends off site to the confluence of the relevant reach with Duck Branch. The off site acreage of Wetland B is approximately 50.5 acres and is being evaluated as Wetland 5 below.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
Wetland A (N)	**1.14**	**Wetland 4 (N)**	**2**
Wetland B (Y)	**11.5**	**Wetland 5 (Y)**	**50.5**
Wetland C (N)	**0.04**		
Wetland 1 (N)	**6**		
Wetland 2 (N)	**11**		
Wetland 3 (N)	**18**		

Summarize overall biological, chemical and physical functions being performed: **Wetlands A, B, C, and 1-4 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 and agricultural 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. Additional important chemical and physical water quality functions such as denitrification, carbon storage, and sediment and phosphorous retention are also provided by Wetlands A, B, C, and 1-4.**

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 03050208-02 which is located in Allendale and Hampton Counties and consists primarily of the upper Coosawhatchie River and its tributaries from its origin to Black Creek. The watershed occupies 80,614 acres of the Lower Coastal Plain region of South Carolina. There is a low potential for growth in this watershed, which contains the portions of the Towns of Allendale, Fairfax, and Brunson, and the Town of McColl. Half of Allendale County's population lives in the Towns of Allendale and Fairfax. US 278 runs between the towns and is projected to support increased commercial growth. There is no indication of industrial growth, but Allendale and Fairfax are the only towns in the county with sewer systems and a rail line to support industry. Allendale County has adopted a zoning ordinance that includes River and Streamside Management Areas, restricting development within 100 feet of a river and 50 feet from perennial streams, which flow directly into the river. Approximately 24 percent of the watershed consists of agricultural lands. This increases the significance and importance of the aquatic resource functions currently being provided by existing wetlands in this watershed, in particular the wetlands within the drainage area encompassed by the relevant reach tributary considering the headwaters consist of an agricultural operation. The nitrogen (N) and phosphorus (P) applied to agricultural land (via synthetic fertilizers, composts, manures, biosolids, etc.) if not managed correctly, can have negative environmental consequences. Excess N supplied by both synthetic fertilizers (as highly soluble nitrate) and organic sources such as manures (whose organic N is mineralized to nitrate by soil microorganisms) can lead to contamination of nitrate within the water table. Together with excess P from these same fertilizer sources, downstream eutrophication can occur due to excess nutrient supply, leading to anoxic areas or dead zones. Wetlands provide important nutrient cycling and retention functions that have the potential to ameliorate the effect of agricultural pollution.

Wetlands A, B, C, and 1-4 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 and agricultural 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. Additional important chemical and physical water quality functions such as denitrification, carbon storage, and sediment and phosphorous retention are also provided by Wetlands A, B, C, and 1-4.

Considering the headwaters of the relevant reach tributary consist of an agricultural operation, the functions of the wetlands in the project area, as well as those similarly situated within the relevant reach, 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 (Coosawhatchie River).

Documentation for the Record only: Significant nexus findings for seasonal RPWs and/or wetlands abutting seasonal RPWs:
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D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

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: **Jurisdictional pRPW 1 has an approximated drainage area of 812 acres consisting of at least 100 acres of wetlands. It is depicted on the USGS Map as a blue line perennial stream. It is also depicted on the NHDS Map as having a perennial flow regime. During the site visit, the tributary had overtopped its banks and was flowing through the adjacent floodplain wetlands. Based on the above, it has been determine that the tributary has a perennial flow regime.**

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

Provide estimates for jurisdictional waters in the review area (check all that apply):
☒ Tributary waters: **Jurisdictional pRPW 1 = 1940 linear feet.**
☒ Other non-wetland waters: **Jurisdictional Ditch 1 = 222 linear feet.**
Identify type(s) of waters: **Jurisdictional Ditch 1 displays signs of relatively permanent flow and connects Wetland C to Jurisdictional pRPW 1. It is common for water from the tributary to back up into Wetland C via Jurisdictional Ditch 1 during the wet season and larger precipitation events. Flow occurs on a seasonal nature during the wet season and in response to precipitation events, but not continually year round.**

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: **Wetland B is contiguous with Jurisdictional pRPW 1 and is its associated floodplain wetland.**

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: **Wetland B = 11.5 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 A = 1.14 acres, Wetland C = 0.04 acres.**

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

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

7. Impoundments of jurisdictional waters.[9]
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).
Explain:

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.

[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 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 pond on site that was confirmed during the site visit to be surrounded by non-hydric soils and dug out of uplands. The pond was constructed under SCDHEC Stormwater Permit # SCR109402. Therefore it has been determined that the stormwater pond is non-jurisdictional and not subject to regulation under Section 404 of the Clean Water Act.**

There are two ditches on site that did not display signs of relatively permanent flow. Both ditches were full of leaf litter and other organic debris indicating lack of relatively permanent flow. Ditch B did not display an OHW or bed and bank. Ditch A did not display bed and bank, but did have evidence of an OHW. This is due to several plugs within the ditch consisting of downed trees and other debris retaining water and not a result of relatively permanent flow. Based on the above information, it has been determined that Ditches A and B are 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: 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, S&ME, Inc.**
☒ 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: **NHDS Map**.
☒ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: **Barton Quadrangle**.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: **NRCS Web Soil Survey**.
☒ National wetlands inventory map(s). Cite name: **NWI Wetlands Mapper**.
☐ 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 1989-2015**.
or ☒ Other (Name & Date): **2/10/15 site visit photographs**.
☐ 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: 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 Coosewhatchie River. Therefore it has been determined that Wetlands A, B, and C are jurisdictional and subject to regulation under Section 404 of the Clean Water Act.