

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): 02/12/2013

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston, Holzworth Road South, SWG-2012-00927

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: TX County/Parish/Borough: Harris City: Spring

Center coordinates of site (lat/long in degree decimal format): Lat. 30.073492, Long. -95.447987

Universal Transverse Mercator: UTM, Zone 15N, NAD83 264035.48 m E, 3329455.90 m N

Name of nearest waterbody: HCFCD Channel No. K120-01-00

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Not Applicable

Name of watershed or Hydrologic Unit Code (HUC): 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: 02/12/2013

Field Determination. Date(s): 9/7/2012

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.

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: Not Applicable.

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.

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review (project) area (check all that apply):¹

TNWs, including territorial seas

Wetlands adjacent to TNWs

Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs

Non-RPWs that flow directly or indirectly into TNWs

Wetlands directly abutting RPWs that flow directly or indirectly into TNWs

Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs

Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs

Impoundments of jurisdictional waters

Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: --- linear feet; --- width (ft) and/or --- acres.

Wetlands: --- acres.

c. Limits (boundaries) of jurisdiction based on: Field Delineation.

Elevation of established OHWM (if known): Not Applicable.

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

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

Wetland Areas 3A & 3B (0.0115 acres) consists of low areas on the landscape. Surface water run-off from the surrounding upland areas located north, south, and west contribute to accumulated water in this wetland during and following rainfall events. Only a small area of these wetlands are located within the proposed Holzwarth Road right-of-way, the wetland area overall is relatively well-defined with no hydrologic connection to a downstream waterbody.

Wetland Areas 3A & 3B were identified using the 1987 Manual and appropriate Regional Supplement that requires all three mandatory wetland criteria be present, under normal circumstances, to be classified as a "wetland." The wetlands are located in a landscape formation that is slightly depressed and in a receiving position that allows for seasonal hydrology (associated with precipitation events) necessary for wetlands to establish. These wetlands are surrounded by uplands (to the north, south and west) and Spring west Road (to the east). HCFCD Channel No. K120-01-00 (Senger Gully) the nearest water of the US is located 1,300 feet to the southwest of Wetland Areas 3A & 3B. Uplands surrounding Wetland Areas 3A & 3B range from 0.5 to 2 feet higher in elevation than the wetland. Wetland Areas 3A & 3B and the surrounding uplands are located in Zone X, areas determined to be outside the 500-year floodplain.

Wetland Areas 3A & 3B are not located in a reasonable close proximity to any waters of the U.S. (neither on a horizon and vertical geometric plane). As such, under normal conditions in the hydrologic cycle, they would not be anticipated to share surface hydrology with the nearest waters of the U.S. They are not tidal waters, nor part of a surface tributary system to interstate waters or navigable waters of the U.S. nor are they located "adjacent" (as defined in federal regulations) to any tributary waters; as such they have been determined to be "ISOLATED" as defined in federal regulations (33 CFR 330.2(e)).

"Adjacent" as per Federal regulations 33 CFR 328.3(c) is defined: "bordering, contiguous or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes and the like are 'adjacent wetlands'." The nearest waters of the U.S. to Wetland Areas 3A & 3B is HCFCD Channel No. K120-01-00. Wetland Areas 3A & 3B do not border nor are they contiguous (abutting) to HCFCD Channel No. K120-01-00. Wetland Area 3A & 3B are not neighboring HCFCD Channel No. K120-01-00 as determined by the fact that they are, under normal conditions in the hydrologic cycle, not located in a reasonably close proximity (both on the horizon and vertical geometric plane) to another water of the United States (and are not located in a contiguous nor bordering landscape position) that would have shared surface hydrology with the another water of the US (HCFCD Channel No. K120-01-00) during expected high flow (e.g. the 100-year floodplain). Nor is there any known species demonstrable ecological interconnection requiring both the wetland in question and the nearest waters of the U.S. to spawn and/or fulfill their life cycle requirements. Wetland Area 3A & 3B are physically separated from other waters of the U.S. by geographic factors that do not allow the exchange waters, via a confined surface hydrology connection during normal conditions and they are not inseparably bound with HCFCD Channel No. K120-01-00.

"Isolated" waters as defined in 33 CFR 330.2 (e) is: "those non-tidal waters of the U.S. that are: (1) not part of a surface tributary system to interstate or navigable waters of the U.S.; and (2) not adjacent to such tributary waterbodies." Wetland Areas 3A & 3B have been identified as wetlands (aquatic resources) that have been determined to be isolated.

"Waters of the U.S." are defined in 33 CFR 328.3 (a) 1 thru 7 which is addressed in the following. Due to the fact that these wetlands: (1) are not currently used, or was used in the past, nor susceptible to use for interstate or foreign commerce nor subject to the ebb and flow of the daily tide; (2) do not cross interstate or tribal boundaries; (3) the destruction of these wetlands is not expected to affect (i) interstate or foreign travelers for recreational purposes or other purposes or, (ii) fish or shellfish that could be taken and sold in interstate or foreign commerce or (iii) current use or potential use for industrial purposes by industries in interstate commerce; (4) are not impoundments of waters of the U.S.; (5) are not part of a surface tributary system of (a) (1) through (4); (6) are not part of the territorial seas; and (7) are not adjacent to waters of the U.S. identified in (a) (1) through (6) these are not waters of the U.S.

In conclusion, SWG has been determined that there are isolated wetlands on the site that are not waters of the U.S. subject to federal jurisdiction under Section 404 of the Clean Water Act.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW: Not Applicable.

Summarize rationale supporting determination: Not Applicable.

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": Not Applicable.

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: Not Applicable
Drainage area: Not Applicable
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: Not Applicable.

Identify flow route to TNW⁵: Not Applicable.
Tributary stream order, if known: Not Applicable.

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

Tributary is: Natural
 Artificial (man-made). Explain: Not Applicable.
 Manipulated (man-altered). Explain: Not Applicable.

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: Not Applicable.
 Other. Explain: Not Applicable.

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Not Applicable.
Presence of run/riffle/pool complexes. Explain: Not Applicable.

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 geometry: **Pick List**
Tributary gradient (approximate average slope): Not Applicable.

(c) Flow:

Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: Not Applicable.
Other information on duration and volume: Not Applicable.

Surface flow is: **Pick List**. Characteristics: Not Applicable.

Subsurface flow: **Pick List**. Explain findings: Not Applicable.
 Dye (or other) test performed: Not Applicable.

Tributary has (check all that apply):

- Bed and banks
 - OHWM⁶ (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): Not Applicable
 - Discontinuous OHWM.⁷ Explain: Not Applicable.
- | |
|---|
| <input type="checkbox"/> the presence of litter and debris |
| <input type="checkbox"/> destruction of terrestrial vegetation |
| <input type="checkbox"/> the presence of wrack line |
| <input type="checkbox"/> sediment sorting |
| <input type="checkbox"/> scour |
| <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> abrupt change in plant community |

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

- | | |
|---|--|
| <input type="checkbox"/> High Tide Line indicated by: <ul style="list-style-type: none"><input type="checkbox"/> oil or scum line along shore objects<input type="checkbox"/> fine shell or debris deposits (foreshore)<input type="checkbox"/> physical markings/characteristics<input type="checkbox"/> tidal gauges<input type="checkbox"/> other (list): Not Applicable | <input type="checkbox"/> Mean High Water Mark indicated by: <ul style="list-style-type: none"><input type="checkbox"/> survey to available datum;<input type="checkbox"/> physical markings;<input type="checkbox"/> vegetation lines/changes in vegetation types. |
|---|--|

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: Not Applicable.
Identify specific pollutants, if known: None Known.

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

- Riparian corridor. Characteristics (type, average width): Not Applicable.
- Wetland fringe. Characteristics: Not Applicable.
- Habitat for:
 - Federally Listed species. Explain findings: Not Applicable.
 - Fish/spawn areas. Explain findings: Not Applicable.
 - Other environmentally-sensitive species. Explain findings: Not Applicable.
 - Aquatic/wildlife diversity. Explain findings: Not Applicable.

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: --- acres
Wetland type. Explain: Not Applicable.
Wetland quality. Explain: Not Applicable.
Project wetlands cross or serve as state boundaries. Explain: Not Applicable.

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: Not Applicable.

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

⁷Ibid.

Surface flow is: **Pick List**
Characteristics: Not Applicable.

Subsurface flow: **Pick List**. Explain findings: Not Applicable.
 Dye (or other) test performed: Not Applicable.

- (c) Wetland Adjacency Determination with Non-TNW:
- Directly abutting
 - Not directly abutting
 - Discrete wetland hydrologic connection. Explain: Not Applicable.
 - Ecological connection. Explain: Not Applicable.
 - Separated by berm/barrier. Explain: Not Applicable.

- (d) Proximity (Relationship) to TNW
Project wetlands are **Pick List** river miles from TNW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Flow is from: **Pick List**.
Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Not Applicable.
Identify specific pollutants, if known: Not Applicable.

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

- Riparian buffer. Characteristics (type, average width): Not Applicable.
- Vegetation type/percent cover. Explain: Not Applicable.
- Habitat for:
 - Federally Listed species. Explain findings: Not Applicable.
 - Fish/spawn areas. Explain findings: Not Applicable.
 - Other environmentally-sensitive species. Explain findings: Not Applicable.
 - Aquatic/wildlife diversity. Explain findings: Not Applicable.

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

All wetland(s) being considered in the cumulative analysis: **Pick List**
Approximately --- acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
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Summarize overall biological, chemical and physical functions being performed: Not Applicable.

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: (this will be the same as the box marked on SECTION II 1 a and MUST include a statement of how it significantly affects or does not significantly affect the TNW {significantly affect = more than speculative or insubstantial)

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: Not Applicable.
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: Not Applicable.
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: Not Applicable.

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: Not Applicable.
 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: Not Applicable.

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: Not Applicable.

3. **Non-RPWs⁸ 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: Not Applicable.

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: Not Applicable.
 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: Not Applicable.

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 jurisdictional. 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.**

⁸See Footnote # 3.

- 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: this must tie the water back to interstate commerce nexus.
 Other factors. Explain: Not Applicable.

Identify water body and summarize rationale supporting determination: Not Applicable.

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: Not Applicable.
 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): Not Applicable.

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

- Non-wetland waters (i.e., rivers, streams): --- linear feet; --- width (ft).
 Lakes/ponds: --- acres.
 Other non-wetland waters: --- acres. List type of aquatic resource: Not Applicable.
 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: Not Applicable.
 Wetlands: 0.0115 acres, 500.94 square feet

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Wetland Delineation Report, September 2012.
 Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 Office concurs with data sheets/delineation report.

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

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

- 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: Map scale is 1 inch = 1000 feet; original scale 1:24,000; United States Geological Survey (USGS) 7.5 Minute Series Spring Quadrangle Harris County Texas 1995
- USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey of Harris County, Texas
- National wetlands inventory map(s). Cite name: US Dept. of the Interior, Fish & Wildlife Service, National Wetlands Inventory Map, Wetlands Mapper accessed July 10, 2012 (<http://www.fws.gov/wetlands/Data/Mapper.html>).
- State/Local wetland inventory map(s): None.
- FEMA/FIRM maps: 48201C0255L, June 18, 2007
- 100-year Floodplain Elevation is: The wetland is not located in a designated floodplain.
- Photographs: Aerial (Name & Date): 2004 Infrared Aerial Texas Natural Resources Information System (TNRIS); 1944 and 1957 Aerial Photographs Agricultural Stabilization & Conservation Service; 1969 Aerial Photograph Private Company; 1979 and 1989 Aerial Photographs Texas Department of Transportation, 1999 Aerial Photograph Houston-Galveston Area Council, and 2009 Aerial Photograph United States Geological Survey
 - or Other (Name & Date):
- Previous determination(s). File no. and date of response letter: None.
- Applicable/supporting case law: Not Applicable.
- Applicable/supporting scientific literature:
- Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Wetland Areas 3A & 3B were identified using the 1987 Manual and appropriate Regional Supplement that requires all three mandatory wetland criteria be present, under normal circumstances, to be classified as a "wetland." The wetlands are located in a landscape formation that is slightly depressed and in a receiving position that allows for seasonal hydrology (associated with precipitation events) necessary for wetlands to establish. These wetlands are surrounded by uplands (to the north, south and west) and Spring west Road (to the east). HCFCD Channel No. K120-01-00 (Senger Gully) the nearest water of the US is located 1,300 feet to the southwest of Wetland Areas 3A & 3B. Uplands surrounding Wetland Areas 3A & 3B range from 0.5 to 2 feet higher in elevation than the wetland. Wetland Areas 3A & 3B and the surrounding uplands are located in Zone X, areas determined to be outside the 500-year floodplain.

Wetland Areas 3A & 3B are not located in a reasonable close proximity to any waters of the U.S. (neither on a horizon and vertical geometric plane). As such, under normal conditions in the hydrologic cycle, they would not be anticipated to share surface hydrology with the nearest waters of the U.S. They are not tidal waters, nor part of a surface tributary system to interstate waters or navigable waters of the U.S. nor are they located "adjacent" (as defined in federal regulations) to any tributary waters; as such they have been determined to be "ISOLATED" as defined in federal regulations (33 CFR 330.2(e)).

"Adjacent" as per Federal regulations 33 CFR 328.3(c) is defined: "bordering, contiguous or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes and the like are 'adjacent wetlands'." The nearest waters of the U.S. to Wetland Areas 3A & 3B is HCFCD Channel No. K120-01-00. Wetland Areas 3A & 3B do not border nor are they contiguous (abutting) to HCFCD Channel No. K120-01-00. Wetland Areas 3A & 3B are not neighboring HCFCD Channel No. K120-01-00 as determined by the fact that they are, under normal conditions in the hydrologic cycle, not located in a reasonably close proximity (both on the horizon and vertical geometric plane) to another water of the United States (and are not located in a contiguous nor bordering landscape position) that would have shared surface hydrology with the another water of the US (HCFCD Channel No. K120-01-00) during expected high flow (e.g. the 100-year floodplain). Nor is there any known species demonstrable ecological interconnection requiring both the wetland in question and the nearest waters of the U.S. to spawn and/or fulfill their life cycle requirements. Wetland Areas 3A & 3B are physically separated from other waters of the U.S. by geographic factors that do not allow the exchange waters, via a confined surface hydrology connection during normal conditions and they are not inseparably bound with HCFCD Channel No. K120-01-00.

"Isolated" waters as defined in 33 CFR 330.2 (e) is: "those non-tidal waters of the U.S. that are: (1) not part of a surface tributary system to interstate or navigable waters of the U.S.; and (2) not adjacent to such tributary waterbodies." Wetland Areas 3A & 3B have been identified as wetlands (aquatic resources) that have been determined to be isolated.

"Waters of the U.S." are defined in 33 CFR 328.3 (a) 1 thru 7 which is addressed in the following. Due to the fact that these wetlands: (1) are not currently used, or was used in the past, nor susceptible to use for interstate or foreign commerce nor subject to the ebb and flow of the daily tide; (2) do not cross interstate or tribal boundaries; (3) the destruction of these wetlands is not expected to affect (i) interstate or foreign travelers for recreational purposes or other purposes or, (ii) fish or shellfish that could be taken and sold in interstate or foreign commerce or (iii) current use or potential use for industrial purposes by industries in interstate commerce; (4) are not impoundments of waters of the U.S.; (5) are not part of a surface tributary system of (a) (1) through (4); (6) are not part of the territorial seas; and (7) are not adjacent to waters of the U.S. identified in (a) (1) through (6) these are not waters of the U.S.

In conclusion, SWG has been determined that there are isolated wetlands on the site that are not waters of the U.S. subject to federal jurisdiction under Section 404 of the Clean Water Act.

Table 1: Isolated Non-Jurisdictional Wetlands

Wetland ID	Longitude	Latitude	Acres	Distance to TNW
Wetland 3A	-95.447243°	30.072252°	0.0101	2.5 miles
Wetland 3B	-95.447095°	30.072082°	0.0014	2.5 miles

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): 18 December 2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2011-00719, Wetland A

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Liberty City: NA

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 30.2344° N, Long. -95.0508° W;

Universal Transverse Mercator: UTM: , 3,346,518.644 N., 302,678.038 E., NAD: 83

Name of nearest water body: Orange Branch

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: none

Name of watershed or Hydrologic Unit Code (HUC): 12040103

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: 13 November 2012

Field Determination. Date(s): 24 August 2011, 8 March 2012

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 no** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. **[Required]**

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: **A review of the documents listed in Section IV of this form was conducted in October 2012. The 2009 CIR aerial photo reveals cooler signatures which can be indicative of hydrology at the location of Wetland A. The USFWS NWI map indicates there is a freshwater-emergent (PEM) wetland at this location. The consultant's datasheets confirm a wetland that meets the three criteria of a wetland (dominance of hydrophytic vegetation, wetland hydrology, and hydric soil) under normal circumstances as outlined in the Atlantic and Gulf Coastal Plain Region Supplement to the 1987 Army Corps of Engineers Wetland Delineation Manual. Wetland A is located approximately 0.8 aerial miles east of Orange Branch, the nearest tributary of East Fork San Jacinto River, a TNW. The wetland is located approximately 2.6 aerial miles, at the closest point of approach, to East Fork San Jacinto River. The wetland is separated from East Fork San Jacinto River by more than two rural ranch roads, berms, and Farm-to-Market Road 1010. The FEMA DFIRM shows that Wetland A is outside of the 100-year floodplain of any water of the United States. The 2008 HGAC LIDAR data depicts no surface hydrological connection between Wetland A and any Water of the United States, based on location and elevation. The Soil Survey of Liberty County shows that Wetland A is situated in Waller Loam, depressional, which has a perched water table that is generally within a depth of 1 foot. Hydrology for Wetland A is precipitation driven. Wetland A is located beyond the anticipated high flow of any water of the United States, and there is no known aquatic species that would require Wetland A and the nearest waterbody to spawn and/or fulfill its life cycle requirements. Wetland A is not a water of the United States as defined in the United States Code, Title 33, CFR 328.3(a): (1) Wetland A is not currently used, or used in the past, nor is susceptible to use in interstate or foreign commerce; Wetland A is not subject to the ebb and flow of the daily tide; (2) Wetland A does not cross interstate or tribal boundaries; (3) the degradation or destruction of Wetland A (an intrastate wetland) could not affect (i) interstate travelers for recreational or other purposes or, (ii) contain or sustain fish or shellfish that could be taken or sold in interstate or foreign commerce or, (iii) and is not currently used or could be used for industrial purposes by industries in interstate commerce; (4) Wetland A is not an impoundment of a water of the United States; (5) Wetland A is not part of a surface tributary system of (a) (1) through (4); (6) Wetland A is not part of the territorial seas; (7) the wetland is not adjacent to waters (other than waters that are themselves wetlands) identified in (a) (1) through (6). Wetland A was determined by the Galveston District as isolated and not adjacent (bordering, contiguous, or neighboring) as defined in 33 CFR 328.3(c). Wetland A is isolated as defined in 33 CFR 330.2(e): Isolated waters means those non-tidal waters of the United States that are: (1) not part of a surface tributary system to interstate or navigable waters of the United States; and (2) not adjacent to such tributaries. Wetland A has no known nexus to interstate commerce. Therefore, Wetland A is not a water of the United States subject to jurisdiction under Section 404 of the Clean Water Act.**

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”:

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

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

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

- | | | |
|--|--|-----------------------------------|
| <input type="checkbox"/> Silts | <input type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: | |
| <input type="checkbox"/> 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: Seasonal flow

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):

- | | |
|---|---|
| <input type="checkbox"/> Bed and banks | |
| <input type="checkbox"/> OHWM ⁶ (check all indicators that apply): | |
| <input type="checkbox"/> clear, natural line impressed on the bank | <input type="checkbox"/> the presence of litter and debris |
| <input type="checkbox"/> changes in the character of soil | <input type="checkbox"/> destruction of terrestrial vegetation |
| <input type="checkbox"/> shelving | <input type="checkbox"/> the presence of wrack line |
| <input type="checkbox"/> vegetation matted down, bent, or absent | <input type="checkbox"/> sediment sorting |
| <input type="checkbox"/> leaf litter disturbed or washed away | <input type="checkbox"/> scour |
| <input type="checkbox"/> sediment deposition | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining | <input type="checkbox"/> abrupt change in plant community |
| <input type="checkbox"/> other (list): | |
| <input type="checkbox"/> Discontinuous OHWM. ⁷ Explain: | |

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

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

(iii) **Chemical Characteristics:**

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

Explain:

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

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

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

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: _____ acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain:

Surface flow is: **Pick List**

Characteristics:

Subsurface flow: **Pick List**. Explain findings:

- Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

- Directly abutting
- Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

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

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

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

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

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

For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres) Directly abuts? (Y/N) Size (in acres)

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-RPWs⁸ 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
- 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 jurisdictional. 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. 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:

⁸See Footnote # 3.

⁹To 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 estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft)
- Other non-wetland waters: acres
- Identify type(s) of waters:
- Wetlands: acres

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

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

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

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: 39.1 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: **Hydrex Environmental, Inc.**
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas: **Nationa Hydrography Dataset**
 - 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: **1:24,000 Plum Grove, Texas**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **Liberty County, Texas**
- National wetlands inventory map(s). Cite name:
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: **DFIRM and Q3 Data**
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): **2009 DOQQ, 2010 NAIP**
 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): **2008 HGAC LIDAR Dataset**

B. ADDITIONAL COMMENTS TO SUPPORT JD: A review of the documents listed in Section IV of this form was conducted in October 2012. The 2009 CIR aerial photo reveals cooler signatures which can be indicative of hydrology at the location of Wetland A. The USFWS NWI map indicates there is a freshwater-emergent (PEM) wetland at this location. The consultant's datasheets confirm a wetland that meets the three criteria of a wetland (dominance of hydrophytic vegetation, wetland hydrology, and hydric soil) under normal circumstances as outlined in the Atlantic and Gulf Coastal Plain Region Supplement to the 1987 Army Corps of Engineers Wetland Delineation Manual. Wetland A is located approximately 0.8 aerial miles east of Orange Branch, the nearest tributary of East Fork San Jacinto River, a TNW. The wetland is located approximately 2.6 aerial miles, at the closest point of approach, to East Fork San Jacinto River. The wetland is separated from East Fork San Jacinto River by more than two rural ranch roads, berms, and Farm-to-Market Road 1010. The FEMA DFIRM shows that Wetland A is outside of the 100-year floodplain of any water of the United States. The 2008 HGAC LIDAR data depicts no surface hydrological connection between Wetland A and any Water of the United States, based on location and elevation. The Soil Survey of Liberty County shows that Wetland A is situated in Waller Loam, depressional, which has a perched water table that is generally within a depth of 1 foot. Hydrology for Wetland A is precipitation driven. Wetland A is located beyond the anticipated high flow of any water of the United States, and there is no known aquatic species that would require Wetland A and the nearest waterbody to spawn and/or fulfill its life cycle requirements. Wetland A is not a water of the United States as defined in the United States Code, Title 33, CFR 328.3(a): (1) Wetland A is not currently used, or used in the past, nor is susceptible to use in interstate or foreign commerce; Wetland A is not subject to the ebb and flow of the daily tide; (2) Wetland A does not cross interstate or tribal boundaries; (3) the degradation or destruction of Wetland A (an intrastate wetland) could not affect (i) interstate travelers for recreational or other purposes or, (ii) contain or sustain fish or shellfish that could be taken or sold in interstate or foreign commerce or, (iii) and is not currently used or could be used for industrial purposes by industries in interstate commerce; (4) Wetland A is not an impoundment of a water of the United States; (5) Wetland A is not part of a surface tributary system of (a) (1) through (4); (6) Wetland A is not part of the territorial seas; (7) the wetland is not adjacent to waters (other than waters that are themselves wetlands) identified in (a) (1) through (6). Wetland A was determined by the Galveston District as isolated and not adjacent (bordering, contiguous, or neighboring) as defined in 33 CFR 328.3(c). Wetland A is isolated as defined in 33 CFR 330.2(e): Isolated waters means those non-tidal waters of the United States that are: (1) not part of a surface tributary system to interstate or navigable waters of the United States; and (2) not adjacent to such tributaries. Wetland A has no known nexus to interstate commerce. Therefore, Wetland A is not a water of the United States subject to jurisdiction under Section 404 of the Clean Water Act.

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

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

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 13 November 2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2011-00719, Wetland B

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Liberty City: NA

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 30.2351° N, Long. -95.0461° W;

Universal Transverse Mercator: UTM: , Pick List., Pick List., NAD:

Name of nearest water body: Unnamed tributary of Tarkington Bayou

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: None

Name of watershed or Hydrologic Unit Code (HUC): 120401030203

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: 13 November 2012

Field Determination. Date(s): 24 August 2011, 8 March 2012

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 no** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. **[Required]**

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: **A review of the documents listed in Section IV of this form was conducted during October 2012. Wetland B meets the three criteria, under normal circumstances, for a wetland per the Atlantic and Gulf Coastal Plain Region Supplement to the 1987 Corps of Engineers Wetland Delineation Manual. Wetland B is a palustrine forested wetland. Wetland B is outside the 100-year floodplain of any water of the United States, and situated approximately 3,700 feet west of the 100-year floodplain of Tarkington Bayou and approximately 16,500 feet east of the 100-year floodplain of East Fork San Jacinto River. Wetland B is situated in a flat landscape position that is at an elevation of 120 feet in NAVD88, according to the 2008 HGAC LIDAR Data. The closest headwater within Wetland B's watershed is an unnamed tributary of Tarkington Bayou. This unnamed tributary is located at an elevation of 100 feet in NAVD88 and is approximately 4,500 feet east of Wetland B. The Soil Survey of Liberty County shows that Wetland B is situated in Waller-Kirbyville complex, which has a perched water table that is generally within a depth of 1.5 to 2.5 feet. Hydrology for Wetland B is precipitation driven. Wetland B does not have a confined surface hydrological connection to any water of the United States and is isolated. Wetland B is not a water of the United States as defined by Title 33 CFR 328.3(a). Wetland B is not and could not be used by interstate or foreign travellers for recreational purposes, is not or would not be used for industrial purposes in interstate commerce, and is not or could not be used to take fish or shellfish sold in interstate or foreign commerce. No other nexus to interstate commerce is known. Therefore, Wetland B is not subject to jurisdiction under Section 404 of the Clean Water Act.**

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”:

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

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

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

- | | | |
|--|--|-----------------------------------|
| <input type="checkbox"/> Silts | <input type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: | |
| <input type="checkbox"/> 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: Seasonal flow

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):

- | | |
|---|---|
| <input type="checkbox"/> Bed and banks | |
| <input type="checkbox"/> OHWM ⁶ (check all indicators that apply): | |
| <input type="checkbox"/> clear, natural line impressed on the bank | <input type="checkbox"/> the presence of litter and debris |
| <input type="checkbox"/> changes in the character of soil | <input type="checkbox"/> destruction of terrestrial vegetation |
| <input type="checkbox"/> shelving | <input type="checkbox"/> the presence of wrack line |
| <input type="checkbox"/> vegetation matted down, bent, or absent | <input type="checkbox"/> sediment sorting |
| <input type="checkbox"/> leaf litter disturbed or washed away | <input type="checkbox"/> scour |
| <input type="checkbox"/> sediment deposition | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining | <input type="checkbox"/> abrupt change in plant community |
| <input type="checkbox"/> other (list): | |
| <input type="checkbox"/> Discontinuous OHWM. ⁷ Explain: | |

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

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

(iii) **Chemical Characteristics:**

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

Explain:

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

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

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

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: _____ acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain:

Surface flow is: **Pick List**

Characteristics:

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

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

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

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

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

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

For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres) Directly abuts? (Y/N) Size (in acres)

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-RPWs⁸ 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
- 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 jurisdictional. 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. 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:

⁸See Footnote # 3.

⁹To 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 estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft)
- Other non-wetland waters: acres
- Identify type(s) of waters:
- Wetlands: acres

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

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

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

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: 22.3 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: **Hydrex Environmental, Inc.**
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas: **Nationa Hydrography Dataset**
 - 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: **1:24,000 Plum Grove, Texas**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **Liberty County, Texas**
- National wetlands inventory map(s). Cite name:
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: **DFIRM and Q3 Data**
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): **2009 DOQQ, 2010 NAIP**
 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): **2008 HGAC LIDAR Dataset**

B. ADDITIONAL COMMENTS TO SUPPORT JD: Wetland B meets the three criteria, under normal circumstances, for a wetland per the Atlantic and Gulf Coastal Plain Region Supplement to the 1987 Corps of Engineers Wetland Delineation Manual. Wetland B is a palustrine forested wetland. Wetland B is outside the 100-year floodplain of any water of the United States, and situated approximately 3,700 feet west of the 100-year floodplain of Tarkington Bayou and approximately 16,500 feet east of the 100-year floodplain of East Fork San Jacinto River. Wetland B is situated in a flat landscape position that is at an elevation of 120 feet in NAVD88, according to the 2008 HGAC LIDAR Data. The closest headwater within Wetland B's watershed is an unnamed tributary of Tarkington Bayou. This unnamed tributary is located at an elevation of 100 feet in NAVD88 and is approximately 4,500 feet east of Wetland B. The Soil Survey of Liberty County shows that Wetland B is situated in Waller-Kirbyville complex, which has a perched water table that is generally within a depth of 1.5 to 2.5 feet. Hydrology for Wetland B is precipitation driven. Wetland B does not have a confined surface hydrological connection to any water of the United States and is isolated. Wetland B is not a water of the United States as defined by Title 33 CFR 328.3(a). Wetland B is not and could not be used by interstate or foreign travellers for recreational purposes, is not or would not be used for industrial purposes in interstate commerce, and is not or could not be used to take fish or shellfish sold in interstate or foreign commerce. No other nexus to interstate commerce is known. Therefore, Wetland B is not subject to jurisdiction under Section 404 of the Clean Water Act.

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

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

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 18 December 2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2011-00719, Wetland C

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Liberty City: NA

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 30.2314° N, Long. -95.0487° W;

Universal Transverse Mercator: UTM: 15N, 302,836.008 N., 302,836.008 E., NAD: 83

Name of nearest water body: Orange Branch

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: none

Name of watershed or Hydrologic Unit Code (HUC): 12040103

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: 13 November 2012

Field Determination. Date(s): 24 August 2011, 8 March 2012

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 no** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. **[Required]**

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: **A review of the documents listed in Section IV of this form was conducted in October 2012. The 2009 CIR aerial photo reveals cooler signatures which can be indicative of hydrology at the location of Wetland C. The USFWS NWI map indicates there is a freshwater-emergent (PEM) wetland at this location. The consultant's datasheets confirm a wetland that meets the three criteria of a wetland (dominance of hydrophytic vegetation, wetland hydrology, and hydric soil) under normal circumstances as outlined in the Atlantic and Gulf Coastal Plain Region Supplement to the 1987 Army Corps of Engineers Wetland Delineation Manual. Wetland C is located approximately 1 aerial mile east of Orange Branch, the nearest tributary of East Fork San Jacinto River, a TNW. The wetland is located approximately 3 aerial miles east, at the closest point of approach, of East Fork San Jacinto River. The wetland is separated from East Fork San Jacinto River by more than two rural ranch roads, berms, and Farm-to-Market Road 1010. The FEMA DFIRM shows that Wetland C is outside of the 100-year floodplain of any water of the United States. The 2008 HGAC LIDAR data depicts no surface hydrological connection between Wetland C and any Water of the United States, based on location and elevation. The Soil Survey of Liberty County shows that Wetland C is situated Kirbyville fine sandy loam, which has a perched water table that is generally within a depth of 1.5 to 2.5 feet. Hydrology for Wetland C is precipitation driven. Wetland H is located beyond the anticipated high flow of any water of the United States, and there is no known aquatic species that would require Wetland C and the nearest waterbody to spawn and/or fulfill its life cycle requirements. Wetland C is not a water of the United States as defined in the United States Code, Title 33, CFR 328.3(a): (1) Wetland C is not currently used, or used in the past, nor is susceptible to use in interstate or foreign commerce; Wetland C is not subject to the ebb and flow of the daily tide; (2) Wetland C does not cross interstate or tribal boundaries; (3) the degradation or destruction of Wetland C (an intrastate wetland) could not affect (i) interstate travelers for recreational or other purposes or, (ii) contain or sustain fish or shellfish that could be taken or sold in interstate or foreign commerce or, (iii) is not currently used or could be used for industrial purposes by industries in interstate commerce; (4) Wetland C is not an impoundment of a water of the United States; (5) Wetland C is not part of a surface tributary system of (a) (1) through (4); (6) Wetland C is not part of the territorial seas; (7) the wetland is not adjacent to waters (other than waters that are themselves wetlands) identified in (a) (1) through (6). Wetland C was determined by the Galveston District to be isolated and not adjacent (bordering, contiguous, or neighboring) as defined in 33 CFR 328.3(c). Wetland C is isolated as defined in 33 CFR 330.2(e): Isolated waters means those non-tidal waters of the United States that are: (1) not part of a surface tributary system to interstate or navigable waters of the United States; and (2) not adjacent to such tributaries. Wetland C has no known nexus to interstate commerce. Therefore, Wetland C is not a water of the United States subject to jurisdiction under Section 404 of the Clean Water Act.**

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”:

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

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

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

- | | | |
|--|--|-----------------------------------|
| <input type="checkbox"/> Silts | <input type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: | |
| <input type="checkbox"/> 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: Seasonal flow

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):

- | | |
|---|---|
| <input type="checkbox"/> Bed and banks | |
| <input type="checkbox"/> OHWM ⁶ (check all indicators that apply): | |
| <input type="checkbox"/> clear, natural line impressed on the bank | <input type="checkbox"/> the presence of litter and debris |
| <input type="checkbox"/> changes in the character of soil | <input type="checkbox"/> destruction of terrestrial vegetation |
| <input type="checkbox"/> shelving | <input type="checkbox"/> the presence of wrack line |
| <input type="checkbox"/> vegetation matted down, bent, or absent | <input type="checkbox"/> sediment sorting |
| <input type="checkbox"/> leaf litter disturbed or washed away | <input type="checkbox"/> scour |
| <input type="checkbox"/> sediment deposition | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining | <input type="checkbox"/> abrupt change in plant community |
| <input type="checkbox"/> other (list): | |
| <input type="checkbox"/> Discontinuous OHWM. ⁷ Explain: | |

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

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

(iii) **Chemical Characteristics:**

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

Explain:

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

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

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

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: _____ acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain:

Surface flow is: **Pick List**

Characteristics:

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

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

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

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

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

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

For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres) Directly abuts? (Y/N) Size (in acres)

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-RPWs⁸ 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
- 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 jurisdictional. 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. 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:

⁸See Footnote # 3.

⁹To 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 estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft)
- Other non-wetland waters: acres
- Identify type(s) of waters:
- Wetlands: acres

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

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

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

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: 4.7 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: **Hydrex Environmental, Inc.**
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas: **Nationa Hydrography Dataset**
 - 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: **1:24,000 Plum Grove, Texas**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **Liberty County, Texas**
- National wetlands inventory map(s). Cite name:
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: **DFIRM and Q3 Data**
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): **2009 DOQQ, 2010 NAIP**
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): **2008 HGAC LIDAR Dataset**

B. ADDITIONAL COMMENTS TO SUPPORT JD: A review of the documents listed in Section IV of this form was conducted in October 2012. The 2009 CIR aerial photo reveals cooler signatures which can be indicative of hydrology at the location of Wetland C. The USFWS NWI map indicates there is a freshwater-emergent (PEM) wetland at this location. The consultant's datasheets confirm a wetland that meets the three criteria of a wetland (dominance of hydrophytic vegetation, wetland hydrology, and hydric soil) under normal circumstances as outlined in the Atlantic and Gulf Coastal Plain Region Supplement to the 1987 Army Corps of Engineers Wetland Delineation Manual. Wetland C is located approximately 1 aerial mile east of Orange Branch, the nearest tributary of East Fork San Jacinto River, a TNW. The wetland is located approximately 3 aerial miles east, at the closest point of approach, of East Fork San Jacinto River. The wetland is separated from East Fork San Jacinto River by more than two rural ranch roads, berms, and Farm-to-Market Road 1010. The FEMA DFIRM shows that Wetland C is outside of the 100-year floodplain of any water of the United States. The 2008 HGAC LIDAR data depicts no surface hydrological connection between Wetland C and any Water of the United States, based on location and elevation. The Soil Survey of Liberty County shows that Wetland C is situated Kirbyville fine sandy loam, which has a perched water table that is generally within a depth of 1.5 to 2.5 feet. Hydrology for Wetland C is precipitation driven. Wetland H is located beyond the anticipated high flow of any water of the United States, and there is no known aquatic species that would require Wetland C and the nearest waterbody to spawn and/or fulfill its life cycle requirements. Wetland C is not a water of the United States as defined in the United States Code, Title 33, CFR 328.3(a): (1) Wetland C is not currently used, or used in the past, nor is susceptible to use in interstate or foreign commerce; Wetland C is not subject to the ebb and flow of the daily tide; (2) Wetland C does not cross interstate or tribal boundaries; (3) the degradation or destruction of Wetland C (an intrastate wetland) could not affect (i) interstate travelers for recreational or other purposes or, (ii) contain or sustain fish or shellfish that could be taken or sold in interstate or foreign commerce or, (iii) is not currently used or could be used for industrial purposes by industries in interstate commerce; (4) Wetland C is not an impoundment of a water of the United States; (5) Wetland C is not part of a surface tributary system of (a) (1) through (4); (6) Wetland C is not part of the territorial seas; (7) the wetland is not adjacent to waters (other than waters that are themselves wetlands) identified in (a) (1) through (6). Wetland C was determined by the Galveston District to be isolated and not adjacent (bordering, contiguous, or neighboring) as defined in 33 CFR 328.3(c). Wetland C is isolated as defined in 33 CFR 330.2(e): Isolated waters means those non-tidal waters of the United States that are: (1) not part of a surface tributary system to interstate or navigable waters of the United States; and (2) not adjacent to such tributaries. Wetland C has no known nexus to interstate commerce. Therefore, Wetland C is not a water of the United States subject to jurisdiction under Section 404 of the Clean Water Act.

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

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

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 18 December 2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2011-00719, Wetland D

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Liberty City: NA

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 30.2286° N, Long. -95.0480° W;

Universal Transverse Mercator: UTM: 15N, 3,345,892.961 N., 302,893.446 E., NAD: 83

Name of nearest water body: Orange Branch

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: none

Name of watershed or Hydrologic Unit Code (HUC): 12040103

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: 13 November 2012

Field Determination. Date(s): 24 August 2011, 8 March 2012

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 no** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. **[Required]**

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

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

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: **A review of the documents listed in Section IV of this form was conducted in October 2012. The 2009 CIR aerial photo reveals no signatures which can be indicative of hydrology at the location of Wetland D. The USFWS NWI map indicates there is a freshwater-emergent (PEM) wetland at this location. The consultant's datasheets confirm a wetland that meets the three criteria of a wetland (dominance of hydrophytic vegetation, wetland hydrology, and hydric soil) under normal circumstances as outlined in the Atlantic and Gulf Coastal Plain Region Supplement to the 1987 Army Corps of Engineers Wetland Delineation Manual. Wetland D is located approximately 1.1 aerial miles east of Orange Branch, the nearest tributary of East Fork San Jacinto River, a TNW. The wetland is located approximately 3 aerial miles east, at the closest point of approach, of East Fork San Jacinto River. The wetland is separated from East Fork San Jacinto River by more than two rural ranch roads, berms, and Farm-to-Market Road 1010. The FEMA DFIRM shows that Wetland D is outside of the 100-year floodplain of any water of the United States. The 2008 HGAC LIDAR data depicts no surface hydrological connection between Wetland D and any Water of the United States, based on location and elevation. The Soil Survey of Liberty County shows that Wetland D is situated Kirbyville fine sandy loam, which has a perched water table that is generally within a depth of 1.5 to 2.5 feet. Hydrology for Wetland D is precipitation driven. Wetland D is located beyond the anticipated high flow of any water of the United States, and there is no known aquatic species that would require Wetland D and the nearest waterbody to spawn and/or fulfill its life cycle requirements. Wetland D is not a water of the United States as defined in the United States Code, Title 33, CFR 328.3(a): (1) Wetland D is not currently used, or used in the past, nor is susceptible to use in interstate or foreign commerce; Wetland D is not subject to the ebb and flow of the daily tide; (2) Wetland D does not cross interstate or tribal boundaries; (3) the degradation or destruction of Wetland D (an intrastate wetland) could not affect (i) interstate travelers for recreational or other purposes or, (ii) contain or sustain fish or shellfish that could be taken or sold in interstate or foreign commerce or, (iii) is not currently used or could be used for industrial purposes by industries in interstate commerce; (4) Wetland D is not an impoundment of a water of the United States; (5) Wetland D is not part of a surface tributary system of (a) (1) through (4); (6) Wetland D is not part of the territorial seas; (7) the wetland is not adjacent to waters (other than waters that are themselves wetlands) identified in (a) (1) through (6). Wetland D was determined by the Galveston District to be isolated and not adjacent (bordering, contiguous, or neighboring) as defined in 33 CFR 328.3(c). Wetland D is isolated as defined in 33 CFR 330.2(e): Isolated waters means those non-tidal waters of the United States that are: (1) not part of a surface tributary system to interstate or navigable waters of the United States; and (2) not adjacent to such tributaries. Wetland D has no known nexus to interstate commerce. Therefore, Wetland D is not a water of the United States subject to jurisdiction under Section 404 of the Clean Water Act.**

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”:

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

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

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

- | | | |
|--|--|-----------------------------------|
| <input type="checkbox"/> Silts | <input type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: | |
| <input type="checkbox"/> 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: Seasonal flow

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):

- | | |
|---|---|
| <input type="checkbox"/> Bed and banks | |
| <input type="checkbox"/> OHWM ⁶ (check all indicators that apply): | |
| <input type="checkbox"/> clear, natural line impressed on the bank | <input type="checkbox"/> the presence of litter and debris |
| <input type="checkbox"/> changes in the character of soil | <input type="checkbox"/> destruction of terrestrial vegetation |
| <input type="checkbox"/> shelving | <input type="checkbox"/> the presence of wrack line |
| <input type="checkbox"/> vegetation matted down, bent, or absent | <input type="checkbox"/> sediment sorting |
| <input type="checkbox"/> leaf litter disturbed or washed away | <input type="checkbox"/> scour |
| <input type="checkbox"/> sediment deposition | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining | <input type="checkbox"/> abrupt change in plant community |
| <input type="checkbox"/> other (list): | |
| <input type="checkbox"/> Discontinuous OHWM. ⁷ Explain: | |

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

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

(iii) **Chemical Characteristics:**

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

Explain:

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

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

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

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: _____ acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain:

Surface flow is: **Pick List**

Characteristics:

Subsurface flow: **Pick List**. Explain findings:

- Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

- Directly abutting
- Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

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

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

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

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

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

For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres) Directly abuts? (Y/N) Size (in acres)

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-RPWs⁸ 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
- 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 jurisdictional. 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. 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:

⁸See Footnote # 3.

⁹To 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 estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft)
- Other non-wetland waters: acres
- Identify type(s) of waters:
- Wetlands: acres

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

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

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

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: 2.6 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: **Hydrex Environmental, Inc.**
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas: **Nationa Hydrography Dataset**
 - 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: **1:24,000 Plum Grove, Texas**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **Liberty County, Texas**
- National wetlands inventory map(s). Cite name:
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: **DFIRM and Q3 Data**
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): **2009 DOQQ, 2010 NAIP**
 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): **2008 HGAC LIDAR Dataset**

B. ADDITIONAL COMMENTS TO SUPPORT JD: A review of the documents listed in Section IV of this form was conducted in October 2012. The 2009 CIR aerial photo reveals no signatures which can be indicative of hydrology at the location of Wetland D. The USFWS NWI map indicates there is a freshwater-emergent (PEM) wetland at this location. The consultant's datasheets confirm a wetland that meets the three criteria of a wetland (dominance of hydrophytic vegetation, wetland hydrology, and hydric soil) under normal circumstances as outlined in the Atlantic and Gulf Coastal Plain Region Supplement to the 1987 Army Corps of Engineers Wetland Delineation Manual. Wetland D is located approximately 1.1 aerial miles east of Orange Branch, the nearest tributary of East Fork San Jacinto River, a TNW. The wetland is located approximately 3 aerial miles east, at the closest point of approach, of East Fork San Jacinto River. The wetland is separated from East Fork San Jacinto River by more than two rural ranch roads, berms, and Farm-to-Market Road 1010. The FEMA DFIRM shows that Wetland D is outside of the 100-year floodplain of any water of the United States. The 2008 HGAC LIDAR data depicts no surface hydrological connection between Wetland D and any Water of the United States, based on location and elevation. The Soil Survey of Liberty County shows that Wetland D is situated Kirbyville fine sandy loam, which has a perched water table that is generally within a depth of 1.5 to 2.5 feet. Hydrology for Wetland D is precipitation driven. Wetland D is located beyond the anticipated high flow of any water of the United States, and there is no known aquatic species that would require Wetland D and the nearest waterbody to spawn and/or fulfill its life cycle requirements. Wetland D is not a water of the United States as defined in the United States Code, Title 33, CFR 328.3(a): (1) Wetland D is not currently used, or used in the past, nor is susceptible to use in interstate or foreign commerce; Wetland D is not subject to the ebb and flow of the daily tide; (2) Wetland D does not cross interstate or tribal boundaries; (3) the degradation or destruction of Wetland D (an intrastate wetland) could not affect (i) interstate travelers for recreational or other purposes or, (ii) contain or sustain fish or shellfish that could be taken or sold in interstate or foreign commerce or, (iii) is not currently used or could be used for industrial purposes by industries in interstate commerce; (4) Wetland D is not an impoundment of a water of the United States; (5) Wetland D is not part of a surface tributary system of (a) (1) through (4); (6) Wetland D is not part of the territorial seas; (7) the wetland is not adjacent to waters (other than waters that are themselves wetlands) identified in (a) (1) through (6). Wetland D was determined by the Galveston District to be isolated and not adjacent (bordering, contiguous, or neighboring) as defined in 33 CFR 328.3(c). Wetland D is isolated as defined in 33 CFR 330.2(e): Isolated waters means those non-tidal waters of the United States that are: (1) not part of a surface tributary system to interstate or navigable waters of the United States; and (2) not adjacent to such tributaries. Wetland D has no known nexus to interstate commerce. Therefore, Wetland D is not a water of the United States subject to jurisdiction under Section 404 of the Clean Water Act.

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

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

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 20 February 2013

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2011-00719, Wetland H

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Liberty City: NA

Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 30.229839° N, Long. -95.041371° W;

Universal Transverse Mercator: UTM: Zone 15, 3,346,016.200 N., 303,549.136 E., NAD: 83

Name of nearest water body: Tarkington Bayou

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Luce Bayou

Name of watershed or Hydrologic Unit Code (HUC): 12040103

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: 15 February 2013

Field Determination. Date(s): 24 August 2011, 8 March 2012, 5 February 2013

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. **[Required]**

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. **[Required]**

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent 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: 169 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

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

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

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”:

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

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

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, 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: 183,128 square miles

Drainage area: Pick List

Average annual rainfall: 54.86 inches

Average annual snowfall: inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

- Tributary flows directly into TNW.
 Tributary flows through 2 tributaries before entering TNW.

Project waters are 10-15 river miles from TNW.

Project waters are 5-10 river miles from RPW.

Project waters are 5-10 aerial (straight) miles from TNW.

Project waters are 1-2 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 TNW⁵: Long Branch flows into Luce Bayou. Luce Bayou is a TNW within its' lower reach.

Tributary stream order, if known: 1

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

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

Tributary properties with respect to top of bank (estimate):

Average width: 4 feet
Average depth: 1.5 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: Meandering

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: Seasonal flow

Estimate average number of flow events in review area/year: 11-20

Describe flow regime: Flow regime is precipitation driven

Other information on duration and volume:

Surface flow is: Discrete and confined. Characteristics:

Subsurface flow: Unknown. Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks
 OHWM⁶ (check all indicators that apply):
 clear, natural line impressed on the bank the presence of litter and debris
 changes in the character of soil destruction of terrestrial vegetation
 shelving the presence of wrack line
 vegetation matted down, bent, or absent sediment sorting
 leaf litter disturbed or washed away scour
 sediment deposition multiple observed or predicted flow events
 water staining abrupt change in plant community
 other (list):
 Discontinuous OHWM.⁷ Explain:

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

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

(iii) Chemical Characteristics:

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

Explain:

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

⁶ A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the 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.

Identify specific pollutants, if known:

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

Riparian corridor. Characteristics (type, average width):

Wetland fringe. Characteristics: **The upper reach of Long Branch is contiguous with wetlands associated with Wetland H.**

Habitat for:

Federally Listed species. Explain findings:

Fish/spawn areas. Explain findings:

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: **169** acres

Wetland type. Explain: **Palustrine forested wetland**

Wetland quality. Explain: **Wetland H is composed primarily of deciduous hardwoods with secondary influence of Loblolly Pine. The understory is composed of primarily woody vines and deciduous shrubs. The herbaceous layer of the wetland is sparse in composition.**

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Ephemeral flow**. Explain: **Wetland H is part of a surface tributary system of Long Branch. There are no uplands that isolate normal surface hydrologic flow from Wetland H into Long Branch.**

Surface flow is: **Pick List**

Characteristics: **Flow from Wetland H into Long Branch is discrete precipitation driven throughout a continuum of wetlands contiguous with Long Branch.**

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: **Wetland H is part of a surface tributary system of Long Branch.**

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

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

Project waters are **10-15** 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:

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: **Wetland H supports all vegetative strata with a dominance of deciduous hardwoods. Percent cover for vegetation, including all strata, is approximately 95%. Reference Wetland Determination Data Forms in file SWG-2011-00719 for plant species and percent cover for individual sample points.**

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: **12**

Approximately (501) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
See attachment A.			

Summarize overall biological, chemical and physical functions being performed: There are approximately 12 adjacent wetlands which either abut or are contiguous with the relative reach of Long Branch, within the review area. Other wetlands in close proximity, but not abutting or contiguous to the relative reach of Long Branch, are not considered for this significant nexus determination as they are outside of any mapped floodplain and no fact based inference could be made for "adjacency" as defined in federal regulation/guidance. In all, the 12 wetlands found abutting the relative reach amount to approximately 501 acres of freshwater forested/shrub and freshwater emergent wetlands. Cumulatively, these wetlands provide 501 acres of floodwater storage capacity, affecting the hydrology of the downstream TNW, Luce Bayou. The wetlands considered in this cumulative analysis sequester organic matter which is processed into bio-available ammonia, phosphate, nitrite, and nitrate, via the Nitrogen Cycle. This process provides essential nutrients for microorganisms that in turn provide essential nutrition to macroorganisms. Macroorganisms provide the base food chain for larger vertebrate species, including fish, found in the lower reach of Long Branch and Luce Bayou, which flows into the Lake Houston reservoir. Therefore, the cumulative capacity of the wetlands subject to this review provide cycling of organic molecules which are essential to the life history of downstream organisms. In addition, the substrate elements of these wetlands confine organic and inorganic pollutants where ion exchange produces less environmentally damaging and more stable molecules, which in turn reduces pollution and enhances water quality of Long Branch, Luce Bayou (TNW), and Lake Houston reservoir (TNW). Wetland H, along with its adjacent wetlands provide essential flood storage, biological cycling of nutrients, and sequestration of organic and inorganic pollutants affecting the downstream TNWs, Luce Bayou and Lake Houston reservoir. Lake Houston reservoir is the secondary municipal water supply for the city of Houston.

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: **The non-RPW is Long Branch. The relevant reach of Long Branch is a first order stream (Strahler Stream Order naming convention). The segment of Long branch under review is approximately 4.5 miles in length. Based on GIS analysis and our 5 February 2013 site visit, this segment of Long Branch carries intermittent surface flow in response to precipitation events. Further downstream, Long Branch becomes a second order stream, and then flows into Luce Bayou, an RPW. The 501 acres of wetlands abutting the segment of Long Branch and this reach of Long Branch provide more than a speculative or insubstantial affect on the chemical, physical, and biological integrity of the TNWs (lower reach of Luce Bayou and Lake Houston reservoir).**

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-RPWs⁸ 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

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 jurisdictional. 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: **141** 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

⁸See Footnote # 3.

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

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

- Identify type(s) of waters:
 Wetlands: acres

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

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

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

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

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

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

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: **Hydrex Environmental, Inc.**
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 Office concurs with data sheets/delineation report.
 Office does not concur with data sheets/delineation report
- Data sheets prepared by the Corps: **5 February 2013**
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas: **National Hydrography Dataset**
 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: **1:24,000 Plum Grove, Texas**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **Liberty County, Texas**
- National wetlands inventory map(s). Cite name:
 State/Local wetland inventory map(s):
- FEMA/FIRM maps: **DFIRM and Q3 Data**
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): **2009 DOQQ, 2010 NAIP, Bing Maps Aerial Photos**
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): **2008 HGAC LIDAR Dataset**

B. ADDITIONAL COMMENTS TO SUPPORT JD: Wetland H meets the three criteria (wetland hydrology, predominance of hydrophytic vegetation, and hydric soils) under normal circumstances per the Atlantic and Gulf Coastal Plain Region Supplement to the 1987 Army Corps of Engineers Wetland Delineation Manual. Within the project site, Wetland H encompasses approximately 169 acres. Data collected from a site visit conducted on 5 February 2013 revealed that Wetland H is situated within a larger wetland

continuum that is contiguous with the headwaters of Long Branch. Long Branch is an intermittent tributary which flows into Luce Bayou, an RPW. Luce Bayou becomes a TNW within its lower reach near Lake Houston reservoir. Wetland H, along with 11 other wetlands are part of a wetland continuum that is contiguous with Long Branch. Including Wetland H, the 12 wetlands assessed under the significant nexus analysis encompass approximately 501 acres. These wetlands produce more than a speculative or insubstantial affect on the chemical, physical, and biological integrity of downstream TNWs, Luce Bayou and Lake Houston reservoir (see Section III.B.3). Wetland H exhibits a significant nexus with Luce Bayou, a TNW within its lower reach, and Lake Houston reservoir (TNW). Therefore, Wetland H is subject to Section 404 of the Clean Water Act in accordance with current Federal Regulations and Guidance.

Attachment A

SWG-2011-00719

Significant Nexus Wetland Table

Wetland	Abuts	Size (Acres)
H	Yes	169
1	Yes	34
2	Yes	6
3	Yes	63
4	Yes	2
5	Yes	198
6	Yes	7
7	Yes	6
8	Yes	2
9	Yes	5
10	Yes	7
11	Yes	2

Total abutting wetlands: 501 acres