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): 02/14/2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:SWG-2021-00786, HCFCD, Q122-00-00

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. 29.86413° **N**, Long. 95.00931° **W**.
Universal Transverse Mercator: 15R 305923.05 E, 3305424.98 N
Name of nearest waterbody: Cedar Bayou (Q100-00-00; non-navigable section)
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Cedar Bayou (Q100-00-00; navigable segment begins upstream of Interstate Highway (IH) 10 near Highlands, Texas in Chambers/Harris County to Galveston Bay)
Name of watershed or Hydrologic Unit Code (HUC): Adlong Ditch-Cedar Bayou watershed (HUC10-1204020301)
☒ 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: 02/22/2022
☒ Field Determination. Date(s): Consultabt, June 7-10, 2021; June 23-25, 2021; July 9-13, 2021; August 3, 2021

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **are and are not** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. Waters of the U.S.

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

b. Identify (estimate) size of waters of the U.S. in the review area:
Non-wetland waters: Relatively Permanent Tributary linear feet: 16,966 linear-feet 11' width (ft) and/or Open Water 0.05 acres.
Wetlands: 53.97 acres.

c. Limits (boundaries) of jurisdiction based on: **1987 Delineation Manual**
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: **RD-1 and RD-2 are roadside drainage ditches along Krampota Road constructed in upland areas. These features are located outside the 100-year floodplain of Q122-00-00, do not re-align a tributary, do not maintain a**

[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.

relatively permanent flow of water, and were not constructed with the intent to drain wetlands. Therefore, RD-1 and RD-2 would not be considered WOTUS and would not be subject to USACE jurisdiction under Section 404.

Similarly, the agricultural drainage ditches observed within the study area (AD-1 through AD-8) do not carry a relatively permanent flow of water nor do they appear to realign any portion of the local surface tributary system. Although, features AD-1 and AD-2 are present as linear intermittent streams on topographic maps dating back to 1916, there are no contour elements to suggest the realignment of a tributary. Therefore, AD-1 and AD-2 were likely constructed as agricultural ditches prior to 1916. Features AD-3 through AD-8 appear to be constructed in upland areas exclusively for agricultural purposes. As such, features AD-1 through AD-8 should not be considered WOTUS and would not be subject to USACE jurisdiction under Section 404.

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SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW
Identify TNW: .

Summarize rationale supporting determination: .

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

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

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

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

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

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

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

(i) General Area Conditions:
Watershed size: 202 **square miles**
Drainage area: Cedar Bayou - 42 river miles **Pick List**
Average annual rainfall: 66.34 inches
Average annual snowfall: 0 inches

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

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

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

Identify flow route to TNW[5]: IS-1 is an intermittent stream segment that transitions to PS-1, a perennial stream segment of Q122-00-00. Q122-00-00 is a first order stream (Figure 6.0) with relatively permanent flow, and is a tributary to Cedar Bayou (TNW).
Tributary stream order, if known: 1.

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: Review of historical topographic maps and aerials indicate that Q122-00-00 (RPW) was channelized and relocated portions of a natural tributary to Cedar Bayou (TNW).

Tributary properties with respect to top of bank (estimate):
Average width: 6 feet
Average depth: 1 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):

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

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): 2 %

(c) Flow:
Tributary provides for: **Intermittent but not seasonal flow**
Estimate average number of flow events in review area/year: **2-5**
Describe flow regime: The tributary begins with an intermittent flow regime in the upper reach then transitions to perennial flow in the lower reach.
Other information on duration and volume: .

Surface flow is: **Confined.** Characteristics: The surface flow is confined to the OHWM.

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

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):

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

☐ Discontinuous OHWM.[7] Explain: .

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

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

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

(iii) Chemical Characteristics:

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

Explain: Intermittent tributary coloration appeared to be slightly muddy, likely due to sedimentation. Impairments include: bacterial presence, dissolved oxygen levels, an poor nutrient levels. Additionally, agricultural/industrial runoff may contribute to the poor water quality within the tributary.

Identify specific pollutants, if known: .

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

☒ Riparian corridor. Characteristics (type, average width): .

☒ Wetland fringe. Characteristics: .

☒ Habitat for:

☐ Federally Listed species. Explain findings: .

☒ Fish/spawn areas. Explain findings: Multiple species of small fish were observed utilizing the perennial (downstream) portions of Q122-00-00 during the site investigations.

☐ Other environmentally-sensitive species. Explain findings: .

☐ Aquatic/wildlife diversity. Explain findings: .

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

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: 57.931 acres

Wetland type. Explain: 1 Scrub-Shrub wetland (SSW-1: 35.572 acres), 2 emergent wetlands (EW-1 and EW-2: 10.696 acres), 3 Forested wetlands (FW-1 through FW-3: 7.991 acres), and one open water feature (OW-1) .

Wetland quality. Explain: Moderate.

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

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: Desktop evaluations utilizing the National Hydrography Dataset and during the site investigations depict an intermittent flow regime.

Surface flow is**: Not present**

Characteristics: Surface flow was present, but pooled.

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

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☒ Not directly abutting

☒ Discrete wetland hydrologic connection. Explain: EW-1, EW-2, SSW-1, FW-1, and FW-3 are located within the 100-year floodplain of Q122-00-00 (RPW). Furthermore, hydrologic/hydraulic modeling for the project area suggests that Q122-00-00 experiences overbank flooding during a 2-year storm event. This demonstrates a more frequent direct hydrologic connection between Q122-00-00 and the adjacent wetland areas..

☒ Ecological connection. Explain: These features serve as a buffer between adjacent uplands and Q122-00-00, functioning to capture sediment and pollutants from surface water runoff before entering Q122-00-00 (RPW) which flows directly into Q100-00-00 (TNW).

☒ Separated by berm/barrier. Explain: A berm is present along banks of the Q122-00-00 channel; however, there are several gaps in the berm that could allow floodwaters to inundate these wetland areas .

(d) Proximity (Relationship) to TNW

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

Project waters are **1-2** aerial (straight) miles from TNW.

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

Estimate approximate location of wetland as within the **100 - 500-year**floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Pooled surface water was present and appeared to be of moderate water quality .

Identify specific pollutants, if known: .

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

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

☐ Vegetation type/percent cover. Explain: .

☐ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☐ Aquatic/wildlife diversity. Explain findings: .

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

All wetland(s) being considered in the cumulative analysis: **15-20**

Approximately (247.95) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
See Attached Table			

Summarize overall biological, chemical and physical functions being performed: See below C. 3.

C. SIGNIFICANT NEXUS DETERMINATION

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

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

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

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

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

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
   The NWI map identifies 7.16 acres of off-site emergent wetlands and 188 acres of off-site forested/shrub wetland within this relevant reach. Additionally, field investigations within the project study area identified 10.7 acres of emergent wetlands and 43.56 acres of forested/shrub wetlands within this relevant reach. The USACE Galveston District's interpretation of "adjacent" under 2008 post-Rapanos guidance generally begins with wetlands located within the 100-year floodplain. All of the wetlands noted above fall at least partially within the 100-year floodplain or are part of a complex that partially falls within the 100-year floodplain.
   Wetland features EW-1, EW-2, SSW-1, FW-1, FW-2, and FW-3 comprise 54.26 acres of wetlands adjacent to the relevant reach of Q122-00-00 being evaluated. These wetlands are approximately 1.4 stream miles from the nearest TNW (Cedar Bayou) and maintain a direct hydrologic connection via Q122-00-00, a relatively permanent tributary. Through this connection, these wetlands serve to aid in the reduction of chemical pollutants from adjacent land uses (agriculture, petrochemical, industrial, and transportation) flowing into Cedar Bayou (Q100-00-00). Cedar Bayou (Q100-00-00) is listed on the Texas Commission on Environmental Quality (TCEQ) 303(d) list as impaired for depressed dissolved oxygen (DO). According to the EPA , potential causes of DO include agricultural and urban runoff, removal of riparian vegetation, and industrial point sources. Additionally, riparian forested wetlands provide canopy coverage that help to maintain lower water temperatures by shading Q122-00-00 and Cedar Bayou (Q100-00-00) and reducing solar warming, which can also contribute to depressed DO. Therefore, the wetlands within this relevant reach provide more than a speculative or insubstantial effect on the chemical integrity of a TNW (Cedar Bayou, Q100-00-00) by attenuating inputs that could further depress DO within the system. The 54.26 acres of on-site wetlands, and the almost 200 acres of similarly situated (mostly forested/shrub wetlands) off-site wetlands within the relevant reach provide benefits

to the physical integrity of Cedar Bayou (Q100-00-00) by retaining floodwaters, reducing velocities during overbank events, and stabilizing soils. Removing these wetlands from the system would result in increased sediment load within the Q122-00-00 and Cedar Bayou (Q100-00-00) channels, as well as increased volume and velocity. These increases would contribute to erosion and sedimentation within Cedar Bayou (Q100-00-00) which would constitute alteration/degradation to the physical attributes of a TNW. Therefore, the wetlands identified in this relevant reach provide more than a speculative or insubstantial effect on the physical integrity of the downstream TNW (Cedar Bayou, Q100-00-00).

During the field investigation, observations of various aquatic fauna were made within the Q122-00-00 channel. This included fish, aquatic macroinvertebrates, and amphibians. Additionally, evidence suggesting aquatic life use of the adjacent on-site wetland areas including aquatic macroinvertebrates (crayfish burrows) and amphibians (frogs, toads, and tadpoles in standing pools) was observed. Additionally, the on-site and off-site adjacent wetlands aid in providing habitat for terrestrial species that rely on aquatic fauna as a food source (e.g. birds, racoons, etc.). While there is insufficient evidence to identify aquatic species that require this relevant reach to fulfill their lifecycle requirements, observations of aquatic fauna and proximity to the TNW (approximately 1.4 stream miles) suggest that there is a regular interplay of aquatic wildlife between Q122-00-00, it's adjacent wetlands, and Cedar Bayou (Q100-00-00). This demonstrates more than a speculative or insubstantial effect on the biological integrity of a TNW (Cedar Bayou, Q100-00-00).

In conclusion, there is sufficient evidence to support the statement that the on-site wetlands (EW-1, SSW-1, FW-1, FW-2, and FW-3), in combination with off-site similarly situated wetlands totalling 247.95 acres of wetlands identified within this relative reach of Q122-00-00, a relatively permanent tributary, provide a significant nexus (more than a speculative or insubstantial effect) to the chemical, physical, and/or biological integrity of the downstream TNW (Cedar Bayou, Q100-00-00). As such, these wetlands would be considered WOTUS and subject to USACE jurisdiction under Section 404. Open water feature OW-1 is a man-made feature that appears to have been excavated in a wetland area (EW-2/SSW-1). Additional review of Google Earth imagery indicates that OW-1 was excavated between 1978 and 1989. Because OW-1 falls within the 100-year floodplain limits of Q122-00-00 and appears to have been excavated in a wetland area are that maintains a significant nexus to a TNW, this feature would be classified as a WOTUS. .

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: This determination was based on presence on topographic maps dating back to 1916 and field observations of flow.
- ☐ 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: **16,966** linear feet **11 feet** width (ft).
- ☐ Other non-wetland waters: acres.
  Identify type(s) of waters: .

3. Non-RPWs[8] that flow directly or indirectly into TNWs.
- ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.
- ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
- ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

[8]See Footnote # 3.

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

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

Identify water body and summarize rationale supporting determination: .

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

☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: Open Water Feature, excavated within a wetland area (EW-2/SSW-1).
☐ Wetlands: acres.

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

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☒ Other: (explain, if not covered above): **Roadside Ditches RD-1, RD-2, and Agricultural Ditches AD-1 through AD-8.**

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

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[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.***

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

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

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: See Halff Associates Waters of the United States Delineation Report Dated January 2022.
☒ 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.
☒ U.S. Geological Survey map(s). Cite scale & quad name: 7.5-Minute Crosby, Cedar Bayou, and Burnett Bay, Texas quadrangles.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: USDA Web Soil Survey for Harris County, 2021.
☒ National wetlands inventory map(s). Cite name: USFWS NWI Wetlands Mapper, 2021.
☐ State/Local wetland inventory map(s): .
☒ FEMA/FIRM maps: NFHL.
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): Google Earth Imagery for 1943, 1977, 1988, 1995, 2004, 2006, 2010, and 2018, and 2021 NearMap WMS Server.
  or ☐ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: SWG-2020-00146, June 17, 2020..
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: N/A or provide additional discussion as appropriate..

Table 1 - On-Site Wetlands in Relative Reach

Wetland Name	Source	Directly Abuts (Y/N)	Size (Acres)
EW-3	Halff Delineation	N	9.88
EW-4	Halff Delineation	N	0.82
FW-1	Halff Delineation	N	6.91
FW-2	Halff Delineation	N	0.47
FW-3	Halff Delineation	N	0.37
SSW-1	Halff Delineation	N	35.51
		TOTAL =	**53.97 ACRES**

Table 2 - Off-Site Wetlands in Relative Reach

Wetland Name	Source	Directly Abuts (Y/N)	Size (Acres)
PEM1	NWI		2.09
PEM2	NWI		0.72
PEM3	NWI		1.29
PEM4	NWI		0.44
PEM5	NWI		0.53
PEM6	NWI		0.17
PEM7	NWI		0.6
PFO1	NWI		1.71
PFO2	NWI		0.74
PFO3	NWI		173.19
PSS1	NWI		1.41
PSS2	NWI		1.07
PSS3	NWI		4.88
PSS4	NWI		5.13
		TOTAL =	**193.98 ACRES**