

**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): 22 July 2016**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER:** Galveston District, SWG-2015-00778, City of Baytown Wetland E

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: Texas County/Parish: Harris City: Baytown  
Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. 29.789289° N, Long. -94.988658° W;  
Universal Transverse Mercator: UTM: 15, 307775 N., 3297095 E., NAD: 83  
Name of nearest water body: Goose Creek  
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: N/A  
Name of watershed or Hydrologic Unit Code (HUC): Buffalo - San Jacinto, 12040104  
 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: 30 June 2016  
 Field Determination. Date(s): 14 May 2016

**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):<sup>1</sup>**

- TNWs, including territorial seas  
 Wetlands adjacent to TNWs  
 Relatively permanent waters<sup>2</sup> (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):<sup>3</sup>**

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.  
Explain: Based on a review of available information and the 14 May 2016 site visit, we have determined that wetland E is "isolated". This wetland was identified using the Atlantic Gulf Coast Regional Supplement to 1987 Wetland Delineation Manual. It is a depressional wetland with precipitation as the primary source of hydrology.

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

<sup>2</sup> 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).

<sup>3</sup> Supporting documentation is presented in Section III.F.

The nearest known water of the United States (a relatively permanent water {RPW}) is Goose Creek and it is 0.8-miles east of the wetland. The nearest traditional navigable waterway (TNW) is Goose Creek further downstream and it is appx 1.9 miles away. It was noted that there is an upland drainage ditch (appears to be an old agriculture irrigation ditch) that transect the property. The drainage ditch was excavated from uplands and does not extend the ordinary high water mark or reroute a water of the United States. The closest wetland boundary to this ditch is approximately 900' away. Based on our review and site visit, none of these wetland have surface hydrologic connection to any waters of the U.S. nor the non-jurisdictional upland drainage ditch.

- This wetland is not subject to the ebb and flow of the daily tide nor are not currently used, or were used in the past, nor are susceptible to use for interstate or foreign commerce.
  - This wetland does not cross interstate or tribal boundaries.
- The destruction of this intrastate wetland would not affect interstate or foreign travelers for recreational or other purposes, would not affect fish or shellfish that could be taken and sold in interstate or foreign commerce, and would not affect the current use or potential use for industrial purposes by industries in interstate commerce.
  - This wetland is not an impoundment of waters of the United States.
  - This wetland is not a tributary nor was it part of a tributary system.
    - This wetland is not part of the territorial seas.
- This wetland is not "adjacent" (per federal regulations 33 CFR 328 (b) defines "adjacent" as bordering, neighboring, or contiguous to a waters of the US).
  - This wetland is not part of a prior converted cropland.

This wetland has been determined to be "isolated" per federal regulations. (33 CFR 330.2(e): those non-tidal waters of the United States that are not part of a surface tributary system to interstate or navigable waters of the United State nor adjacent to such tributary waterbodies). Based on site review, flood plain maps and a detailed review of LIDAR data, it was determined that this wetland is located above the anticipated high flow of any waterway (e.g. outside the 100-year flood plain) and there is no nexus to interstate commerce associated with it. There are no known species in this georegion that require both the subject wetland and the nearest waterbody (a water of the United States other than an adjacent wetland) to fulfill spawning and/or life cycle requirements. As such they are not "ecologically adjacent", as defined in the Rapanos as being "reasonably close" such that an ecologic interconnectivity is beyond speculation and insubstantial.

In conclusion it is SWG draft determination that the subject wetland is "isolated", with no known nexus to interstate commerce and as such are not waters of the United States 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:

Summarize rationale supporting determination:

**2. Wetland adjacent to TNW**

Summarize rationale supporting conclusion that wetland is “adjacent”:

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

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

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

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

If the water body<sup>4</sup> 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 TNW<sup>5</sup>:

Tributary stream order, if known:

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

<sup>5</sup> 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: Pick List**

**Estimate average number of flow events in review area/year: Pick List**

Describe flow regime:

**Other information on duration and volume:**

**Surface flow is: Pick List. Characteristics:**

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

- Dye (or other) test performed:

**Tributary has (check all that apply):**

- |   |   |
|---|---|
| <input type="checkbox"/> Bed and banks  |   |
| <input type="checkbox"/> OHWM <sup>6</sup> (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. <sup>7</sup> 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:

<sup>6</sup>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.

<sup>7</sup>Ibid.

(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-RPWs<sup>8</sup> 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.<sup>9</sup>**

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):<sup>10</sup>**

- 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:**

<sup>8</sup>See Footnote # 3.

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

<sup>10</sup> 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: **Approximately 1.6** 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: **Kimley-Horn and Associates, LLC.**
- 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: **DP 1, 14 May 2016**
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas: **Texas-Gulf Region, 12040104**
  - 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: **1920 Cedar Bayou, Texas; 1961, 1982, 1994 Mont Belvieu, Texas.**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **NRCS Soil Web Survey**
- National wetlands inventory map(s). Cite name: **USFWS Google Earth NWI Map**
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: **Harris County FIRM Panel 48201C0765L**
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): **1943 to 2016 Google Earth Aerial Photos**  
or  Other (Name & Date): **2009, 2014 Infrared**
- Previous determination(s). File no. and date of response letter:
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify): **2001 HCFCD Lidar: Harris County (TX)**

**B. ADDITIONAL COMMENTS TO SUPPORT JD:** ased on a review of available information and the 14 May 2016 site visit, we have determined that wetland E is "isolated". This wetland was identified using the Atlantic Gulf Coast Regional Supplement to 1987 Wetland Delineation Manual. It is a depressional wetland with precipitation as the primary source of hydrology.

The nearest known water of the United States (a relatively permanent water {RPW}) is Goose Creek and it is 0.8-miles east of the wetland. The nearest traditional navigable waterway (TNW) is Goose Creek further downstream and it is appx 1.9 miles away. It was noted that there is an upland drainage ditch (appears to be an old agriculture irrigation ditch) that transect the property. The drainage ditch was excavated from uplands and does not extend the ordinary high water mark or reroute a water of the United States. The closest wetland boundary to this ditch is approximately 900' away. Based on our review and site visit, none of these wetland have surface hydrologic connection to any waters of the U.S. nor the non-jurisdictional upland drainage ditch.

- This wetland is not subject to the ebb and flow of the daily tide nor are not currently used, or were used in the past, nor are susceptible to use for interstate or foreign commerce.
- This wetland does not cross interstate or tribal boundaries.
- The destruction of this intrastate wetland would not affect interstate or foreign travelers for recreational or other purposes, would not affect fish or shellfish that could be taken and sold in interstate or foreign commerce, and would not affect the current use or potential use for industrial purposes by industries in interstate commerce.
- This wetland is not an impoundment of waters of the United States.
- This wetland is not a tributary nor was it part of a tributary system.
- This wetland is not part of the territorial seas.
- This wetland is not "adjacent" (per federal regulations 33 CFR 328 (b) defines "adjacent" as bordering, neighboring, or contiguous to a waters of the US).
- This wetland is not part of a prior converted cropland.

This wetland has been determined to be "isolated" per federal regulations. (33 CFR 330.2(e): those non-tidal waters of the United States that are not part of a surface tributary system to interstate or navigable waters of the United State nor adjacent to such tributary waterbodies). Based on site review, flood plain maps and a detailed review of LIDAR data, it was determined that this wetland is located above the anticipated high flow of any waterway (e.g. outside the 100-year flood plain) and there is no nexus to interstate commerce associated with it. There are no known species in this georegion that require both the subject wetland and the nearest waterbody (a water of the United States other than an adjacent wetland) to fulfill spawning and/or life cycle requirements. As such they are not "ecologically adjacent", as defined in the Rapanos as being "reasonably close" such that an ecologic interconnectivity is beyond speculation and insubstantial.

In conclusion it is SWG draft determination that the subject wetland is "isolated", with no known nexus to interstate commerce and as such are not waters of the United States subject to federal 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): 22 July 2016**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER:** Galveston District, SWG-2015-00778, Adjacent Wetlands (A thru D and F thru J)

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: Texas County/Parish: Harris City: Baytown

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

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

Name of nearest water body: Goose Creek

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

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

- 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: 30 June 2016  
 Field Determination. Date(s): 14 May 2016

**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):<sup>1</sup>**

- TNWs, including territorial seas  
 Wetlands adjacent to TNWs  
 Relatively permanent waters<sup>2</sup> (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: 0.45 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):<sup>3</sup>**

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

<sup>2</sup> 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).

<sup>3</sup> 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 body<sup>4</sup> 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: 37287 acres  
Drainage area: Pick List  
Average annual rainfall: 55.94 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 2-5 river miles from TNW.  
Project waters are 1-2 river miles from RPW.  
Project waters are 2-5 aerial (straight) miles from TNW.  
Project waters are 1 (or less) aerial (straight) miles from RPW.  
Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW<sup>5</sup>: Goose Creek (RPW) to Goose Creek (TNW)

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

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

Tributary stream order, if known: 2

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

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

Manipulated (man-altered). Explain: Portions of Goose Creek appear to be channelized. In addition, there are several areas where the banks of Goose Creek have been reinforced with concrete to prevent erosion.

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

Average width: 100 feet  
Average depth: 1 feet  
Average side slopes: 2:1

Primary tributary substrate composition (check all that apply):

Silts  Sands  Concrete  
 Cobbles  Gravel  Muck  
 Bedrock  Vegetation. Type/% cover: 10  
 Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Tributary is maintained for drainage/flood control purposes. Approximately 1/3 of the tributary banks have been concreted and stabilized. Some sloughing is occurring in the northern extent of the tributary.

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Seasonal flow**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime: **The tributary is an RPW that turns into a TNW.**

Other information on duration and volume:

Surface flow is: **Confined**. Characteristics:

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

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks  
 OHWM<sup>6</sup> (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.<sup>7</sup> 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:**

<sup>6</sup>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.

<sup>7</sup>ibid.

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

Explain: .

Identify specific pollutants, if known:

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

Riparian corridor. Characteristics (type, average width): Riparian corridor is predominantly herbaceous vegetation due to the banks of the tributary being mowed and maintained. The top of the banks and edge of the corridor consists of a forested/scrub-shrub vegetation community.

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: (See attached table) acres

Wetland type. Explain: Palustrine

Wetland quality. Explain: There are 9 wetlands within the project boundary, identified as Wetlands A thru D & F thru J. The wetlands contain a predominance of FAC, FACW, and OBL vegetation. Chinese tallow was observed in some of the wetlands. These wetlands are located within the 100-year floodplain of Goose Creek.

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Unknown**. Explain:

Surface flow is: **Overland sheetflow**

Characteristics: The wetlands are located within the anticipated high flow of Goose Creek (i.e. the 100-year floodplain of Goose Creek).

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

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: The wetlands are located within the anticipated high flow of Goose Creek (i.e. the 100-year floodplain of Goose Creek).

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **2-5** river miles from TNW.

Project waters are **2-5** aerial (straight) miles from TNW.

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

Estimate approximate location of wetland as within the **50 - 100-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: No surface hydrology was exhibited within the wetlands.

Identify specific pollutants, if known:

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

Riparian buffer. Characteristics (type, average width):

Vegetation type/percent cover. Explain: Forested and/or herbaceous with 100 percent cover.

Habitat for:

Federally Listed species. Explain findings:

Fish/spawn areas. Explain findings:

Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings:

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

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

Approximately (38) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

See attached table.

Summarize overall biological, chemical and physical functions being performed:

Based on our analysis, we determined there are a total of 19 total wetlands, on and off site, within the relevant reach of Goose Creek in relation to the project site, totaling approximately 38 acres. The approximate 38 acres (19 wetlands), are adjacent to Goose Creek, but do not abut Goose Creek within the relevant reach. The navigable portion of Goose Creek ends approximately 2.3 river miles downstream of the project site and begins approximately 7.5 river miles downstream where Goose Creek intersects the San Jacinto River.

Typically neighboring wetlands provide a chemical sequestration impact/effect upon the waters as they flow thru adjacent wetlands and connect to downstream TNW; which is located approximately 2.3 river miles downstream.

The retention of water and retardation of overbank flooding associated with adjacent wetlands located in the 100 year floodplain has effect upon the physical attributes of the downstream TNW. The function in effecting the flow (velocity and duration) of waters into the TNW (Goose Creek). Increased flow increases flooding and scouring, resulting in loss of property and the physical integrity of the TNW.

There are no known species found in this review that require these aquatic resources with this relevant reach and/or review area and the waters of the TNW to fulfill their life cycle requirements. Neighboring wetlands aid in providing detritus as a food source for many aquatic species.

**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:

**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: Goose Creek in this reach is a relatively permanent water (RPW) and a 2nd order tributary that is approximately 3.9 river miles long. This RPW portion of Goose Creek flows into the TNW portion of Goose Creek, downstream of this relevant reach. Goose Creek extends from its upper reach within Harris County to the San Jacinto River, and is located within a moderately developed area.

There are 9 neighboring wetlands (Wetland A thru D & F thru J totaling appx 0.45 acre)) within the project boundary. These wetlands vary in distance from Goose Creek - an RPW at this point (closest being appx 0.7 mile). The closest point to the nearest TNW (Goose Creek) is approximately 2.4 aerial miles. There is a total of 19 adjacent wetland polygons within this relevant reach (on and off site) that total approximately 38 acres. All of these wetlands are neighboring (not abutting) Goose Creek.

The aquatic resources within this relevant reach include a 2nd order reach of an RPW (Goose Creek) and the 19 adjacent (neighboring) wetlands. The "adjacent" wetlands were determined based on the FEMA flood plain map and project specific identified 9 wetland polygons (A thru D & F thru J; totaling 0.45 acres). The other 10 wetland polygons (totaling appx 37.5 acres) were determined using those wetlands identified by the NWI map and all or portions of the wetlands were located within the 100-year flood plain. Few of the wetlands on the project site are mapped outside/above the 100-year flood plain map; but a more thorough review of the project specifics using LIDAR data & FEMA 100 year flood plain elevation cross section reviewed that these wetlands are actually within the elevation and were including in this determination as being adjacent/"neighboring".

Chemically speaking, adjacent wetlands typically provide filtration to the nearby waterway. The nearest TNW is located 2.3 miles downstream. These adjacent wetlands provide filtration aiding in the elimination and treatment of bacteria, thermal, and chemical pollutants. It should be noted the wetlands in the review area do not have a direct surface hydrologic connection to the nearby waterway but it is anticipated within reasonably anticipated high flows (100 year flood plain) of Goose Creek, that they will share direct surface hydrology. Therefore, it is anticipated that the aquatic resources within this reach should provide positive functions associated with the chemical integrity of the downstream TNW.

There are 38 acres of adjacent wetlands within the anticipated high flow (100-year flood plain) of this reach that serve for physical retention of flood waters. These adjacent wetlands provide retention of water and retardation of overbank flooding associated with adjacent waterway. These 38 acres of wetlands provide flood plain storage and have a direct effect upon the velocity and flow of liquids into the

downstream TNW; Goose Creek. Increased and intense flow results in increased flooding and scouring, resulting in loss of property and the physical attributes of the TNW. As such these is more than a speculative and insubstantial effect upon the physical attributes for the downstream TNW.

There are no known aquatic biological species found in this reach (the tributary and the adjacent wetlands) that require these aquatic resources fulfill their life cycle requirements. It is noted that the tributary within this reach (Goose Creek and RPW) has a direct surface hydrologic connection with the TNW. None of the wetlands are abutting but they are neighboring and as such the majority of the time they lack any potential surface hydrologic connection. These neighboring wetlands typically aid in providing detritus as a food source to aquatic species in the TNW. However, there is not sufficient evidence to identify a species that requires both the aquatic resources within this reach and the waters of the TNW to fulfill life cycle requirements.

In conclusion, it is the SWG draft determination that the aquatic resources within this relative reach provide more than a speculative or insubstantial effect upon the chemical, physical and/or biological integrity of the downstream TNW.

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

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

- TNWs: linear feet width (ft), Or, acres.
- Wetlands adjacent to TNWs: acres.

**2. RPWs that flow directly or indirectly into TNWs.**

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
- Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

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

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

**3. Non-RPWs<sup>8</sup> 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:

<sup>8</sup>See Footnote # 3.

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: **Approximately 0.45** 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.<sup>9</sup>**

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):<sup>10</sup>**

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

**Identify water body and summarize rationale supporting determination:**

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

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

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

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

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

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

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

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

Provide acreage estimates for non-jurisdictional waters in the review area 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: **Kimley-Horn and Associates, LLC.**
- 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 DP 1**
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas: **Texas Gulf Region -- 12040104**
  - 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: **Mont Belvieu, Texas Quad**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **Web Soil Survey**
- National wetlands inventory map(s). Cite name: **USFWS NWI Mapper**
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: **48201C0765L**
- 100-year Floodplain Elevation is:        (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): **Google Earth 1943 to 2016, Infrared 2009, 2014**  
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): **2001 HCFCD Lidar: Harris County (TX)**

**B. ADDITIONAL COMMENTS TO SUPPORT JD:** Goose Creek in this reach is a relatively permanent water (RPW) and a 2nd order tributary that is approximately 3.9 river miles long. This RPW portion of Goose Creek flows into the TNW portion of Goose Creek, downstream of this relevant reach. Goose Creek extends from its upper reach within Harris County to the San Jacinto River, and is located within a moderately developed area.

There are 9 neighboring wetlands (Wetland A thru J & F thru J totaling appx 0.45 acre)) within the project boundary. These wetlands vary in distance from Goose Creek - an RPW at this point (closest being appx 0.7 mile). The closest point to the nearest TNW (Goose Creek) is approximately 2.4 aerial miles. There is a total of 19 adjacent wetland polygons within this relevant reach (on and off site) that total approximately 38 acres. All of these wetlands are neighboring (not abutting) Goose Creek.

The aquatic resources within this relevant reach include a 2nd order reach of an RPW (Goose Creek) and the 19 adjacent (neighboring) wetlands. The "adjacent" wetlands were determined based on the FEMA flood plain map and project specific identified 9 wetland polygons (A thru D & F thru J; totaling 0.45 acres). The other 10 wetland polygons (totaling appx 37.5 acres) were determined using those wetlands identified by the NWI map and all or portions of the wetlands were located within the 100-year flood plain. Few of the wetlands on the project site are mapped outside/above the 100-year flood plain map; but a more thorough review of the project specifics using LIDAR data & FEMA 100 year flood plain elevation

cross section reviewed that these wetlands are actually within the elevation and were including in this determination as being adjacent/"neighboring".

Chemically speaking, adjacent wetlands typically provide filtration to the nearby waterway. The nearest TNW is located 2.3 miles downstream. These adjacent wetlands provide filtration aiding in the elimination and treatment of bacteria, thermal, and chemical pollutants. It should be noted the wetlands in the review area do not have a direct surface hydrologic connection to the nearby waterway but it is anticipated within reasonably anticipated high flows (100 year flood plain) of Goose Creek, that they will share direct surface hydrology. Therefore, it is anticipated that the aquatic resources within this reach should provide positive functions associated with the chemical integrity of the downstream TNW.

There are 38 acres of adjacent wetlands within the anticipated high flow (100-year flood plain) of this reach that serve for physical retention of flood waters. These adjacent wetlands provide retention of water and retardation of overbank flooding associated with adjacent waterway. These 38 acres of wetlands provide flood plain storage and have a direct effect upon the velocity and flow of liquids into the downstream TNW; Goose Creek. Increased and intense flow results in increased flooding and scouring, resulting in loss of property and the physical attributes of the TNW. As such these is more than a speculative and insubstantial effect upon the physical attributes for the downstream TNW.

There are no known aquatic biological species found in this reach (the tributary and the adjacent wetlands) that require these aquatic resources fulfill their life cycle requirements. It is noted that the tributary within this reach (Goose Creek and RPW) has a direct surface hydrologic connection with the TNW. None of the wetlands are abutting but they are neighboring and as such the majority of the time they lack any potential surface hydrologic connection. These neighboring wetlands typically aid in providing detritus as a food source to aquatic species in the TNW. However, there is not sufficient evidence to identify a species that requires both the aquatic resources within this reach and the waters of the TNW to fulfill life cycle requirements.

In conclusion, it is the SWG draft determination that the aquatic resources within this relative reach provide more than a speculative or insubstantial effect upon the chemical, physical and/or biological integrity of the downstream TNW.

# TABLE

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Significant Nexus Test Adjacent Wetlands

Wetland	Acreage	Type	Abutting	Latitude	Longitude
A*	0.1	Herbaceous	No	29.797837	-94.990202
B*	0.06	Herbaceous	No	29.796704	-94.989942
C*	0.01	Herbaceous	No	29.800230	-94.990053
D*	0.06	Forested	No	29.795709	-94.990708
F*	0.03	Herbaceous	No	29.797048	-94.989866
G*	0.04	Herbaceous	No	29.797592	-94.990280
H*	0.03	Forested	No	29.795652	-94.989725
I*	0.08	Herbaceous	No	29.800798	-94.800798
J*	0.04	Herbaceous	No	29.793342	-94.988531
1	1	Forested	No	29.804036	-95.010029
2	1.85	Forested	No	29.796199	-95.008026
3	0.41	Forested	No	29.796321	-95.007185
4	1.84	Forested	No	29.795139	-95.007865
5	0.76	Forested	No	29.795174	-95.006824
6	3.1	Forested	No	29.791993	-95.011469
7	1	Forested	No	29.793662	-95.000676
8	3.1	Forested	No	29.795365	-95.000556
9	7.21	Forested	No	29.791455	-95.004021
10	18.2	Forested	No	29.778414	-95.004601
<b>Total</b>	<b>38.92</b>	<b>*Wetlands within Project Area</b>			
Forested	38.68	Abutting	0		
Herbaceous	0.36	Non-Abutting	38.92		