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): 25 March 2019

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2018-00092, Wetland 1, 2, & 3

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: Texas County/Parish: Montgomery City: Magnolia
Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. See Table 1. ° N, Long. See Table 1. ° W;
Universal Transverse Mercator: UTM: 15N, N., E.,NAD: 83
Name of nearest water body: Spring Creek Unnamed Tributary
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: none
Name of watershed or Hydrologic Unit Code (HUC): Spring -- 12040102
☒ **Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.**
☐ **Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.**

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ **Office (Desk) Determination. Date: 20 January 2019**
☒ **Field Determination. Date(s): 30 November 2018**

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

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

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: linear feet: width (ft) and/or acres
      Wetlands: acres

   c. **Limits (boundaries) of jurisdiction based on: Not Applicable.**
      Elevation of established OHWM (if known):

2. **Non-regulated waters/wetlands (check if applicable):[3]**
   ☒ **Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: There are three isolated wetlands identified on this site: Wetland 1 ~ 0.29 acre, Wetland 2 ~ 0.89 ac, and Wetland 3 ~ 0.03 acre. The nearest known water of the U.S. is Spring Creek, a relatively permanent water (RPW). It is located south of the subject site. Spring Creek flows approximately 30.8 river miles to the southeast, to the point where it becomes a traditional navigable water (TNW).**

[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.**

Based on a review of multiple exhibits, our 30 November 2018 site visit, topographical maps, historical aerials, the U.S. Fish and Wildlife Service National Wetland Inventory map, the U.S. Department of Agriculture National Cooperative Soil Survey (NCSS) map data, and the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs), there appear to be no discrete surface hydrological connections between the subject wetlands and any water of the U.S. The exact boundaries (as standard with isolated wetlands) were not verified, but the feature polygons were examined via aerial photography and during the 30 November 2018 site visit to ensure that they are enclosed polygons surrounded by uplands.

The subject wetlands are all located outside the 1% annual flood risk zone (100-year floodplain) of any water of the U.S.

- The subject wetlands are neither currently used, nor have been used in the past, nor susceptible to use for interstate or foreign commerce
- The subject wetlands are not subject to the ebb and flow of the daily tide.
- The subject wetlands do not cross interstate or tribal boundaries.
- There are no indications that these "Isolated*" wetlands would 1) affect or be used by any interstate or foreign travelers for recreational or other purposes, 2) affect or be used for fish or shellfish that could be taken and sold in interstate or foreign commerce, or 3) be involved in any direct current use or potential use for industrial purposes by industries in interstate commerce.
- The subject wetlands are not impoundments of any water of the U.S.
- The subject wetlands are not part of a surface tributary system to any water body.
- The subject wetlands are not part of the territorial seas.
- The subject wetlands are not located "Adjacent" to waters of the U.S. (other than waters that are themselves wetlands).**
- The subject wetlands are not located reasonably close to a water of the US as to infer they are "ecologically adjacent"; for a water/wetland to be determined to "reasonably close" it must be in a geomorphic position such that an ecologic interconnectivity is beyond speculation or insubstantial for a known biologic species that requires both, the subject waters/wetlands and the nearest known waterbody (a known water of the U.S. other than an adjacent wetland) to fullfill spawning and/or life cycle requirements. There are no known species in this geo-region that require both these waters/wetlands under review and the nearest known waterway to fulfill their life cycle requirements, therefore these waters/wetlands are ecologically isolated.

*** 33 CFR 330.2 (e): Isolated waters means those non-tidal waters of the U.S. that are:**
(1) Not part of a surface tributary system to interstate or navigable waters of the US; and
(2) Not adjacent to such tributary waterbodies.

**** 33 CFR 328.3 (a)(7) adjacent wetlands: Federal regulations, specifically 33 CFR 328.3 c) defines "ADJACENT" as: bordering, contiguous or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands."**

In summary, the subject wetlands have been identifed per the Atlantic and Gulf Coastal Plain Region Supplement of the 1987 Corps of Engineers Wetland Delineation Manual. The subject wetlands are not inseparably bound to a water of the U.S., ares not adjacent to any water of the U.S., and do not have a discrete hydrological surface connection to any water of the U.S. Therefore, the site wetlands are "isolated" with no known nexus to interstate commerce and as such would not be 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[4] 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: acres
Drainage area: acres
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[5]:
Tributary stream order, if known:

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

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: Pick List

Primary tributary substrate composition (check all that apply):

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

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

(c) Flow:

[4] **Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.**
[5] **Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.**

Tributary provides for: Pick List
Estimate average number of flow events in review area/year: Pick List
Describe flow regime:
Other information on duration and volume:
Surface flow is: Pick List. Characteristics:
Subsurface flow: Pick List. Explain findings:
☐ Dye (or other) test performed:

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):
- ☐ clear, natural line impressed on the bank
- ☐ changes in the character of soil
- ☐ shelving
- ☐ vegetation matted down, bent, or absent
- ☐ leaf litter disturbed or washed away
- ☐ sediment deposition
- ☐ water staining
- ☐ other (list):
- ☐ the presence of litter and debris
- ☐ destruction of terrestrial vegetation
- ☐ the presence of wrack line
- ☐ sediment sorting
- ☐ scour
- ☐ multiple observed or predicted flow events
- ☐ abrupt change in plant community

☐ 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:
- ☐ oil or scum line along shore objects
- ☐ fine shell or debris deposits (foreshore)
- ☐ physical markings/characteristics
- ☐ tidal gauges
- ☐ other (list):

☐ Mean High Water Mark indicated by:
- ☐ survey to available datum;
- ☐ physical markings;
- ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain:
Identify specific pollutants, if known:

(iv) Biological Characteristics. Channel supports (check all that apply):
☐ Riparian corridor. Characteristics (type, average width):
☐ Wetland fringe. Characteristics:
☐ Habitat for:
- ☐ Federally Listed species. Explain findings:
- ☐ Fish/spawn areas. Explain findings:
- ☐ 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) <u>General Wetland Characteristics:</u>
Properties:
Wetland size: acres
Wetland type. Explain:
Wetland quality. Explain:
Project wetlands cross or serve as state boundaries. Explain:

(b) <u>General Flow Relationship with Non-TNW</u>:
Flow is: Pick List. Explain:

Surface flow is: Pick List
Characteristics:

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

(c) <u>Wetland Adjacency Determination with Non-TNW:</u>
☐ Directly abutting
☐ Not directly abutting
☐ Discrete wetland hydrologic connection. Explain:

[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.
[7]Ibid.

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

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

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

     - ☐ **Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:**

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

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ **Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.**

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

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   - ☐ **Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.**

   Provide estimates for jurisdictional wetlands in the review area: acres

7. **Impoundments of jurisdictional waters.[9]**
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   - ☐ **Demonstrate that impoundment was created from "waters of the U.S.," or**
   - ☐ **Demonstrate that water meets the criteria for one of the categories presented above (1-6), or**
   - ☐ **Demonstrate that water is isolated with a nexus to commerce (see E below).**

---

[8] **See Footnote # 3.**
[9] **To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.**

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: ~ 1.21 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: Wetland delineation report submitted by applicant.
☐ 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: 30 November 2018 site visit
☐ Corps navigable waters' study:
☒ U.S. Geological Survey Hydrologic Atlas: Spring -- 12040102
☐ USGS NHD data
☒ USGS 8 and 12 digit HUC maps
☐ Galveston District's Approved List of Navigable Waters
☒ U.S. Geological Survey map(s). Cite scale & quad name: 1:24K, Magnolia West, Texas; Magnolia East, Texas; Hockley, Texas; and Rose Hill, Texas.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: National Cooperative Soil Survey (NCSS) Google Earth Layer (http://casoilresource.lawr.ucdavis.edu/soil_web/kml/mapunits.kml), accessed 18 November 2018.
☒ National wetlands inventory map(s). Cite name: FWS NWI Mapper Website (https://www.fws.gov/wetlands/data/mapper.HTML), accessed 19 November 2018.
☐ State/Local wetland inventory map(s):

[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.*

☒ **FEMA/FIRM maps: Montgomery County, Texas Unincorporated Areas, Panel Numbers 48339C0475G, 48339C0650G, 48339C0675G (08/18/2014).**
☒ **100-year Floodplain Elevation is: AE and X; Elevation: 182-185 feet. (National Geodectic Vertical Datum of 1929)**
☒ **Photographs: ☒ Aerial (Name & Date): 2015 Texas Orthoimagery Program (TOP), 0.5-meter Near Color (NC) / Color Infrared (CIR); 2012 National Agriculture Imagery Program (NAIP), 1.0-meter NC/CIR; Google Earth Aerial Images (1995, 2005, 2015).**
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):**

B. ADDITIONAL COMMENTS TO SUPPORT JD: The approximate 55-acre site contains three (3) wetlands: Wetland 1 ~ 0.29 acre, Wetland 2 ~ 0.89 ac, and Wetland 3 ~ 0.03 acre. The nearest water of the U.S. is Spring Creek, a relatively permanent water (RPW), located south of the subject site. Spring Creek flows approximately 30.8 river miles to the southeast, to the point where it becomes a traditional navigable water (TNW).

Based on a review of multiple exhibits, our 30 November 2018 site visit, topographical maps, historical aerials, the U.S. Fish and Wildlife Service National Wetland Inventory map, the U.S. Department of Agriculture National Cooperative Soil Survey (NCSS) map data, and the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs), there appear to be no discrete surface hydrological connections between the subject wetlands and any water of the U.S. The exact boundaries (as standard with isolated wetlands) were not verified, but the feature polygons were examined via aerial photography and during the 30 November 2018 site visit to ensure that they are enclosed polygons surrounded by uplands.

The subject wetlands are all located outside the 1% annual flood risk zone (100-year floodplain) of any water of the U.S.

- The subject wetlands are neither currently used, nor have been used in the past, nor susceptible to use for interstate or foreign commerce
- The subject wetlands are not subject to the ebb and flow of the daily tide.
- The subject wetlands do not cross interstate or tribal boundaries.
- There are no indications that these "Isolated*" wetlands would 1) affect or be used by any interstate or foreign travelers for recreational or other purposes, 2) affect or be used for fish or shellfish that could be taken and sold in interstate or foreign commerce, or 3) be involved in any direct current use or potential use for industrial purposes by industries in interstate commerce.
- The subject wetlands are not impoundments of any water of the U.S.
- The subject wetlands are not part of a surface tributary system to any water body.
- The subject wetlands are not part of the territorial seas.
- The subject wetlands are not located "Adjacent" to waters of the U.S. (other than waters that are themselves wetlands).**
- The subject wetlands are not located reasonably close to a water of the US as to infer they are "ecologically adjacent"; for a water/wetland to be determined to "reasonably close" it must be in a geomorphic position such that an ecologic interconnectivity is beyond speculation or insubstantial for a known biologic species that requires both, the subject waters/wetlands and the nearest known waterbody (a known water of the U.S. other than an adjacent wetland) to fullfill spawning and/or life cycle requirements. There are no known species in this geo-region that require both these waters/wetlands under review and the nearest known waterway to fulfill their life cycle requirements, therefore these waters/wetlands are ecologically isolated.

*** 33 CFR 330.2 (e): Isolated waters means those non-tidal waters of the U.S. that are:**
(1) Not part of a surface tributary system to interstate or navigable waters of the US; and
(2) Not adjacent to such tributary waterbodies.

**** 33 CFR 328.3 (a)(7) adjacent wetlands: Federal regulations, specifically 33 CFR 328.3 c) defines "ADJACENT" as: bordering, contiguous or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands."**

In summary, the subject wetlands have been identifed per the Atlantic and Gulf Coastal Plain Region Supplement of the 1987 Corps of Engineers Wetland Delineation Manual. The subject wetlands are not inseparably bound to a water of the U.S., ares not adjacent to any water of the U.S., and do not have a discrete hydrological surface connection to any water of the U.S. Therefore, the site wetlands are "isolated" with no known nexus to interstate commerce and as such would not be subject to federal jurisdiction under Section 404 of the Clean Water Act.

Table 1.								
Site	**Latitude**	**Longitude**	**UTM Zone**	**UTM Easting**	**UTM Northing**	**Approximate Size (acres / linear feet)**	**Approximate Distance to RPW (miles)**	**Approximate Distance to TNW (miles)**
Wetland 1	30.124801	-95.754244	15N	234641.5	3335817	0.29	2.1	17.8
Wetland 2	30.122346	-95.754349	15N	234624.8	3335545.1	0.89	1.9	17.8
Wetland 3	30.106035	-95.745857	15N	235400	3333716.9	0.03	0.7	17.3
						~1.21		

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): 25 March 2019

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Galveston District, SWG-2018-00092, Montgomery County, Approximate 55-Acre Site for Proposed Grand Pines Road, From Nichols Sawmill Road to Sanders Cemetery Road, in Magnolia, Montgomery County, Texas

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: Texas County/Parish: Montgomery City: Magnolia
Center coordinates of site (lat/long in degree decimal format, NAD-83): Lat. See Table 1. ° N, Long. See Table 1. ° W;
Universal Transverse Mercator: UTM: 15N, N., E.,NAD: 83
Name of nearest water body: Spring Creek Unnamed Tributary
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Spring Creek
Name of watershed or Hydrologic Unit Code (HUC): Spring -- 12040102
☒ **Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.**
☐ **Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.**

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ **Office (Desk) Determination. Date: 20 January 2019**
☒ **Field Determination. Date(s): 30 November 2018**

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

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

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: linear feet: width (ft) and/or acres
      Wetlands: acres

   c. **Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual.**
      Elevation of established OHWM (if known):

2. **Non-regulated waters/wetlands (check if applicable):[3]**
   ☐ **Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:**

[1] **Boxes checked below shall be supported by completing the appropriate sections in Section III below.**
[2] **For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).**
[3] **Supporting documentation is presented in Section III.F.**

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW
Identify TNW:

Summarize rationale supporting determination:

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

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

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

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

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

If the water body[4] 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: Sugar Creek-Spring Creek (120401020205) - 20,484 acres
Drainage area: 5,191 acres
Average annual rainfall: EPA Watershed Report - 47.9 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 30 (or more) river miles from TNW.
Project waters are 1 (or less) river miles from RPW.
Project waters are 15-20 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[5]: The relevant reach, an approximate 2.25-mile-long section of the Spring Creek Unnamed Tributary, is an intermittent feature that flows south-southeast to where it intersects with Spring Creek, a relatively permanent water (RPW). Spring Creek then flows approximately 30.8 river miles to the east-southeast to where it becomes a traditional navigable water (TNW).
Tributary stream order, if known: Based upon the Strahler stream order classification, and site specific information, the relevant reach is a 1st order stream.

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

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

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

Tributary properties with respect to top of bank (estimate):
Average width: 15 feet
Average depth: 1-4 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: Eroding banks
Presence of run/riffle/pool complexes. Explain: No. Channel substrate appears to be relatively uniform along the full length of the relevant reach.
Tributary geometry: Meandering
Tributary gradient (approximate average slope): <1 %

(c) Flow:

Tributary provides for: Seasonal flow
Estimate average number of flow events in review area/year: 20 (or greater)
Describe flow regime: Number of flow events taken from USGS National Water Information System, Gauge 08068275, Spring Creek near Tomball, Texas.
Other information on duration and volume:
Surface flow is: Confined. Characteristics: Well developed bed and bank contains intermittent water flow under normal conditions.
Subsurface flow: Unknown. Explain findings: The Soil Survey of Montgomery County, Texas shows the Boy loamy fine sand (1-5% slopes-BoyC), Lilbert loamy fine sand (Fs), and Segno fine sandy loam (1-3% slopes - SegB) soil series associated with the Spring Creek Unnamed Tributary. According to the estimated depth from surface to the water table for these soil series varies between 80 to >200 centimeters.
☐ Dye (or other) test performed:

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

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

☐ Discontinuous OHWM.[7] Explain:

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

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

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: Water present during the 30 November 2018 site visit was clear.
Identify specific pollutants, if known: Spring Creek, from the confluence with the West Fork of the San Jacinto River in Harris/Montgomery County to the confluence with Kickapoo Creek in Harris/Waller County, is listed by the Texas Commission on Environmental Quality (TCEQ) on the Clean Water Act Section 303(d) impaired waters list due to depressed dissolved oxygen.

[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.
[7]Ibid.

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

☒ Riparian corridor. Characteristics (type, average width): Spring Creek Unnamed Tributary includes a forested riparian corridor with scattered residential sites on the east and west edges, and residential developments at the northern limit. The average width is approximately 1,500 to 2,000 feet.

☐ 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: 0.38 acres

Wetland type. Explain: Forested and herbaceous wetlands

Wetland quality. Explain: See data sheets.

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: Intermittent flow. Explain: The subject site wetlands are closed depressions. Hydrology is primarily driven by precipitation, and typically contribute water flow to Spring Creek Unnamed Tributary when they overflow.

Surface flow is: Overland sheetflow

Characteristics:

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: Located within the 1% annual flood risk zone (100-year flood plain).

☐ Ecological connection. Explain:

☐ Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are 30 (or more) river miles from TNW.

Project waters are 15-20 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: Water present during the 30 November 2018 site visit was clear. Chemical characteristics are unknown.

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: Forested 40-80 percent and herbaceous 100 percent cover, respectively.

☐ 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: 2

Approximately (0.38) 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)
Wetland 4	N	0.02		
Wetland 5	N	0.364		

Summarize overall biological, chemical and physical functions being performed: The relevant reach for this significant nexus evaluation is an approximately 2.25-mile-long section of Spring Creek Unnamed Tributary, a 1st order intermittent feature. The relevant reach intersects with and ends at Spring Creek, a relatively permanent water (RPW). Spring Creek flows approximately 30.8 river miles east from this intersection to the point where it becomes a traditional navigable water (TNW).

According to the TCEQ, the impaired segment of Spring Creek is approximately 57.1 river miles long. The relevent reach intersects with Spring Creek at a point with less than 10% of the total impaired stream segment located upstream. In addition, an analysis of potential impairment sources identified point source discharges within the Spring Creek watershed and less than 1% of the point source facility discharges is located within or upstream of the relevent reach. Therefore, there is insufficient data and information to state that the aquatic resources within this relevant reach (seasonal tributary and adjacent wetlands) provide more than speculative or insubstantial effect on the chemical integrity of the downstream TNW located approximately 30.8 river miles downstream.

The subject site is approximately 55 acres of forested land containing two (2) wetlands (Wetland 4 and 5), comprising a total of approximately 0.38 acre. The site also contains one (1) unnamed tributary to Spring Creek (the Relevent Reach), identified on the Hockley, Texas and Rose Hill, Texas USGS topographic quadrangle maps. Based on a review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), a portion of the southern end of the subject site is located within the 1% annual flood risk zone (100-year floodplain) of Spring Creek and the Spring Creek Unnamed Tributary (Relevent Reach). Therefore, it is the Corps opinion there is insufficient evidence that the subject aquatic resources within this relevant reach (intermittent tributary and adjacent wetlands) provide more than a speculative or insubstantial effect upon the physical attributes of the downstream TNW located 30.8 river miles downstream.

There are no known protected species found in the subject site that rely wholly on the relevant reach aquatic resources and the waters of the TNW located 30.8 river miles downstream to fulfill their life cycle requirements. The hydroperiod for this reach is best described as intermittent season. Additionally, considering the 30.8-river-mile distance to the downstream TNW, it would be highly unusual that substantial aquatic biotic species would require both the aquatic resources within this reach and the downstream TNW to fulfill their lifecycle requirements. As such, it is the Corps conclusion that there is insufficient information that the aquatic resources within this relevant reach (intermittent tributary and adjacent wetlands) provide more than a speculative or insubstantial effect upon the biological integrity of the downstream TNW, located approximately 30.8 river miles downstream.

In conclusion, the Corps has determined that there is insufficient evidence to support the statement that the estimated 0.38 acre of adjacent wetlands and the approximate 2.25-mile-long relevant reach of the Spring Creek Unnamed Tributary have a significant nexus to, and therefore have more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of the downstream TNW located 30.8 river miles downstream.

C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

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

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

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:**

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

1. **TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:**
   - ☐ **TNWs: linear feet width (ft), Or, acres.**
   - ☐ **Wetlands adjacent to TNWs: acres.**

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

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

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

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

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

     - ☐ **Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:**

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

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ **Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.**

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

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   - ☐ **Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.**

   Provide estimates for jurisdictional wetlands in the review area: acres

7. **Impoundments of jurisdictional waters.[9]**
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   - ☐ **Demonstrate that impoundment was created from "waters of the U.S.," or**
   - ☐ **Demonstrate that water meets the criteria for one of the categories presented above (1-6), or**
   - ☐ **Demonstrate that water is isolated with a nexus to commerce (see E below).**

---

[8] **See Footnote # 3.**
[9] **To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.**

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: The relevant reach for this significant nexus evaluation is an approximately 2.25-mile-long section of Spring Creek Unnamed Tributary, a 1st order intermittent feature. The relevant reach intersects with and ends at Spring Creek, a relatively permanent water (RPW). Spring Creek flows approximately 30.8 river miles east from this intersection to the point where it becomes a traditional navigable water (TNW).**

According to the TCEQ, the impaired segment of Spring Creek is approximately 57.1 river miles long. The relevant reach intersects with Spring Creek at a point with less than 10% of the total impaired stream segment located upstream. In addition, an analysis of potential impairment sources identified point source discharges within the Spring Creek watershed and less than 1% of the point source facility discharges is located within or upstream of the relevant reach. Therefore, there is insufficient data and information to state that the aquatic resources within this relevant reach (seasonal tributary and adjacent wetlands) provide more than speculative or insubstantial effect on the chemical integrity of the downstream TNW located approximately 30.8 river miles downstream.

The subject site is approximately 55 acres of forested land containing two (2) wetlands (Wetland 4 and 5), comprising a total of approximately 0.38 acre. The site also contains one (1) unnamed tributary to Spring Creek (the Relevant Reach), identified on the Hockley, Texas and Rose Hill, Texas USGS topographic quadrangle maps. Based on a review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), a portion of the southern end of the subject site is located within the 1% annual flood risk zone (100-year floodplain) of Spring Creek and the Spring Creek Unnamed Tributary (Relevant Reach). Therefore, it is the Corps opinion there is insufficient evidence that the subject aquatic resources within this relevant reach (intermittent tributary and adjacent wetlands) provide more than a speculative or insubstantial effect upon the physical attributes of the downstream TNW located 30.8 river miles downstream.

There are no known protected species found in the subject site that rely wholly on the relevant reach aquatic resources and the waters of the TNW located 30.8 river miles downstream to fulfill their life cycle requirements. The hydroperiod for this reach is best described as intermittent season. Additionally, considering the 30.8-river-mile distance to the downstream TNW, it would be highly unusual that substantial aquatic biotic species would require both the aquatic resources within this reach and the downstream TNW to fulfill their lifecycle requirements. As such, it is the Corps conclusion that there is insufficient information that the aquatic resources within this relevant reach (intermittent tributary and adjacent wetlands) provide more than a speculative or insubstantial effect upon the biological integrity of the downstream TNW, located approximately 30.8 river miles downstream.

In conclusion, the Corps has determined that there is insufficient evidence to support the statement that the estimated 0.38 acre of adjacent wetlands and the approximate 2.25-mile-long relevant reach of the Spring Creek

[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.***

Unnamed Tributary have a significant nexus to, and therefore have more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of the downstream TNW located 30.8 river miles downstream.

☐ **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): 11,880 linear feet 15 width (ft).**
☐ **Lakes/ponds: acres.**
☐ **Other non-wetland waters: acres. List type of aquatic resource:**
☒ **Wetlands: 0.38 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: Wetland delineation report submitted by applicant.**
☐ **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: 30 November 2018 site visit**
☐ **Corps navigable waters' study:**
☒ **U.S. Geological Survey Hydrologic Atlas: Spring -- 12040102**
  ☐ **USGS NHD data**
  ☒ **USGS 8 and 12 digit HUC maps**
☐ **Galveston District's Approved List of Navigable Waters**
☒ **U.S. Geological Survey map(s). Cite scale & quad name: 1:24K, Magnolia West, Texas; Magnolia East, Texas; Hockley, Texas; and Rose Hill, Texas.**
☒ **USDA Natural Resources Conservation Service Soil Survey. Citation: National Cooperative Soil Survey (NCSS) Google Earth Layer (http://casoilresource.lawr.ucdavis.edu/soil_web/kml/mapunits.kml), accessed 18 November 2018.**
☒ **National wetlands inventory map(s). Cite name: FWS NWI Mapper Website (https://www.fws.gov/wetlands/data/mapper.HTML), accessed 19 November 2018.**
☐ **State/Local wetland inventory map(s):**
☒ **FEMA/FIRM maps: Montgomery County, Texas Unincorporated Areas, Panel Numbers 48339C0475G, 48339C0650G, 48339C0675G (08/18/2014).**
☒ **100-year Floodplain Elevation is: AE and X; Elevation: 182-185 feet. (National Geodectic Vertical Datum of 1929)**
☒ **Photographs: ☒ Aerial (Name & Date): 2015 Texas Orthoimagery Program (TOP), 0.5-meter Near Color (NC) / Color Infrared (CIR); 2012 National Agriculture Imagery Program (NAIP), 1.0-meter NC/CIR; Google Earth Aerial Images (1995, 2005, 2015).**
  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):**

B. ADDITIONAL COMMENTS TO SUPPORT JD: The relevant reach for this significant nexus evaluation is an approximately 2.25-mile-long section of Spring Creek Unnamed Tributary, a 1st order intermittent feature. The relevant reach intersects with and ends at Spring Creek, a relatively permanent water (RPW). Spring Creek flows approximately 30.8 river miles east from this intersection to the point where it becomes a traditional navigable water (TNW).

According to the TCEQ, the impaired segment of Spring Creek is approximately 57.1 river miles long. The relevant reach intersects with Spring Creek at a point with less than 10% total impaired stream segment located upstream. In addition, an analysis of potential impairment sources identified point source discharges within the Spring Creek watershed and less than 1% of the point source facility discharges is located within or upstream of the relevant reach. Therefore, there is insufficient data and information to state that the aquatic resources within this relevant reach (seasonal tributary and adjacent wetlands) provide more than speculative or insubstantial effect on the chemical integrity of the downstream TNW located approximately 30.8 river miles downstream.

The subject site is approximately 55 acres of forested land containing two (2) wetlands (Wetland 4 and 5), comprising a total of approximately 0.38 acre. The site also contains one (1) unnamed tributary to Spring Creek (the Relevant Reach), identified on the Hockley, Texas and Rose Hill, Texas USGS topographic quadrangle maps. Based on a review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), a portion of the southern end of the subject site is located within

the 1% annual flood risk zone (100-year floodplain) of Spring Creek and the Spring Creek Unnamed Tributary (Relevant Reach). Therefore, it is the Corps opinion there is insufficient evidence that the subject aquatic resources within this relevant reach (seasonal tributary and adjacent wetlands) provide more than a speculative or insubstantial effect upon the physical attributes of the downstream TNW located 30.8 river miles downstream.

There are no known protected species found in the subject site that rely wholly on the relevant reach aquatic resources and the waters of the TNW located 30.8 river miles downstream to fulfill their life cycle requirements. The hydroperiod for this reach is best described as intermittent season. Additionally, considering the 30.8-river-mile distance to the downstream TNW, it would be highly unusual that substantial aquatic biotic species would require both the aquatic resources within this reach and the downstream TNW to fulfill their lifecycle requirements. As such, it is the Corps conclusion that there is insufficient information that the aquatic resources within this relevant reach (intermittent tributary and adjacent wetlands) provide more than a speculative or insubstantial effect upon the biological integrity of the downstream TNW, located approximately 30.8 river miles downstream.

In conclusion, the Corps has determined that there is insufficient evidence to support the statement that the estimated 0.38 acre of adjacent wetlands and the approximate 2.25-mile-long relevant reach of the Spring Creek Unnamed Tributary have a significant nexus to, and therefore have more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of the downstream TNW located 30.8 river miles downstream.

Table 1.								
Site	**Latitude**	**Longitude**	**UTM Zone**	**UTM Easting**	**UTM Northing**	**Approximate Size (acres / linear feet)**	**Approximate Distance to RPW (feet)**	**Approximate Distance to TNW (miles)**
Wetland 4	30.09927	-95.739623	15N	235982.7	3332952.4	0.02	1,200	16.8
Wetland 5	30.094545	-95.735412	15N	236376.1	3332418.8	0.36	125	16.5
Spring Creek Unnamed Tributary	30.107873	-95.746427	15N	267104.4	3340254.5	11,880 linear feet	0	17.4