

**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): 07 December 2018**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Fort Worth District, McGregor Mega Site, SWF-2018-00448**

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

State: Texas County/parish/borough: McLennan City: McGregor  
Center coordinates of site (lat/long in degree decimal format): Lat. 31.407634° N, Long. -97.403569° W.  
Universal Transverse Mercator: 14

Name of nearest waterbody: South Bosque River

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

Name of watershed or Hydrologic Unit Code (HUC): 120602030301

☒ 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:

☐ Field Determination. Date(s):

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

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

☐ Waters subject to the ebb and flow of the tide.

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

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

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

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

- ☐ TNWs, including territorial seas
- ☐ Wetlands adjacent to TNWs
- ☒ Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs
- ☒ Non-RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- ☒ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- ☐ Impoundments of jurisdictional waters
- ☒ Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: 12,634 linear feet: ~13 width (ft) and/or 3.78 acres.

Wetlands: 3.08 acres.

**c. Limits (boundaries) of jurisdiction based on: Established by OHWM.**

Elevation of established OHWM (if known):

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.  
Explain: Ponds constructed in an upland setting for watering livestock were determined to be isolated.

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

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

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

### SECTION III: CWA ANALYSIS

#### A. TNWs AND WETLANDS ADJACENT TO TNWs

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

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

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

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

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

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

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

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

(i) General Area Conditions:

Watershed size: 33147 acres

Drainage area: 309 acres

Average annual rainfall: 35.87 inches

Average annual snowfall: --- inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

☒ Tributary flows through 3 tributaries before entering TNW.

Project waters are 25-30 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: NA.

Identify flow route to TNW<sup>5</sup>: The water from Tributary 2 empties into an unnamed tributary of South Bosque River (Tributary 1), then into South Bosque River, then into Bosque River, and finally into the Brazos River.

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

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

Tributary stream order, if known: First.

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

Tributary is:

☒ Natural

☐ Artificial (man-made). Explain:

☒ Manipulated (man-altered). Explain: Extremely overpopulated with livestock which has

trampled and altered the limits of the OWHM.

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

Average width: 5-20 feet

Average depth: 2 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: Highly eroding and sloughing banks, mainly attributed to excessive cattle trampling and lack of vegetation from overgrazing.

Presence of run/riffle/pool complexes. Explain: NA.

Tributary geometry: Relatively straight

Tributary gradient (approximate average slope): <1 %

(c) Flow:

Tributary provides for: Pick List

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

Describe flow regime: Tributaries were dry during evaluation so this information is unknown.

Other information on duration and volume: Tributaries were dry during evaluation so this information is unknown.

Surface flow is: Pick List. Characteristics: Tributaries were dry during evaluation so this information is unknown.

Subsurface flow: Unknown. Explain findings:

☐ Dye (or other) test performed:

Tributary has (check all that apply):

☒ Bed and banks

☐ OWHM<sup>6</sup> (check all indicators that apply):

☐ clear, natural line impressed on the bank

☐ the presence of litter and debris

☒ changes in the character of soil

☒ destruction of terrestrial vegetation

☐ shelving

☐ the presence of wrack line

☒ vegetation matted down, bent, or absent

☐ sediment sorting

☐ leaf litter disturbed or washed away

☒ scour

☐ sediment deposition

☐ multiple observed or predicted flow events

☐ water staining

☐ abrupt change in plant community

☐ other (list):

☒ Discontinuous OWHM.<sup>7</sup> Explain: OWHM indicators were weak during the field evaluation due to poor land use for the last 80 years. Areas where the channels became vegetated by bermuda grass or banks were trampled down, secondary indicators were used.

If factors other than the OWHM 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: Watershed on the property is essentially a confined livestock feeding operation with very little vegetation and

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

<sup>7</sup>Ibid.

excessive cattle excrement. During precipitation events, said excrement is transported to the tributaries via sheet flow. Water quality was not tested but is likely high in ammonia, phosphorus, and nitrogen. Tributary 1 was observed downslope of the site with discolored water.

Identify specific pollutants, if known: Livestock excrement.

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

☒ Riparian corridor. Characteristics (type, average width): Narrow strips of sugarberry trees were observed lining some portions of the tributaries, 10 feet wide on average.

☐ 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: 3.08 acres

Wetland type. Explain: Wetland 1 and 3 were emergent wetlands while Wetland 2 was forested.

Wetland quality. Explain: Both are low quality wetlands dominated by early successional vegetation communities due to a constant disturbance regime.

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

(b) General Flow Relationship with Non-TNW:

Flow is: **No Flow**. Explain: Both are seasonally saturated wetlands so there is no flow.

Surface flow is: **Not present**

Characteristics:

Subsurface flow: **No**. 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: Wetland 2 was forested wetland continuation of Wetland 3 which is a emergent wetland abutting Tributary 2. As one wetland complex, the entire area is abutting Tributary 2, but when considering vegetation classification, wetland 3 is connected to Tributary 2 via Wetland 2. Wetland 1 is abutting a tributary that is located outside the project area.

☐ Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **25-30** river miles from TNW.

Project waters are **15-20** aerial (straight) miles from TNW.

Flow is from: **No Flow**.

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: Watershed on the property is essentially a confined livestock feeding operation with very little vegetation and excessive cattle excrement. During precipitation events, said excrement is transported to the tributaries via sheet flow. Water quality was not tested but is likely high in ammonia, phosphorus, and nitrogen.

Identify specific pollutants, if known: Livestock excrement.

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

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

☒ Vegetation type/percent cover. Explain: Low quality, early successional with 30% canopy cover and 100% emergent ground cover.

☐ Habitat for:

☐ Federally Listed species. Explain findings:

☐ Fish/spawn areas. Explain findings:

☐ Other environmentally-sensitive species. Explain findings:

☐ Aquatic/wildlife diversity. Explain findings:

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

All wetland(s) being considered in the cumulative analysis: **3**

Approximately ( 3.08 ) 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>
Yes	1.897	Yes	1.069
Yes	0.117		

Summarize overall biological, chemical and physical functions being performed: These features provide biological functions as habitat for amphibians and invertebrates, as well as mammals. The vegetation detritus provides the basis of a food web that supports the wildlife community downstream. These functions provide an indirect biological connection to the TNW. These features also provides for the nutrient and chemical uptake of waters that enter the streams and the waters that percolate into the soils. This nutrient and chemical uptake provides for a reduced nutrient/chemical loading in the downstream water column.

### 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:NA.
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: The water from Tributaries 1, 2, and 3 empties into South Bosque River, then into Bosque River, and finally into the Brazos River, a TNW. This provides an indirect hydrologic connection for these features to a TNW. These features provide biological functions as habitat for amphibians and invertebrates, as well as mammals. The vegetation detritus provides the basis of a food web that supports the wildlife community downstream. These functions provide an indirect biological connection to the TNW. These features also provide for the nutrient and chemical uptake of waters that enter the streams and the waters that percolate into the soils. This nutrient and chemical uptake provides for a reduced nutrient/chemical loading in the downstream water column. This provides an indirect chemical connection to a TNW.
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: NA.

### 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: Channel width and depth was significantly greater than other tributaries in the area, suggesting it receives flow more regularly than other near by tributaries. Water was observed pooled and flowing downstream of the survey area, despite the drought conditions at the time of survey.

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

- ☒ Tributary waters: 10,475 linear feet-14 width (ft).
- ☐ Other non-wetland waters:            acres.
- Identify type(s) of waters:            .

3. **Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

- ☒ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

- ☐ Tributary waters: 2,159 linear feet-6width (ft).
- ☐ Other non-wetland waters:            acres.
- Identify type(s) of waters:            .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

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

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

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

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

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

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

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

Provide estimates for jurisdictional wetlands in the review area: 3.08acres.

7. **Impoundments of jurisdictional waters.<sup>9</sup>**

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

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

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

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

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

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

Identify water body and summarize rationale supporting determination:

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

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

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

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

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

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

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

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- ☒ Lakes/ponds: 6.96 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:
- ☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps:
- ☐ Corps navigable waters' study:
- ☐ U.S. Geological Survey Hydrologic Atlas:
  - ☐ USGS NHD data.
  - ☐ USGS 8 and 12 digit HUC maps.
- ☐ U.S. Geological Survey map(s). Cite scale & quad name:
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation:
- ☐ National wetlands inventory map(s). Cite name:

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



- ☐ State/Local wetland inventory map(s):
- ☐ FEMA/FIRM maps:
- ☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- ☐ Photographs: ☐ Aerial (Name & Date):  
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:**

**Table 1. Aquatic resources Delineated within the Survey Area**

Feature ID	Hydrologic Characteristics	Length of Feature (Linear Feet)	Area of Feature (Acre)
Tributaries			
Tributary 1	Intermittent	10,475	3.461
Tributary 2	Ephemeral	526	0.086
Tributary 3a	Ephemeral	652	0.075
Tributary 3b	Ephemeral	981	0.158
Wetlands			
Wetland 1	Seasonally Saturated	---	0.117
Wetland 2	Seasonally Saturated	---	1.897
Wetland 3	Seasonally Saturated	---	1.069
Ponds			
Pond 1	Seasonally Inundated	---	0.563
Pond 2	Seasonally Inundated	---	0.458
Pond 3	Seasonally Inundated	---	0.754
Pond 4	Seasonally Inundated	---	0.517
Pond 5	Seasonally Inundated	---	0.644
Pond 6	Seasonally Inundated	---	0.487
Pond 7	Seasonally Inundated	---	0.702
Pond 8	Seasonally Inundated	---	0.545
Pond 9	Seasonally Inundated	---	0.306
Pond 10	Seasonally Inundated	---	1.979

**Tributary 2** was identified as a relatively short segment of channel connecting Wetlands 2 and 3 to Tributary 1 near the western extent of Tributary 1. The tributary was identified by OHWM characteristics including bed and bank, sediment sorting, and destruction of terrestrial vegetation. The channel bed was comprised mainly of fine particles like silt and clay. The OHWM of Tributary 2 was more consistent than Tributary 1. The OHWM characteristics were approximately 6 feet wide and incised into the landscape approximately 3 feet deep. Despite recent rainfall, no water was observed flowing or pooled in Tributary 2 during the field investigation. Given the channel size and composition, as well as the lack of hydrology, it is IES' professional opinion that Tributary 2 would be considered to have ephemeral flow.

**Tributary 3 (Segments a and b)** was identified in the northern portion of the survey area near the center of Tributary 1's alignment, oriented north-to-south. The tributary's OHWM was identified by characteristics such as change in soil character, scour, and deposition. The bed of the channel was comprised mainly of fine particles with gravel and cobble in areas. The OHWM was observed between 5 to 8 feet wide and was incised into the landscape between 3 to 8 feet deep. Despite recent rainfall, no water was observed flowing or pooled in either segment of Tributary 3 during the field investigation. Given the channel size and composition, as well as the lack of hydrology, it is IES' professional opinion that Tributary 3 would be considered to have ephemeral flow.

**Wetland 1** was a small, emergent wetland abutting an unnamed tributary just outside the survey area. Wetland 1 formed as a private ranch road along the property line was slightly built up, impounding the sheet flow before it empties into the aforementioned tributary off site long enough for wetland conditions to develop and persist. Wetland 1 was identified by the presence of hydric vegetation dominated by cocklebur (*Xanthium strumarium*). Hydric soil was indicated by Redox Dark Surface with a matrix of 10YR 2/1 with redoximorphic concentrations of 2.5YR 4/8 in the pore lining and matrix. Hydrologic indicators were sparsely vegetated concave surface and drainage patterns.

**Wetland 2** was a linear run-of-stream forested wetland observed at the top of the watershed for Tributary 2 before an OHWM formed in its channel. Hydric vegetation for Wetland 2 was dominated by a canopy of sugarberry with an herbaceous layer of sump weed (*Iva annua*) and common spike rush (*Eleocharis palustris*) underneath. Like Wetland 1, hydric soil was indicated by Redox Dark Surface with a matrix of 10YR 2/1 with redoximorphic concentrations of 2.5YR 4/8 in the matrix and pore linings. Primary hydrologic indicators consisted of sediment deposits and drift deposits, while secondary indicators consisted of drainage patterns and crayfish burrows. Wetland 2 receives hydrology as water exits the spillway of the pond upslope just outside of the survey area boundary and from sheet flow from the surrounding pasture. Water from Wetland 2 drains into Tributary 2 before continuing down the watershed.

**Wetland 3** was an emergent continuation of Wetland 2 located on a terrace upslope of the vegetated channel which lacked a sugarberry canopy. Wetland 3 receives hydrology from direct rainfall and upslope sheet flow which remains present long enough for wetland conditions to develop and persist. Wetland 3 drains into Wetland 2 and ultimately into Tributary 2. Hydric vegetation was dominated by sump weed and common spike rush like Wetland 2. Hydric soil was indicated by Redox Dark Surface with a matrix of 10YR 3/1 with redoximorphic concentrations of 2.5YR 4/8 in the matrix. Sediment deposits was the primary hydrologic indicator while secondary hydrologic indicators were drainage patterns and crayfish burrows.

**Ponds 1 through 10** were artificial ponds observed throughout the survey area. These ponds appeared to be artificially formed by placing an earthen embankment in such a manner to capture sheet flow from the surrounding pasture. The ponds' limits were identified by OHWM characteristic including a natural line impressed in the bank, destruction of terrestrial vegetation, and deposition. All ponds were inundated at the time of evaluation. These features were located in an upland setting and lacked an OHWM entering or exiting the OHWM of the ponds.

#### POTENTIAL JURISDICTIONAL ASSESSMENT

The 05 June 2007 USACE and USEPA jointly published instructional guidebook is intended to provide the USACE field staff a national standard operating procedure for conducting jurisdictional determinations. The guidebook was prepared by combining all prior applicable provisions, regulations, statutes, and case laws pertaining to the CWA. All terms, definitions, and conclusions regarding the jurisdictional nature of the aquatic resources used within this report are derived directly, as they are practiced, from the guidance. The following outlines the applicable interpretations of the guidance appropriate for this situation.

##### *Tributary 1*

It was determined that Tributary 1 was an RPW with intermittent flow. As such, Tributary 1 would meet the definition of a water of the United States and would be subject to regulation under Section 404 of the CWA.

##### *Tributaries 2 and 3*

It was determined that Tributaries 2 and 3 were ephemeral tributaries. As such, these tributaries will be considered non-RPWs and a significant nexus test is required to determine the jurisdictional nature of these tributaries and their associated aquatic resources.

The significant nexus test must prove direct flow or an indirect hydrological, biological, and chemical connection to a TNW. The water from Tributaries 2 and 3 empties into an unnamed tributary of South Bosque River (Tributary 1), then into Bosque River, and finally into the Brazos River, a TNW. This provides an indirect hydrologic connection for these features to a TNW. These features provide biological functions as habitat for amphibians and invertebrates, as well as mammals. The vegetation detritus provides the basis of a food web that supports the wildlife community downstream. These functions provide an indirect biological connection to the TNW. These features also provide for the nutrient and chemical uptake of waters that enter the streams and the waters that percolate into the soils. This nutrient and chemical uptake provides for a reduced nutrient/chemical loading in the downstream water column. This provides an indirect chemical connection to a TNW. As such, it is IES' professional opinion that Tributaries 2 and 3 would be considered waters of the United States as they demonstrate an indirect biological, chemical, and hydrological connection to a TNW.

### *Wetlands 1 and 3*

Wetlands 1 and 3 were identified as wetlands adjacent to a Non-RPW. Thus, the jurisdictional nature of the wetlands would be contingent on a significant nexus test of the associated tributary. Wetland 1 drains into an unnamed tributary just outside of the survey area that, like Tributary 1, flows into South Bosque River, Bosque River, and finally into the Brazos River, a TNW. This provides significant nexus for both wetlands. Under the 2007 guidance, Wetlands 1 and 3 are wetlands adjacent to a non-navigable tributary of a TNW with non-relatively permanent flow that have been determined to have significant nexus to a TNW. As such, Wetlands 1 and 3 would be subject to regulation under Section 404 of the CWA.

### *Wetland 2*

Wetland 2 was identified as a wetland abutting a jurisdictional tributary. Thus, the jurisdictional nature of the associated tributary would carry over to the wetland. Under the 2007 guidance, Wetland 2 is a wetland abutting a non-navigable tributary of a TNW with non-relatively permanent flow determined to have significant nexus. As such, Wetland 2 would be subject to regulation under Section 404 of the CWA.

### *Ponds 1 through 10*

Ponds 1 through 10 appear to have been constructed wholly in an upland setting by excavating and placing earthen embankments across the natural gradient of the landscape in such a manner to capture upslope sheet flow. Under the 2007 guidance:

Ponds 1 through 10 would not be subject to jurisdiction under Section 404 of the CWA, by definition, as they;

- are not natural ponds, impoundments of waters, or waters as defined in paragraphs (a)(1)-(7) of the CWA 33 CFR 328.3;
- are not TNWs or wetlands adjacent to a TNW, nor are they non-navigable tributaries of a TNW with relatively permanent flow or wetlands that abut such tributaries; and
- as clarified under 33 CFR 323.2 (b), The term *lake* ... As used in this regulation, the term does not include artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water for such purposes as stock watering, irrigation, settling basins, cooling, and rice growing.

### **CONCLUSIONS**

To summarize the delineation, 3 tributaries, 3 wetlands, and 10 ponds were identified and delineated within the survey area. A summary of these features' characteristics is presented in **Table 1** and a summary of the jurisdictional assessment is presented in **Table 2**. It was determined that **Tributary 1** was identified as an RPW with intermittent flow; therefore, it would meet a definition of a water of the United States. **Tributaries 2 and 3** are both non-RPW tributaries with significant nexus, ultimately making them also subject to jurisdiction under Section 404 of the CWA. **Wetlands 1 through 3** are either adjacent to or abutting jurisdictional tributaries, ultimately making the wetlands subject to regulation under Section 404 of the CWA. **Ponds 1 through 10** were identified as artificial features constructed in an upland setting that do not meet a definition of a water of the United States and would not be regulated under Section 404 of the CWA.

Table 2. Jurisdictional Assessment of Aquatic Resources

Water Identification	Water of the United States	Post-Rapanos Water Classification	33 CFR 328.3 Definition
Tributaries			
Tributary 1	Yes	RPW	(a)(5)
Tributary 2	Yes	Non-RPW	(a)(5)
Tributary 3a	Yes	Non-RPW	(a)(5)
Tributary 3b	Yes	Non-RPW	(a)(5)
Wetlands			
Wetland 1	Yes	Wetland Adjacent to a Non-RPW With Significant Nexus	(a)(7)
Wetland 2	Yes	Wetland Abutting a Non-RPW With Significant Nexus	(a)(7)
Wetland 3	Yes	Wetland Abutting a Non-RPW With Significant Nexus	(a)(7)
Ponds			
Pond 1	No	Artificial Pond	---
Pond 2	No	Artificial Pond	---
Pond 3	No	Artificial Pond	---
Pond 4	No	Artificial Pond	---
Pond 5	No	Artificial Pond	---
Pond 6	No	Artificial Pond	---
Pond 7	No	Artificial Pond	---
Pond 8	No	Artificial Pond	---
Pond 9	No	Artificial Pond	---
Pond 10	No	Artificial Pond	---

This delineation is based on professional experience in the approved methodology and from experience with the USACE Fort Worth District regulatory biologists; however, this delineation does not constitute a jurisdictional determination of waters of the United States. This delineation has been based on the professional experience of IES staff and our interpretation of USACE regulations at 33 CFR 328.3, the joint USACE/USEPA guidance regarding the Rapanos and Carabell decisions, and the Regulatory Guidance Letter (RGL) 08-02. While, IES believes our delineation to be accurate, final authority to interpret the regulations lies solely with the USACE and USEPA. The USACE Headquarters in association with the USEPA often issue guidance that changes the interpretation of published regulations. USACE/USEPA guidance issued after the date of this report has the potential to invalidate the report conclusions and/or recommendations, which may create the need to reevaluate the report conclusions. IES has no regulatory authority, as such, proceeding based solely upon this report does not protect the Client from potential sanction or fines from the USACE/USEPA. The Client acknowledges that they have the opportunity to submit this report to the USACE for a preliminary jurisdictional determination for concurrence prior to proceeding with any work within aquatic resources located on the survey area. If the Client elects not to do so, then the Client proceeds at their sole risk.



# Photograph Location Map

McGregor Megasite  
City of McGregor  
McLennan County, Texas

1 in = 1,750 feet

Feet  
0 1,750

File Ref. 04.142.019  
Date: 11/8/2018



- Survey Area
- Site Photograph Location

## Aquatic Resources

- Wetland
- Tributary
- Pond