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.

SE	CTION I: BACKGROUND INFORMATION
	REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020
В.	DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 1 of 20; SAC-2019-01728 Hodges Solar
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Mulberry Creek
	Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Greenwood Name of watershed or Hydrologic Unit Code (HUC): 03050109-08 Lake Greenwood-Saluda River Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. Check if other sites (e.g., offsite mitigation sites, disposal sites, etc) are associated with this action and are recorded on a different JD form.
D.	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): ☐ Office (Desk) Determination. Date: 12-May-2020 ☐ Field Determination. Date(s): 19-December-2019
SEC A.	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
	re Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the ew 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.
The	re 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): TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands
	b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: A=61 linear feet, W3=2,997 linear feet, and X3=374 linear feet: width (ft) and/or wetlands: B=0.04 acre, C=0.01 acre, D=0.02 acre, E=0.04 acre, and F=0.03 acres.
	c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Established by OHWM., Pick List Elevation of established OHWM (if known):
	 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:

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.

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.

Identify TNW: .

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 182,629 acres; 03050109-08 Lake Greenwood-Saluda River

Drainage area: A=3.8 acres and X3=22.3 acres

Average annual rainfall: 45.74 inches Average annual snowfall: 1.9 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 3 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 5-10 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 TNW⁵: Unnamed Tributary which flows to Mulberry Creek which flows to Lake Greenwood (Traditional Navigable Water).

Tributary stream order, if known: A and X3 are first.

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.

(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.
Pacolet soils.	Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain: According to the soil survey, X3 is surrounded by Cecil soils and A is surrounded by Both soils are sandy loams that are not hydric.
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Meandering. Tributary gradient (approximate average slope): %
	Flow: Tributary provides for: Seasonal flow Estimate average number of flow events in review area/year: Pick List Describe flow regime: Tributaries A and X3 each have a clear OHWM and distinct channels. Other information on duration and volume: Tributaries A and X3 flow at least 3 months out of the year, during times and during the wetter months.
	Surface flow is: Discrete and confined. Characteristics: Water flows within the channel during normal conditions .
	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 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): 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:
Cha	emical Characteristics: aracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: The Lake Greenwood-Saluda River watershed occupies 182,629 acres of the Piedmont region of South Carolina. Land use/land cover includes 55.6% forested land, 27.8% agricultural land, 8% urban land, 5.7% water, 1.7% forested wetland (swamp), and 1.2% barren land. httify specific pollutants, if known: Possible pollutants from agricultural practices and nearby roads.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

	(iv)		Other environmentally-se	ristics (type, average tics: Explain findings: In findings: The trib ensitive species. Ex	e width): outaries provide breeding gr plain findings:	rounds for aquatic species. bitat for wildlife in the area.
2.	Cha	aract	eristics of wetlands adjacent	to non-TNW that	flow directly or indirectly in	nto TNW
	(i)		Asical Characteristics: General Wetland Characterist Properties: Wetland size: E=0.04 ac Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or ser	res F orested . n: .	es. Explain: .	
		(b)	General Flow Relationship v Flow is: Ephemeral flow . F			
			Surface flow is: Discrete an Characteristics: The wet		utting X3, a seasonal RPW.	
			Subsurface flow: Unknown. Dye (or other) test pe			
		(c)	Wetland Adjacency Determi ☐ Directly abutting ☐ Not directly abutting ☐ Discrete wetland hyd ☐ Ecological connection ☐ Separated by berm/b	lrologic connection. on. Explain: .		
		(d)	Proximity (Relationship) to Project wetlands are 5-10 riv Project waters are 5-10 aeria Flow is from: Wetland to na Estimate approximate location	rer miles from TNW al (straight) miles fravigable waters.	om TNW.	
	(ii)	Cha	characteristics; etc.). Explain Piedmont region of South (n: The Lake Green Carolina. Land use r, 1.7% forested w	wood-Saluda River watersh /land cover includes 55.6% etland (swamp), and 1.2% l	
	(iii)) Bio	Other environmentally-se	tics (type, average ver. Explain: Explain findings: In findings: The wetensitive species. Ex	vidth):	
3.	Cha	All	veristics of all wetlands adjact wetland(s) being considered in proximately (0.04) acres in to	n the cumulative and	alysis: 1	is.
		For	each wetland, specify the foll	owing:		
			Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
			Y	0.04		

Summarize overall biological, chemical and physical functions being performed: The wetland being evaluated in this significant nexus determination, which is adjacent to the seasonal RPW, is performing biological, chemical, and physical functions that relate to the integrity of the TNW. The wetland in the review area is abutting the seasonal RPW. The wetland is forested and there are areas of the site that have been cleared for possible agriculture practices. It is performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. It also provides vegetation diversity on a site that has some cleared areas. The wetland is also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The wetland is also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and helps to maintain seasonal flow volumes.

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: The seasonal RPWs and their adjacent wetlands are performing biological, chemical, and physical functions that relate to the integrity of the TNW. A and X3 flow directly into a perennial RPW. X3 has a wetland directly abutting the tributary. The wetland is forested and there are areas of the site that have been cleared for possible agriculture practices. The tributaries and wetland are performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. They also provides vegetation diversity on a site that has some cleared areas. The tributaries and wetland are also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The tributaries and wetland are also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and 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 downstream TNW, it has been determined there is a significant nexus between the relevant reach of the tributaries and adjacent wetland to the downstream TNW.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL

TH	AT 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: W3 is a perennial RPW. It is shown as a dashed blue line on the topo map and is shown on the USFWS Wetland Map. The tributary was observed flowing during flagging. It has a distinct channel and clear OHWM. Available data led this office to conclude the tribtuary 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: X3 and A are seasonal RPWs. They are both shown as drainage patterns on the topo map. These tributaries have distinct channels and clear OHWMs. Available data this office to conclude the tributaries have a seasonal flow regime.
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: A=61 linear feet, W3=2,997 linear feet, and X3=374 linear feet 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 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: E is directly abutting X3, a seasonal RPW.
and	Provide acreage estimates for jurisdictional wetlands in the review area: B=0.04 acre, C=0.01 acre, D=0.02 acre, E=0.04 acre, F=0.03 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.
	Provide estimates for jurisdictional wetlands in the review area: acres.

⁸See Footnote # 3.

	7.	Impoundments of jurisdictional waters. 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:
Е.	DE	CHATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY CH 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:
	Ide	entify water body and summarize rationale supporting determination:
		wide 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.		ON-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):
	fact	evide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR tors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional gment (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.
	Pro a fin	wide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such nding 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.
SE(CTIO	ON IV: DATA SOURCES.
	SUP	PORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Timmons Group.
ron.		Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. This office agrees with the conclusions of the submitted data sheets and
repo	ort. □	☐ Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: 1977 Navigability Study.

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.

U.S. Geological Survey Hydrologic Atlas: HA 730-G,1990.
USGS NHD data.
☐ USGS 8 and 12 digit HUC maps. 03050109-08 Lake Greenwood-Saluda River
U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Shoals Junction Quad.
USDA Natural Resources Conservation Service Soil Survey. Citation: SSURGO.
National wetlands inventory map(s). Cite name: USFWS Wetland Map.
State/Local wetland inventory map(s): .
FEMA/FIRM maps: .
100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
Photographs: Aerial (Name & Date): ESRI.
or ☑ Other (Name & Date): Photos taken during Corps site visit on 12/19/2019 .
Previous determination(s). File no. and date of response letter:
Applicable/supporting case law: .
Applicable/supporting scientific literature: .
Other information (please specify): Corps Site Visit 12/19/2019.

B. ADDITIONAL COMMENTS TO SUPPORT JD: The aquatic resources documented on this form include 1 perennial tributary with 4 abutting wetlands, 2 seasonal tributaries, and one wetland abutting one of the seasonal tributaries. RPWs and wetlands abutting RPWs are jurisdictional according to guidance provided, however, the significant nexus findings for the record as required by Rapanos Guidance. The waters documented on this form are under jurisdiction of the Clean Water Act and considered waters of the U.S.

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.

	CTION I: BACKGROUND INFORMATION REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020
B.	DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 2 of 20; SAC-2019-01728 Hodges Solar
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Mulberry Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Greenwood Name of watershed or Hydrologic Unit Code (HUC): 03050109-08 Lake Greenwood-Saluda River Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. Check if other sites (e.g., offsite mitigation sites, disposal sites, etc) are associated with this action and are recorded on a different JD form.
D.	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): Office (Desk) Determination. Date: 12-May-2020 Field Determination. Date(s): 19-December-2019
	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
	Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the lew 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:
В.	CWA SECTION 404 DETERMINATION OF JURISDICTION.
The	ere 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): TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands
	b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: U3=1,110 linear feet and V3=142 linear feet: width (ft) and/or wetlands: G=0.04 acre, H=0.05 acre and I=0.07 acres.
	c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Established by OHWM., Pick List Elevation of established OHWM (if known):
	 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:

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.

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1	TNW

Identify TNW: .

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 182,629 acres; 03050109-08 Lake Greenwood-Saluda River

Drainage area: U3=42 acres
Average annual rainfall: 45.74 inches
Average annual snowfall: 1.9 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

Tributary flows through 3 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 5-10 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 TNW⁵: Unnamed Tributary which flows to Mulberry Creek which flows to Lake Greenwood (Traditional Navigable Water).

Tributary stream order, if known: .

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.

(b)	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.
loams that ar	Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain: According to the soil survey, U3 is surrounded by Pacolet soils. Pacolet soils are sandy e not hydric.
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Meandering. Tributary gradient (approximate average slope): %
(c)	Flow: Tributary provides for: Perennial flow Estimate average number of flow events in review area/year: 20 (or greater) Describe flow regime: The tributary has a clear OHWM and distinct channels. Other information on duration and volume: The tributary flows continuously throughout the year.
	Surface flow is: Discrete and confined. Characteristics: Water flows within the channel during normal conditions
	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 changes in the character of soil destruction of terrestrial vegetation shelving the presence of wrack line sediment sorting vegetation matted down, bent, or absent sediment sorting leaf litter disturbed or washed away sediment deposition matter deposition multiple observed or predicted flow events 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:
Cha	mical Characteristics: racterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: The Lake Greenwood-Saluda River watershed occupies 182,629 acres of the Piedmont region of South Carolina. Land use/land cover includes 55.6% forested land, 27.8% agricultural land, 8% urban land, 5.7% water, 1.7% forested wetland (swamp), and 1.2% barren land. tify specific pollutants, if known: Possible pollutants from agricultural practices and nearby roads.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

				arolina. Land use, 1.7% forested w	land cover includes 55.6%	forested land, 27.8% agricultural land,
	(ii)					water quality; general watershed hed occupies 182,629 acres of the
		(d)	Proximity (Relationship) to T Project wetlands are 5-10 rive Project waters are 5-10 aerial Flow is from: Wetland to nav Estimate approximate location	r miles from TNW (straight) miles frovigable waters.	om TNW.	
		(c)	Wetland Adjacency Determin ☐ Directly abutting ☐ Not directly abutting ☐ Discrete wetland hydr ☐ Ecological connection ☐ Separated by berm/ba	rologic connection. . Explain: The we		
			Characteristics: H flows t Subsurface flow: Unknown . Dye (or other) test per	Explain findings:		
		(0)	General Flow Relationship wi Flow is: Ephemeral flow . Ex Surface flow is: Overland sh	eetflow		
		(1.)	Wetland type. Explain: F Wetland quality. Explain: Project wetlands cross or serv	orested. : . : e as state boundario	es. Explain: .	
	(i)		sical Characteristics: General Wetland Characterist Properties: Wetland size: H=0.05 acro			
2.	Cha	ıract	eristics of wetlands adjacent	-		bitat for wildlife in the area.
			Habitat for: Federally Listed species. Fish/spawn areas. Explain Other environmentally-ser	Explain findings: findings: The trib ssitive species. Exp	olain findings: .	• •
			logical Characteristics. Chan Riparian corridor. Characteristi Wetland fringe. Characteristi	stics (type, average	width):	

Summarize overall biological, chemical and physical functions being performed: The wetlands being evaluated in this significant nexus determination, which are adjacent (both abutting and non-abutting) to a perennial RPW (U3), are performing biological, chemical, and physical functions that relate to the integrity of the TNW. Wetland H is adjacent, non-abutting and Wetland G is directly abutting U3. The wetlands are forested and there are areas of the site that have been cleared for possible agriculture practices. They are performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. They also provide vegetation diversity on a site that has some cleared areas. The wetlands are also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The wetlands are also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and helps to maintain seasonal flow volumes.

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 wetlands being evaluated in this significant nexus determination, which are adjacent (both abutting and non-abutting) to a perennial RPW (U3), are performing biological, chemical, and physical functions that relate to the integrity of the TNW. Wetland H is adjacent, non-abutting and Wetland G is directly abutting U3. The wetlands are forested and there are areas of the site that have been cleared for possible agriculture practices. They are performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. They also provide vegetation diversity on a site that has some cleared areas. The wetlands are also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The wetlands are also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and 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 downstream TNW, it has been determined there is a significant nexus between the relevant reach of the tributary and adjacent wetland to the downstream TNW.

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

TH	AT 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: U3 and V3 are perennial tributaries. They are both shown as drainage patterns on the topo map. They were both observed flowing during flagging and during the Corps site visit. Both tributaries have a clear OHWM and distinct channel. Stream characteristics observed and available data led this office to conclude the tributaries have perennial flow regimes.
	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: U3=1,110 linear feet and V3=142 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: I is directly abutting V3 and G is directly abutting U3. V3 and U3 are perennial RPWs.
	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: G=0.04 acre and I=0.07 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: H=0.05 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. 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:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL

 $^{^8 \}rm See$ Footnote # 3. 9 To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

E.	ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY): 10 which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:
	Identify water body and summarize rationale supporting determination:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: Wetlands: acres.
F.	NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> 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.
SEC	TION 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: Timmons Group. Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. This office agrees with the conclusions of the submitted data sheets and
repo	

 $^{^{10}}$ 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.

	FEMA/FIRM maps: .
	100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
\boxtimes	Photographs: Aerial (Name & Date): ESRI .
	or ⊠ Other (Name & Date): Photos taken during Corps site visit on 12/19/2019.
	Previous determination(s). File no. and date of response letter:
	Applicable/supporting case law: .
	Applicable/supporting scientific literature: .
	Other information (please specify): Corps Site Visit 12/19/2019.

B. ADDITIONAL COMMENTS TO SUPPORT JD: The aquatic resources documented on this form include 2 perennial tributaries with 3 adjacent wetlands (2 abutting and 1 non-abutting). RPWs and wetlands abutting RPWs are jurisdictional according to guidance provided. One of the wetlands documented on this form is non-abutting so a significant nexus determination was performed. Based on the documentation provided in Section III, C of this form, the nexus between the RPW (and adjacent wetlands, including the non-abutting wetland) to the downstream TNW is significant. The waters documented on this form are under jurisdiction of the Clean Water Act and considered waters of the U.S.

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.

SEC A.	CTION I: BACKGROUND INFORMATION REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020
B.	DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 3 of 20; SAC-2019-01728 Hodges Solar
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Mulberry Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Greenwood Name of watershed or Hydrologic Unit Code (HUC): 03050109-08 Lake Greenwood-Saluda River Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. Check if other sites (e.g., offsite mitigation sites, disposal sites, etc) are associated with this action and are recorded on a different JD form.
D.	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): Office (Desk) Determination. Date: 12-May-2020 Field Determination. Date(s): 19-December-2019
	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
	re Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the ew 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:
В.	CWA SECTION 404 DETERMINATION OF JURISDICTION.
The	re 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): TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly 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: S3=2,070 linear feet and T3=128 linear feet: width (ft) and/or acres. Wetlands: C4=0.004 acres.
	c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Established by OHWM., Pick List Elevation of established OHWM (if known):
	 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:

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.

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.

Identify TNW: .

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 182,629 acres; 03050109-08 Lake Greenwood-Saluda River

Drainage area: T3=8.9 acres
Average annual rainfall: 45.74 inches
Average annual snowfall: 1.9 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 3 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 5-10 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 TNW⁵: Unnamed Tributary which flows to Mulberry Creek which flows to Lake Greenwood (Traditional Navigable Water).

Tributary stream order, if known: **T3 is first**.

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.

(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: According to the soil survey, T3 is surrounded by Cecil soils. Cecil soils are sandy loams
that are not l	aydric .
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Meandering. Tributary gradient (approximate average slope): %
	Flow: Tributary provides for: Seasonal flow Estimate average number of flow events in review area/year: Pick List Describe flow regime: The tributary has a clear OHWM and distinct channels. Other information on duration and volume: The tributary flows at least 3 months out of the year, during wetter after heavy rains.
	·
	Surface flow is: Discrete and confined. Characteristics: Water flows within the channel during normal conditions.
	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 changes in the character of soil destruction of terrestrial vegetation shelving destruction of terrestrial vegetation the presence of wrack line sediment sorting sediment sorting sediment sorting sediment deposition multiple observed or predicted flow events water staining destruction of terrestrial vegetation the presence of wrack line sediment sorting sediment sorting sediment sorting sediment deposition multiple observed or predicted flow events 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:
Cha	emical Characteristics: uracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: The Lake Greenwood-Saluda River watershed occupies 182,629 acres of the Piedmont region of South Carolina. Land use/land cover includes 55.6% forested land, 27.8% agricultural land, 8% urban land, 5.7% water, 1.7% forested wetland (swamp), and 1.2% barren land. ntify specific pollutants, if known: Possible pollutants from agricultural practices and nearby roads.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

(IV)		Riparian corridor. Characterist Wetland fringe. Characterist Habitat for: Federally Listed species Fish/spawn areas. Expla Other environmentally-s	ristics (type, averagetics: Explain findings: in findings: The trilensitive species.	e width): putary provides breeding gr splain findings:		
Cha	ıract	eristics of wetlands adjacen	t to non-TNW that	flow directly or indirectly i	nto TNW	
(i)		General Wetland Characteri Properties: Wetland size: acr Wetland type. Explain: Wetland quality. Expla	res in: .	ies. Explain: .		
	(b)	General Flow Relationship Flow is: Pick List . Explain	with Non-TNW:			
		Surface flow is: Pick List Characteristics:				
	(c)	☐ Directly abutting ☐ Not directly abutting ☐ Discrete wetland hy ☐ Ecological connecti	drologic connection on. Explain:			
	(d)	Project wetlands are Pick L Project waters are Pick List Flow is from: Pick List .	ist river miles from t aerial (straight) mi	les from TNW.		
(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:						
Cha	All	racteristics 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 fol	lowing:			
		Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)	
	Cha (i) (iii)	Charact (i) Phy (a) (b) (ii) Che Cha Ider (iii) Biol Charact All App	Riparian corridor. Characteris Wetland fringe. Characteris Habitat for: Federally Listed species Fish/spawn areas. Expla Other environmentally-s Aquatic/wildlife diversite. Aquatic/wildlife diversite. Aquatic/wildlife diversite. Aquatic/wildlife diversite. (a) General Wetlands adjacene. Wetland size: acr Wetland size: acr Wetland type. Explain: Wetland quality. Explain Project wetlands cross or see (b) General Flow Relationship: Flow is: Pick List. Explain Surface flow: Pick List. Characteristics: Subsurface flow: Pick List. Dye (or other) test point of the pick of	Riparian corridor. Characteristics (type, averag Wetland fringe. Characteristics: Habitat for: Federally Listed species. Explain findings: Fish/spawn areas. Explain findings: The tril Other environmentally-sensitive species. Ex Aquatic/wildlife diversity. Explain findings Characteristics of wetlands adjacent to non-TNW that	Habitat for:	

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: The seasonal RPW is performing biological, chemical, and physical functions that relate to the integrity of the TNW. T3 flows directly into S3, a perennial RPW. The tributary is performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. The tributary is also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The tributary is also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and 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 downstream TNW, it has been determined there is a significant nexus between the relevant reach of the tributaries and adjacent wetland to the downstream TNW.

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

I.	TNWs and A	djacent Wetlands.	Check all that appl	y and provide size estimates in review area:
	TNWs:	linear feet	width (ft), Or,	acres.
	☐ Wetlands a	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: S3 is a perennial tributary. It is shown as a drainage pattern on the topo map. It was observed

	characteristics observed and available data led this office to conclude the tributary has perennial flow regimes.
	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: T3 is a seasonal RPW. It is shown as a drainage pattern on the topo and is first order. The tributary has a distinct channel and clear OHWM. Available data this office to conclude the tributary has a seasonal flow regime.
	Provide estimates for jurisdictional waters in the review area (check all that apply): ☐ Tributary waters: S3=2,070 linear feet and T3=128 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: C4 is directly abutting S3, a perennial 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: C4=0.004 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.
	Provide estimates for jurisdictional wetlands in the review area: acres.
7.	Impoundments of jurisdictional waters. 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:
DE SU	DLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY CH 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.

flowing during flagging and during the Corps site visit. The tributary has a clear OHWM and distinct channel. Stream

E.

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:					
		vide 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.		N-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):				
	fact	wide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR ors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional gment (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.				
	a fii	wide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such adding 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.				
SE(CTIC	ON IV: DATA SOURCES.				
A. S		PORTING 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: Timmons Group. Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. This office agrees with the conclusions of the submitted data sheets and				
repo	ort.	☐ Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: 1977 Navigability Study. U.S. Geological Survey Hydrologic Atlas: HA 730-G,1990. ☐ USGS NHD data.				
		□ USGS 8 and 12 digit HUC maps. 03050109-08 Lake Greenwood-Saluda River U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Shoals Junction Quad. USDA Natural Resources Conservation Service Soil Survey. Citation: SSURGO. National wetlands inventory map(s). Cite name: USFWS Wetland Map. State/Local wetland inventory map(s): FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: □ Aerial (Name & Date): ESRI.				
		or Other (Name & Date): Photos taken during Corps site visit on 12/19/2019. Previous determination(s). File no. and date of response letter: Applicable/supporting case law: Applicable/supporting scientific literature: Other information (please specify): Corps Site Visit 12/19/2019.				

B. ADDITIONAL COMMENTS TO SUPPORT JD: The aquatic resources documented on this form include 1 perennial tributary with an abutting wetland and 1 seasonal RPW. RPWs and wetlands abutting RPWs are jurisdictional according to guidance

provided, however, the significant nexus findings for the record as required by Rapanos Guidance. The waters documented on this form are under jurisdiction of the Clean Water Act and considered waters of the U.S.

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.

SEC A.	CTION I: BACKGROUND INFORMATION REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020
B.	DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 4 of 20; SAC-2019-01728 Hodges Solar
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Mulberry Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Greenwood Name of watershed or Hydrologic Unit Code (HUC): 03050109-08 Lake Greenwood-Saluda River ☐ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. ☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc) are associated with this action and are recorded on a different JD form.
D.	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): Office (Desk) Determination. Date: 12-May-2020 Field Determination. Date(s): 19-December-2019
	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
	re Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the ew 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:
В. (CWA SECTION 404 DETERMINATION OF JURISDICTION.
The	re 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): TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands
	b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: R3=860 linear feet: width (ft) and/or acres. Wetlands: K=0.4 acre, K2=0.02 acre, and J=0.08 acres.
	c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Established by OHWM., Pick List Elevation of established OHWM (if known):
	 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:

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.

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.

I.	INW Identify TNW:		
	Summarize rationale supporting determination: .		
2.	Wetland adjacent to TNW Summarize rationale supporting conclusion that wetland is "adjacent":		

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

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

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

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

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

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

(i) General Area Conditions:

(1)	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 3 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:
	Project waters cross of serve as state boundaries. Explain.
	7.1
	Identify flow route to TNW ⁵ : .
	Tributary stream order, if known:
	•

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.

	(b)	General Tributary Cha Tributary is:	racteristics (check all that apply Natural Artificial (man-made). Explain Manipulated (man-altered). E	n:	in: .		
		Average side slop	with respect to top of bank (estin feet feet bes: Pick List.	mate)):		
		Primary tributary substance Silts Cobbles Bedrock Other. Explain	trate composition (check all that Sands Gravel Vegetation. Type/%			☐ Concrete ☐ Muck	
		Presence of run/riffle/p Tributary geometry: P	ability [e.g., highly eroding, slow cool complexes. Explain: ick List. croximate average slope):	ıghin %	ng banks].	Explain: .	
	(c)	Flow: Tributary provides for: Estimate average numl Describe flow reg Other information on o	per of flow events in review area time:	a/yea	ar: Pick Lis	st	
		Surface flow is: Pick I	List. Characteristics: .				
		Subsurface flow: Pick Dye (or other)	List . Explain findings: . test performed:				
		clear, natuchanges in changes in shelving vegetation leaf litter sediment water stail other (list	ck all indicators that apply): aral line impressed on the bank in the character of soil in matted down, bent, or absent disturbed or washed away deposition ning		destruction the present sediment scour multiple of	nce of litter and debris on of terrestrial vegetation nce of wrack line sorting observed or predicted flow of lange in plant community	events
		If factors other than the High Tide Li oil or scur	e OHWM were used to determine indicated by: m line along shore objects or debris deposits (foreshore) markings/characteristics tes	Mea	nn High Wa survey to a physical m	ater Mark indicated by: vailable datum;	
(iii)	Cha	emical Characteristics: aracterize tributary (e.g., Explain: . ntify specific pollutants,	water color is clear, discolored	, oily	film; wate	er quality; general watershee	d characteristics, etc.)
(iv)	Biol		Channel supports (check all aracteristics (type, average width acteristics:		apply):		

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

			☐ Federally Listed species. ☐ Fish/spawn areas. Explain ☐ Other environmentally-se ☐ Aquatic/wildlife diversity	n findings:	olain findings:	
2.	Cha	ract	eristics of wetlands adjacent	to non-TNW that i	flow directly or indirectly in	nto 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 w Flow is: Pick List . Explain:	vith Non-TNW:		
			Surface flow is: Pick List Characteristics:			
			Subsurface flow: Pick List. Dye (or other) test per		·	
		(c)	Wetland Adjacency Determine Directly abutting Not directly abutting Discrete wetland hyde Ecological connection Separated by berm/ba	rologic connection. n. Explain:		
		(d)	Proximity (Relationship) to 3 Project wetlands are Pick List Project waters are Pick List Flow is from: Pick List. Estimate approximate location	st river miles from T aerial (straight) mile	es from TNW.	
	(ii) Chemical Characteristics: Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershe characteristics; etc.). Explain: Identify specific pollutants, if known:				water quality; general watershed	
	(iii)	Biol	Riparian buffer. Characterist Vegetation type/percent cove Habitat for: Federally Listed species. Fish/spawn areas. Explain Other environmentally-se Aquatic/wildlife diversity	tics (type, average wer. Explain: Explain findings: In findings: Explain findings: Explain findings:	ridth):	
3.	Cha	All	eristics of all wetlands adjac wetland(s) being considered in proximately () acres in	n the cumulative ana		vsis.
	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

2.

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

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.	
RPWs that flow directly or indirectly into TNWs. Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating the tributary is perennial: S3 is a perennial tributary. It is shown as a dashed blue line on the topo and on the USFWS Wetland Map. It was observed flowing during flagging and during the Corps site visit. The tributary has a clear OHWM and distinct channel. Stream characteristics observed and available data led this office to conclude the tributary has perennial flow regimes.	hat
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 flor seasonally:)WS
Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: R3=860 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: K, J, and K2 are directly abutting R3, a perennial 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: K=0.4 acre, K2=0.02 acre, and J=0.08 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.
	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:
SUC 	CLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY CH 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:
Ide	ntify water body and summarize rationale supporting determination:
	vide 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.

E.

 ⁸See Footnote # 3.
 To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
 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.

r.	If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above): .
	Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
	Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
	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: Timmons Group. Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. This office agrees with the conclusions of the submitted data sheets and
repo	

B. ADDITIONAL COMMENTS TO SUPPORT JD: The aquatic resources documented on this form include 1 perennial tributary with 3 abutting wetlands. RPWs and wetlands abutting RPWs are jurisdictional according to guidance provided. The waters documented on this form are under jurisdiction of the Clean Water Act and considered waters of the U.S.

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 REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020 DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 5 of 20; SAC-2019-01728 Hodges Solar C. PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long. -82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Mulberry Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Greenwood Name of watershed or Hydrologic Unit Code (HUC): 03050109-08 Lake Greenwood-Saluda River Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form. D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): Office (Desk) Determination. Date: 12-May-2020 Field Determination. Date(s): 19-December-2019 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. B. CWA SECTION 404 DETERMINATION OF JURISDICTION. There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required] 1. Waters of the U.S. a. Indicate presence of waters of U.S. in review area (check all that apply): 1 TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: K3=1,100 linear feet, L3=42 linear feet, J3=2,458 linear feet, and M3=57 linear feet: width (ft) and/or Wetlands: L=0.47 acre and D4=0.004 acres. c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Established by OHWM., Pick List Elevation of established OHWM (if known): 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:

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.

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 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: 182,629 acres; 03050109-08 Lake Greenwood-Saluda River

Drainage area: L3=6.7 acres and M=7 acres

Average annual rainfall: 45.74 inches Average annual snowfall: 1.9 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 3 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 5-10 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 TNW⁵: Unnamed Tributary which flows to Mulberry Creek which flows to Lake Greenwood (Traditional Navigable Water).

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.

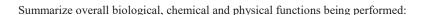
	Tributary stream order, if known: L3 and M3 are first.			
(b)	(b) General Tributary Characteristics (check all that apply): Tributary is: Natural Artificial (man-made). Explain: Manipulated (man-altered). Explain:			
	Tributary properties with respect to top of bank (estimate): Average width: feet Average depth: feet Average side slopes: Pick List.			
Pacolet soils.	Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain: According to the soil survey, L3 is surrounded by Cecil soils and M3 is surrounded by Cecil and Pacolet soils are sandy loams that are not hydric.			
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Meandering. Tributary gradient (approximate average slope): %			
	Flow: Tributary provides for: Seasonal flow Estimate average number of flow events in review area/year: Pick List Describe flow regime: The tributaries have a clear OHWM and distinct channels. Other information on duration and volume: The tributaries flow at least 3 months out of the year, during wetter after heavy rains.			
	Surface flow is: Discrete and confined. Characteristics: Water flows within the channel during normal conditions.			
	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 changes in the character of soil destruction of terrestrial vegetation the presence of wrack line sediment sorting sediment down, bent, or absent sediment sorting sediment deposition matted down, bent, or absent sediment deposition multiple observed or predicted flow events abrupt change in plant community other (list): Discontinuous OHWM. 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:			
` /	(iii) Chemical Characteristics: Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: The Lake Greenwood-Saluda River watershed occupies 182,629 acres of the Piedmont region of South Carolina. Land use/land cover includes 55.6% forested land, 27.8% agricultural land, 8% urban land, 5.7% water, 1.7% forested wetland (swamp), and 1.2% barren land.			

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply): Riparian corridor. Characteristics (type, average width): Wetland fringe. Characteristics: Mabitat for: Federally Listed species. Explain findings: ☐ Fish/spawn areas. Explain findings: The tributaries provide breeding grounds for aquatic species. Other environmentally-sensitive species. Explain findings: Aquatic/wildlife diversity. Explain findings: The tributaries provide habitat for wildlife in the area. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW **Physical Characteristics:** General Wetland Characteristics: Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain: (b) General Flow Relationship with Non-TNW: Flow is: **Pick List**. Explain: Surface flow is: Pick List Characteristics: Subsurface flow: Pick List. Explain findings: Dye (or other) test performed: (c) Wetland Adjacency Determination with Non-TNW: ☐ Directly abutting ☐ Not directly abutting ☐ Discrete wetland hydrologic connection. Explain: Ecological connection. Explain: Separated by berm/barrier. Explain: (d) Proximity (Relationship) to TNW Project wetlands are Pick List river miles from TNW. Project waters are **Pick List** aerial (straight) miles from TNW. Flow is from: Pick List. Estimate approximate location of wetland as within the Pick List floodplain. (ii) Chemical Characteristics: Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Identify specific pollutants, if known: (iii) Biological Characteristics. Wetland supports (check all that apply): Riparian buffer. Characteristics (type, average width): Vegetation type/percent cover. Explain: Habitat for: Federally Listed species. Explain findings: Fish/spawn areas. Explain findings: Other environmentally-sensitive species. Explain findings: Aquatic/wildlife diversity. Explain findings: 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)

Identify specific pollutants, if known: Possible pollutants from agricultural practices and nearby roads.



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: The seasonal RPWs are performing biological, chemical, and physical functions that relate to the integrity of the TNW. L3 and M3 flow directly into K3, a perennial RPW. The tributaries are performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. The tributaries are also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The tributaries are also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and 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 downstream TNW, it has been determined there is a significant nexus between the relevant reach of the tributaries to the downstream TNW.

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

1.	TNWs and	Adjacent Wetlands.	Check all that appl	y and provide size estimates in review area:
	TNWs:	linear feet	width (ft), Or,	acres.
	■ Wetland	ls adjacent to TNWs:	acres.	

2. RPWs that flow directly or indirectly into TNWs.

tributary is perennial: K3 and J3 are perennial tributaries. It is shown as a drainage pattern on the topo map. It was observed flowing during flagging and during the Corps site visit. The tributaries both have a clear OHWM and distinct channel. Stream characteristics observed and available data led this office to conclude the tributaries have perennial flow regimes.
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: L3 and M3 are seasonal RPWs. They are both shown as drainage patterns on the topo and are first order. The tributaries have a distinct channel and clear OHWM. Available data this office to conclude the tributaries have a seasonal flow regime.
Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: K3=1,100 linear feet, L3=42 linear feet, J3=2,458 linear feet, and M3=57 linear feet (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: .
 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: D4 and L are directly abutting J3, a perennial RPW.
Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary i 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: L=0.47 acre and D4=0.004 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.
Provide estimates for jurisdictional wetlands in the review area: acres.
7. Impoundments of jurisdictional waters. 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:
ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY

E.

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.

	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:								
	Ide	ntify water body and summarize rationale supporting determination:							
		vide 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.		N-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):							
	wide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR ors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional gment (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.								
		wide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such ading 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.							
SEC	CTIC	ON IV: DATA SOURCES.							
A.		PORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked							
		requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Timmons Group . Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. This office agrees with the conclusions of the submitted data sheets and							
repo	ort.	☐ Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: 1977 Navigability Study. U.S. Geological Survey Hydrologic Atlas: HA 730-G,1990. ☐ USGS NHD data. ☐ USGS 8 and 12 digit HUC maps. 03050109-08 Lake Greenwood-Saluda River U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Shoals Junction Quad. USDA Natural Resources Conservation Service Soil Survey. Citation: SSURGO. National wetlands inventory map(s). Cite name: USFWS Wetland Map. State/Local wetland inventory map(s): FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: ☐ Aerial (Name & Date): ESRI. or ☐ Other (Name & Date): Photos taken during Corps site visit on 12/19/2019.							
		Previous determination(s). File no. and date of response letter: .							

 $^{^{10}}$ 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.

	Applicable/supporting case law: .
	Applicable/supporting scientific literature: .
\boxtimes	Other information (please specify): Corps Site Visit 12/19/2019.

B. ADDITIONAL COMMENTS TO SUPPORT JD: The aquatic resources documented on this form include 2 perennial tributaries with abutting wetlands and 2 seasonal RPWs. RPWs and wetlands abutting RPWs are jurisdictional according to guidance provided, however, the significant nexus findings for the record as required by Rapanos Guidance. The waters documented on this form are under jurisdiction of the Clean Water Act and considered waters of the U.S.

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 REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020 DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 6 of 20; SAC-2019-01728 Hodges Solar C. PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long. -82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Mulberry Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Greenwood Name of watershed or Hydrologic Unit Code (HUC): 03050109-08 Lake Greenwood-Saluda River Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form. D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): Office (Desk) Determination. Date: 12-May-2020 Field Determination. Date(s): 19-December-2019 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. B. CWA SECTION 404 DETERMINATION OF JURISDICTION. There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required] 1. Waters of the U.S. a. Indicate presence of waters of U.S. in review area (check all that apply): 1 TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: O3=3,265 linear feet, Q3=43 linear feet, N3=46 linear feet, and P3=97 linear feet: width (ft) and/or Wetlands: H4=0.001 acre, G4=0.02 acre, K4=0.08 acre, F4=0.02 acre, and I4=2.07 acres. c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Established by OHWM., Pick List Elevation of established OHWM (if known): 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:

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.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 182,629 acres; 03050109-08 Lake Greenwood-Saluda River

Drainage area: P3=4.6 acres, N3=8.3 acres, and Q3=3.2 acres

Average annual rainfall: 45.74 inches Average annual snowfall: 1.9 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 3 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 5-10 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 TNW⁵: Unnamed Tributary which flows to Mulberry Creek which flows to Lake Greenwood (Traditional Navigable Water).

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 stream order, if known: P3, N3, and Q3 are first.					
(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: According to the soil survey, P3, N3, and Q3 are surrounded by Pacolet soils. Pacolet soils are sandy loams that are not hydric.					
Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Meandering. Tributary gradient (approximate average slope): %					
(c) Flow: Tributary provides for: Seasonal flow Estimate average number of flow events in review area/year: Pick List Describe flow regime: The tributaries have a clear OHWM and distinct channels. Other information on duration and volume: The tributaries flow at least 3 months out of the year, during times of heavy rain and during the wetter months					
Surface flow is: Discrete and confined. Characteristics: Water flows within the channel during normal conditions.					
Subsurface flow: Unknown. Explain findings:					
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): Discontinuous OHWM. 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:					
(iii) Chemical Characteristics: Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: The Lake Greenwood-Saluda River watershed occupies 182,629 acres of the Piedmont region of South Carolina. Land use/land cover includes 55.6% forested land, 27.8% agricultural land, 8% urban land, 5.7% water, 1.7% forested wetland (swamp), and 1.2% barren land.					

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

		Ide	ntify specific pollutants, if k	nown: Possible pollu	utants from agricultural pr	actices and nearby roads.
	(iv)		Other environmentally	teristics (type, average istics: s. Explain findings: ain findings: The tries resistive species. E	ge width): butaries provide breeding xplain findings:	grounds for aquatic species. nabitat for wildlife in the area.
2.	Cha	aract	eristics of wetlands adjace	nt to non-TNW tha	t flow directly or indirectly	into TNW
	(i)		Asical Characteristics: General Wetland Characte Properties: Wetland size: F4=0.02 Wetland type. Explain Wetland quality. Expl Project wetlands cross or s	acres : Forested . ain:	ries. Explain: .	
		(b)	General Flow Relationship Flow is: Ephemeral flow			
			Surface flow is: Discrete a Characteristics: The w		outting P3, a seasonal RPW	
			Subsurface flow: Unknow Dye (or other) test			
		(c)	Wetland Adjacency Determ Directly abutting Not directly abutting Discrete wetland h Ecological connect Separated by berm	ydrologic connection tion. Explain:		
		(d)	Proximity (Relationship) to Project wetlands are 5-10 a Project waters are 5-10 ae Flow is from: Wetland to Estimate approximate loca	river miles from TNV rial (straight) miles f navigable waters.		1.
	(ii)	Cha	characteristics; etc.). Expl Piedmont region of South 8% urban land, 5.7% wa	ain: The Lake Gree n Carolina. Land us ter, 1.7% forested v	nwood-Saluda River water	
	(iii) Bio	Other environmentally	ristics (type, average over. Explain: s. Explain findings: ain findings: The wo sensitive species. E	width): etland provides breeding gr xplain findings:	ounds for aquatic species. bitat for wildlife in the area.
3.	Cha	All	wetland(s) being considered proximately (0.02) acres in	l in the cumulative as		ysis.
			each wetland, specify the fo			
			Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)



Summarize overall biological, chemical and physical functions being performed: The wetland being evaluated in this significant nexus determination, which is abuts seasonal RPW P3, is performing biological, chemical, and physical functions that relate to the integrity of the TNW. The wetland is forested and there are areas of the site that have been cleared for possible agriculture practices. It is performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. It also provides vegetation diversity on a site that has some cleared areas. The wetland is also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The wetland is also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and helps to maintain seasonal flow volumes.

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: The seasonal RPWs and the adjacent wetland are performing biological, chemical, and physical functions that relate to the integrity of the TNW. Seasonal RPW P3 has a wetland (F4) directly abutting the tributary. The wetland is forested and there are areas of the site that have been cleared for possible agriculture practices. The tributaries and wetland are performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. They also provide vegetation diversity on a site that has some cleared areas. The tributaries and wetland are also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The tributaries and wetland are also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and 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 downstream TNW, it has been determined there is a significant nexus between the relevant reach of the tributaries and adjacent wetland to the downstream TNW.

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: O3 is a perennial RPW. It is shown as a dashed blue line on the topo map and is shown on the USFWS Wetland Map. The tributary was observed flowing during flagging and during the Corps site visit. It has a distinct channel and clear OHWM. Stream characteristics observed and available data led this office to conclude the tribtuary 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: Q3, N3, and P3 are seasonal RPWs. They are all shown as drainage patterns on the topo map. These tributaries have distinct channels and clear OHWMs. Available data led this office to conclude the tributaries have a seasonal flow regime.					
		Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: O3=3,265 linear feet, Q3=43 linear feet, N3=46 linear feet, and P3=97 linear feet 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: H4, G4, K4, and I4 are directly abutting O3, a perennial 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: F4 is directly abutting P3, a seasonal RPW.					
	acr	Provide acreage estimates for jurisdictional wetlands in the review area: H4=0.001 acre, G4=0.02 acre, K4=0.08 acre, F4=0.02 e, and I4=2.07 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.					
		Provide estimates for jurisdictional wetlands in the review area:					

⁸See Footnote # 3.

	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):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> 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.
SEC	TION IV: DATA SOURCES.
	UPPORTING 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: Timmons Group. Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. This office agrees with the conclusions of the submitted data sheets and
repo	

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.

\boxtimes	Corps navigable waters' study: 1977 Navigability Study.
\boxtimes	U.S. Geological Survey Hydrologic Atlas: HA 730-G,1990.
	USGS NHD data.
	☐ USGS 8 and 12 digit HUC maps. 03050109-08 Lake Greenwood-Saluda River
\boxtimes	U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Shoals Junction Quad.
\boxtimes	USDA Natural Resources Conservation Service Soil Survey. Citation: SSURGO .
\boxtimes	National wetlands inventory map(s). Cite name: USFWS Wetland Map.
	State/Local wetland inventory map(s):
	FEMA/FIRM maps: .
	100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
\boxtimes	Photographs: Aerial (Name & Date): ESRI .
	or ☑ Other (Name & Date): Photos taken during Corps site visit on 12/19/2019
	Previous determination(s). File no. and date of response letter: .
	Applicable/supporting case law:
	Applicable/supporting scientific literature: .
\boxtimes	Other information (please specify): Corps Site Visit 12/19/2019.

B. ADDITIONAL COMMENTS TO SUPPORT JD: The aquatic resources documented on this form include 1 perennial tributary with 4 abutting wetlands and 3 seasonal tributaries, one of which has an abutting wetland. RPWs and wetlands abutting RPWs are jurisdictional according to guidance provided, however, the significant nexus findings for the record as required by Rapanos Guidance. The waters documented on this form are under jurisdiction of the Clean Water Act and considered waters of the U.S.

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 REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020 DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 7 of 20; SAC-2019-01728 Hodges Solar C. PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long. -82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Pickens Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Thurmond Lake Name of watershed or Hydrologic Unit Code (HUC): 03060103-06 Long Cane Creek 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: 12-May-2020 Field Determination. Date(s): 19-December-2019 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. 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.	Indica	te presence of waters of U.S. in review area (check all that apply): 1
		TNWs, including territorial seas
		Wetlands adjacent to TNWs
	\boxtimes	Relatively permanent waters ² (RPWs) that flow directly or indirectly into TNWs
		Non-RPWs that flow directly or indirectly into TNWs
	\boxtimes	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: F3=782 linear feet: width (ft) and/or acres. Wetlands: M=0.34 acre, N=0.07 acre, O=0.09 acre, and H3=0.002 acres.

- c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Established by OHWM., Pick List Elevation of established OHWM (if known):
- 2. Non-regulated waters/wetlands (check if applicable):³

^{*}A portion of F3 is seasonal (102 linear feet), but the majority is perennial. It will be documented as perennial on this form.

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.

			Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:			
SEC	CTIO	N III	: CWA ANALYSIS			
A.	TN	Ws A	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.	TN' Ider	W ntify TNW:			
		Sun	nmarize rationale supporting determination:			
	2.		tland adjacent to TNW marize rationale supporting conclusion that wetland is "adjacent":			
В.	СН	ARA	CTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):			
			tion summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps ne whether or not the standards for jurisdiction established under <i>Rapanos</i> have been met.			
	wat mor (per	ters" nths) renni	ncies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3. A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round al) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, section III.D.4.			
	EP.	A reg	nd that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and gions will include in the record any available information that documents the existence of a significant nexus between a y permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even a significant nexus finding is not required as a matter of law.			
	wat con ana the the	terbo sider lytica tribu tribu	aterbody ⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the dy has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for all purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is stary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for stary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite ite. The determination whether a significant nexus exists is determined in Section III.C below.			
	1.	Cha	aracteristics 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 3 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:

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

		Identify flow route to 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 Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain:					
		Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Pick List. Tributary gradient (approximate average slope): %					
	(c)	Flow: Tributary provides for: Pick List Estimate average number of flow events in review area/year: Pick List Describe flow regime: Other information on duration and volume:					
		Surface flow is: Pick List. Characteristics: Subsurface flow: Pick List. Explain findings: Dye (or other) test performed:					
		Tributary has (check all that apply): Bed and banks 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): Discontinuous OHWM. 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)	Cha	emical Characteristics: cracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.) Explain: tify specific pollutants, if known:					

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW. ⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

	(iv)		Riparian corridor. Character Wetland fringe. Characteris: Habitat for: Federally Listed species. Fish/spawn areas. Explai Other environmentally-se	istics (type, average tics: Explain findings: n findings: ensitive species. Ex	e width): plain findings:			
2.	Cha	aract	eristics of wetlands adjacent	to non-TNW that	flow directly or indi	rectly into	TNW	
	(i)		sical Characteristics: General Wetland Characteris Properties: Wetland size: acre Wetland type. Explain: Wetland quality. Explain Project wetlands cross or ser	es n: .	es. Explain: .			
		(b)	General Flow Relationship v Flow is: Pick List . Explain:					
			Surface flow is: Pick List Characteristics:					
			Subsurface flow: Pick List. Dye (or other) test pe					
		(c)	Wetland Adjacency Determing Directly abutting Not directly abutting Discrete wetland hyder Ecological connection Separated by berm/b	drologic connection. on. Explain: .				
		(d)	Proximity (Relationship) to Project wetlands are Pick List Project waters are Pick List Flow is from: Pick List. Estimate approximate location	st river miles from aerial (straight) mi	les from TNW.	dplain.		
 (ii) Chemical Characteristics: Characterize wetland system (e.g., water color is clear, brown, oil film of characteristics; etc.). Explain: Identify specific pollutants, if known: 							ter quality; g	general watershed
	(iii)		Riparian buffer. Characterist Vegetation type/percent cover Habitat for: Federally Listed species. Fish/spawn areas. Explair Other environmentally-search	tics (type, average ver. Explain: Explain findings: In findings: Ensitive species. Explain findings:	vidth):			
3.	Cha	All	eristics of all wetlands adjac wetland(s) being considered in proximately () acres in	n the cumulative an		ive analysis	S.	
		For	each wetland, specify the foll	owing:				
			Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N	<u>v)</u> <u>s</u>	Size (in acres	3)

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: F3 is a perennial tributary. It is shown as a dashed blue line on the topo and on the USFWS Wetland Map. It was observed flowing during flagging and during the Corps site visit. The tributary has a clear OHWM and distinct channel. Stream characteristics observed and available data led this office to conclude the tributary has perennial flow regimes.		
		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:		

width (ft).

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

☐ Tributary waters: **F3=782** linear feet

Other non-wetland waters:

	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: M, N, O, and H3 are directly abutting F3, a perennial 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:
acre	Provide acreage estimates for jurisdictional wetlands in the review area: M=0.34 acre, N=0.07 acre, O=0.09 acre, and H3=0.002 es.
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.
	Provide estimates for jurisdictional wetlands in the review area: acres.
7.	Impoundments of jurisdictional waters. 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:
SUC	OLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY CH 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:
Ide	ntify water body and summarize rationale supporting determination:
	vide 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:

E.

 ⁸See 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.

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B. ADDITIONAL COMMENTS TO SUPPORT JD: The aquatic resources documented on this form include 1 perennial tributary with 4 abutting wetlands. RPWs and wetlands abutting RPWs are jurisdictional according to guidance provided. The waters documented on this form are under jurisdiction of the Clean Water Act and considered waters of the U.S.

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.

SEC A.	CTION I: BACKGROUND INFORMATION REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020
B.	DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 8 of 20; SAC-2019-01728 Hodges Solar
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Pickens Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Thurmond Lake
	Name of watershed or Hydrologic Unit Code (HUC): 03060103-06 Long Cane Creek 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: 12-May-2020 Field Determination. Date(s): 19-December-2019
	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
	re Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the ew 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:
В. (CWA SECTION 404 DETERMINATION OF JURISDICTION.
The	re 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): TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands
	b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: E3=1,178 linear feet and D3=445 linear feet: Wetlands: P=0.01 acres.
	c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Established by OHWM., 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: .

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.

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.

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 128, 358 acres; 03060103-06 Long Cane Creek

Drainage area: **D3=36.9** acres
Average annual rainfall: **45.74** inches
Average annual snowfall: **1.9** inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

Tributary flows through 3 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 5-10 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 TNW⁵: Unnamed Tributary which flows to Pickens Creek which flows to Long Cane Creek which flows to Thurmond Lake (Traditional Navigable Water and Navigable Water of the U.S.). Tributary stream order, if known: D3 is first.

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.

(b)	General Tributary Characteristics (check all that apply): Tributary is:
	Manipulated (man-altered). Explain:
	Tributary properties with respect to top of bank (estimate): Average width: feet Average depth: feet Average side slopes: Pick List.
that are not h	Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain: According to the soil survey, D3 is surrounded by Cecil soils. Cecil soils are sandy loams
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Meandering. Tributary gradient (approximate average slope): %
(c)	Flow: Tributary provides for: Seasonal flow Estimate average number of flow events in review area/year: Pick List Describe flow regime: D3 has a clear OHWM and distinct channels.
during the w	Other information on duration and volume: D3 flows at least 3 months out of the year, during times of heavy rain and etter months.
	Surface flow is: Discrete and confined. Characteristics: Water flows within the channel during normal conditions.
	Subsurface flow: Unknown. Explain findings:
	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 destruction of terrestrial vegetation shelving between the presence of wack line sediment sorting sediment sorting sediment deposition matted down, bent, or absent sediment sorting sediment deposition multiple observed or predicted flow events abrupt change in plant community other (list): Discontinuous OHWM. 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.
Cha	emical Characteristics: racterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: The Long Cane Creek watershed occupies 128,358 acres of the Piedmont region of South Carolina. Land use/land cover includes 66.9% forested land, 22.6% agricultural land, 8% urban land, 1.7% forested wetland (swamp), 0.4% barren land, and 0.4% water. tify specific pollutants, if known: Possible pollutants from agricultural practices and nearby roads.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

	(iv)	Bio	Other environmentally-se	ristics (type, average tics: Explain findings: n findings: The trib ensitive species. Ex	e width): putary provides breeding gr plain findings:	ounds for aquatic species. bitat for wildlife in the area.	
2.	Cha	aract	eristics of wetlands adjacen	t to non-TNW that	flow directly or indirectly i	nto TNW	
	(i)		Visical Characteristics: General Wetland Characteric Properties: Wetland size: P=0.01 ac Wetland type. Explain: Wetland quality. Explai Project wetlands cross or ser	res Forested. n: .	es. Explain: .		
		(b)	General Flow Relationship v Flow is: Ephemeral flow . I				
			Surface flow is: Discrete an	d confined	ntting D3, a seasonal RPW.		
			Subsurface flow: Unknown Dye (or other) test per				
		(c)	Wetland Adjacency Determing Directly abutting Discrete wetland hye Ecological connection Separated by berm/b	drologic connection. on. Explain: .			
		(d)	Proximity (Relationship) to Project wetlands are 5-10 riv Project waters are 5-10 aeri Flow is from: Wetland to no Estimate approximate location	ver miles from TNW al (straight) miles fravigable waters.	om TNW.		
	(ii)	Cha	characteristics; etc.). Explai	n: The Long Cane land cover includes 0.4% barren land,	Creek watershed occupies 1 66.9% forested land, 22.69 and 0.4% water.	water quality; general watershed 128,358 acres of the Piedmont region o agricultural land, 8% urban land, 1. ctices and nearby roads.	
	(iii) Bio	Other environmentally-se	er. Explain: Explain findings: n findings: The wetensitive species. Ex	vidth): land provides breeding gro		
3.	Cha	All	wetland(s) being considered is proximately (0.01) acres in to	n the cumulative and	alysis: 1	sis.	
			each wetland, specify the foll	_	,		
			Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)	
			Y (P)	0.01			

Summarize overall biological, chemical and physical functions being performed: The wetland being evaluated in this significant nexus determination, which abuts the seasonal RPW, is performing biological, chemical, and physical functions that relate to the integrity of the TNW. The wetland is forested and there are areas of the site that have been cleared for possible agriculture practices. It is performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. It also provides vegetation diversity on a site that has some cleared areas. The wetland is also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The wetland is also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and helps to maintain seasonal flow volumes.

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: The seasonal RPWs and the wetland abutting one of the seasonal RPWs are performing biological, chemical, and physical functions that relate to the integrity of the TNW. Seasonal RPW D3 flows directly into a perennial RPW. D3 has a wetland directly abutting the tributary. The wetland is forested and there are areas of the site that have been cleared for possible agriculture practices. The tributary and wetland are performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. They also provides vegetation diversity on a site that has some cleared areas. The tributary and wetland are also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The tributary and wetland are also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and 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 downstream TNW, it has been determined there is a significant nexus between the relevant reach of the tributaries and adjacent wetland to the downstream TNW.

D.		TERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL AT 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: E3 is a perennial RPW. It is shown as a dashed blue line on the topo map and is shown on the USFWS Wetland Map. The tributary was observed flowing during flagging. It has a distinct channel and clear OHWM. Stream characteristics observed and available data led this office to conclude the tribtuary 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: D3 is a seasonal RPW. It is shown as drainage patterns on the topo map. This tributary has a distinct channel and clear OHWM. Water was observed sitting in spots along the channel during the Corps site visit. Stream characteristics observed and available data led this office to conclude the tributary has a seasonal flow regime.
		Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: E3=1,178 linear feet and D3=445 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: P is directly abutting D3, a seasonal RPW .
		Provide acreage estimates for jurisdictional wetlands in the review area: P=0.01 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.

acres.

Provide estimates for jurisdictional wetlands in the review area:

⁸See Footnote # 3.

	7. Impoundments of jurisdictional waters. 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):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> 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.
SEC	CTION 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: Timmons Group. Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. This office agrees with the conclusions of the submitted data sheets and
repo	ort. ☐ Office does not concur with data sheets/delineation report. ☐ Data sheets prepared by the Corps: ☐ Corps navigable waters' study: 1977 Navigability Study.

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.

U.S. Geological Survey Hydrologic Atlas: HA 730-G,1990.
USGS NHD data.
☐ USGS 8 and 12 digit HUC maps. 03060103-06 Long Cane Creek
U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Shoals Junction Quad.
USDA Natural Resources Conservation Service Soil Survey. Citation: SSURGO .
National wetlands inventory map(s). Cite name: USFWS Wetland Map.
State/Local wetland inventory map(s):
FEMA/FIRM maps: .
100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
Photographs: ☐ Aerial (Name & Date): ESRI.
or ☑ Other (Name & Date): Photos taken during Corps site visit on 12/19/2019.
Previous determination(s). File no. and date of response letter:
Applicable/supporting case law: .
Applicable/supporting scientific literature: .
Other information (please specify): Corps Site Visit 12/19/2019.

B. ADDITIONAL COMMENTS TO SUPPORT JD: The aquatic resources documented on this form include 1 perennial tributary and 1 seasonal tributary with an abutting wetland. RPWs and wetlands abutting RPWs are jurisdictional according to guidance provided, however, the significant nexus findings for the record as required by Rapanos Guidance. The waters documented on this form are under jurisdiction of the Clean Water Act and considered waters of the U.S.

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.

	CTION I: BACKGROUND INFORMATION REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020
В.	DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 9 of 20; SAC-2019-01728 Hodges Solar
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Pickens Creek
	Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Thurmond Lake Name of watershed or Hydrologic Unit Code (HUC): 03060103-06 Long Cane Creek 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: 12-May-2020 ☐ Field Determination. Date(s): 19-December-2019
SEO	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
	ere Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the lew 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:
В.	CWA SECTION 404 DETERMINATION OF JURISDICTION.
The	ere 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): TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands
	b. Identify (estimate) size of waters of the U.S. in the review area:

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

width (ft) and/or

acres.

2. Non-regulated waters/wetlands (check if applicable):³

Non-wetland waters: C3=581 linear feet:

Wetlands: A4=0.01 acres.

^{*}A portion of C3 is perennial (239 linear feet), but the majority is seasonal. It will be documented as seasonal on this form.

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.

	П	Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
	_	Explain: .
SEC	CTION III	CWA ANALYSIS
A.	TNWs A	ND WETLANDS ADJACENT TO TNWs
		ncies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete II.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

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Identify TNW:

Summarize rationale supporting determination:

and Section III.D.1.; otherwise, see Section III.B below.

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions: Watershed size: 128, 358, a

Watershed size: 128, 358 acres; 03060103-06 Long Cane Creek

Drainage area: C3=30 acres
Average annual rainfall: 45.74 inches
Average annual snowfall: 1.9 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

☑ Tributary flows through 3 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 5-10 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:

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

Tributary stream order, if known: C3 is first. (b) General Tributary Characteristics (check all that apply): Natural Tributary is: 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): ☐ Sands Concrete ☐ Silts Cobbles ☐ Gravel Muck Bedrock ☐ Vegetation. Type/% cover: Other. Explain: According to the soil survey, C3 is surrounded by Enon soils. Enon soils are sandy clay loams that are not hydric. Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Meandering. Tributary gradient (approximate average slope): % (c) Flow: Tributary provides for: Seasonal flow Estimate average number of flow events in review area/year: Pick List Describe flow regime: C3 has a clear OHWM and distinct channels. Other information on duration and volume: C3 flows at least 3 months out of the year, during times of heavy rain and during the wetter months. There is a portion of C3 that is perennial and flows year round.. Surface flow is: Discrete and confined. Characteristics: Water flows within the channel during normal conditions. Subsurface flow: Unknown. Explain findings: Dye (or other) test performed: Tributary has (check all that apply): Bed and banks OHWM⁶ (check all indicators that apply): ☐ clear, natural line impressed on the bank the presence of litter and debris changes in the character of soil destruction of terrestrial vegetation shelving the presence of wrack line vegetation matted down, bent, or absent sediment sorting leaf litter disturbed or washed away П scour sediment deposition \boxtimes 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:

Identify flow route to TNW5: Unnamed Tributary which flows to Pickens Creek which flows to Long Cane Creek

which flows to Thurmond Lake (Traditional Navigable Water and Navigable Water of the U.S.).

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

Tlbid.

Explain: The Long Cane Creek watershed occupies 128,358 acres of the Piedmont region of South Carolina. Land use/land cover includes 66.9% forested land, 22.6% agricultural land, 8% urban land, 1.7% forested wetland (swamp), 0.4% barren land, and 0.4% water. Identify specific pollutants, if known: Possible pollutants from agricultural practices and nearby roads. (iv) Biological Characteristics. Channel supports (check all that apply): Riparian corridor. Characteristics (type, average width): Wetland fringe. Characteristics: Mabitat for: Federally Listed species. Explain findings: ☐ Fish/spawn areas. Explain findings: The tributary provides breeding grounds for aquatic species. Other environmentally-sensitive species. Explain findings: Aquatic/wildlife diversity. Explain findings: The tributary provides habitat for wildlife in the area. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW **Physical Characteristics:** (a) General Wetland Characteristics: Properties: Wetland size: A4=0.01 acres Wetland type. Explain: Forested. Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain: (b) General Flow Relationship with Non-TNW: Flow is: **Ephemeral flow**. Explain: Surface flow is: Discrete and confined Characteristics: The wetland is directly abutting C3, a 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: Ecological connection. Explain: ☐ Separated by berm/barrier. Explain: (d) Proximity (Relationship) to TNW Project wetlands are 5-10 river miles from TNW. Project waters are 5-10 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: The Long Cane Creek watershed occupies 128,358 acres of the Piedmont region of South Carolina. Land use/land cover includes 66.9% forested land, 22.6% agricultural land, 8% urban land, 1.7% forested wetland (swamp), 0.4% barren land, and 0.4% water. Identify specific pollutants, if known: Possible pollutants from agricultural practices and nearby roads. (iii) Biological Characteristics. Wetland supports (check all that apply): Riparian buffer. Characteristics (type, average width): Vegetation type/percent cover. Explain: Mabitat for: Federally Listed species. Explain findings: ☐ Fish/spawn areas. Explain findings: The wetland provides breeding grounds for aquatic species. Other environmentally-sensitive species. Explain findings: Aquatic/wildlife diversity. Explain findings: The wetland provides habitat for wildlife in the area.

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

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

All wetland(s) being considered in the cumulative analysis: 1

Approximately (0.01) 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 (A4)	0.01		

Summarize overall biological, chemical and physical functions being performed: The wetland being evaluated in this significant nexus determination, which abuts the seasonal RPW, is performing biological, chemical, and physical functions that relate to the integrity of the TNW. The wetland is forested and there are areas of the site that have been cleared for possible agriculture practices. It is performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. It also provides vegetation diversity on a site that has some cleared areas. The wetland is also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The wetland is also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and helps to maintain seasonal flow volumes.

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: The seasonal RPW and its adjacent wetland are performing biological, chemical, and physical functions that relate to the integrity of the TNW. Seasonal RPW C3 flows directly into a perennial RPW. A portion of C3 is also perennial, but the majority is seasonal. Wetland A4 directly abuts Seasonal RPW C3. The wetland is forested and there are areas of the site that have been cleared for possible agriculture practices. The tributary and wetland are performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. They also provides vegetation diversity on a site that has some cleared areas. The tributary and wetland are also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The tributary and wetland are also performing

physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and 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 downstream TNW, it has been determined there is a significant nexus between the relevant reach of the tributaries and adjacent wetland to the downstream TNW.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL

ш	AT AFFLI);
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: C3 is a seasonal RPW. It is shown as drainage pattern on the topo map. This tributary has a distinct channel and clear OHWM. A portion of the tributary is perennial and flows year round, but the majority is seasonal. Water was observed sitting in spots along the channel along the seasonal portion during the Corps site visit. Stream characteristics observed and available data led this office to conclude the tributary has a seasonal flow regime.
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: C3=581 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: A4 is directly abutting C3, a seasonal RPW.
	Provide acreage estimates for jurisdictional wetlands in the review area: A4=0.01 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.
	Provide estimates for jurisdictional wetlands in the review area:

 $^{^8}$ See Footnote # 3.

	7. Impoundments of jurisdictional waters. 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):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> 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 suc 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.
SF	CTION IV: DATA SOURCES.
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repo	

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.

\boxtimes	Corps navigable waters' study: 1977 Navigability Study.
\boxtimes	U.S. Geological Survey Hydrologic Atlas: HA 730-G,1990.
	USGS NHD data.
	☐ USGS 8 and 12 digit HUC maps. 03060103-06 Long Cane Creek
\boxtimes	U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Shoals Junction Quad.
\boxtimes	USDA Natural Resources Conservation Service Soil Survey. Citation: SSURGO .
\boxtimes	National wetlands inventory map(s). Cite name: USFWS Wetland Map.
	State/Local wetland inventory map(s): .
	FEMA/FIRM maps: .
	100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
\boxtimes	Photographs: Aerial (Name & Date): ESRI .
	or ☑ Other (Name & Date): Photos taken during Corps site visit on 12/19/2019
	Previous determination(s). File no. and date of response letter: .
	Applicable/supporting case law: .
	Applicable/supporting scientific literature: .
\boxtimes	Other information (please specify): Corps Site Visit 12/19/2019.

B. ADDITIONAL COMMENTS TO SUPPORT JD: The aquatic resources documented on this form include 1 seasonal tributary with an abutting wetland. RPWs and wetlands abutting RPWs are jurisdictional according to guidance provided, however, the significant nexus findings for the record as required by Rapanos Guidance. The waters documented on this form are under jurisdiction of the Clean Water Act and considered waters of the U.S.

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.

SEC A.	CTION I: BACKGROUND INFORMATION REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):
В.	DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 10 of 20; SAC-2019-01728 Hodges Solar
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Pickens Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Thurmond Lake Name of watershed or Hydrologic Unit Code (HUC): 03060103-06 Long Cane Creek 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
D.	different JD form. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): ☐ Office (Desk) Determination. Date: 12-May-2020 ☐ Field Determination. Date(s): 19-December-2019
SEC	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
	re Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the ew 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:
В.	CWA SECTION 404 DETERMINATION OF JURISDICTION.
The	re 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): TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands
	b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: Z2=2,141 linear feet, A3=228 linear feet, B3=819 linear feet: width (ft) and/or wetlands: I3=0.02 acre, J4=0.01 acre, Q=0.52 acre, R=3.08 acres.
	c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Established by OHWM., Pick List Elevation of established OHWM (if known):
	 Non-regulated waters/wetlands (check if applicable):³

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.

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.

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 128, 358 acres; 03060103-06 Long Cane Creek

Drainage area: **B3=36.8** acres
Average annual rainfall: **45.74** inches
Average annual snowfall: **1.9** inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

Tributary flows through 3 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 5-10 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 TNW⁵: Unnamed Tributary which flows to Pickens Creek which flows to Long Cane Creek which flows to Thurmond Lake (Traditional Navigable Water and Navigable Water of the U.S.). Tributary stream order, if known: B3 is first.

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.

(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.
that are not h	Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain: According to the soil survey, B3 is surrounded by Enon soils. Enon soils are sandy loams anydric.
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Meandering. Tributary gradient (approximate average slope): %
	Flow: Tributary provides for: Seasonal flow Estimate average number of flow events in review area/year: Pick List Describe flow regime: The tributary has a clear OHWM and distinct channels. Other information on duration and volume: The tributay flows at least 3 months out of the year, during times of ad during the wetter months
	Surface flow is: Discrete and confined . Characteristics: Water flows within the channel during normal conditions .
	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 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): Discontinuous OHWM. ⁷ Explain: the presence of litter and debris destruction of terrestrial vegetation the presence of wrack line sediment sorting sediment sorting sediment sorting multiple observed or predicted flow events abrupt change in plant community
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by:
Cha	emical Characteristics: racterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: The Long Cane Creek watershed occupies 128,358 acres of the Piedmont region of South Carolina. Land use/land cover includes 66.9% forested land, 22.6% agricultural land, 8% urban land, 1.7% forested wetland (swamp), 0.4% barren land, and 0.4% water. tify specific pollutants, if known: Possible pollutants from agricultural practices and nearby roads.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

	(iv)	Bio	Other environmentally-se	ristics (type, average tics: Explain findings: n findings: The trib ensitive species. Exp	width): utary provides breeding greplain findings:	ounds for aquatic species. Ditat for wildlife in the area.
2.	Cha	aract	eristics of wetlands adjacent	to non-TNW that	flow directly or indirectly in	nto TNW
	(i)		Sical Characteristics: General Wetland Characterist Properties: Wetland size: R=3.08 ac Wetland type. Explain: Wetland quality. Explain Project wetlands cross or ser	res Forested. n: .	es. Explain: .	
		(b)	General Flow Relationship v Flow is: Ephemeral flow . B			
			Surface flow is: Discrete an	d confined	atting B3, a seasonal RPW.	
			Subsurface flow: Unknown. Dye (or other) test pe			
		(c)	Wetland Adjacency Determing Directly abutting Not directly abutting Discrete wetland hyder Ecological connection Separated by berm/b	drologic connection. on. Explain: .		
		(d)	Proximity (Relationship) to Project wetlands are 5-10 riv Project waters are 5-10 aeria Flow is from: Wetland to na Estimate approximate location	rer miles from TNW al (straight) miles from the straight) miles from the straight waters.	om TNW.	
	(ii)	Cha	characteristics; etc.). Explai	n: The Long Cane of and cover includes 0.4% barren land,	Creek watershed occupies 1 66.9% forested land, 22.6% and 0.4% water.	water quality; general watershed 28,358 acres of the Piedmont region of 6 agricultural land, 8% urban land, 1.7% ctices and nearby roads.
	(iii)) Bio	Other environmentally-se	tics (type, average wer. Explain: Explain findings: n findings: The wettensitive species. Explain findings: Explain findings: The wettensitive species.	vidth): land provides breeding gro	• •
3.	Cha	All	eristics of all wetlands adjact wetland(s) being considered in broximately (3.08) acres in to	n the cumulative and	alysis: 1	is.
			each wetland, specify the foll		,	
			Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
			Y(R)	3.08		

Summarize overall biological, chemical and physical functions being performed: The wetland being evaluated in this significant nexus determination, which directly abuts the seasonal RPW, is performing biological, chemical, and physical functions that relate to the integrity of the TNW. The wetland is forested and there are areas of the site that have been cleared for possible agriculture practices. It is performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. It also provides vegetation diversity on a site that has some cleared areas. The wetland is also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The wetland is also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and helps to maintain seasonal flow volumes.

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: The seasonal RPW and its adjacent wetland are performing biological, chemical, and physical functions that relate to the integrity of the TNW. Seasonal RPW B3 flows directly into a perennial RPW. Wetland R directly abuts Seasonal RPW B3. The wetland is forested and there are areas of the site that have been cleared for possible agriculture practices. The tributary and wetland are performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. They also provides vegetation diversity on a site that has some cleared areas. The tributary and wetland are also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The tributaries and wetland are also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and 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 downstream TNW, it has been determined there is a significant nexus between the relevant reach of the tributaries and adjacent wetland to the downstream TNW.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL

TH	AT 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: Z2 and A3 are perennial tributaries. They are both shown as dashed blue lines on the topo map and are shown on the USFWS Wetland Map. The tributaries were observed flowing during flagging. They have a distinct channel and clear OHWM. Stream characteristics observed and available data led this office to conclude the tribtuaries have a perennial flow regime.
	Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: B3 is a seasonal RPW. It is showns as a drainage pattern on the topo map. This tributary has a distinct channels and clear OHWM. Pockets of water and some flow was observed during the Corps site visit. Stream characteristics observed and available data this office to conclude the tributary has a seasonal flow regime.
	Provide estimates for jurisdictional waters in the review area (check all that apply): ☐ Tributary waters: A=61 linear feet, W3=2,997 linear feet, and X3=374 linear feet ☐ 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: I3 and J4 are directly abutting Z2, a perennial RPW. Q is directly abutting A3, a perennial 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: R is directly abutting R3 , a seasonal RPW .
	Provide acreage estimates for jurisdictional wetlands in the review area: I3=0.02 acre, J4=0.01 acre, Q=0.52 acre, R=3.08 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.

⁸See Footnote # 3.

	Provide estimates for jurisdictional wetlands in the review area: acres.
	7. Impoundments of jurisdictional waters. 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):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> 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.
SEG	CTION 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: Timmons Group. Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. This office agrees with the conclusions of the submitted data sheets and
repo	ort. Office does not concur with data sheets/delineation report.

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.

	Data sheets prepared by the Corps: .
\boxtimes	Corps navigable waters' study: 1977 Navigability Study.
\boxtimes	U.S. Geological Survey Hydrologic Atlas: HA 730-G,1990.
	USGS NHD data.
	☑ USGS 8 and 12 digit HUC maps. 03060103-06 Long Cane Creek
\boxtimes	U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Shoals Junction Quad.
\boxtimes	USDA Natural Resources Conservation Service Soil Survey. Citation: SSURGO.
\boxtimes	National wetlands inventory map(s). Cite name: USFWS Wetland Map.
	State/Local wetland inventory map(s):
	FEMA/FIRM maps: .
	100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
\boxtimes	Photographs: Aerial (Name & Date): ESRI.
	or ☑ Other (Name & Date): Photos taken during Corps site visit on 12/19/2019.
	Previous determination(s). File no. and date of response letter:
	Applicable/supporting case law: .
	Applicable/supporting scientific literature: .
\boxtimes	Other information (please specify): Corps Site Visit 12/19/2019.

B. ADDITIONAL COMMENTS TO SUPPORT JD: The aquatic resources documented on this form include 2 perennial tributaries with 3 abutting wetlands and 1 seasonal tributary with an abutting wetland. RPWs and wetlands abutting RPWs are jurisdictional according to guidance provided, however, the significant nexus findings for the record as required by Rapanos Guidance. The waters documented on this form are under jurisdiction of the Clean Water Act and considered waters of the U.S.

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.

REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020

B.	DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 11 of 20; SAC-2019-01728 Hodges Solar			
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Pickens Creek			
	Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Thurmond Lake Name of watershed or Hydrologic Unit Code (HUC): 03060103-06 Long Cane Creek 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: 12-May-2020 Field Determination. Date(s): 19-December-2019			
SEC A.	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.			
	re Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the ew 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.			
The	re 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): TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands			
	b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: X2=203 linear feet and Y2=61 linear feet: width (ft) and/or acres. Wetlands: S=0.26 acres.			
*A	portion of X2 is seasonal (81 linear feet), but the majority is perennial. It will be documented as perennial on this form.			

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

Non-regulated waters/wetlands (check if applicable):³

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.

	Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:
SECTION III:	CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1.	TNW Identify TNW:	
	Summarize rationale supporting determination: .	
2.	Wetland adjacent to TNW Summarize rationale supporting conclusion that wetland is "adjacent":	

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 128, 358 acres; 03060103-06 Long Cane Creek Drainage area: Y2=29.1 acres Average annual rainfall: 45.74 inches Average annual snowfall: 1.9 inches (ii) Physical Characteristics: (a) Relationship with TNW: ☐ Tributary flows directly into TNW. ☐ Tributary flows through 3 tributaries before entering TNW. Project waters are 5-10 river miles from TNW. Project waters are 1 (or less) river miles from RPW. Project waters are 5-10 aerial (straight) miles from RPW. Project waters are 1 (or less) aerial (straight) miles from RPW. Project waters cross or serve as state boundaries. Explain:

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

(b) General Tributary Characteristics (check all that apply): ⊠ Natural Tributary is: 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): Sands ☐ Silts Concrete Cobbles ☐ Gravel Muck Bedrock ☐ Vegetation. Type/% cover: ☑ Other. Explain: According to the soil survey, Y2 is surrounded by Cecil soils. Cecil soils are sandy loams that are not hydric. Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Meandering. Tributary gradient (approximate average slope): (c) Flow: Tributary provides for: Seasonal flow Estimate average number of flow events in review area/year: Pick List Describe flow regime: The tributary has a clear OHWM and distinct channels. Other information on duration and volume: The tributary flows at least 3 months out of the year, during wetter months and after heavy rains. Surface flow is: Discrete and confined. Characteristics: Water flows within the channel during normal conditions. Subsurface flow: Unknown. Explain findings: Dye (or other) test performed: Tributary has (check all that apply): Bed and banks OHWM⁶ (check all indicators that apply): ☐ clear, natural line impressed on the bank the presence of litter and debris changes in the character of soil destruction of terrestrial vegetation shelving the presence of wrack line vegetation matted down, bent, or absent sediment sorting leaf litter disturbed or washed away П 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:

Identify flow route to TNW5: Unnamed Tributary which flows to Pickens Creek which flows to Long Cane Creek

which flows to Thurmond Lake (Traditional Navigable Water and Navigable Water of the U.S.).

Tributary stream order, if known: Y2 is first.

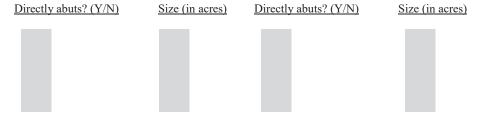
⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

Explain: The Long Cane Creek watershed occupies 128,358 acres of the Piedmont region of South Carolina. Land use/land cover includes 66.9% forested land, 22.6% agricultural land, 8% urban land, 1.7% forested wetland (swamp), 0.4% barren land, and 0.4% water. Identify specific pollutants, if known: Possible pollutants from agricultural practices and nearby roads. (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: The tributary provides breeding grounds for aquatic species. Other environmentally-sensitive species. Explain findings: Aquatic/wildlife diversity. Explain findings: The tributary provides habitat for wildlife in the area. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW **Physical Characteristics:** (a) General Wetland Characteristics: Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain: (b) General Flow Relationship with Non-TNW: Flow is: **Pick List**. Explain: Surface flow is: Pick List Characteristics: Subsurface flow: Pick List. Explain findings: Dye (or other) test performed: (c) Wetland Adjacency Determination with Non-TNW: Directly abutting ☐ Not directly abutting Discrete wetland hydrologic connection. Explain: Ecological connection. Explain: Separated by berm/barrier. Explain: (d) Proximity (Relationship) to TNW Project wetlands are Pick List river miles from TNW. Project waters are **Pick List** aerial (straight) miles from TNW. Flow is from: Pick List. Estimate approximate location of wetland as within the **Pick List** floodplain. (ii) Chemical Characteristics: Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Identify specific pollutants, if known: (iii) Biological Characteristics. Wetland supports (check all that apply): Riparian buffer. Characteristics (type, average width): Vegetation type/percent cover. Explain: ☐ Habitat for: Federally Listed species. Explain findings: ☐ Fish/spawn areas. Explain findings: Other environmentally-sensitive species. Explain findings: Aquatic/wildlife diversity. Explain findings: 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:

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



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: The seasonal RPW is performing biological, chemical, and physical functions that relate to the integrity of the TNW. Y2 flows directly into X2, a perennial RPW. The tributary is performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. The tributary is also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The tributary is also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and 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 downstream TNW, it has been determined there is a significant nexus between the relevant reach of the tributaries and adjacent wetland to the downstream TNW.

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

1.	TNWs and Ac	ljacent Wetlands.	Check all that apply	and provide size	estimates in review a	rea:
	TNWs:	linear feet	width (ft), Or,	acres.		
	■ Wetlands a	djacent 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: X2 is a perennial tributary. It is shown as a dashed line on the topo and on the USFWS Wetland Map. It was observed flowing during flagging and during the Corps site visit. The tributary has a clear OHWM and distinct channel. A portion of the tributary is seasonal, but the majority is perennial. Stream characteristics observed and available data led this office to conclude 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: Y2 is a seasonal RPW. It is shown as a drainage pattern on the topo and is first order. Some water was observed in the channel, but there was not continuous flow. The tributary has a distinct channel and clear OHWM. Stream characteristics observed and available data led this office to conclude the tributary has a seasonal flow regime.
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: X2=203 linear feet and Y2=61 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: S is directly abutting X2, a perennial 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: S=0.26 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.
	Provide estimates for jurisdictional wetlands in the review area: acres.
7.	Impoundments of jurisdictional waters. 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:

 $^{^8} See$ Footnote # 3. 9 To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

Е.	ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):10 which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:
	Identify water body and summarize rationale supporting determination:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: . Wetlands: acres.
F.	NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
	Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: . Wetlands: acres.
SEC	CTION IV: DATA SOURCES.
	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: Timmons Group. Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. This office agrees with the conclusions of the submitted data sheets and
repo	ort. □ Office does not concur with data sheets/delineation report. □ Data sheets prepared by the Corps: □ Corps navigable waters' study: 1977 Navigability Study. □ U.S. Geological Survey Hydrologic Atlas: HA 730-G,1990. □ USGS NHD data. □ USGS 8 and 12 digit HUC maps. 03060103-06 Long Cane Creek □ U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Shoals Junction Quad. □ USDA Natural Resources Conservation Service Soil Survey. Citation: SSURGO. National wetlands inventory map(s). Cite name: USFWS Wetland Map. □ State/Local wetland inventory map(s): □ FEMA/FIRM maps: □ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

 $^{^{10}}$ 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.

\boxtimes	Photographs: ☐ Aerial (Name & Date): ESRI.
	or ⊠ Other (Name & Date): Photos taken during Corps site visit on 12/19/2019.
	Previous determination(s). File no. and date of response letter: .
	Applicable/supporting case law:
	Applicable/supporting scientific literature: .
	Other information (please specify): Corps Site Visit 12/19/2019.

B. ADDITIONAL COMMENTS TO SUPPORT JD: The aquatic resources documented on this form include 1 perennial tributary with an abutting wetland and 1 seasonal RPW. RPWs and wetlands abutting RPWs are jurisdictional according to guidance provided, however, the significant nexus findings for the record as required by Rapanos Guidance. The waters documented on this form are under jurisdiction of the Clean Water Act and considered waters of the U.S.

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.

SEC A.	CTION I: BACKGROUND INFORMATION REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020
B.	DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 12 of 20; SAC-2019-01728 Hodges Solar
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Pickens Creek
	Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Thurmond Lake Name of watershed or Hydrologic Unit Code (HUC): 03060103-06 Long Cane Creek 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: 12-May-2020 ☐ Field Determination. Date(s): 19-December-2019
SEC A.	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
	re Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the lew 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.
The	ere 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): TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands
	b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: W2=1,888 linear feet: width (ft) and/or acres. Wetlands: U=0.62 acres.
	c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Established by OHWM., Pick List Elevation of established OHWM (if known):
	 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: .

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.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1.	TNW Identify TNW:	
	Summarize rationale supporting determination: .	
2.	Wetland adjacent to TNW Summarize rationale supporting conclusion that wetland is "adjacent":	

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

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

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

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

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

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

(i) General Area Conditions:

(1)	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 3 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:	
	Troject waters cross of serve as state boundaries. Explain.	
	T1 ('C 0) TD ITE	
	Identify flow route to TNW ⁵ : .	
	Tributary stream order, if known:	

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.

	(b)	General Tributary Char Tributary is:	aracteristics (check all that apply Natural Artificial (man-made). Explain Manipulated (man-altered). E	n:	in: .		
		Tributary properties Average width: Average depth: Average side slo	with respect to top of bank (estin feet feet pes: Pick List.	mate)):		
		Primary tributary subs Silts Cobbles Bedrock Other. Explain	strate composition (check all that Sands Gravel Vegetation. Type/%			☐ Concrete ☐ Muck	
		Presence of run/riffle/ Tributary geometry: I	ability [e.g., highly eroding, slow pool complexes. Explain: Pick List. proximate average slope):	ıghin %	g banks].	Explain: .	
	(c)	Flow: Tributary provides for Estimate average num Describe flow re Other information on	aber of flow events in review area gime:	a/yea	r: Pick Lis	st	
		Surface flow is: Pick	List. Characteristics: .				
		Subsurface flow: Pick Dye (or other	List. Explain findings:				
		clear, nat changes shelving vegetatio leaf litter sediment water sta other (lis	ceck all indicators that apply): tural line impressed on the bank in the character of soil on matted down, bent, or absent disturbed or washed away deposition ining		destruction the present sediment scour multiple of	nce of litter and debris on of terrestrial vegetation nce of wrack line sorting observed or predicted flow ange in plant community	events
		If factors other than the High Tide L	ne OHWM were used to determine indicated by: Im line along shore objects I or debris deposits (foreshore) markings/characteristics ges	Mea	n High Wa survey to a physical ma	ater Mark indicated by: vailable datum;	
(iii)	Cha	emical Characteristics aracterize tributary (e.g. Explain: ntify specific pollutants	, water color is clear, discolored	, oily	film; wate	er quality; general watershe	ed characteristics, etc.)
(iv)	Biol		s. Channel supports (check all aracteristics (type, average width acteristics:		apply):		

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

			Federally Listed species. Fish/spawn areas. Explain Other environmentally-se Aquatic/wildlife diversity	n findings:	olain findings: .	
2.	Cha	ract	eristics of wetlands adjacent	to non-TNW that i	flow directly or indirectly in	to TNW
	(i)		Sical Characteristics: General Wetland Characterist Properties: Wetland size: Wetland type. Explain: Wetland quality. Explain Project wetlands cross or ser	es	es. Explain:	
		(b)	General Flow Relationship w Flow is: Pick List . Explain:	vith Non-TNW:		
			Surface flow is: Pick List Characteristics:			
			Subsurface flow: Pick List. Dye (or other) test per		·	
		(c)	Wetland Adjacency Determine Directly abutting Not directly abutting Discrete wetland hyde Ecological connection Separated by berm/ba	rologic connection. n. Explain:		
		(d)	Proximity (Relationship) to 3 Project wetlands are Pick List Project waters are Pick List Flow is from: Pick List. Estimate approximate location	st river miles from T aerial (straight) mile	es from TNW.	
	(ii)	Cha	emical Characteristics: racterize wetland system (e.g. characteristics; etc.). Explain tify specific pollutants, if kno	1: .	, brown, oil film on surface; v	vater quality; general watershed
	(iii)	Biol	Riparian buffer. Characteristics. Wet Riparian buffer. Characterist Vegetation type/percent cover Habitat for: Federally Listed species. Fish/spawn areas. Explain Other environmentally-se Aquatic/wildlife diversity	tics (type, average wer. Explain: Explain findings: In findings: Explain findings: Explain findings:	ridth):	
3.	Cha	All	eristics of all wetlands adjac wetland(s) being considered in roximately () acres in	n the cumulative ana		sis.
		For	each wetland, specify the follo	owing:		
			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

2.

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

1. TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:

	NWs: linear feet width (ft), Or, acres. Vetlands adjacent to TNWs: acres.
X T	It is shown as a solid blue line on the topo and on the USFWS Wetland Map. It was observed flowing during flagging and during the Corps site visit. The tributary has a clear OHWM and distinct channel. Stream characteristics observed and available data led this office to conclude the tributary has a perennial flow regime.
j	ributaries 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: W2=1,888 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: U is directly abutting an off-site perennial RPW. The off-site tributary is shown on the USFWS Wetland Map and as a dashed blue line on the topo.
	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: U=0.62 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.
	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:
DE SUC	CLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY CH 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:
Ide	ntify water body and summarize rationale supporting determination:
	vide 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.

E.

 ⁸See Footnote # 3.
 To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
 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.

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B. ADDITIONAL COMMENTS TO SUPPORT JD: The aquatic resources documented on this form include 1 perennial tributary and 1 wetland abutting a perennial RPW. RPWs and wetlands abutting RPWs are jurisdictional according to guidance provided. The waters documented on this form are under jurisdiction of the Clean Water Act and considered waters of the U.S.

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 REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020 DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 13 of 20; SAC-2019-01728 Hodges Solar C. PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long. -82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Pickens Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Thurmond Lake Name of watershed or Hydrologic Unit Code (HUC): 03060103-06 Long Cane Creek 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: 12-May-2020 Field Determination. Date(s): 19-December-2019 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. B. CWA SECTION 404 DETERMINATION OF JURISDICTION. There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required] 1. Waters of the U.S. a. Indicate presence of waters of U.S. in review area (check all that apply): 1 TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: V2=106 linear feet and Z3=15 linear feet: width (ft) and C2pond=1.97 acres. Wetlands: D2=0.14 acre and C2wetland=0.01 acres. c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Established by OHWM., Pick List Elevation of established OHWM (if known): 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:

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.

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1	TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 128, 358 acres; 03060103-06 Long Cane Creek

Drainage area: V2=21.7 acres and Z3=less than 5 acres

Average annual rainfall: 45.74 inches Average annual snowfall: 1.9 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 3 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 5-10 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 TNW⁵: Unnamed Tributary which flows to Pickens Creek which flows to Long Cane Creek which flows to Thurmond Lake (Traditional Navigable Water and Navigable Water of the U.S.). Tributary stream order, if known: **Z3** is first.

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.

(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.
loams that ar	Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain: According to the soil survey, V2 and Z3 are surrounded by Enon soils. Enon soils are sandy to hydric.
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Meandering. Tributary gradient (approximate average slope): %
	Flow: Tributary provides for: Seasonal flow Estimate average number of flow events in review area/year: Pick List Describe flow regime: The tributaries have a clear OHWM and distinct channels. Other information on duration and volume: The tributaries flow at least 3 months out of the year, during times of ad during the wetter months
	Surface flow is: Discrete and confined. Characteristics: Water flows within the channel during normal conditions.
	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 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): Discontinuous OHWM. ⁷ Explain: the presence of litter and debris destruction of terrestrial vegetation the presence of wrack line sediment sorting sediment sorting multiple observed or predicted flow events abrupt change in plant community
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by:
Cha	emical Characteristics: racterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: The Long Cane Creek watershed occupies 128,358 acres of the Piedmont region of South Carolina. Land use/land cover includes 66.9% forested land, 22.6% agricultural land, 8% urban land, 1.7% forested wetland (swamp), 0.4% barren land, and 0.4% water. https://doi.org/10.1001/

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

	(iv)		Other environmentally-s	ristics (type, average tics: Explain findings: in findings: The trik ensitive species. Ex	e width): . putaries provide breeding gr plain findings:	rounds for aquatic species. bitat for wildlife in the area.
2.	Cha	ract	eristics of wetlands adjacen	t to non-TNW that	flow directly or indirectly in	nto TNW
	(i)		Visical Characteristics: General Wetland Characteric Properties: Wetland size: C2wetlan Wetland type. Explain: Wetland quality. Expla: Project wetlands cross or se	d=0.01 acre and Di Forested. in:		
		(b)	General Flow Relationship Flow is: Ephemeral flow .			
			Surface flow is: Discrete an Characteristics: The we		t X3, a seasonal RPW.	
			Subsurface flow: Unknown Dye (or other) test p			
		(c)	Wetland Adjacency Determ ☐ Directly abutting ☐ Not directly abutting ☐ Discrete wetland hy ☐ Ecological connecti ☐ Separated by berm/b	drologic connection on. Explain:		
		(d)	Proximity (Relationship) to Project wetlands are 5-10 ri Project waters are 5-10 aeri Flow is from: Wetland to n Estimate approximate locati	ver miles from TNW al (straight) miles fravigable waters.		
	(ii)	Cha	characteristics; etc.). Expla South Carolina. Land use/ forested wetland (swamp).	in: The Long Cane land cover includes 0.4% barren land	Creek watershed occupies 1 s 66.9% forested land, 22.6%	water quality; general watershed 28,358 acres of the Piedmont region of 6 agricultural land, 8% urban land, 1.7% ctices and nearby roads.
	(iii)	Bio	Other environmentally-s	stics (type, average ver. Explain: Explain findings: in findings: The wetensitive species. Explain findings: Explain findings: The wetensitive species.	width): .tlands provide breeding gro	·
3.	Cha	All	veristics of all wetlands adja- wetland(s) being considered proximately (0.15) acres in t	in the cumulative an		is.
		For	each wetland, specify the fol	lowing:	·	
			Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
			Y (C2wetland)	0.01		



Summarize overall biological, chemical and physical functions being performed: The wetlands being evaluated in this significant nexus determination directly abut C2 Pond, an impoundment of a Seasonal RPW, are performing biological, chemical, and physical functions that relate to the integrity of the TNW. The wetlands are forested and there are areas of the site that have been cleared for possible agriculture practices. They are performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. They also provide vegetation diversity on a site that has some cleared areas. The wetlands are also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The wetlands are also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and helps to maintain seasonal flow volumes.

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: The seasonal RPWs and their adjacent wetlands are performing biological, chemical, and physical functions that relate to the integrity of the TNW. V2 flows directly into a perennial RPW and Z3 flows into an impoundment of V2. C2pond, an impoundment of V2, has 2 wetlands directly abutting it. The wetlands are forested and there are areas of the site that have been cleared for possible agriculture practices. The tributaries and wetlands are performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. They also provide vegetation diversity on a site that has some cleared areas. The tributaries and wetlands are also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The tributaries and wetlands are also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and 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 downstream TNW, it has been determined there is a significant nexus between the relevant reach of the tributaries and adjacent wetlands to the downstream TNW.

	TERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL AT 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: V2 and Z3 are seasonal RPWs. They are both shown as drainage patterns on the topo map and V2 is shown on the USFWS Wetland Map. Water was sitting in V2 from a beaverdam during the Corps site visit. V2 has a impoundment constructed on it that is most likely affecting the flow in V2. These tributaries have distinct channels and clear OHWMs. Stream characteristics observed and available data led this office to conclude the tributaries have seasonal flow regimes.
	Provide estimates for jurisdictional waters in the review area (check all that apply): ☐ Tributary waters: V2=106 linear feet and Z3=15 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: D2 and C2wetland are directly abutting C2pond, an impoundment of V2, a seasonal RPW .
	Provide acreage estimates for jurisdictional wetlands in the review area: D2=0.14 acre and C2wetland=0.01 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.

acres.

7. Impoundments of jurisdictional waters.9

D.

Provide estimates for jurisdictional wetlands in the review area:

⁸See Footnote # 3.

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

	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: C2pond is an impoundment of V2, a seasonal RPW
Е.	ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY): 10 which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:
	Identify water body and summarize rationale supporting determination:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: Wetlands: acres.
F.	NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
	Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
SEC	CTION 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: Timmons Group. Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. This office agrees with the conclusions of the submitted data sheets and ort. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: 1977 Navigability Study. U.S. Geological Survey Hydrologic Atlas: HA 730-G,1990. USGS NHD data.

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

	☐ USGS 8 and 12 digit HUC maps. 03060103-06 Long Cane Creek
\boxtimes	U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Shoals Junction Quad.
\boxtimes	USDA Natural Resources Conservation Service Soil Survey. Citation: SSURGO.
\boxtimes	National wetlands inventory map(s). Cite name: USFWS Wetland Map.
	State/Local wetland inventory map(s): .
	FEMA/FIRM maps: .
	100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
\boxtimes	Photographs: Aerial (Name & Date): ESRI .
	or ⊠ Other (Name & Date): Photos taken during Corps site visit on 12/19/2019
	Previous determination(s). File no. and date of response letter: .
	Applicable/supporting case law:
	Applicable/supporting scientific literature: .
\boxtimes	Other information (please specify): Corps Site Visit 12/19/2019.

B. ADDITIONAL COMMENTS TO SUPPORT JD: The aquatic resources documented on this form include 2 seasonal RPWs, one of which has 2 abutting wetlands, and an impoundment of a seasonal RPW. RPWs, impoundments of RPWs, and wetlands abutting RPWs are jurisdictional according to guidance provided, however, the significant nexus findings for the record as required by Rapanos Guidance. The waters documented on this form are under jurisdiction of the Clean Water Act and considered waters of the U.S.

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 REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020 DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 14 of 20; SAC-2019-01728 Hodges Solar C. PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long. -82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Pickens Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Thurmond Lake Name of watershed or Hydrologic Unit Code (HUC): 03060103-06 Long Cane Creek 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: 12-May-2020 Field Determination. Date(s): 19-December-2019 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. B. CWA SECTION 404 DETERMINATION OF JURISDICTION. There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required] 1. Waters of the U.S. a. Indicate presence of waters of U.S. in review area (check all that apply): 1 TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: U2=466 linear feet: width (ft) and E2=0.24 acres. Wetlands: **F2=0.003** acres. c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Established by OHWM., Pick List Elevation of established OHWM (if known): 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:

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.

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.

Identify TNW: .

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 128, 358 acres; 03060103-06 Long Cane Creek

Drainage area: U2=24.3 acres
Average annual rainfall: 45.74 inches
Average annual snowfall: 1.9 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 3 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 5-10 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 TNW⁵: Unnamed Tributary which flows to Pickens Creek which flows to Long Cane Creek which flows to Thurmond Lake (Traditional Navigable Water and Navigable Water of the U.S.). Tributary stream order, if known: U2 is first.

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.

(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: According to the soil survey, U2 is surrounded by Enon soils. Enon soils are sandy loams
that are not h	ydric .
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Meandering. Tributary gradient (approximate average slope): %
(c)	Flow: Tributary provides for: Seasonal flow Estimate average number of flow events in review area/year: Pick List Describe flow regime: The tributary has a clear OHWM and distinct channels. Other information on duration and volume: The tributary flows at least 3 months out of the year, during times of
heavy rain ar	nd during the wetter months
	Surface flow is: Discrete and confined. Characteristics: Water flows within the channel during normal conditions.
	Subsurface flow: Unknown. Explain findings:
	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 destruction of terrestrial vegetation the presence of wack line shelving the presence of wack line sediment sorting sediment deposition 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:
Cha	emical Characteristics: racterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: The Long Cane Creek watershed occupies 128,358 acres of the Piedmont region of South Carolina. Land use/land cover includes 66.9% forested land, 22.6% agricultural land, 8% urban land, 1.7% forested wetland (swamp), 0.4% barren land, and 0.4% water. tify specific pollutants, if known: Possible pollutants from agricultural practices and nearby roads.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

	(iv)	Bio	Other environmentally-se	istics (type, average cics: Explain findings: In findings: The trib ensitive species. Ex	width): utary provides breeding gr plain findings:	ounds for aquatic species. oitat for wildlife in the area.
2.	Cha	aract	eristics of wetlands adjacent	to non-TNW that	flow directly or indirectly i	nto TNW
	(i)		Project wetlands cross or ser	acres F orested . 1: .	es. Explain: .	
		(b)	General Flow Relationship v Flow is: Ephemeral flow . B			
			Surface flow is: Discrete an	d confined	atting U2, a seasonal RPW.	
			Subsurface flow: Unknown. Dye (or other) test pe			
		(c)	Wetland Adjacency Determing Directly abutting Not directly abutting Discrete wetland hyder Ecological connection Separated by berm/b	lrologic connection. n. Explain: .		
		(d)	Proximity (Relationship) to Project wetlands are 5-10 riv Project waters are 5-10 aeria Flow is from: Wetland to na Estimate approximate location	er miles from TNW al (straight) miles fro avigable waters.	om TNW.	
	(ii)	Cha	characteristics; etc.). Explai	n: The Long Cane (and cover includes 0.4% barren land,	Creek watershed occupies 1 66.9% forested land, 22.6% and 0.4% water.	water quality; general watershed 28,358 acres of the Piedmont region of 6 agricultural land, 8% urban land, 1.7% ctices and nearby roads.
	(iii		Riparian buffer. Characterist Vegetation type/percent cove Habitat for: Federally Listed species. Fish/spawn areas. Explai Other environmentally-set Aquatic/wildlife diversity	tics (type, average ver. Explain: Explain findings: In findings: The wetensitive species. Explain Explain findings: Explain findings: The wetensitive species.	vidth): land provides breeding grouplain findings:	
3.	Cha	All	eristics of all wetlands adjact wetland(s) being considered in broximately (0.003) acres in	n the cumulative and	alysis: 1	/sis.
		For	each wetland, specify the foll	owing:		
			Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
			Y	0.003		

Summarize overall biological, chemical and physical functions being performed: The wetland being evaluated in this significant nexus determination, which is adjacent to the seasonal RPW, is performing biological, chemical, and physical functions that relate to the integrity of the TNW. The wetland in the review area is abutting U2, a seasonal RPW. The wetland is forested and there are areas of the site that have been cleared for possible agriculture practices. It is performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. It also provides vegetation diversity on a site that has some cleared areas. The wetland is also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The wetland is also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and helps to maintain seasonal flow volumes.

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: The seasonal RPW and its adjacent wetland is performing biological, chemical, and physical functions that relate to the integrity of the TNW. U2 flows directly into a perennial RPW. The wetland is forested and there are areas of the site that have been cleared for possible agriculture practices. The tributary and wetland are performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. They also provide vegetation diversity on a site that has some cleared areas. The tributary and wetland are also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The tributary and wetland are also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and 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 downstream TNW, it has been determined there is a significant nexus between the relevant reach of the tributary and adjacent wetland to the downstream TNW.

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: U2 is a seasonal RPW. It is shown as drainage patterns on the topo map. Water was sitting in U2 from a beaverdam during the Corps site visit. U2 has a impoundment constructed on it that is most likely affecting the flow in U2. This tributary has a distinct channel and clear OHWM. Stream characteristics observed and available data this office to conclude the tributary has a seasonal flow regime.
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: U2=466 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: F2 is abutting U2, a seasonal RPW.
	Provide acreage estimates for jurisdictional wetlands in the review area: F2=0.003 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.
	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.

⁸See Footnote # 3.

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

	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: E2 is an impoundment of U2, a seasonal RPW
Е.	ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):10 which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:
	Identify water body and summarize rationale supporting determination:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: . Wetlands: acres.
F.	NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> 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.
SEC	CTION 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: Timmons Group. Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. This office agrees with the conclusions of the submitted data sheets and ort. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: 1977 Navigability Study.
	U.S. Geological Survey Hydrologic Atlas: HA 730-G,1990. ☐ USGS NHD data. ☐ USGS 8 and 12 digit HUC maps. 03060103-06 Long Cane Creek

 $^{^{10}}$ 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.

\boxtimes	U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Shoals Junction Quad.
\boxtimes	USDA Natural Resources Conservation Service Soil Survey. Citation: SSURGO .
\boxtimes	National wetlands inventory map(s). Cite name: USFWS Wetland Map.
	State/Local wetland inventory map(s):
	FEMA/FIRM maps: .
	100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
\boxtimes	Photographs: Aerial (Name & Date): ESRI .
	or ☑ Other (Name & Date): Photos taken during Corps site visit on 12/19/2019.
	Previous determination(s). File no. and date of response letter: .
	Applicable/supporting case law: .
	Applicable/supporting scientific literature: .
\boxtimes	Other information (please specify): Corps Site Visit 12/19/2019.

B. ADDITIONAL COMMENTS TO SUPPORT JD: The aquatic resources documented on this form include 1 seasonal RPW with an abutting wetland and an impoundment of a seasonal RPW. RPWs, impoundments of RPWs, and wetlands abutting RPWs are jurisdictional according to guidance provided, however, the significant nexus findings for the record as required by Rapanos Guidance. The waters documented on this form are under jurisdiction of the Clean Water Act and considered waters of the U.S.

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 REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020 DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 15 of 20; SAC-2019-01728 Hodges Solar C. PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long. -82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Pickens Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Thurmond Lake Name of watershed or Hydrologic Unit Code (HUC): 03060103-06 Long Cane Creek 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: 12-May-2020 Field Determination. Date(s): 19-December-2019 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. B. CWA SECTION 404 DETERMINATION OF JURISDICTION. There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required] 1. Waters of the U.S. a. Indicate presence of waters of U.S. in review area (check all that apply): 1 TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: T2=1,203 linear feet, R2=119 linear feet and S2=46 linear feet: width (ft) and B2=0.1 acres. Wetlands: Y=0.65 acre, J2=0.001 acre, A2=0.01 acre, Z=0.03 acres. c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Established by OHWM., Pick List Elevation of established OHWM (if known): 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:

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.

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.

Identify TNW: .

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 128, 358 acres; 03060103-06 Long Cane Creek

Drainage area: R2=26 acres and S2=less than 5 acres

Average annual rainfall: 45.74 inches Average annual snowfall: 1.9 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 3 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 5-10 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 TNW⁵: Unnamed Tributary which flows to Pickens Creek which flows to Long Cane Creek which flows to Thurmond Lake (Traditional Navigable Water and Navigable Water of the U.S.). Tributary stream order, if known: R2 and S2 are first.

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.

(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.
sandy loams	Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain: According to the soil survey, R2 and S2 are surrounded by Pacolet soils. Pacolet soils are that are not hydric.
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Meandering. Tributary gradient (approximate average slope): %
	Flow: Tributary provides for: Seasonal flow Estimate average number of flow events in review area/year: Pick List Describe flow regime: The tributaries have a clear OHWM and distinct channels. Other information on duration and volume: The tributaries flow at least 3 months out of the year, during times of ad during the wetter months
	Surface flow is: Discrete and confined . Characteristics: Water flows within the channel during normal conditions .
	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 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): Discontinuous OHWM. ⁷ Explain: the presence of litter and debris destruction of terrestrial vegetation the presence of wrack line sediment sorting sediment sorting sediment sorting multiple observed or predicted flow events abrupt change in plant community
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by:
Cha	emical Characteristics: racterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: The Long Cane Creek watershed occupies 128,358 acres of the Piedmont region of South Carolina. Land use/land cover includes 66.9% forested land, 22.6% agricultural land, 8% urban land, 1.7% forested wetland (swamp), 0.4% barren land, and 0.4% water. tify specific pollutants, if known: Possible pollutants from agricultural practices and nearby roads.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

	(IV)		Other environmentally-s	eristics (type, average stics: Explain findings: in findings: The tri tensitive species. E	e width): butaries provide breeding xplain findings:	grounds for aquatic species. nabitat for wildlife in the area.
2.	Cha	ıract	eristics of wetlands adjacen	t to non-TNW tha	t flow directly or indirectly	into TNW
	(i)		rsical Characteristics: General Wetland Characteri Properties: Wetland size: acr Wetland type. Explain: Wetland quality. Expla Project wetlands cross or se	res in: .	ries. Explain: .	
		(b)	General Flow Relationship Flow is: Pick List . Explain			
			Surface flow is: Pick List Characteristics:			
			Subsurface flow: Pick List. Dye (or other) test p		٠	
		(c)	Wetland Adjacency Determ Directly abutting Not directly abutting Discrete wetland hy Ecological connecti Separated by berm/	drologic connectior on. Explain:		
		(d)	Proximity (Relationship) to Project wetlands are Pick L Project waters are Pick List Flow is from: Pick List. Estimate approximate location	ist river miles from t aerial (straight) m		1.
	(ii)	Cha	emical Characteristics: racterize wetland system (e.g characteristics; etc.). Expla httify specific pollutants, if kn	in: .	ar, brown, oil film on surface	e; water quality; general watershed
	(iii)	Biol	Riparian buffer. Characteri Vegetation type/percent cov Habitat for: Federally Listed species Fish/spawn areas. Expla Other environmentally-s Aquatic/wildlife diversit	stics (type, average ver. Explain: . Explain findings: in findings: censitive species. Explain findings:	width): . xplain findings:	
3.	Cha	All	eristics of all wetlands adja wetland(s) being considered proximately () acres in	in the cumulative ar		alysis.
		For	each wetland, specify the fol	lowing:		
			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: The seasonal RPWs are performing biological, chemical, and physical functions that relate to the integrity of the TNW. R2 and S2 flow directly into a perennial RPW. The tributaries are performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. The tributaries are also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The tributaries are also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and 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 downstream TNW, it has been determined there is a significant nexus between the relevant reach of the tributaries to the downstream TNW.

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

I.	INWs and Adjacent Wetlands.	Check all that appl	ly 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: T2 is a perennial RPW. It is shown as a dashed blue line on the topo and on the USFWS Wetland

	perennial flow regimes.
	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: R2 and S2 are seasonal RPWs. They are both shown as drainage patterns on the topo map. Water was observed in R2 during the Corps site visit, but R2 spreads out and loses its channel as it gets closer to T2. These tributaries have distinct channels and clear OHWMs. Stream characteristics observed and available data led this offic to conclude the tributaries have seasonal flow regimes.
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: T2=1,203 linear feet, R2=119 linear feet and S2=46 linear feet 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: Y, J2, A2, and Z are directly abutting T2, a perennial 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: Y=0.65 acre, J2=0.001 acre, A2=0.01 acre, Z=0.03 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.
	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: B2 is an impoundment of T2, a perennial RPW
DE	DLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY CH WATERS (CHECK ALL THAT APPLY);10

Map. It was observed flowing during flagging and during the Corps site visit. The tributary has a clear OHWM and distinct channel. Stream characteristics observed and available data led this office to conclude the tributary has

E.

⁸See Footnote # 3.

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

	which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:
	Identify water body and summarize rationale supporting determination:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: Wetlands: acres.
F.	NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> 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.
	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: Timmons Group. Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. This office agrees with the conclusions of the submitted data sheets and
repo	☐ Office does not concur with data sheets/delineation report. ☐ Data sheets prepared by the Corps: ☐ Corps navigable waters' study: 1977 Navigability Study. ☐ U.S. Geological Survey Hydrologic Atlas: HA 730-G,1990. ☐ USGS NHD data.
	 ☑ USGS 8 and 12 digit HUC maps. 03060103-06 Long Cane Creek ☑ U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Shoals Junction Quad. ☑ USDA Natural Resources Conservation Service Soil Survey. Citation: SSURGO. ☑ National wetlands inventory map(s). Cite name: USFWS Wetland Map. ☑ State/Local wetland inventory map(s): FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) ☑ Photographs: ☑ Aerial (Name & Date): ESRI.
	or ☑ Other (Name & Date): Photos taken during Corps site visit on 12/19/2019. ☐ Previous determination(s). File no. and date of response letter:

 $^{^{10}}$ 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.

	Applicable/supporting case law: .
	Applicable/supporting scientific literature: .
\boxtimes	Other information (please specify): Corps Site Visit 12/19/2019.

B. ADDITIONAL COMMENTS TO SUPPORT JD: The aquatic resources documented on this form include 1 perennial RPW with 4 abutting wetlands, an impoundment of the perennial RPW, and 2 seasonal RPWs. RPWs, impoundments of RPWs, and wetlands abutting RPWs are jurisdictional according to guidance provided, however, the significant nexus findings for the record as required by Rapanos Guidance. The waters documented on this form are under jurisdiction of the Clean Water Act and considered waters of the U.S.

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.

SEC A.	CTION I: BACKGROUND INFORMATION REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020
B.	DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 16 of 20; SAC-2019-01728 Hodges Solar
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Pickens Creek
	Name of nearest Traditional Navigable Water (TNW) Into which the aquatic resource flows: Thurmond Lake Name of watershed or Hydrologic Unit Code (HUC): 03060103-06 Long Cane Creek 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: 12-May-2020 Field Determination. Date(s): 19-December-2019
	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
	re Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the ew 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:
В. (CWA SECTION 404 DETERMINATION OF JURISDICTION.
The	re 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): 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: G2=0.38 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: .

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.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1.	TNW Identify TNW:	
	Summarize rationale supporting determination: .	
2.	Wetland adjacent to TNW Summarize rationale supporting conclusion that wetland is "adjacent":	

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

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

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

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

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

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

(i) General Area Conditions:

(-)	CONCINITION CONGINIONS
	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:
	J
	Identify flow route to TNW ⁵ :
	Tributary stream order, if known:
	Thousand business of the file

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 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 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	
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	
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	
Tributary provides for: Pick List Estimate average number of flow events in review area/year: Pick List	
Describe flow regime: Other information on duration and volume:	
Surface flow is: Pick List. Characteristics: .	
Subsurface flow: Pick List. Explain findings: Dye (or other) test performed:	
Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): clear, natural line impressed on the bank changes in the character of soil destruction of terrestrial vegetation shelving vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition water staining 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:):
(iii) Chemical Characteristics: Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, Explain: Identify specific pollutants, if known:	s, etc.)
(iv) Biological Characteristics. Channel supports (check all that apply): Riparian corridor. Characteristics (type, average width): Wetland fringe. Characteristics: Habitat for:	

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

			Federally Listed species. Fish/spawn areas. Explain Other environmentally-se Aquatic/wildlife diversity	n findings:	olain findings: .	
2.	Cha	ract	eristics of wetlands adjacent	to non-TNW that i	flow directly or indirectly in	to TNW
	(i)		Sical Characteristics: General Wetland Characterist Properties: Wetland size: Wetland type. Explain: Wetland quality. Explain Project wetlands cross or ser	es	es. Explain:	
		(b)	General Flow Relationship w Flow is: Pick List . Explain:	vith Non-TNW:		
			Surface flow is: Pick List Characteristics:			
			Subsurface flow: Pick List. Dye (or other) test per		·	
		(c)	Wetland Adjacency Determine Directly abutting Not directly abutting Discrete wetland hyd Ecological connectio Separated by berm/ba	rologic connection. n. Explain:		
		(d)	Proximity (Relationship) to 3 Project wetlands are Pick List Project waters are Pick List Flow is from: Pick List. Estimate approximate location	st river miles from T aerial (straight) mile	es from TNW.	
	(ii)	Cha	emical Characteristics: racterize wetland system (e.g. characteristics; etc.). Explain tify specific pollutants, if kno	1: .	, brown, oil film on surface; v	vater quality; general watershed
	(iii)	Biol	Riparian buffer. Characteristics. Wet Riparian buffer. Characterist Vegetation type/percent cover Habitat for: Federally Listed species. Fish/spawn areas. Explain Other environmentally-se Aquatic/wildlife diversity	tics (type, average wer. Explain: Explain findings: In findings: Explain findings: Explain findings: Explain findings:	ridth):	
3.	Cha	All	eristics of all wetlands adjac wetland(s) being considered in roximately () acres in	n the cumulative ana		sis.
		For	each wetland, specify the follo	owing:		
			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 ALI
	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 perennial RPW is located off-site and flows directly into a larger system. It is shown as a drainage on the topo map and clearly shown on the Hillshade map. Available data led this office to conclude 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: linear feet width (ft). □ Other non-wetland waters: acres. Identify type(s) of waters: .

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

⁸See Footnote # 3.

		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: G2 is directly abutting an off-site perennial RPW.
		Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary i 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: G2=0.38 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.
		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:
Е.	SUC	DLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY CH 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:
	Ide	ntify water body and summarize rationale supporting determination:
	Pro	vide 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:
Е	□ NO	Wetlands: acres.
F.	NU	N-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

E.

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.

		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):
	fact	vide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR ors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional gment (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.
		vide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such adding 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.
SEC	CTIC	ON IV: DATA SOURCES.
Α.		PORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Timmons Group. Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. This office agrees with the conclusions of the submitted data sheets and
repo	ort.	Office does not concur with data sheets/delineation report.
	$ \boxtimes \boxtimes$	Data sheets prepared by the Corps: Corps navigable waters' study: 1977 Navigability Study. U.S. Geological Survey Hydrologic Atlas: HA 730-G,1990. USGS NHD data.
		☑ USGS 8 and 12 digit HUC maps. 03060103-06 Long Cane Creek U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Shoals Junction Quad. USDA Natural Resources Conservation Service Soil Survey. Citation: SSURGO. National wetlands inventory map(s). Cite name: USFWS Wetland Map. State/Local wetland inventory map(s):
		FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: Aerial (Name & Date): ESRI. or Other (Name & Date): Photos taken during Corps site visit on 12/19/2019.
		Previous determination(s). File no. and date of response letter: Applicable/supporting case law: Applicable/supporting scientific literature: Other information (please specify): Corps Site Visit 12/19/2019.

B. ADDITIONAL COMMENTS TO SUPPORT JD: The aquatic resources documented on this form include 1 wetland abutting an off-site perennial RPW. RPWs and wetlands abutting RPWs are jurisdictional according to guidance provided. The water documented on this form is under jurisdiction of the Clean Water Act and considered a water of the U.S.

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 REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020 DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 17 of 20; SAC-2019-01728 Hodges Solar C. PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long. -82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Pickens Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Thurmond Lake Name of watershed or Hydrologic Unit Code (HUC): 03060103-06 Long Cane Creek 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: 12-May-2020 Field Determination. Date(s): 19-December-2019 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. B. CWA SECTION 404 DETERMINATION OF JURISDICTION. There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required] 1. Waters of the U.S. a. Indicate presence of waters of U.S. in review area (check all that apply): 1 TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: **O2=164** linear feet: width (ft) and I2=5.48 acres. Wetlands: **H2=1.46** acres. c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Established by OHWM., Pick List Elevation of established OHWM (if known): 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:

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.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1.	TNW Identify TNW:	
	Summarize rationale supporting determination: .	
2.	Wetland adjacent to TNW Summarize rationale supporting conclusion that wetland is "adjacent":	

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

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

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

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

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

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

(i) General Area Conditions: Watershed size: Pick List: Drainage area: **Pick List** Average annual rainfall: inches Average annual snowfall: inches (ii) Physical Characteristics: (a) Relationship with TNW: ☐ Tributary flows directly into TNW. Tributary flows through **Pick List** tributaries before entering TNW. Project waters are **Pick List** river miles from TNW. Project waters are **Pick List** river miles from RPW. Project waters are Pick List aerial (straight) miles from TNW. Project waters are **Pick List** aerial (straight) miles from RPW. Project waters cross or serve as state boundaries. Explain: Identify flow route to TNW⁵: Tributary stream order, if known:

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.

	(b)	General Tributary Char Tributary is:	aracteristics (check all that apply Natural Artificial (man-made). Explain Manipulated (man-altered). E	n:	in: .		
		Tributary properties Average width: Average depth: Average side slo	with respect to top of bank (estin feet feet pes: Pick List.	mate)):		
		Primary tributary subs Silts Cobbles Bedrock Other. Explain	strate composition (check all that Sands Gravel Vegetation. Type/%			☐ Concrete ☐ Muck	
		Presence of run/riffle/ Tributary geometry: I	ability [e.g., highly eroding, slow pool complexes. Explain: Pick List. proximate average slope):	ıghin %	g banks].	Explain: .	
	(c)	Flow: Tributary provides for Estimate average num Describe flow re Other information on	aber of flow events in review area gime:	a/yea	r: Pick Lis	st	
		Surface flow is: Pick	List. Characteristics: .				
		Subsurface flow: Pick Dye (or other	List. Explain findings:				
		clear, nat changes shelving vegetatio leaf litter sediment water sta other (lis	ceck all indicators that apply): tural line impressed on the bank in the character of soil on matted down, bent, or absent disturbed or washed away deposition ining		destruction the present sediment scour multiple of	nce of litter and debris on of terrestrial vegetation nce of wrack line sorting observed or predicted flow ange in plant community	events
		If factors other than the High Tide L	ne OHWM were used to determine indicated by: Im line along shore objects I or debris deposits (foreshore) markings/characteristics ges	Mea	n High Wa survey to a physical ma	ater Mark indicated by: vailable datum;	
(iii)	Cha	emical Characteristics aracterize tributary (e.g. Explain: ntify specific pollutants	, water color is clear, discolored	, oily	film; wate	er quality; general watershe	ed characteristics, etc.)
(iv)	Biol		s. Channel supports (check all aracteristics (type, average width acteristics:		apply):		

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

			Federally Listed species. Fish/spawn areas. Explain Other environmentally-se Aquatic/wildlife diversity	n findings:	olain findings: .	
2.	Cha	ract	eristics of wetlands adjacent	to non-TNW that i	flow directly or indirectly in	to TNW
	(i)		Sical Characteristics: General Wetland Characterist Properties: Wetland size: Wetland type. Explain: Wetland quality. Explain Project wetlands cross or ser	es	es. Explain:	
		(b)	General Flow Relationship w Flow is: Pick List . Explain:	vith Non-TNW:		
			Surface flow is: Pick List Characteristics:			
			Subsurface flow: Pick List. Dye (or other) test per		·	
		(c)	Wetland Adjacency Determine Directly abutting Not directly abutting Discrete wetland hyd Ecological connectio Separated by berm/ba	rologic connection. n. Explain:		
		(d)	Proximity (Relationship) to 3 Project wetlands are Pick List Project waters are Pick List Flow is from: Pick List. Estimate approximate location	st river miles from T aerial (straight) mile	es from TNW.	
	(ii)	Cha	emical Characteristics: racterize wetland system (e.g. characteristics; etc.). Explain tify specific pollutants, if kno	1: .	, brown, oil film on surface; v	vater quality; general watershed
	(iii)	Biol	Riparian buffer. Characteristics. Wet Riparian buffer. Characterist Vegetation type/percent cover Habitat for: Federally Listed species. Fish/spawn areas. Explain Other environmentally-se Aquatic/wildlife diversity	tics (type, average wer. Explain: Explain findings: In findings: Explain findings: Explain findings: Explain findings:	ridth):	
3.	Cha	All	eristics of all wetlands adjac wetland(s) being considered in roximately () acres in	n the cumulative ana		sis.
		For	each wetland, specify the follo	owing:		
			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

2.

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. TH	HE SUBJECT WATERS/WI	ETLANDS ARE (CHECK ALL
	THAT APPLY):		

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.
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: O2 is a perennial RPW. It is shown as a dashed blue line on the topo and on the USFWS Wetlan Map. It was observed flowing during flagging and during the Corps site visit. The tributary has a clear OHWM and distinct channel. Stream characteristics observed and available data led this office to conclude the tributary has a perennial flow regimes.
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: O2=164 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: H2 is directly abutting I2 which is an impoundment of O2, a perennial 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: H2=1.46 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.
	Provide estimates for jurisdictional wetlands in the review area: acres.
7.	Impoundments of jurisdictional waters. 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: 12 is an impoundment of O2, a perennial RPW
SUC SUC SUC SUC	CLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY CH 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:
Ide	ntify water body and summarize rationale supporting determination:
	vide 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.

E.

 ⁸See Footnote # 3.
 To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
 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.

r.		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):
	fact	vide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR ors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional gment (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.
		vide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such adding 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.
SF	CTIO	ON IV: DATA SOURCES.
		PORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked
л.	and	requested, appropriately reference sources below):
	\boxtimes	Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Timmons Group . Data sheets prepared/submitted by or on behalf of the applicant/consultant.
ron	ort.	Office concurs with data sheets/delineation report. This office agrees with the conclusions of the submitted data sheets and
rep	ort.	Office does not concur with data sheets/delineation report.
		Data sheets prepared by the Corps: Corps navigable waters' study: 1977 Navigability Study.
	\boxtimes	U.S. Geological Survey Hydrologic Atlas: HA 730-G,1990.
		☐ USGS NHD data. ☐ USGS 8 and 12 digit HUC maps. 03060103-06 Long Cane Creek
	\boxtimes	U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Shoals Junction Quad.
		USDA Natural Resources Conservation Service Soil Survey. Citation: SSURGO. National wetlands inventory map(s). Cite name: USFWS Wetland Map.
		State/Local wetland inventory map(s): .
	H	FEMA/FIRM maps: . 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
	$\overline{\boxtimes}$	
		Photographs: Aerial (Name & Date): ESRI.
		or \(\subseteq \text{ Other (Name & Date): Photos taken during Corps site visit on 12/19/2019.} \) Previous determination(s). File no. and date of response letter:
		or Other (Name & Date): Photos taken during Corps site visit on 12/19/2019. Previous determination(s). File no. and date of response letter: Applicable/supporting case law:
		or \(\subseteq \text{ Other (Name & Date): Photos taken during Corps site visit on 12/19/2019.} \) Previous determination(s). File no. and date of response letter:

B. ADDITIONAL COMMENTS TO SUPPORT JD: The aquatic resources documented on this form include 1 perennial RPW with an abutting wetland and an impoundment of a perennial RPW. RPWs, impoundments of RPWs, and wetlands abutting RPWs are jurisdictional according to guidance provided. The waters documented on this form are under jurisdiction of the Clean Water Act and considered waters of the U.S.

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 REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020 DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 18 of 20; SAC-2019-01728 Hodges Solar C. PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long. -82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Pickens Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Thurmond Lake Name of watershed or Hydrologic Unit Code (HUC): 03060103-06 Long Cane Creek 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: 12-May-2020 Field Determination. Date(s): 19-December-2019 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. B. CWA SECTION 404 DETERMINATION OF JURISDICTION. There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required] 1. Waters of the U.S. a. Indicate presence of waters of U.S. in review area (check all that apply): 1 TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: M2=2,110 linear feet and N2=224 linear feet: width (ft) and/or acres. Wetlands: L2=0.29 acres. c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual, Established by OHWM., Pick List Elevation of established OHWM (if known): 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:

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.

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.

Identify TNW: .

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 128, 358 acres; 03060103-06 Long Cane Creek

Drainage area: N2=15.5 acres
Average annual rainfall: 45.74 inches
Average annual snowfall: 1.9 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 3 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 5-10 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 TNW⁵: Unnamed Tributary which flows to Pickens Creek which flows to Long Cane Creek which flows to Thurmond Lake (Traditional Navigable Water and Navigable Water of the U.S.). Tributary stream order, if known: N2 is first.

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.

(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.
that are not l	Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain: According to the soil survey, N2 is surrounded by Enon soils. Enon soils are sandy loams
that are not i	
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: Meandering. Tributary gradient (approximate average slope): %
(c)	Flow: Tributary provides for: Seasonal flow Estimate average number of flow events in review area/year: Pick List Describe flow regime: N2 has a clear OHWM and distinct channels. Other information on duration and volume: N2 flows at least 3 months out of the year, during times of heavy rain and
during the w	etter months
	Surface flow is: Discrete and confined. Characteristics: Water flows within the channel during normal conditions.
	Subsurface flow: Unknown. Explain findings:
	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 destruction of terrestrial vegetation shelving destruction of terrestrial vegetation the presence of wack line sediment sorting sediment sorting sediment deposition multiple observed or predicted flow events abrupt change in plant community other (list): Discontinuous OHWM. 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:
Cha	emical Characteristics: racterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: The Long Cane Creek watershed occupies 128,358 acres of the Piedmont region of South Carolina. Land use/land cover includes 66.9% forested land, 22.6% agricultural land, 8% urban land, 1.7% forested wetland (swamp), 0.4% barren land, and 0.4% water. ntify specific pollutants, if known: Possible pollutants from agricultural practices and nearby roads.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

	(iv)		Other environmentally-se	ristics (type, average tics: Explain findings: n findings: The tribe ensitive species. Exp	width): utary provides breeding gro	
2.	Cha	ract	eristics of wetlands adjacent	t to non-TNW that f	flow directly or indirectly in	to TNW
	(i)		General Wetland Characteristics: General Wetland Characteristics: Properties: Wetland size: L2=0.29 a Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or ser	cres Forested. n:	es. Explain:	
		(b)	General Flow Relationship v Flow is: Ephemeral flow . I			
			Surface flow is: Discrete an Characteristics: The wet		tting D3, a seasonal RPW.	
			Subsurface flow: Unknown Dye (or other) test pe			
		(c)	Wetland Adjacency Determi ☐ Directly abutting ☐ Not directly abutting ☐ Discrete wetland hyd ☐ Ecological connection ☐ Separated by berm/b	drologic connection. on. Explain:		
		(d)	Proximity (Relationship) to Project wetlands are 5-10 riv Project waters are 5-10 aeria Flow is from: Wetland to na Estimate approximate location	ver miles from TNW. al (straight) miles fro avigable waters.	om TNW.	
	(ii)	Cha	characteristics; etc.). Explain South Carolina. Land use/liferested wetland (swamp),	n: The Long Cane (land cover includes 0.4% barren land,	Creek watershed occupies 12 66.9% forested land, 22.6%	vater quality; general watershed 18,358 acres of the Piedmont region of agricultural land, 8% urban land, 1.7% ices and nearby roads.
	(iii)	Biol	Other environmentally-se	tics (type, average wer. Explain: Explain findings: n findings: The wetlensitive species. Exp	vidth):	
3.	Cha	All	eristics of all wetlands adjac wetland(s) being considered is proximately (0.29) acres in to	n the cumulative ana		s.
		For	each wetland, specify the foll	owing:		
			Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
			Y (L2)	0.29		

Summarize overall biological, chemical and physical functions being performed: The wetland being evaluated in this significant nexus determination, directly abutting seasonal RPW N2, is performing biological, chemical, and physical functions that relate to the integrity of the TNW. The wetland is forested and there are areas of the site that have been cleared for possible agriculture practices. It is performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. It also provides vegetation diversity on a site that has some cleared areas. The wetland is also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The wetland is also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and helps to maintain seasonal flow volumes.

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: The seasonal RPW and its adjacent wetland are performing biological, chemical, and physical functions that relate to the integrity of the TNW. N2 flows directly into a perennial RPW. N2 has a wetland directly abutting the tributary. The wetland is forested and there are areas of the site that have been cleared for possible agriculture practices. The tributary and wetland are performing a variety of biological functions that include providing breeding grounds for aquatic species in the area and habitat for wildlife in the area. They also provides vegetation diversity on a site that has some cleared areas. The tributary and wetland are also performing chemical functions that include filtering pollutants from nearby roads and agriculture areas. The tributary and wetland are also performing physical functions that include flow maintenance like retaining runoff and storing rain water temporarily during the wetter months and in times of heavy rain. This helps to reduce downstream peak flows and 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 downstream TNW, it has been determined there is a significant nexus between the relevant reach of the tributary and adjacent wetland to the downstream TNW.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL

111.	ATAILI).
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: M3 is a perennial RPW. It is a named tributary (Pickens Creek) that is shown as a solid blue line on the topo map and is shown on the USFWS Wetland Map. The tributary was observed flowing during flagging. It has a distinct channel and clear OHWM. Available data led this office to conclude the tribtuary 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: N2 is a seasonal RPW. It is shown as drainage patterns on the topo map. This tributary has a distinct channel and clear OHWM. Available data led this office to conclude the tributary has a seasonal flow regime.
	Provide estimates for jurisdictional waters in the review area (check all that apply): ☐ Tributary waters: M2=2,110 linear feet and N2=224 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: L2 is directly abutting M2, a perennial 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: L2=0.29 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.
	Provide estimates for jurisdictional wetlands in the review area: acres.
7.	Impoundments of jurisdictional waters. ⁹

⁸See Footnote # 3.

 $^{^{\}rm 9}$ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

	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:
Е.	ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY): 10 which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:
	Identify water body and summarize rationale supporting determination:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: Wetlands: acres.
F.	NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> 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.
SE(CTION IV: DATA SOURCES.
A. S	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: Timmons Group. Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. This office agrees with the conclusions of the submitted data sheets and ort. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: 1977 Navigability Study. U.S. Geological Survey Hydrologic Atlas: HA 730-G,1990. USGS NHD data.
	🔲 0000 NIID uata.

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

USGS 8 and 12 digit HUC maps. 03060103-06 Long Cane Creek
U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Shoals Junction Quad.
USDA Natural Resources Conservation Service Soil Survey. Citation: SSURGO.
National wetlands inventory map(s). Cite name: USFWS Wetland Map.
State/Local wetland inventory map(s): .
FEMA/FIRM maps: .
100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
Photographs: Aerial (Name & Date): ESRI.
or ☑ Other (Name & Date): Photos taken during Corps site visit on 12/19/2019.
Previous determination(s). File no. and date of response letter: .
Applicable/supporting case law: .
Applicable/supporting scientific literature: .
Other information (please specify): Corps Site Visit 12/19/2019.

B. ADDITIONAL COMMENTS TO SUPPORT JD: The aquatic resources documented on this form include 1 perennial tributary and 1 seasonal tributary with an abutting wetland. RPWs and wetlands abutting RPWs are jurisdictional according to guidance provided, however, the significant nexus findings for the record as required by Rapanos Guidance. The waters documented on this form are under jurisdiction of the Clean Water Act and considered waters of the U.S.

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 REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020 DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 19 of 20; SAC-2019-01728 Hodges Solar C. PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long. -82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Pickens Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: N/A Name of watershed or Hydrologic Unit Code (HUC): 03060103-06 Long Cane Creek 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: 12-May-2020 Field Determination. Date(s): 19-December-2019 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. B. CWA SECTION 404 DETERMINATION OF JURISDICTION. There Are no "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required] 1. Waters of the U.S. a. Indicate presence of waters of U.S. in review area (check all that apply): 1 TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands

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

b. Identify (estimate) size of waters of the U.S. in the review area:

linear feet:

Elevation of established OHWM (if known):

acres.

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: The 1,123.9 acre site has 1 isolated wetland. The wetland is 0.16 acre and is located near the middle of the site at the bottom of a slope. The wetland has a berm between it and the closest water of the U.S. There appears to be parts

acres.

width (ft) and/or

Non-wetland waters:

Wetlands:

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.

of a swale through the berm, but it is not continuous and there are no signs of flow or a connection. The portions of the swale have no OHWM or signs of relatively permanent flow. There are also no signs of overland sheet flow or any other kind of drainage to serve as a connection. There are no signs of jurisdictional drainage features, shallow subsurface flow, or overland flow from the isolated wetland to any other waters on-site or off-site. The isolated wetland shows no evidence of biological, chemical, or physical connectivity to waters of the U.S. There is also no apparent connection to interstate or foreign commerce. In addition, there is no apparent evidence of ecological interconnectivity between the isolated wetland and waters of the U.S. This office has determined that the wetland is isolated from waters of the U.S. and is not within jurisdiction 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 waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

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

(i) General Area Conditions:

	Watershed size:	Pick List;
	Drainage area:	Pick List
	Average annual rainfa	ll: inches
	Average annual snowf	fall: inches
(ii)		
	Project waters are	e Pick List river miles from TNW.

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

	Project waters are Pick List river miles from 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:
	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 destruction of terrestrial vegetation the presence of wrack line vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition water staining 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:

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW. ⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

	(iii)		emical Characteristics:
		Cha	racterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
			Explain:
		Ider	ntify specific pollutants, if known:
	(iv)	Riol	logical Characteristics. Channel supports (check all that apply):
	(11)	Dio	Riparian corridor. Characteristics (type, average width):
		Ħ	Wetland fringe. Characteristics:
		Ħ	Habitat for:
		_	Federally Listed species. Explain findings:
			Fish/spawn areas. Explain findings:
			Other environmentally-sensitive species. Explain findings:
			Aquatic/wildlife diversity. Explain findings:
2.	Cha	ract	eristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW
	(i)		sical Characteristics:
		(a)	General Wetland Characteristics:
			Properties: Wetland size: acres
			Wetland size: acres Wetland type. Explain: .
			Wetland quality. Explain: .
			Project wetlands cross or serve as state boundaries. Explain:
			110 Joet Wellands 11035 of Serve as state obtainantes. Explain.
		(b)	General Flow Relationship with Non-TNW:
			Flow is: Pick List. Explain: .
			Surface flow is: Pick List
			Characteristics:
			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:
			Separated by bernivbarrier. Explain:
		(d)	Proximity (Relationship) to TNW
		. ,	Project wetlands are Pick List river miles from TNW.
			Project waters are Pick List aerial (straight) miles from TNW.
			Flow is from: Pick List.
			Estimate approximate location of wetland as within the Pick List floodplain.
	(ii)	Che	emical Characteristics:
	(11)		racterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed
		CIIG	characteristics; etc.). Explain:
		Ider	ntify specific pollutants, if known:
	(iii)	Bio!	logical Characteristics. Wetland supports (check all that apply):
		H	Riparian buffer. Characteristics (type, average width): Vegetation type/percent cover. Explain:
		H	Habitat for:
		Ш	Federally Listed species. Explain findings:
			Fish/spawn areas. Explain findings:
			Other environmentally-sensitive species. Explain findings:
			Aquatic/wildlife diversity. Explain findings:
3.	Cha		eristics of all wetlands adjacent to the tributary (if any)
			wetland(s) being considered in the cumulative analysis: Pick List proximately () acres in total are being considered in the cumulative analysis.
		7 7 P	jucies in total are being considered in the culturative alialysis.

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. TNWs: linear feet Wetlands adjacent to TNWs:	Check all that apply width (ft), Or, acres.	and provide size estimates in review area: acres.
2.	RPWs that flow directly or indi Tributaries of TNWs where to tributary is perennial:		w year-round are jurisdictional. Provide data and rationale indicating that

	☐ 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.
	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:
SUC	OLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY CH 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:

E.

 ⁸See 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.

	Ider	lentify water body and summarize rationale supporting determination:			
		vide 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.			
	ш	wettands. acres.			
		N-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):			
	facto	vide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR ors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional greent (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.			
	a fin	vide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such ding 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.			
SEC	TIO	N IV: DATA SOURCES.			
		PORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked requested, appropriately reference sources below):			
	\boxtimes	Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Timmons Group . Data sheets prepared/submitted by or on behalf of the applicant/consultant.			
repoi	rt.	Office concurs with data sheets/delineation report. This office agrees with the conclusions of the submitted data sheets and			
•		☐ Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: 1977 Navigability Study. U.S. Geological Survey Hydrologic Atlas: HA 730-G, 1990. ☐ USGS NHD data.			
		☐ USGS 8 and 12 digit HUC maps. 03060103-06 Long Cane Creek U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Shoals Junction Quad. USDA Natural Resources Conservation Service Soil Survey. Citation: SSURGO.			
		National wetlands inventory map(s). Cite name: USFWS Wetland Map. State/Local wetland inventory map(s): FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)			
		Photographs: ☐ Aerial (Name & Date): ESRI. or ☐ Other (Name & Date): Photos taken during Corps site visit on 12/19/2019.			
		Previous determination(s). File no. and date of response letter: Applicable/supporting case law: Applicable/supporting scientific literature: Other information (please specify): Corps Site Visit 12/19/2019.			

B. ADDITIONAL COMMENTS TO SUPPORT JD: The 1,123.9 acre site has 1 isolated wetland. The wetland is 0.16 acre and is located near the middle of the site at the bottom of a slope. The wetland has a berm between it and the closest water of the U.S. There appears to be parts of a swale through the berm, but it is not continuous and there are no signs of flow or a connection. The portions of the swale have no OHWM or signs of relatively permanent flow. There are also no signs of overland sheet flow or any other kind of drainage to serve as a connection. There are no signs of jurisdictional drainage features, shallow subsurface flow, or overland flow

from the isolated wetland to any other waters on-site or off-site. The isolated wetland shows no evidence of biological, chemical, or physical connectivity to waters of the U.S. There is also no apparent connection to interstate or foreign commerce. In addition, there is no apparent evidence of ecological interconnectivity between the isolated wetland and waters of the U.S. This office has determined that the wetland is isolated from waters of the U.S. and is not within jurisdiction of the Clean Water Act.

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

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

SECTION I: BACKGROUND INFORMATION REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 3, 2020 DISTRICT OFFICE, FILE NUMBER, FILE NAME: JD Form 20 of 20; SAC-2019-01728 Hodges Solar C. PROJECT LOCATION AND BACKGROUND INFORMATION: State: South Carolina County/parish/borough: Greenwood County City: Hodges Center coordinates of site (lat/long in degree decimal format): Lat. 34.3087°, Long. -82.2828°. Universal Transverse Mercator: NAD 83 Name of nearest waterbody: Pickens Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: N/A Name of watershed or Hydrologic Unit Code (HUC): 03060103-06 Long Cane Creek 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: 12-May-2020 Field Determination. Date(s): 19-December-2019 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. B. CWA SECTION 404 DETERMINATION OF JURISDICTION. There Are no "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required] 1. Waters of the U.S. a. Indicate presence of waters of U.S. in review area (check all that apply): 1 TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands

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

b. Identify (estimate) size of waters of the U.S. in the review area:

linear feet:

Elevation of established OHWM (if known):

acres.

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: The site has two upland dug ponds (0.17 acre and 1.24 acres). The ponds appear to have been constructed in uplands and not on a water of the U.S. The pond that is 0.17 acre is a portion of a pond that goes off-site. The topo map

acres.

width (ft) and/or

Non-wetland waters:

Wetlands:

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.

shows the pond and a topographically low area nearby, but no blue line is shown on the topo map and no water or evidence of an ordinary high water mark was observed in the potential drainage area during the site visit. It was determined that this pond was not built on a water of the U.S. The pond that is 1.24 acres is not shown on the topo and was not built on a water of the U.S. They are considered upland dug pond and neither are considered a water of the U.S.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

ı.	INW	
	Identify TNW:	

TENTANI

Summarize rationale supporting determination:

Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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 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.

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

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

(ii) Ph

(a)

ıy	sical Characteristi	cs:			
)	Relationship with TNW:				
	☐ Tributary flows		nto TNW.		
	☐ Tributary flows	through l	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.		

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

	Project waters cross or serve as state boundaries. Explain:
	Identify flow route to 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:
	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 destruction of terrestrial vegetation the presence of wrack line sediment sorting sediment sorting sediment deposition multiple observed or predicted flow events 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:
	emical Characteristics: racterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain:

(iii)

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW. ⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

		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.	Cha	aracteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW		
	(i)	Physical Characteristics: (a) General Wetland Characteristics: Properties: Wetland size: acres Wetland type. Explain: Wetland quality. Explain: Project wetlands cross or serve as state boundaries. Explain:		
		(b) General Flow Relationship with Non-TNW: Flow is: Pick List. Explain:		
		Surface flow is: Pick List Characteristics: Subsurface flow: Pick List. Explain findings: Dye (or other) test performed:		
		(c) Wetland Adjacency Determination with Non-TNW: ☐ Directly abutting ☐ Not directly abutting ☐ Discrete wetland hydrologic connection. Explain: ☐ Ecological connection. Explain: ☐ Separated by berm/barrier. Explain:		
		(d) Proximity (Relationship) to TNW Project wetlands are Pick List river miles from TNW. Project waters are Pick List aerial (straight) miles from TNW. Flow is from: Pick List. Estimate approximate location of wetland as within the Pick List floodplain.		
	(ii)	Chemical Characteristics: Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Identify specific pollutants, if known:		
	(iii)	Biological Characteristics. Wetland supports (check all that apply): Riparian buffer. Characteristics (type, average width): Vegetation type/percent cover. Explain: Habitat for: Federally Listed species. Explain findings: Fish/spawn areas. Explain findings: Other environmentally-sensitive species. Explain findings: Aquatic/wildlife diversity. Explain findings:		
3.	Cha	Aracteristics 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. TNWs: linear feet Wetlands adjacent to TNWs:	Check all that apply width (ft), Or, acres.	and provide size estimates in review area: acres.
2.	RPWs that flow directly or indi Tributaries of TNWs where to tributary is perennial:		w year-round are jurisdictional. Provide data and rationale indicating that

	☐ 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.
	Provide estimates for jurisdictional wetlands in the review area: acres.
7.	Impoundments of jurisdictional waters. 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:
SU 	CLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY CH 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:

E.

 ⁸See 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.

	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.
	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): The site has two upland dug ponds (0.17 acre and 1.24 acres). The ponds appear to
	been constructed in uplands and not on a water of the U.S. The pond that is 0.17 acre is a portion of a pond that goes off-site.
	opo map shows the pond and a topographically low area nearby, but no blue line is shown on the topo map and no water or
	nce of an ordinary high water mark was observed in the potential drainage area during the site visit. It was determined that ond was not built on a water of the U.S. The pond that is 1.24 acres is not shown on the topo and was not built on a water of th
	They are considered upland dug pond and neither are considered a water of the U.S.
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> 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.
<u>SEC</u>	TION IV: DATA SOURCES.
A. S	UPPORTING 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: Timmons Group. ✓ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
	☐ Data sheets prepared/submitted by of on behalf of the applicant/consultant. ☐ Office concurs with data sheets/delineation report. This office agrees with the conclusions of the submitted data sheets and
repo	· · · · · · · · · · · · · · · · · · ·
	Office does not concur with data sheets/delineation report.
	□ Data sheets prepared by the Corps: □ Corps navigable waters' study: 1977 Navigability Study.
	U.S. Geological Survey Hydrologic Atlas: HA 730-G, 1990.
	USGS NHD data.
	☐ USGS 8 and 12 digit HUC maps. 03060103-06 Long Cane Creek ☐ USGS 8 and 12 digit HUC maps. 03060103-06 Long Cane Creek
	 ✓ U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Shoals Junction Quad. ✓ USDA Natural Resources Conservation Service Soil Survey. Citation: SSURGO.
	National wetlands inventory map(s). Cite name: USFWS Wetland Map.
	State/Local wetland inventory map(s):
	FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
	Photographs: Aerial (Name & Date): ESRI.
	or ☑ Other (Name & Date): Photos taken during Corps site visit on 12/19/2019.
	Previous determination(s). File no. and date of response letter: Applicable/supporting case law:
	Applicable/supporting case law. Applicable/supporting scientific literature:
	Other information (please specify): Corps Site Visit 12/19/2019.

B. ADDITIONAL COMMENTS TO SUPPORT JD: The site has two upland dug ponds (0.17 acre and 1.24 acres). The ponds appear to have been constructed in uplands and not on a water of the U.S. The pond that is 0.17 acre is a portion of a pond that goes off-site. The topo map shows the pond and a topographically low area nearby, but no blue line is shown on the topo map and no water or evidence of an ordinary high water mark was observed in the potential drainage area during the site visit. It was determined that this pond was not built on a water of the U.S. The pond that is 1.24 acres is not shown on the topo and was not built on a water of the U.S. They are considered upland dug pond and neither are considered a water of the U.S.