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): 20 February 2020

В

B.	DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2014, 00412 - Texas Central Railroad, LLC
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: Texas
D.	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): ☐ Office (Desk) Determination. Date: 20 February 2020 ☐ Field Determination. Date(s):
	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
revi	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:
	CWA SECTION 404 DETERMINATION OF JURISDICTION.
The	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: linear feet: width (ft) and/or acres Wetlands: acres
	c. Limits (boundaries) of jurisdiction based on: 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: SCAS17S11 - an approximate 85 linear foot drainage feature. Based on historic aerial imagery this feature was constructed prior to 1995 and does not re-route a natural tributary. The west end of this feature connects with a roadside ditch which under normal conditions conveys infrequent, low volume, and short duration water flow. As such this feature does not meet the definition of a tributary and is not a water of the United States.

ulated waters/wetlands (check if applicable):

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, fill out Section III.D.2 and 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 water body⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the water body 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

General Area Conditions: Pick List Watershed size: **Pick List** Drainage area: Average annual rainfall: inches Average annual snowfall: inches (ii) Physical Characteristics: 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: (b) General Tributary Characteristics (check all that apply): Natural Tributary is:

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.

		☐ 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 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 distribution 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:
(iii)	Cha	emical Characteristics: uracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: httfy specific pollutants, if known:

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 water body'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)		ogical Characteristics. C Riparian corridor. Charact Wetland fringe. Characte Habitat for: Federally Listed specie Fish/spawn areas. Exp Other environmentally Aquatic/wildlife divers	eteristics (type, average w ristics: es. Explain findings: lain findings: r-sensitive species. Expla	idth):	
2.	Cha	aract	eristics of wetlands adjace	ent to non-TNW that flo	w directly or indirectly into TNW	
	(i)		sical Characteristics: General Wetland Characte Properties: Wetland size: ac Wetland type. Explain Wetland quality. Exp Project wetlands cross or	eres n: lain:	Explain:	
		(b)	General Flow Relationshi Flow is: Pick List . Explai			
			Surface flow is: Pick List Characteristics:			
			Subsurface flow: Pick List Dye (or other) test			
		(c)	Wetland Adjacency Deter Directly abutting Not directly abutting Discrete wetland l Ecological connect Separated by bern	nydrologic connection. E		
		(d)	Proximity (Relationship) Project wetlands are Pick Project waters are Pick L Flow is from: Pick List. Estimate approximate local	List river miles from TN aerial (straight) miles	from TNW.	
	(ii)	Cha	emical Characteristics: racterize wetland system (e characteristics; etc.). Exp attify specific pollutants, if k	lain:	orown, oil film on surface; water qua	ality; general watershed
	(iii		logical Characteristics. W Riparian buffer. Characte Vegetation type/percent of Habitat for: Federally Listed specie Fish/spawn areas. Exp Other environmentally Aquatic/wildlife diverse	ristics (type, average wid over. Explain: es. Explain findings: lain findings: -sensitive species. Expla	th):	
3.	Cha	All	eristics of all wetlands adj wetland(s) being considere proximately () acres i	d in the cumulative analys		
	For	each	wetland, specify the follow	ving:		
			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:

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

1.	TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: TNWs: linear feet width (ft), Or, acres. Wetlands adjacent to TNWs: acres.
2.	RPWs that flow directly or indirectly into TNWs. ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft) Other non-wetland waters: acres Identify type(s) of waters:
3.	Non-RPWs ⁸ that flow directly or indirectly into TNWs. Water body 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

⁸See Footnote # 3.

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.	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).
Е.	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: 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:
roa	dside	Other: (explain, if not covered above): SCAS17S11 – an approximate 85 linear foot drainage feature. Based on historic aerial this feature was constructed prior to 1995 and does not re-route a natural tributary. The west end of this feature connects with a ditch which under normal conditions conveys infrequent, low volume, and short duration water flow. As such this feature does not definition of a tributary and is not a water of the United States.

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.

fac	ovide acreage estimates for non-jurisdic tors (i.e., presence of migratory birds, p gment (check all that apply):				
	Non-wetland waters (i.e., rivers, streat Lakes/ponds: acres.	ms): linear fee	et width (ft).		
		es. List type of aquati	ic resource:		
		c all that apply):	et, width (ft).	ot meet the "Significant Nexus" stand	lard, where such
ш	Wetlands: acres.				
SECTIO	ON IV: DATA SOURCES.				
	PPORTING DATA. Data reviewed for		t apply - checked iter	ms shall be included in case file and,	where checked
and	I requested, appropriately reference sou Maps, plans, plots or plat submitted b		applicant/consultant	t: Delineation report and maps submi	itted by agent.
	Data sheets prepared/submitted by or	on behalf of the app		. Z cimenton repert unu mups suem	ay agami
	Office concurs with data sheets/de		,		
	Office does not concur with data so Data sheets prepared by the Corps:	sneets/delineation rep	ort		
H	Corps navigable waters' study:				
	U.S. Geological Survey Hydrologic A	Atlas:			
_	USGS NHD data				
_	USGS 8 and 12 digit HUC maps				
	Galveston District's Approved List of		75 M' 4 M 1'	· w	
	U.S. Geological Survey map(s). Cite USDA Natural Resources Conservati			a West, Texas	
H	National wetlands inventory map(s).		cy. Citation.		
Ħ	State/Local wetland inventory map(s)				
$\overline{\boxtimes}$			s; Panel No. 48473C	0100E (2/18/2009); Unshaded X Flo	od Zone – area
of 1	minimal flood hazard.				
	100-year Floodplain Elevation is:		ctic Vertical Datum o		
201	15; Digital Globe High Resolution NC	Aerial Imagery - 201			Infrared (CIR) -
	or Other (Name & Dat Previous determination(s). File no. a		etter:		
Ħ	Applicable/supporting case law:	na aute of response is	cttor.		
	Applicable/supporting scientific litera	nture:			
\boxtimes					
1.0	-Meter Bare Earth Digital Elevation Mo	odel (DEM); 2018 To	exas Strategic Mappi	ng (StratMap), 0.5-Meter Bare Earth	ı DEM.
D ADI	DITIONAL COMMENTS TO SUPPO	ODT ID. CCAC17C1	II on annuavimenta	95 linear foot drainage feature. Desc	ad an historic
	nagery this feature was constructed prior				

a roadside ditch which under normal conditions conveys infrequent, low volume, and short duration water flow. As such this feature does not meet the definition of a tributary and is not a water of the United States.

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

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

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 20 February 2020

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2014, 00412 - Texas Central Railroad, LLC

Ь.	DISTRICT OFFICE, FILE NAME, AND NUMBER. Gaiveston District, SWG-2014, 00412 - Texas Central Rainoad, ELC
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: Texas
D.	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): ☐ Office (Desk) Determination. Date: 20 February 2020 ☐ Field Determination. Date(s):
SEC A.	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
	we 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 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): 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: linear feet: width (ft) and/or acres Wetlands: acres
	c. Limits (boundaries) of jurisdiction based on: 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: SCAU17PD10 – an approximate 0.07-acre impoundment feature. Based on historical aerial imagery this feature was constructed in approximate 2015. This feature is an artificial pond created by excavating dry land to collect and retain water, and which is used exclusively for stock watering. Therefore this feature is not a water of the United States.

SECTION III: CWA ANALYSIS

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, fill out Section III.D.2 and 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 water body is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the water body 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

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: (b) General Tributary Characteristics (check all that apply): ☐ Natural Tributary is: Artificial (man-made). Explain:

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.

		☐ 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 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)	Cha	emical Characteristics: uracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: ntify specific pollutants, if known:

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 water body'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)		logical Characteristics. C Riparian corridor. Charact Wetland fringe. Characte Habitat for: Federally Listed specie Fish/spawn areas. Exp Other environmentally Aquatic/wildlife divers	eteristics (type, average wristics: es. Explain findings: lain findings: esensitive species. Expla	idth):	
2.	Cha	aract	eristics of wetlands adjace	ent to non-TNW that flo	w directly or indirectly into TNW	
	(i)	•	rsical Characteristics: General Wetland Character Properties: Wetland size: Wetland type. Explain Wetland quality. Exp Project wetlands cross or	eres n: lain:	Explain:	
		(b)	General Flow Relationship Flow is: Pick List . Explain			
			Surface flow is: Pick List Characteristics:			
			Subsurface flow: Pick List Dye (or other) test			
		(c)	Wetland Adjacency Deter Directly abutting Not directly abutting Discrete wetland l Ecological connect Separated by bern	nydrologic connection. E		
		(d)	Proximity (Relationship) Project wetlands are Pick Project waters are Pick L Flow is from: Pick List. Estimate approximate local	List river miles from TN acrial (straight) miles	from TNW.	
	(ii)	Cha	emical Characteristics: racterize wetland system (e characteristics; etc.). Exp ntify specific pollutants, if k	lain:	orown, oil film on surface; water qua	ality; general watershed
	(iii)		logical Characteristics. W Riparian buffer. Characte Vegetation type/percent of Habitat for: Federally Listed specie Fish/spawn areas. Exp Other environmentally Aquatic/wildlife diverse	ristics (type, average wid over. Explain: es. Explain findings: lain findings: sensitive species. Expla	th):	
3.	Cha	All	eristics of all wetlands adj wetland(s) being considere proximately () acres i	d in the cumulative analy		
	For	each	wetland, specify the follow	ving:		
			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:

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

1.	TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: TNWs: linear feet width (ft), Or, acres. Wetlands adjacent to TNWs: acres.
2.	 RPWs that flow directly or indirectly into TNWs. □ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: □ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft) Other non-wetland waters: acres Identify type(s) of waters:
3.	Non-RPWs ⁸ that flow directly or indirectly into TNWs. Water body 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

⁸See Footnote # 3.

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).
E.	DEC 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
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): SCAU17PD10 – an approximate 0.07-acre impoundment feature. Based on historical aerial this feature was constructed in approximate 2015. This feature is an artificial pond created by excavating dry land to collect and ter, and which is used exclusively for stock watering. Therefore this feature is not a water of the United States.

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.

Provide acreage estimates for non-jurisdictional waters in the review area, wher factors (i.e., presence of migratory birds, presence of endangered species, use of 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.	water for irrigated agriculture), using best professional
Provide acreage estimates for non-jurisdictional waters in the review area that da finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (for Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.	-
SECTION IV: DATA SOURCES.	
A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked and requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant Data sheets prepared/submitted by or on behalf of the applicant/consultant Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report Data sheets prepared by the Corps: Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS NHD data USGS 8 and 12 digit HUC maps Galveston District's Approved List of Navigable Waters U.S. Geological Survey map(s). Cite scale & quad name: 7.5-Minute, Wall USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name: State/Local wetland inventory map(s): FEMA/FIRM maps: Harris County Unincorporated Areas; Panel No. 4820 minimal flood hazard. 100-year Floodplain Elevation is: (National Geodectic Vertical Data Photographs: Aerial (Name & Date): Texas Orthoimagery Program (TC 2015; Digital Globe High Resolution NC Aerial Imagery - 2019; Google Earth or Other (Name & Date): Previous determination(s). File no. and date of response letter: Applicable/supporting case law: Applicable/supporting scientific literature:	tant: Delineation report and maps submitted by agent. er, Texas 1C0160L (6/18/2007); Unshaded X Flood Zone – area of am of 1929) DP), 0.5-meter Near Color (NC) / Color Infrared (CIR) - Aerial Images, 1943 - 2019.
Other information (please specify): Light Detection and Ranging (LiDAR) 1.0-Meter Bare Earth Digital Elevation Model (DEM); 2018 Texas Strategic Management	

B. ADDITIONAL COMMENTS TO SUPPORT JD: SCAU17PD10 – an approximate 0.07-acre impoundment feature. Based on historical aerial imagery this feature was constructed in approximate 2015. This feature is an artificial pond created by excavating dry land to collect and retain water, and which is used exclusively for stock watering. Therefore this feature is not a water of the United States.

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): 20 February 2020

B.	DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2014, 00412 - Texas Central Railroad, LLC
С.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: Texas
D.	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): ☐ Office (Desk) Determination. Date: 20 February 2020 ☐ Field Determination. Date(s): 17 May 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:
B.	CWA SECTION 404 DETERMINATION OF JURISDICTION.
The	re 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): 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: linear feet: width (ft) and/or acres Wetlands: acres
	c. Limits (boundaries) of jurisdiction based on: 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: SCAV17S2 - an approximate 117-foot-long linear drainage feature. Based on historical aerial imagery this feature was constructed at some point before 31 December 1943 associated with development of adjacent rice fields. Hydrology within this feature is artificially maintained via active pumping and is part of a closed network. Therefore, but for the active water pumping into this feature, under normal circumstances this feature exhibits infrequent, short duration, and low volume water flow. This feature is not a re-routed tributary. As such this feature does not meet the definition of a tributary.

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, fill out Section III.D.2 and 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 water body is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the water body 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:

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

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 is:	☐ Natural ☐ Artificial (man-ma ☐ Manipulated (man			in:			
		Average widt Average dept		of bank (esti	mate)	:			
		Primary tributary s Silts Cobbles Bedrock Other. Ex		check all thation. Type/%			☐ Concrete ☐ Muck		
		Presence of run/rif Tributary geometry	n/stability [e.g., highly fle/pool complexes. Ex y: Pick List (approximate average s	xplain:	ughin %	g banks].	Explain:		
	(c)	Describe flow Other information Surface flow is: Pi Subsurface flow: I	number of flow events i	e: es:	a/yea	r: Pick L i	ist		
		clear, chang shelvi veget: leaf li sedim water other	anks (check all indicators that natural line impressed test in the character of string ation matted down, bentter disturbed or washe tent deposition staining	on the bank oil at, or absent d away		destructi the prese sediment scour multiple	ence of litter and det on of terrestrial vegence of wrack line t sorting observed or predict nange in plant comm	etation ed flow events	
		☐ High Tid ☐ oil or ☐ fine s ☐ physi	n the OHWM were use le Line indicated by: scum line along shore hell or debris deposits (cal markings/characteri gauges (list):	objects (foreshore)	Mea	n High W survey to a physical m	ater Mark indicated available datum;	by:	pply):
(iii)	Cha	emical Characteris racterize tributary (Explain: ntify specific polluta	e.g., water color is clea	r, discolored	l, oily	film; wat	er quality; general v	vatershed character	istics, etc.).

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 water body'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)		ogical Characteristics. C Riparian corridor. Charact Wetland fringe. Characte Habitat for: Federally Listed specie Fish/spawn areas. Exp Other environmentally Aquatic/wildlife divers	eteristics (type, average w ristics: es. Explain findings: lain findings: r-sensitive species. Expla	idth):	
2.	Cha	aract	eristics of wetlands adjace	ent to non-TNW that flo	w directly or indirectly into TNW	
	(i)		sical Characteristics: General Wetland Characte Properties: Wetland size: ac Wetland type. Explain Wetland quality. Exp Project wetlands cross or	eres n: lain:	Explain:	
		(b)	General Flow Relationshi Flow is: Pick List . Explai			
			Surface flow is: Pick List Characteristics:			
			Subsurface flow: Pick List Dye (or other) test			
		(c)	Wetland Adjacency Deter Directly abutting Not directly abutting Discrete wetland l Ecological connect Separated by bern	nydrologic connection. E		
		(d)	Proximity (Relationship) Project wetlands are Pick Project waters are Pick L Flow is from: Pick List. Estimate approximate local	List river miles from TN aerial (straight) miles	from TNW.	
	(ii)	Cha	emical Characteristics: racterize wetland system (e characteristics; etc.). Exp attify specific pollutants, if k	lain:	orown, oil film on surface; water qua	ality; general watershed
	(iii		logical Characteristics. W Riparian buffer. Characte Vegetation type/percent of Habitat for: Federally Listed specie Fish/spawn areas. Exp Other environmentally Aquatic/wildlife diverse	ristics (type, average wid over. Explain: es. Explain findings: lain findings: -sensitive species. Expla	th):	
3.	Cha	All	eristics of all wetlands adj wetland(s) being considere proximately () acres i	d in the cumulative analys		
	For	each	wetland, specify the follow	ving:		
			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:

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

1.	TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: TNWs: linear feet width (ft), Or, acres. Wetlands adjacent to TNWs: acres.
2.	RPWs that flow directly or indirectly into TNWs. ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft) Other non-wetland waters: acres Identify type(s) of waters:
3.	Non-RPWs ⁸ that flow directly or indirectly into TNWs. Water body 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

⁸See Footnote # 3.

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.	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).
E.	SUC SUC SUC SUC SUC SUC SUC SUC SUC 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:
		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): SCAV17S2 – an approximate 117-foot-long linear drainage feature. Based on historical agery this feature was constructed at some point before 31 December 1943 associated with development of adjacent rice fields. gy within this feature is artificially maintained via active pumping and is part of a closed network. Therefore, but for the active water

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.

pumping into this feature, under normal circumstances this feature exhibits infrequent, short duration, and low volume water flow. This feature is not a re-routed tributary. As such this feature does not meet the definition of a tributary.

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.
	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.
SECTIO	ON IV: DATA SOURCES.
and	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: Delineation report and maps submitted by agent. Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report Data sheets prepared by the Corps: Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS NHD data USGS NHD data USGS 8 and 12 digit HUC maps Galveston District's Approved List of Navigable Waters U.S. Geological Survey map(s). Cite scale & quad name: 7.5-Minute, Waller, Texas USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name: State/Local wetland inventory map(s): FEMA/FIRM maps: Harris County Unincorporated Areas; Panel No. 48201C0170M (10/16/2013); Unshaded X Flood Zone – area ninimal flood hazard. 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: Aerial (Name & Date): Texas Orthoimagery Program (TOP), 0.5-meter Near Color (NC) / Color Infrared (CIR) - 5; Digital Globe High Resolution NC Aerial Imagery - 2019; Google Earth Aerial Images, 1943 - 2019. or Other (Name & Date): Previous determination(s). File no. and date of response letter: Applicable/supporting case law: Applicable/supporting scientific literature: Other information (please specify): Light Detection and Ranging (LiDAR) Elevation Data: 2008 Houston-Galveston Area Council, Meter Bare Earth Digital Elevation Model (DEM); 2018 Texas Strategic Mapping (StratMap), 0.5-Meter Bare Earth DEM.

B. ADDITIONAL COMMENTS TO SUPPORT JD: SCAV17S2 – an approximate 117-foot-long linear drainage feature. Based on historical aerial imagery this feature was constructed at some point before 31 December 1943 associated with development of adjacent rice fields. Hydrology within this feature is artificially maintained via active pumping and is part of a closed network. Therefore, but for the active water pumping into this feature, under normal circumstances this feature exhibits infrequent, short duration, and low volume water flow. This feature is not a re-routed tributary. As such this feature does not meet the definition of a tributary.

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): 20 February 2020

В

В.	DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2014, 00412 - Texas Central Railroad, LLC
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: Texas County/Parish: Harris City: Houston Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 30.031661° N, Long95.885887° W; Universal Transverse Mercator: UTM: 15N, 3325803 N., 221692 E.,NAD: 83 Name of nearest water body: Little Mound Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: N/A Name of watershed or Hydrologic Unit Code (HUC): Spring, 12040102 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: 20 February 2020 ☐ Field Determination. Date(s):
	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 iew 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 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): 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: linear feet: width (ft) and/or acres Wetlands: acres
	c. Limits (boundaries) of jurisdiction based on: 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: SCAV17S301 – an approximate 89-foot-long linear drainage feature. Based on LiDAR and aerial imagery this

feature is a swale feature between a series of man-made stock ponds. Aerial imagery identifies this feature present in 1943, with the stock ponds being constructed between approximate 1977 and 2003. This feature is not identified as a tributary on the USGS topo quad map, nor does it exhibit an OHWM. As such under normal conditions this feature conveys infrequent,

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.

low volume, and short duration water flow. Therefore this feature does not meet the definition of a tributary and is not a water of the United States.

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, fill out Section III.D.2 and 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 water body⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the water body 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 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 vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition sediment deposition multiple observed or predicted flow events 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)	Cha	emical Characteristics: uracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.) Explain: ntify specific pollutants, if known:

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 water body'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)		logical Characteristics. C Riparian corridor. Charact Wetland fringe. Characte Habitat for: Federally Listed specie Fish/spawn areas. Exp Other environmentally Aquatic/wildlife divers	eteristics (type, average wristics: es. Explain findings: lain findings: esensitive species. Expla	idth):	
2.	Cha	aract	eristics of wetlands adjace	ent to non-TNW that flo	w directly or indirectly into TNW	
	(i)	•	rsical Characteristics: General Wetland Character Properties: Wetland size: Wetland type. Explain Wetland quality. Exp Project wetlands cross or	eres n: lain:	Explain:	
		(b)	General Flow Relationship Flow is: Pick List . Explain			
			Surface flow is: Pick List Characteristics:			
			Subsurface flow: Pick List Dye (or other) test			
		(c)	Wetland Adjacency Deter Directly abutting Not directly abutting Discrete wetland l Ecological connect Separated by bern	nydrologic connection. E		
		(d)	Proximity (Relationship) Project wetlands are Pick Project waters are Pick L Flow is from: Pick List. Estimate approximate local	List river miles from TN acrial (straight) miles	from TNW.	
	(ii)	Cha	emical Characteristics: racterize wetland system (e characteristics; etc.). Exp ntify specific pollutants, if k	lain:	orown, oil film on surface; water qua	ality; general watershed
	(iii)		logical Characteristics. W Riparian buffer. Characte Vegetation type/percent of Habitat for: Federally Listed specie Fish/spawn areas. Exp Other environmentally Aquatic/wildlife diverse	ristics (type, average wid over. Explain: es. Explain findings: lain findings: sensitive species. Expla	th):	
3.	Cha	All	eristics of all wetlands adj wetland(s) being considere proximately () acres i	d in the cumulative analy		
	For	each	wetland, specify the follow	ving:		
			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:

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

1.	TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: TNWs: linear feet width (ft), Or, acres. Wetlands adjacent to TNWs: acres.
2.	RPWs that flow directly or indirectly into TNWs. ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft) Other non-wetland waters: acres Identify type(s) of waters:
3.	Non-RPWs ⁸ that flow directly or indirectly into TNWs. Water body 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

⁸See Footnote # 3.

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.	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).
E.	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:
		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
	□ □ al im	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): SCAV17S301 – an approximate 89-foot-long linear drainage feature. Based on LiDAR and agery this feature is a swale feature between a series of man-made stock ponds. Aerial imagery identifies this feature present in
194	3, W1	th the stock ponds being constructed between approximate 1977 and 2003. This feature is not identified as a tributary on the USGS

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.

topo quad map, nor does it exhibit an OHWM. As such under normal conditions this feature conveys infrequent, low volume, and short duration water flow. Therefore this feature does not meet the definition of a tributary and is not a water of the United States.

fac				ew area, where the <u>sole</u> potential basis of jurisdiction is the MBR species, use of water for irrigated agriculture), using best professional
	Non-wetland waters (i.e., rivers, Lakes/ponds: acres.	, streams):	linear feet	width (ft).
	Other non-wetland waters: Wetlands: acres.	acres. List type	e of aquatic res	esource:
	inding is required for jurisdiction (check all that ap		ew area that do not meet the "Significant Nexus" standard, where such
	Non-wetland waters (i.e., rivers, Lakes/ponds: acres. Other non-wetland waters:	,	linear feet,	width (ft).
	Wetlands: acres.	acres. List typ	e of aquatic re	esource:
<u>SECTI</u>	ON IV: DATA SOURCES.			
	d requested, appropriately reference Maps, plans, plots or plat submit Data sheets prepared/submitted Goffice concurs with data she Office does not concur with Data sheets prepared by the Corcorps navigable waters' study: U.S. Geological Survey Hydrold USGS NHD data USGS 8 and 12 digit HUC n Galveston District's Approved LUSDA Natural Resources Conson National wetlands inventory mastate/Local wetland inventor	te sources below tted by or on belative by or on behalf ets/delineation r data sheets/delineation r data sheets/delineation r data sheets/delineation reduced by the second by the secon	half of the applicant eport. Waters ad name: 7.5-1 Soil Survey. C: ated Areas; Panal Geodectic Corthoimagery gery - 2019; Gresponse letter	-Minute, Magnolia West, Texas Citation: anel No. 48201C0170M (10/16/2013); Unshaded X Flood Zone – ar Vertical Datum of 1929) Program (TOP), 0.5-meter Near Color (NC) / Color Infrared (CIR) Google Earth Aerial Images, 1943 - 2019.

B. ADDITIONAL COMMENTS TO SUPPORT JD: SCAV17S301 – an approximate 89-foot-long linear drainage feature. Based on LiDAR and aerial imagery this feature is a swale feature between a series of man-made stock ponds. Aerial imagery identifies this feature present in 1943, with the stock ponds being constructed between approximate 1977 and 2003. This feature is not identified as a tributary on the USGS topo quad map, nor does it exhibit an OHWM. As such under normal conditions this feature conveys infrequent, low volume, and short duration water flow. Therefore this feature does not meet the definition of a tributary and is not a water of the United States.

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): 20 February 2020

B.	DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2014, 00412 - Texas Central Railroad, LLC
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: Texas
D.	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): ☐ Office (Desk) Determination. Date: 20 February 2020 ☐ Field Determination. Date(s): 15 May 2019
	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
revi	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: CWA SECTION 404 DETERMINATION OF JURISDICTION.
	re 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): 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: linear feet: width (ft) and/or acres Wetlands: acres
	c. Limits (boundaries) of jurisdiction based on: 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: SCAW17S1 - an approximate 166-foot-long linear drainage feature. Based on historical aerial imagery this feature was constructed at some point before 31 December 1943 associated with development of adjacent rice fields. Hydrology within this feature is artificially maintained via active pumping and is part of a closed network. Therefore, but for the active water pumping into this feature, under normal circumstances this feature exhibits infrequent, short duration, and low volume water flow. This feature is not a re-routed tributary. As such this feature does not meet the definition of a tributary.

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, fill out Section III.D.2 and 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 water body is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the water body 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:

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

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 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 shelving vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition multiple observed or predicted flow events 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	mical Characteristics: racterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.) Explain: tify specific pollutants, if known:

⁽iii)

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 water body'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)		logical Characteristics. C Riparian corridor. Charact Wetland fringe. Characte Habitat for: Federally Listed specie Fish/spawn areas. Exp Other environmentally Aquatic/wildlife divers	eteristics (type, average wristics: es. Explain findings: lain findings: esensitive species. Expla	idth):	
2.	Cha	aract	eristics of wetlands adjace	ent to non-TNW that flo	w directly or indirectly into TNW	
	(i)	•	rsical Characteristics: General Wetland Character Properties: Wetland size: Wetland type. Explain Wetland quality. Exp Project wetlands cross or	eres n: lain:	Explain:	
		(b)	General Flow Relationship Flow is: Pick List . Explain			
			Surface flow is: Pick List Characteristics:			
			Subsurface flow: Pick List Dye (or other) test			
		(c)	Wetland Adjacency Deter Directly abutting Not directly abutting Discrete wetland l Ecological connect Separated by bern	nydrologic connection. E		
		(d)	Proximity (Relationship) Project wetlands are Pick Project waters are Pick L Flow is from: Pick List. Estimate approximate local	List river miles from TN acrial (straight) miles	from TNW.	
	 (ii) Chemical Characteristics: Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general waters characteristics; etc.). Explain: Identify specific pollutants, if known: 					ality; general watershed
	(iii)		logical Characteristics. W Riparian buffer. Characte Vegetation type/percent of Habitat for: Federally Listed specie Fish/spawn areas. Exp Other environmentally Aquatic/wildlife diverse	ristics (type, average wid over. Explain: es. Explain findings: lain findings: sensitive species. Expla	th):	
3.	Cha	All	eristics of all wetlands adj wetland(s) being considere proximately () acres i	d in the cumulative analy		
	For	each	wetland, specify the follow	ving:		
			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:

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

1.	TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: TNWs: linear feet width (ft), Or, acres. Wetlands adjacent to TNWs: acres.
2.	 RPWs that flow directly or indirectly into TNWs. □ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: □ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft) Other non-wetland waters: acres Identify type(s) of waters:
3.	Non-RPWs ⁸ that flow directly or indirectly into TNWs. Water body 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

⁸See Footnote # 3.

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.	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).
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:
		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
Нус	□ □ al im	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): SCAW17S1 – an approximate 166-foot-long linear drainage feature. Based on historical agery this feature was constructed at some point before 31 December 1943 associated with development of adjacent rice fields. By within this feature is artificially maintained via active pumping and is part of a closed network. Therefore, but for the active water into this feature, under normal circumstances this feature exhibits infrequent, short duration, and low volume water flow. This
pun	rhrug	into this reactive, under normal electristances this feature exhibits infrequent, short duration, and low volume water flow. This

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.

feature is not a re-routed tributary. As such this feature does not meet the definition of a tributary. infrequent, short duration, and low volume water flow. This feature is not a re-routed tributary. As such this feature does not meet the definition of a tributary.

factors (i. judgment Non- Lake		rds, presence of endangered s	pecies, use of water for irrigate width (ft).	l basis of jurisdiction is the MBR d agriculture), using best professional
a finding i Non- Lake Othe	creage estimates for non-ju- is required for jurisdiction (-wetland waters (i.e., rivers s/ponds: acres. r non-wetland waters: ands: acres.	check all that apply):	width (ft).	gnificant Nexus" standard, where such
SECTION IV	: DATA SOURCES.			
and reque Maps Data Data Corp U.S. USD State FEM of minima 100- Phote 2015; Dig Appl	sted, appropriately references, plans, plots or plat submit sheets prepared/submitted office concurs with data sheets prepared by the Cores navigable waters' study: Geological Survey Hydrold SGS NHD data USGS 8 and 12 digit HUC reston District's Approved I Geological Survey map(s). A Natural Resources Consonal wetlands inventory may Local wetland inventory may Local wetland inventory may I flood hazard. Sear Floodplain Elevation is ographs: A Parial (Name of Local wetlands) A Parial (Name of Local wetlands) The Country of I flood hazard. Sear I flood hazard. Sear I flood hazard. Sear I flood hazard. Sear I floodplain Elevation is ographs: A Parial (Name of Local wetlands) A Parial (Name of Local wetlands). File iicable/supporting case laws iicable/supporting scientificar information (please specifical plates).	e sources below): tted by or on behalf of the applica ets/delineation report. data sheets/delineation report ps: ogic Atlas: naps List of Navigable Waters Cite scale & quad name: 7.5- ervation Service Soil Survey. p(s). Cite name: nap(s): nty Unincorporated Areas; Pa s: (National Geodectic & Date): Texas Orthoimagery NC Aerial Imagery - 2019; C Date): no. and date of response lette literature: fy): Light Detection and Rang	oblicant/consultant: Delineation in nt/consultant. Minute, Hockley, Texas Citation: unel No. 48201C0385N (11/14/2) Vertical Datum of 1929) Program (TOP), 0.5-meter Nea Google Earth Aerial Images, 194 r:	008 Houston-Galveston Area Council,

B. ADDITIONAL COMMENTS TO SUPPORT JD: SCAW17S1 – an approximate 166-foot-long linear drainage feature. Based on historical aerial imagery this feature was constructed at some point before 31 December 1943 associated with development of adjacent rice fields. Hydrology within this feature is artificially maintained via active pumping and is part of a closed network. Therefore, but for the active water pumping into this feature, under normal circumstances this feature exhibits infrequent, short duration, and low volume water flow. This feature is not a re-routed tributary. As such this feature does not meet the definition of a tributary.

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): 20 February 2020

B.	DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2014, 00412 - Texas Central Railroad, LLC
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: Texas
D.	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): ☐ Office (Desk) Determination. Date: 20 February 2020 ☐ Field Determination. Date(s): 15 May 2019
SEC A.	<u>CTION II: SUMMARY OF FINDINGS</u> RHA SECTION 10 DETERMINATION OF JURISDICTION.
revi	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:
	CWA SECTION 404 DETERMINATION OF JURISDICTION.
The	re 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): TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters ² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands
	b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: linear feet: width (ft) and/or acres Wetlands: acres
	c. Limits (boundaries) of jurisdiction based on: Pick List 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: SCAW18S5 – an approximate 1,344-foot-long irrigation ditch, in two sections comprising approximately 1,217.7 feet and 126.7 feet. Based on historical aerial imagery this feature was constructed at some point before 31 December 1977 associated with development of adjacent rice fields. Hydrology within this feature is artificially maintained via active pumping and is part of a closed network. Therefore, but for the active water pumping into this feature, under normal

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.

circumstances this feature exhibits infrequent, short duration, and low volume water flow. This feature is not a re-routed tributary. As such this feature does not meet the definition of a tributary.

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, fill out Section III.D.2 and 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 water body⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the water body 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 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 shelving the presence of wrack line sediment sorting sediment sorting 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:
(iii)	Cha	emical Characteristics: uracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.) Explain: ntify specific pollutants, if known:

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 water body'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)		logical Characteristics. C Riparian corridor. Charact Wetland fringe. Characte Habitat for: Federally Listed specie Fish/spawn areas. Exp Other environmentally Aquatic/wildlife divers	eteristics (type, average wristics: es. Explain findings: lain findings: esensitive species. Expla	idth):	
2.	Cha	aract	eristics of wetlands adjace	ent to non-TNW that flo	w directly or indirectly into TNW	
	(i)	•	rsical Characteristics: General Wetland Character Properties: Wetland size: Wetland type. Explain Wetland quality. Exp Project wetlands cross or	eres n: lain:	Explain:	
		(b)	General Flow Relationship Flow is: Pick List . Explain			
			Surface flow is: Pick List Characteristics:			
			Subsurface flow: Pick List Dye (or other) test			
		(c)	Wetland Adjacency Deter Directly abutting Not directly abutting Discrete wetland l Ecological connect Separated by bern	nydrologic connection. E		
		(d)	Proximity (Relationship) Project wetlands are Pick Project waters are Pick L Flow is from: Pick List. Estimate approximate local	List river miles from TN acrial (straight) miles	from TNW.	
	(ii)	Cha	emical Characteristics: racterize wetland system (e characteristics; etc.). Exp ntify specific pollutants, if k	lain:	orown, oil film on surface; water qua	ality; general watershed
	(iii)		logical Characteristics. W Riparian buffer. Characte Vegetation type/percent of Habitat for: Federally Listed specio Fish/spawn areas. Exp Other environmentally Aquatic/wildlife diverse	ristics (type, average wid over. Explain: es. Explain findings: lain findings: r-sensitive species. Expla	th):	
3.	Cha	All	eristics of all wetlands adj wetland(s) being considere proximately () acres i	d in the cumulative analy		
	For	each	wetland, specify the follow	ving:		
			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:

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

1.	TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: TNWs: linear feet width (ft), Or, acres. Wetlands adjacent to TNWs: acres.
2.	RPWs that flow directly or indirectly into TNWs. ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft) Other non-wetland waters: acres Identify type(s) of waters:
3.	Non-RPWs ⁸ that flow directly or indirectly into TNWs. Water body 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

⁸See Footnote # 3.

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.	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).
E.	SUC SUC SUC	PLATED [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
197	□ □ □ roxin 7 ass	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): SCAW18S5 – an approximate 1,344-foot-long irrigation ditch, in two sections comprising nately 1,217.7 feet and 126.7 feet. Based on historical aerial imagery this feature was constructed at some point before 31 December ociated with development of adjacent rice fields. Hydrology within this feature is artificially maintained via active pumping and is closed network. Therefore, but for the active water pumping into this feature, under normal circumstances this feature exhibits
Part	ora	stored nervota. Therefore, our for the dearte water pumping into this feature, under normal encumbiances this feature exhibits

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.

infrequent, short duration, and low volume water flow. This feature is not a re-routed tributary. As such this feature does not meet the definition of a tributary.

fac	tors (i.e., presence of migratory b			w area, where the <u>sole</u> potential basis of jurisdiction is the MBR pecies, use of water for irrigated agriculture), using best professional
jud 	gment (check all that apply): Non-wetland waters (i.e., river: Lakes/ponds: acres.	s, streams):	linear feet	width (ft).
	Other non-wetland waters: Wetlands: acres.	acres. List ty	pe of aquatic res	source:
	ovide acreage estimates for non-junding is required for jurisdiction Non-wetland waters (i.e., river: Lakes/ponds: acres. Other non-wetland waters: Wetlands: acres.	(check all that as, streams):		w area that do not meet the "Significant Nexus" standard, where such width (ft).
SECTION	ON IV: DATA SOURCES.			
and A	I requested, appropriately referen Maps, plans, plots or plat submitted. □ Office concurs with data sheets prepared/submitted. □ Office does not concur with Data sheets prepared by the Cocorps navigable waters' study: U.S. Geological Survey Hydro. □ USGS NHD data □ USGS 8 and 12 digit HUC Galveston District's Approved. U.S. Geological Survey map(s). USDA Natural Resources Commational wetlands inventory mational wetlands inventory mater/Local wetland inventory. FEMA/FIRM maps: Harris Comminimal flood hazard. 100-year Floodplain Elevation Photographs: ☑ Aerial (Name Previous determination(s). File Applicable/supporting case law Applicable/supporting scientifi Other information (please spec-Meter Bare Earth Digital Elevater).	ce sources belouitted by or on belouitted by or on behale eets/delineation data sheets/delineation data sheets/delineation data sheets/delines: logic Atlas: maps List of Navigab Cite scale & query deservation Servicap(s). Cite nammap(s): unty Unincorpo is: (Nation & Date): & Date): Texas n NC Aerial Im & Date): e no. and date of the control o	w): ehalf of the app f of the applicar report. ineation report le Waters quad name: 7.5-1 ee Soil Survey. Gee: rated Areas; Par onal Geodectic of Orthoimagery agery - 2019; G f response letter ction and Rangi M); 2018 Texas	Minute, Hockley, Texas Citation: nel No. 48201C0385N (11/14/2019); Unshaded X Flood Zone – area Vertical Datum of 1929) Program (TOP), 0.5-meter Near Color (NC) / Color Infrared (CIR) - loogle Earth Aerial Images, 1943 - 2019.

B. ADDITIONAL COMMENTS TO SUPPORT JD: SCAW18S5 – an approximate 1,344-foot-long irrigation ditch, in two sections comprising approximately 1,217.7 feet and 126.7 feet. Based on historical aerial imagery this feature was constructed at some point before 31 December 1977 associated with development of adjacent rice fields. Hydrology within this feature is artificially maintained via active pumping and is part of a closed network. Therefore, but for the active water pumping into this feature, under normal circumstances this feature exhibits infrequent, short duration, and low volume water flow. This feature is not a re-routed tributary. As such this feature does not meet the definition of a tributary.

DRY LAND APPROVED JURISDICTIONAL DETERMINATION FORM¹ U.S. Army Corps of Engineers

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

SECTION I: BACKGROUND INFORMATION

- A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): February 20, 2020
- B. DISTRICT OFFICE, FILE NAME, AND NUMBER: SWG-2014-00412 Texas Central Railroad, LLC
- C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/parish/borough: Harris County City: Houston

Center coordinates of site (lat/long in degree decimal format): Lat. 29.945209 °, Long. -95.664004 °

Universal Transverse Mercator: 15N, 3315699 N, 242875 E, NAD: 83.

Name of nearest waterbody: Horsepen Creek

Name of watershed or Hydrologic Unit Code (HUC): Spring, 12040102.

Check if map/diagram of review area is 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: February 20, 2020

Field Determination. Date(s): May 16, 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.

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.

SECTION III: DATA SOURCES.

	PORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and				
requ	uested, appropriately reference sources below):				
~	Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Wetland delineation submitted by agent.				
	Data sheets prepared/submitted by or on behalf of the applicant/consultant.				
	Office concurs with data sheets/delineation report.				
	Office does not concur with data sheets/delineation report.				
	Data sheets prepared by the Corps: Click here to enter text.				
~	U.S. Geological Survey Hydrologic Atlas: Click here to enter text.				
	USGS NHD data.				
	USGS 8 and 12 digit HUC maps.				
~	U.S. Geological Survey map(s). Cite scale & quad name: 7.5-Minute, Satsuma, Texas				
	USDA Natural Resources Conservation Service Soil Survey. Citation: Click here to enter text.				
	National wetlands inventory map(s). Cite name: Click here to enter text.				
	State/Local wetland inventory map(s): Click here to enter text.				
~	FEMA/FIRM maps: Harris County Incorporated Areas; Panel No. 48201C0410M (10/15/2013); Unshaded X Flood Zone – area of minimul flood hazard.				
	100-year Floodplain Elevation is: Click here to enter text. (National Geodetic Vertical Datum of 1988)				
~	Photographs: Aerial (Name & Date): Texas Orthoimagery Program (TOP), 0.5-meter Near Color (NC) / Color Infrared (CIR) - 2015; Digital Globe High Resolution NC Aerial Imagery - 2019; Google Earth Aerial Images, 1943 - 2019.				
	or Cher (Name & Date): Click here to enter text.				
	Previous determination(s). File no. and date of response letter: Click here to enter text.				
	Applicable/supporting case law: Click here to enter text.				
	Applicable/supporting scientific literature: Click here to enter text.				
~	Other information (please specify): Light Detection and Ranging (LiDAR) Elevation Data: 2008 Houston-Galveston Area Council, 1.0-Meter Bare Earth Digital Elevation Model (DEM): 2018 Texas Strategic Manning (StratMan), 0.5-Meter Bare Earth DEM.				

B. REQUIRED ADDITIONAL COMMENTS TO SUPPORT JD. EXPLAIN RATIONALE FOR DETERMINATION THAT THE REVIEW AREA ONLY INCLUDES DRY LAND: SCAW20S2 – an approximate 3,969-foot-long swale feature with no reliable ordinary high water mark (OHWM) evident. This feature does not re-route a natural tributary and as such does not meet the criteria to be considered a tributary. Additionally, under normal conditions this feature does not meet the three required wetland criteria; therefore this feature is not a wetland.

¹ This form is for use only in recording approved JDs involving dry land. It extracts the relevant elements of the longer approved JD form in use since 2007 for aquatic areas and adds no new fields.

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): 20 February 2020

B.	DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2014, 00412 - Texas Central Railroad, LLC
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: Texas
D.	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): ☐ Office (Desk) Determination. Date: 20 February 2020 ☐ Field Determination. Date(s): 15 May 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 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): 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: linear feet: width (ft) and/or acres Wetlands: acres
	c. Limits (boundaries) of jurisdiction based on: 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: SCAX20S1 - an approximate 1,671-foot-long man-made upland drainage ditch excavated within and draining wholly uplands. The feature is not a re-routed tributary. Under normal circumstances this feature would characterized by infrequent, low volume, and short duration water flow and as such is non-jurisdictional. As such under normal circumstances this feature would not be considered jurisdictional. Based on historic aerial photographs the feature was constructed prior to

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.

December 1977 and did not re-route a natural tributary. The ditch's final configuration was completed between 2010 and 2011.

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, fill out Section III.D.2 and 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 water body⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the water body 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 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. 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)	Cha	emical Characteristics: racterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.) Explain: https://example.com/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racteristics/racter				

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 water body'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)		logical Characteristics. C Riparian corridor. Charact Wetland fringe. Characte Habitat for: Federally Listed specie Fish/spawn areas. Exp Other environmentally Aquatic/wildlife divers	eteristics (type, average wristics: es. Explain findings: lain findings: -sensitive species. Expla	idth):	
2.	Cha	aract	eristics of wetlands adjace	ent to non-TNW that flo	w directly or indirectly into TNW	
	(i)	•	General Wetland Character Properties: Wetland size: Wetland type. Explain Wetland quality. Exp Project wetlands cross or	eres n: lain:	Explain:	
		(b)	General Flow Relationship Flow is: Pick List . Explain			
			Surface flow is: Pick List Characteristics:			
			Subsurface flow: Pick List Dye (or other) test			
		(c)	Wetland Adjacency Deter Directly abutting Not directly abutting Discrete wetland l Ecological connect Separated by bern	nydrologic connection. E		
		(d)	Proximity (Relationship) Project wetlands are Pick Project waters are Pick L Flow is from: Pick List. Estimate approximate local	List river miles from TN aerial (straight) miles	from TNW.	
	(ii)	Cha	emical Characteristics: racterize wetland system (e characteristics; etc.). Exp ntify specific pollutants, if k	lain:	orown, oil film on surface; water qua	ality; general watershed
	(iii)		logical Characteristics. W Riparian buffer. Characte Vegetation type/percent of Habitat for: Federally Listed specio Fish/spawn areas. Exp Other environmentally Aquatic/wildlife diverse	ristics (type, average wid over. Explain: es. Explain findings: lain findings: sensitive species. Expla	th):	
3.	Cha	All	eristics of all wetlands adj wetland(s) being considere proximately () acres in	d in the cumulative analy		
	For	each	wetland, specify the follow	ving:		
			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:

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

1.	TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: TNWs: linear feet width (ft), Or, acres. Wetlands adjacent to TNWs: acres.
2.	RPWs that flow directly or indirectly into TNWs. ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft) Other non-wetland waters: acres Identify type(s) of waters:
3.	Non-RPWs ⁸ that flow directly or indirectly into TNWs. Water body 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

80

⁸See Footnote # 3.

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).
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:
		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: (available if not covered above): SCA Y20S1, an approximate 1, 671 foot long man made upland draining a ditch executed.
	hin aı	Other: (explain, if not covered above): SCAX20S1 – an approximate 1,671-foot-long man-made upland drainage ditch excavated and draining wholly uplands. The feature is not a re-routed tributary. Under normal circumstances this feature would characterized
by:	ıntrec	quent, low volume, and short duration water flow and as such is non-jurisdictional. As such under normal circumstances this feature

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.

would not be considered jurisdictional. Based on historic aerial photographs the feature was constructed prior to December 1977. The ditch's final configuration was completed between 2010 and 2011 and did not re-route a natural tributary.

					v area, where the <u>sole</u> potential basis of jurisdiction is the MBR ecies, use of water for irrigated agriculture), using best professional	
	ment (check all tha		us, presence er	endangered sp	estes, and or material integrated agreements), dening east professional	
	Non-wetland water	rs (i.e., rivers,	streams):	linear feet	width (ft).	
	Lakes/ponds:	acres.	T	c .:		
H	Other non-wetland Wetlands: a		acres. List type	e of aquatic res	ource:	
	wetianus: a	cres.				
a fin	ding is required for	r jurisdiction (c	check all that ap		v area that do not meet the "Significant Nexus" standard, where such	
	Non-wetland wate		streams):	linear feet,	width (ft).	
	Lakes/ponds:	acres.	T	c .:		
H	Other non-wetland Wetlands:	cres.	acres. List typ	e of aquatic res	source:	
	wettands.	cies.				
SECTIO	N IV: DATA SOL	URCES.				
					ly - checked items shall be included in case file and, where checked	
	requested, appropri				icant/consultant: Delineation report and maps submitted by agent.	
	Data sheets prepar					
	Office concurs					
	Office does no					
	Data sheets prepar		os:			
	Corps navigable waters' study:					
	U.S. Geological St. USGS NHD da		gic Atlas:			
	USGS 8 and 12		ans			
	Galveston District			e Waters		
					Minute, Satsuma, Texas	
	USDA Natural Re				Citation:	
	National wetlands		` '	:		
	State/Local wetlan			1 A17	N1 49201 C0410M (10/15/2012) 1 49201 C0420D	
	TEMA/FIRM map 14/2019); Unshade				Numbers 48201C0410M (10/15/2013) and 48201C0420P	
	100-year Floodpla				Vertical Datum of 1929)	
					Program (TOP), 0.5-meter Near Color (NC) / Color Infrared (CIR) -	
					pogle Earth Aerial Images, 1943 - 2019.	
_		Other (Name &				
	Previous determin		no. and date of i	response letter:		
	Applicable/suppor Applicable/suppor		litamatuma			
				tion and Rangir	ng (LiDAR) Elevation Data: 2008 Houston-Galveston Area Council,	
1.0-1	Meter Bare Earth D	Digital Elevatio	n Model (DEM	(); 2018 Texas S	Strategic Mapping (StratMap), 0.5-Meter Bare Earth DEM.	
		<i></i>	- (= ==:-	,, : : : : : : : : : : : : : : : : : :	5 11 6 177	
B. ADD	ITIONAL COMM	IENTS TO SU	JPPORT JD: S	SCAX20S1 – ar	n approximate 1,671-foot-long man-made upland drainage ditch	

B. ADDITIONAL COMMENTS TO SUPPORT JD: SCAX20S1 – an approximate 1,671-foot-long man-made upland drainage ditch excavated within and draining wholly uplands. The feature is not a re-routed tributary. Under normal circumstances this feature would characterized by infrequent, low volume, and short duration water flow and as such is non-jurisdictional. As such under normal circumstances this feature would not be considered jurisdictional. Based on historic aerial photographs the feature was constructed prior to December 1977. The ditch's final configuration was completed between 2010 and 2011 and did not re-route a natural tributary.

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): 20 February 2020

B.	DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2014, 00412 - Texas Central Railroad, LLC
C.	PROJECT LOCATION AND BACKGROUND INFORMATION: State: Texas
D.	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): ☐ Office (Desk) Determination. Date: 20 February 2020 ☐ Field Determination. Date(s): 15 May 2019
	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
revi	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: CWA SECTION 404 DETERMINATION OF JURISDICTION.
	re 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): 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: linear feet: width (ft) and/or acres Wetlands: acres
	c. Limits (boundaries) of jurisdiction based on: 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: SCAX21S2 - an approximate 68-foot-long man-made upland drainage ditch excavated within and draining wholly uplands. Under normal circumstances this feature would characterized by infrequent, low volume, and short duration water flow and as such is non-jurisdictional. Based on historic aerial photographs the feature was constructed in the 2009-2010 timeframe and did not re-route a natural tributary.

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, fill out Section III.D.2 and 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 water body⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the water body 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 Characteristics (check all that apply): Fributary is: Natural Artificial (man-made). Explain: Manipulated (man-altered). Explain:
		Average width: feet Average depth: feet Average side slopes: Pick List
		Primary tributary substrate composition (check all that apply): Silts
		Pributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Pributary geometry: Pick List Pributary gradient (approximate average slope):
	(c)	Flow: Fributary 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:
		Fributary 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 sediment sorting sediment sorting sediment deposition multiple observed or predicted flow events abrupt change in plant community other (list): Discontinuous OHWM. ⁷ Explain:
		f factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by:
(iii)	Cha	cterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.) Explain: fy specific pollutants, if known:

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 water body'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) E	Biological Characteristics. C Riparian corridor. Charact Wetland fringe. Characte Habitat for: Federally Listed speci Fish/spawn areas. Exp Other environmentally Aquatic/wildlife diver	eteristics (type, average wristics: es. Explain findings: lain findings: -sensitive species. Expla		
2.	Chara	acteristics of wetlands adjac	ent to non-TNW that flo	w directly or indirectly into TN	W
		Physical Characteristics: a) General Wetland Characteristics: Wetland size: Wetland type. Explaiteristics: Wetland quality. Exp	eres n: lain:	Explain:	
	(b) General Flow Relationshi Flow is: Pick List. Explain			
		Surface flow is: Pick List Characteristics:			
		Subsurface flow: Pick Lis Dye (or other) test			
	(☐ Ecological connec	nydrologic connection. E		
	(d) Proximity (Relationship) Project wetlands are Pick Project waters are Pick L Flow is from: Pick List. Estimate approximate local	List river miles from TN ist aerial (straight) miles	from TNW.	
	(Chemical Characteristics: Characterize wetland system (contracteristics; etc.). Expedentify specific pollutants, if I	lain:	prown, oil film on surface; water o	quality; general watershed
	(iii) I [[]	Biological Characteristics. V Riparian buffer. Characte Vegetation type/percent c Habitat for: Federally Listed speci Fish/spawn areas. Exp Other environmentally Aquatic/wildlife diver	ristics (type, average wic over. Explain: es. Explain findings: lain findings: r-sensitive species. Expla	th):	
3.	A	acteristics of all wetlands ad All wetland(s) being considere Approximately () acres i	d in the cumulative analy		
	For ea	ach wetland, specify the follow	ving:		
		Directly abuts? (Y/N)	Size (in acres)	<u>Directly abuts? (Y/N)</u>	Size (in acres)

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:

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

1.	TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: TNWs: linear feet width (ft), Or, acres. Wetlands adjacent to TNWs: acres.
2.	RPWs that flow directly or indirectly into TNWs. Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft) Other non-wetland waters: acres Identify type(s) of waters:
3.	Non-RPWs ⁸ that flow directly or indirectly into TNWs. Water body 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.

⁸See Footnote #3.

	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.	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).
SUC 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:
	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
NO	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.

E.

F.

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.

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, when	
	proximate 68-foot-long man-made upland drainage ditch excavated
within and draining wholly uplands. Under normal circumstances th	is feature would characterized by infrequent, low volume, and short
duration water flow and as such is non-jurisdictional. Based on history	ric aerial photographs the feature was constructed in the 2009-2010
timeframe and did not re-route a natural tributary.	
·	
Provide acreage estimates for non-jurisdictional waters in the re	view area, where the sole potential basis of jurisdiction is the MBR
	d species, use of water for irrigated agriculture), using best professional
judgment (check all that apply):	a species, use of water for irrigated agriculture), using best professional
Non-wetland waters (i.e., rivers, streams): linear feet	width (ft).
	widii (ii).
Lakes/ponds: acres.	
Other non-wetland waters: acres. List type of aquation	e resource:
Wetlands: acres.	
	view 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 aquati	c resource:
Wetlands: acres.	
_	
SECTION IV: DATA SOURCES	
SECTION IV: DATA SOURCES.	
	annly chacked items shall be included in case file and where checked
A. SUPPORTING DATA. Data reviewed for JD (check all that	apply - checked items shall be included in case file and, where checked
A. SUPPORTING DATA. Data reviewed for JD (check all that and requested, appropriately reference sources below):	
 A. SUPPORTING DATA. Data reviewed for JD (check all that and requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the 	applicant/consultant: Delineation report and maps submitted by agent.
 A. SUPPORTING DATA. Data reviewed for JD (check all that and requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the application. Data sheets prepared/submitted by or on behalf of the application. 	applicant/consultant: Delineation report and maps submitted by agent.
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B. ADDITIONAL COMMENTS TO SUPPORT JD: SCAX21S2 – an approximate 68-foot-long man-made upland drainage ditch excavated within and draining wholly uplands. Under normal circumstances this feature would characterized by infrequent, low volume, and short duration water flow and as such is non-jurisdictional. Based on historic aerial photographs the feature was constructed in the 2009-2010 timeframe and did not re-route a natural tributary.

DRY LAND APPROVED JURISDICTIONAL DETERMINATION FORM¹ U.S. Army Corps of Engineers

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

SECTION I: BACKGROUND INFORMATION

- A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): February 20, 2020
- B. DISTRICT OFFICE, FILE NAME, AND NUMBER: SWG-2014-00412 Texas Central Railroad, LLC
- C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/parish/borough: Harris County City: Houston

Center coordinates of site (lat/long in degree decimal format): Lat. 29.880853 °, Long. -95.572647 °

Universal Transverse Mercator: 15N, 3308363 N, 251536 E, NAD: 83.

Name of nearest waterbody: Whiteoak Bayou South Fork

Name of watershed or Hydrologic Unit Code (HUC): Buffalo-San Jacinto, 12040104.

Check if map/diagram of review area is 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: February 20, 2020

Field Determination. Date(s): May 15, 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.

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.

SECTION III: DATA SOURCES.

	rokting DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and lested, appropriately reference sources below):
req.	Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: <i>Click here to enter text</i> .
	Data sheets prepared/submitted by or on behalf of the applicant/consultant.
	Office concurs with data sheets/delineation report.
	Office does not concur with data sheets/delineation report.
	Data sheets prepared by the Corps: Click here to enter text.
~	U.S. Geological Survey Hydrologic Atlas: Click here to enter text.
	USGS NHD data.
	USGS 8 and 12 digit HUC maps.
~	U.S. Geological Survey map(s). Cite scale & quad name: 7.5-Minute, Hedwig Village, Texas
	USDA Natural Resources Conservation Service Soil Survey. Citation: Click here to enter text.
	National wetlands inventory map(s). Cite name: Click here to enter text.
	State/Local wetland inventory map(s): Click here to enter text.
~	FEMA/FIRM maps: Harris County Unincorporated Areas; Panel No. 48201C0440N (11/15/2019); Shaded X Flood Zone – 0.2% annual chance flood hazard.
	100-year Floodplain Elevation is: Click here to enter text. (National Geodectic Vertical Datum of 1929)
~	Photographs: Aerial (Name & Date): Texas Orthoimagery Program (TOP), 0.5-meter Near Color (NC) / Color Infrared (CIR) - 2015; Digital Globe High Resolution NC Aerial Imagery - 2019; Google Earth Aerial Images, 1943 - 2019.
	or Cher (Name & Date): Click here to enter text.
	Previous determination(s). File no. and date of response letter: Click here to enter text.
	Applicable/supporting case law: Click here to enter text.
	Applicable/supporting scientific literature: Click here to enter text.
~	Other information (please specify): Light Detection and Ranging (LiDAR) Elevation Data: 2008 Houston-Galveston Area Council, 1.0-Meter Bare Farth Digital Elevation Model (DEM): 2018 Texas Strategic Manning (StratMan), 0.5-Meter Bare Farth DEM

B. REQUIRED ADDITIONAL COMMENTS TO SUPPORT JD. EXPLAIN RATIONALE FOR DETERMINATION THAT THE REVIEW AREA ONLY INCLUDES DRY LAND: SCAY22EW5 - 0.72-acre shallow closed depressional area. This area is located in the shaded-X flood risk zone (500-year floodplain), and as such hydrology is principally precipitation driven except in extraordinary circumstances when it may be subject to overbank flooding from White Oak Bayou South Fork. Based on a review of LiDAR data for the area, under normal circumstances this area lacked sufficient wetland hydrology and would therefore not meet the three required wetland criteria.

¹ This form is for use only in recording approved JDs involving dry land. It extracts the relevant elements of the longer approved JD form in use since 2007 for aquatic areas and adds no new fields.