

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 June 2017

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2017-00228, City of Lumberton, Unnamed Tributary To Boggy Creek, Wet 1, Wet 2

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/Parish: Hardin City: Lumberton

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: Boggy Creek

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

Name of watershed or Hydrologic Unit Code (HUC): Pine Island Bayou - 12020007

- 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: 4 May 2017
 Field Determination. Date(s): 5 May 2017

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: appx. 3,826 linear feet: appx. 12 width (ft) and/or acres

Wetlands: appx. 0.04 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: 2.66 square miles

Drainage area: 2.66 Pick List

Average annual rainfall: 58.07 inches

Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 2 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.

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

Project waters are 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:

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: Unnamed tributary to Boggy Creek - Boggy Creek - Pine Island Bayou

Tributary stream order, if known: **Second Order**

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

Tributary is: Natural
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain: **This northern portion of the unnamed tributary to Boggy Creek has been re-routed and channelized.**

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

Average width: **12** feet

Average depth: **6** 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: **The northern portion of the unnamed tributary to Boggy Creek has been straightened and exhibits a cross-section typical of other waters altered for drainage. The southern portion of the unnamed tributary to Boggy Creek meanders, but it has a relatively straight flow path.**

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Relatively straight**

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: **The unnamed tributary to Boggy Creek is a perennial RPW.**

Other information on duration and volume: **Its mean annual flow volume is 9 cubic feet per second (cfs). Its mean annual flow velocity is .8 fps.**

Surface flow is: **Confined**. Characteristics: **The unnamed tributary to Boggy Creek has a defined OHWM and is confined to its bed.**

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:

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.

- | | |
|--|--|
| <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: **Water color is discolored.**

Identify specific pollutants, if known: **The unnamed tributary to Boggy Creek is not on 303 (d) list.**

However, the downstream TNW, Pine Island Bayou, is on the 303 (d) list. The cause of impairment is dissolved oxygen due to organic enrichment/oxygen depletion.

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

Riparian corridor. Characteristics (type, average width): Riparian corridor is narrow due to the steep banks of the tributary.

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: **Approximately 0.04** acres

Wetland type. Explain: **palustrine emergent**

Wetland quality. Explain: **These two wetlands (Wet 1 and Wet 2) contain a predominance of OBL vegetation. They are located in depressions, and surface water was present in these wetlands.**

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Ephemeral flow**. Explain: **No channelized entrance or egress was observed flowing between Wet 1 or Wet 2 and the unnamed tributary to Boggy Creek. Wet 1 and 2 do not abut the unnamed tributary to Boggy Creek. However, Wet 1 and 2 are within the 100-year floodplain of the unnamed tributary to Boggy Creek, and as such, are neighboring and demonstrate a known hydrological connection to the unnamed tributary to Boggy Creek.**

Surface flow is: **Pick List**

Characteristics: **The wetlands are located within the most recent mapped 100-year flood plain of the unnamed tributary to Boggy 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: .

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **5-10** river miles from TNW.

Project waters are **2-5** 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: **Unknown**

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

Riparian buffer. Characteristics (type, average width):

Vegetation type/percent cover. Explain: **Herbaceous**

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: **4**

Approximately (14.79) 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 page 12.			

Summarize overall biological, chemical and physical functions being performed: Based on our analysis, we determined there are approximately a total of 4 adjacent wetlands (appx. 14.79 acres) located within the 2.14-mile, second order reach of the unnamed tributary to Boggy Creek. All of the wetlands considered in this analysis are adjacent, but not abutting, to the unnamed tributary to Boggy Creek.

The wetlands provide for the removal of pollutants (phytosequestration), floodplain storage, and biotic diversity.

C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

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

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: The unnamed tributary to Boggy Creek within this reach (2nd order tributary) is an RPW with perennial flow and does not have a broken surface hydrologic connection to the downstream TNW. This entire reach is approximately 2.14 miles long. Approximately 3,826' feet of the reach are within the project area. This reach concludes approximately 5.2 miles upstream of the nearest TNW. We have identified 4 wetlands (including the two in the review area) that are adjacent to this reach. These wetlands total approximately 14.79 acres. There are two wetlands (Wet 1 and Wet 2) adjacent to the unnamed tributary to Boggy Creek within the project boundary. Wet 1 is located approximately 3.69 aerial miles from the closest edge of the TNW, Pine Island Bayou. Wet 2 is located approximately 3.70 aerial miles from the closest edge of the TNW, Pine Island Bayou. Both Wet 1 and Wet 2 are located within the 100-year floodplain of the unnamed tributary to Boggy Creek, and therefore, neighbor the unnamed tributary to Boggy Creek.
 - The Corps did find evidence/data to support the statement that these waters (the tributary and all similarly situated adjacent wetlands within this relative reach) provide more than a speculative or insubstantial effect upon the chemical integrity of the downstream TNW, Pine Island Bayou, located approximately 5.2 river miles downstream of the relative reach. There is not a surface hydrologic break between this approximate 2.14 mile relative reach and the TNW, Pine Island Bayou; thus, a direct surface hydrologic connection exists. Pine Island Bayou is identified in the TCEQ 303(d) list of impaired waters. The approximate 14.79 acres of adjacent wetlands provide important filtration to aid in the elimination and treatment of bacteria, thermal, and chemical pollutants in Pine Island Bayou. Therefore, the aquatic resources within this reach provide more than speculative or insubstantial effects that are inseparably bound to the chemical integrity of the downstream TNW.
 - Within this relative reach of the unnamed tributary to Boggy Creek, there are approximately 14.79 acres of similarly situated wetlands located within the 100-year floodplain. These adjacent wetlands provide for retention of water and retardation of overbank flooding. These adjacent wetlands and the tributary itself provide vital flood plain retention and storage which aid in preventing water from rushing into the downstream TNW. Increased flow will increase "out of bank" flooding and scouring, resulting in loss of property and the physical attributes of the TNW. The effects of removing these approximately 14.79 acres of adjacent wetlands and the unnamed tributary to Boggy Creek would increase the velocity and flow of liquids into Pine Island Bayou, resulting in a more than speculative or insubstantial effect upon the physical attributes for the downstream TNW.
 - There are no known species found in this review that require the aquatic resources within this relative reach and/or review area and the waters of the TNW to fulfill their life cycle requirements. However, based on the fact that the waterway in this reach is an RPW with a direct hydrologic connection with the TNW, it is highly feasible that species of fishes and/or invertebrates can utilize locations of the unnamed tributary to Boggy Creek for portions of their lifecycles, but 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 full lifecycle requirements. The aquatic resources within this review area aid and support the biological integrity of the downstream TNW.
 - In conclusion, the waters within this review area: a second order stream (in the project area approximately 3,826' of tributary) combined with approximately 14.79 acres of adjacent wetlands do provide more than a speculative or substantial effect upon the chemical and physical 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: The unnamed tributary flows to Boggy Creek and then to Pine Island Bayou, which is a TNW. Due to the vegetation cover in the 31 October 2006 and 27 June 2005 Google Earth aerial images, the presence of water cannot be confirmed within the unnamed tributary to Boggy Creek. However, water is visible throughout the length of the unnamed tributary to Boggy Creek in all of the other Google Earth Aerial Images: 29 January 2017, 28 February 2013, 10 November 2011, 11 March 2010, 31 December 2008, 4 February 1995, and 2 February 1989. Therefore, the unnamed tributary to Boggy Creek would be considered an RPW. It is shown as perennial in the 2010 and 2013 USGS Voth, Texas topographic maps. The feature appears to be fed by direct precipitation and stormwater runoff from the surrounding areas. Flowing water was observed in the unnamed tributary to Boggy Creek during our 5 May 2017 site visit. The unnamed tributary to Boggy Creek is a water of the United States subject to the U.S. Army Corps of Engineers (USACE) jurisdiction under Section 404 of the Clean Water Act (CWA). Under Section 404, a Department of the Army permit is required prior to the discharge of dredged and/or fill material into this jurisdictional water.
- 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: **appx. 3,826** linear feet **appx. 12** 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.

⁸See Footnote # 3.

- 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: **appx 0.04** acres

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

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: _____ acres

7. Impoundments of jurisdictional waters.⁹

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from “waters of the U.S.,” or
 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
 Demonstrate that water is isolated with a nexus to commerce (see E below).

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

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

Identify water body and summarize rationale supporting determination:

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

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

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.

- 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: **Request dated 3 March 2017**
 - 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: **6 June 2017**
 - Corps navigable waters' study:
 - U.S. Geological Survey Hydrologic Atlas: **Pine Island Bayou, 12020007**
 - 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: **1943, 1946, 1960, 1970, 1974, 1993, 2010, and 2013 Voth, Texas Quadrangle Maps, 1984 USGS Silsbee, Texas Quadrangle Map**
 - USDA Natural Resources Conservation Service Soil Survey. Citation: **Soil Survey of Hardin County, Texas**
 - National wetlands inventory map(s). Cite name: **USFWS NWI Mapper**
 - State/Local wetland inventory map(s):
 - FEMA/FIRM maps: **Panel 48199C0530F, Effective 6 October 2010**
 - 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
 - Photographs: Aerial (Name & Date): **Google Earth Pro (1989-2017) and Digital Globe (2014-2016).**
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): **NHDPlus v2.1 Watershed Characterization Report**

B. ADDITIONAL COMMENTS TO SUPPORT JD: Based on our 5 May 2017 site visit and a review of on and off-site data associated with this request, we have determined that the project area contains waters of the United States, specifically the unnamed tributary to Boggy Creek and it's approximate 14.79 acres of adjacent wetlands. The unnamed tributary to Boggy Creek is an RPW which flows indirectly into the TNW, Pine Island Bayou. As such, the section of the unnamed tributary to Boggy Creek within the project boundary is a water of the United States subject to Section 404 of the Clean Water Act. Therefore, the approximate 3,826 linear feet of the unnamed tributary to Boggy Creek within the project site are jurisdictional waters. Under Section 404, a Department of the Army permit is required prior to the discharge of dredged and/or fill material into this jurisdictional water. Within this section, the unnamed tributary to Boggy Creek is a second order waterway with perennial flow and a relative reach that is approximately 2.14 miles long.

There are two wetlands (Wet 1 and Wet 2) adjacent to the unnamed tributary to Boggy Creek within the project boundary. Wet 1 is located approximately 44 feet from the unnamed tributary to Boggy Creek, an RPW, and approximately 3.69 aerial miles from the closest edge of the TNW, Pine Island Bayou. Wet 2 is located approximately 20 feet from the unnamed tributary to Boggy Creek, an RPW, and approximately 3.70 aerial miles from the closest edge of the TNW, Pine Island Bayou. Wet 1 and Wet 2 are located within the 100-year floodplain of the unnamed tributary to Boggy Creek, and therefore, neighbor the unnamed tributary to Boggy Creek. Wet 1 and Wet 2, in combination with two other wetlands located within the 100-year floodplain of the unnamed tributary to Boggy Creek within the 2.14 mile relative reach, total approximately 14.79 acres. All wetlands considered in this analysis are adjacent, but not abutting, to the unnamed tributary to Boggy Creek.

The Corps did find evidence/data to support the statement that these waters (the tributary and all similarly situated adjacent wetlands within this relative reach) provide more than a speculative or insubstantial effect upon the chemical integrity of the downstream TNW, Pine Island Bayou, located approximately 5.2 river miles downstream of the relative reach. There is not a surface hydrologic break between this approximate 2.14 mile relative reach and the TNW, Pine Island Bayou; thus, a direct surface hydrologic connection exists. Pine Island Bayou is identified in the TCEQ 303(d) list of impaired waters. The approximate 14.79 acres of adjacent wetlands provide important filtration to aid in the elimination and treatment of bacteria, thermal, and chemical pollutants in Pine Island Bayou. Therefore, the aquatic resources within this reach provide more than speculative or insubstantial effects that are inseparably bound to the chemical integrity of the downstream TNW.

Within this relative reach of the unnamed tributary to Boggy Creek, there are approximately 14.79 acres of similarly situated wetlands located within the 100-year floodplain. These adjacent wetlands provide for retention of water and retardation of overbank flooding. These adjacent wetlands and the tributary itself provide vital flood plain retention and storage which aid in preventing water from rushing into the downstream TNW. Increased flow will increase "out of bank" flooding and scouring, resulting in loss of property and the physical attributes of the TNW. The effects of removing these approximately 14.79 acres of adjacent wetlands and the unnamed tributary to Boggy Creek would increase the velocity and flow of liquids into Pine Island Bayou, resulting in a more than speculative or insubstantial effect upon the physical attributes for the downstream TNW.

There are no known species found in this review that require these aquatic resources within this relative reach and/or review area and the waters of the TNW to fulfill their life cycle requirements. However, based on the fact that the waterway in this reach is an RPW with a direct hydrologic connection with the TNW, it is highly feasible that species of fishes and/or invertebrates can utilize locations of the unnamed tributary to Boggy Creek for portions of their lifecycles, but 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 full lifecycle requirements. The aquatic resources within this review area aid and support the biological integrity of the downstream TNW.

In conclusion, it is the Corps' opinion that there is sufficient evidence to support the statement that the aquatic resources within this approximate 2.14 mile relative reach and its 14.79 acres of adjacent wetlands provide a significant nexus (more than a speculative or insubstantial) effect upon the chemical, physical, and/or biological integrity of the downstream TNW. As such, they are subject to federal jurisdiction under Section 404 of the Clean Water Act.

Wetlands Considered in the Cumulative Analysis

NWI	Attribute	Approximate	Directly		
Wetland Type		Amount (Acres)	Abuts?	Latitude	Longitude
Inside Project Area					
PEM	PEM	0.03	No	30.239893°N	-94.214853°W (Wet 1)
PEM	PEM	0.01	No	30.239993°N	-94.215022°W (Wet 2)
Outside Project Area					
PUB	PUBHx	14	No	30.232951°N	-94.216520°W
PUB	PUBHx	0.75	No	30.233880°N	-94.216842°W
Approximate Total:		14.79			