APPENDIX H: APPROVED JURISDICTIONAL DETERMINATIONS FOR PROPOSED LOWER BOIS D'ARC CREEK RESERVOIR SITE, RIVERBY RANCH, AND NORTH WATER TREATMENT PLANT SITE NEAR LEONARD

H-1: APPROVED JURISDICTIONAL DETERMINATION FOR LOWER BOIS D'ARC CREEK RESERVOIR

H-2: APPROVED JURISDICTIONAL DETERMINATION FOR RIVERBY RANCH MITIGATION SITE

H-3: APPROVED JURISDICTIONAL DETERMINATION FOR NORTH WTP AT LEONARD

H-4: APPROVED JURISDICTIONAL DETERMINATION FOR FM 1396 RELOCATION - FM 897 EXTENSION

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): August 27, 2015

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: SWT-0-14659

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: Texas County/parish/borough: Fannin City: Leonard
Center coordinates of site (lat/long in degree decimal format): Lat. 33.387604° **N**, Long. 96.271256° **W**.
Universal Transverse Mercator:
Name of nearest waterbody: Lee Creek & Bear Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Trinity River
Name of watershed or Hydrologic Unit Code (HUC): HUC12 - 120301060101 & 120301060102
☒ 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: 27 August 2015
☒ Field Determination. Date(s): 29 February 2016

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [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: 9736 linear feet of streams and 21.6 acres of open waters (on-channel impoundment).
      Wetlands: .42 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **Pick List**
      Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: None in project area.

[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, 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[4] 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: 27,097 & 33,871 **acres**
Drainage area: ~1,400 & ~1,850 **acres**
Average annual rainfall: 41-44 inches
Average annual snowfall: 3 inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☐ Tributary flows directly into TNW.
☒ Tributary flows through **4** 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 **30 (or more)** 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: N/A.

[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.

Identify flow route to TNW[5]: Lee Ceek, which flows through the review area, flows into Arnold Creek, which then flows into Indian Creek, which flows into Pilot Grove Creek, which then flows into Lake Lavon, which flows into the East Fork Trinity River and into Lake Ray Hubbard Lake, which then flows into the East Fork Trinity River, which flows into the TNW, the Trinity River.

The unnamed tributary of Bear Creek flows through the review area, flows into Bear Creek, which then flows into Indian Creek, which flows into Pilot Grove Creek, which then flows into Lake Lavon, which flows into the East Fork Trinity River and into Lake Ray Hubbard Lake, which then flows into the East Fork Trinity River, which flows into the TNW, the Trinity River.

Tributary stream order, if known: .

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

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

Tributary properties with respect to top of bank (estimate):
Average width: 25 - 43 feet
Average depth: feet
Average side slopes: **Vertical (1:1 or less).**

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: More stable where intact riparian corridor exists, eroding banks evident where there is no riparian area.
Presence of run/riffle/pool complexes. Explain: Lee Creek Impoundment within the review area.
Tributary geometry: **Meandering**
Tributary gradient (approximate average slope): 2.4 %

(c) Flow:

Tributary provides for: **Seasonal flow**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: .

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

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
☐ High Tide Line indicated by: ☐ Mean High Water Mark indicated by:

[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the 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.
[7]Ibid.

☐ oil or scum line along shore objects
☐ fine shell or debris deposits (foreshore)
☐ physical markings/characteristics
☐ tidal gauges
☐ other (list):
☐ 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: Water color slightly stained.
Identify specific pollutants, if known: .

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

☒ Riparian corridor. Characteristics (type, average width): Mature Forrested, 0-700ft.
☒ 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: 0.42 acres
Wetland type. Explain: Emergent.
Wetland quality. Explain: Emergent, primarily consisting of spikerush.
Project wetlands cross or serve as state boundaries. Explain: N/A.

(b) General Flow Relationship with Non-TNW:
Flow is: **Intermittent flow**. Explain: .

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

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

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

(d) Proximity (Relationship) to TNW
Project wetlands are **30 (or more)** river miles from TNW.
Project waters are **30 (or more)** 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: .
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: **2**
Approximately (8.42) 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)
Y	0.42 (Lee Creek reach)	Y	~8.0 (u.t. of Bear Creek reach)

Summarize overall biological, chemical and physical functions being performed: The wetlands assist in trapping and filtering potential pollutants, by slowing/storing flood waters, and help maintain water quality through nutrient and contaminant uptake by the plant speciess adapted to hydric soil conditions.

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:

There are four non-RPW tributaries within the 661-acre review area with a significant nexas to the TNW and are described as follows:

The unamed tributary of Bear Creek is indicated as a dashed blue line intermittent stream on the USGS 7.5 Minute Topographic Quadrangle Map - Trenton, Texas, and is observable on multiple years of historical satellite imagery. The unnamed tributary of Bear Creek begins to receive flow from its watershed north of Highway 69 which then flows south through a culvert underneath Highway 69 for ~5,425 feet where it meets the review area boundary. It enters the review area boundary under County Road 4945 through a large culvert and maintains an average OHWM width of 25 feet for its entire course within the limits of the review area. Its channel banks are steep and deeply incised, and the channel bottom substrate is bedrock. The tributary receives flow from precipitation events. In addition, due to size of the tributaries drainage area as well as it being highly incised, ground water influence may be present. Flow continues for ~9,100 feet downstream of the review area to a L1UBHh impoundment and the downstream limit of the relevant reach, where a first order, an unnamed tributary of Bear Creek enters the impoundment from the east. In addition, a ~8.0 acre PFO1Ah wetland area on the USFWS NWI Map is indicated to surround the tributary on each side, beginning north of the impoundment.

There are three unnamed tributaries of Lee Creek that are non-RPW tributaries within the review area. The first tributary enters the review area from the western project boundary within the HUC12 - 120301060102 and flows for approximately 680 linear feet within the review area before converging with Lee Creek from the west. The flow from this tributary begins

from an on-channel pond that receives flow for ~350 linear feet until it converages with a ~950 linear feet channel that begins west of County Road 4965. From this convergance, the tributary flows for an additional ~800 linear feet within the 100 year flood plane (according to FEMA panel No. 48147C0500C) where it meets the review area boundary. This unamed tributary of Lee Creek is indicated on the USGS Topographic Quadrangle Map as a dashed blue line intermittent stream connected to an on-channel pond and is observable on multiple years of historical satellite imagery. The ~950 linear foot channel (outside the review area) is not indicated on the USGS Topograpic Map but was likely created by agricultural practices of the surrounding land area that has altered the stream hydrology. This tributary has an OHWM averaging 5ft within the review area and receives flow from precipitation events that contribute flow to the Lee Creek RPW.

The second unnamed tributary of Lee Creek enters from the east of Lee Creek within the review area. It begins to receive flow north of Highway 69 and flows approximately ~1,700 linear feet until it meets the review area boundary. Within the review area, this stream flows additional 1,935 linear feet until it converges with Lee Creek, just north of the Lee Creek Impoundment. This tributary is not exhibited on a USGS 7.5 Minute Topographic Map, but does exhibit a clear OHWM bed and bank observable on multiple years of historical satellite imagery. The tributary was delineated as having a 6 -11 foot OHWM within the review area and receives flow from precipitation events that contribute flow to the Lee Creek RPW.

The third unnamed tributary of Lee Creek enters from the east of Lee Creek within the review area. It begins to receive flow from the northeast side of a culvert under the Missouri Kansas Texas railroad. It flows within the review area for ~2,380 before converging with the Lee Creek Impoundment. This unnamed tributary of Lee Creek is indicated on the USGS Topographic Quadrangle Map as dashed blue line intermittent stream connecting to Lee Creek from the east and is observable on multiple years of historical satellite imagery. The Lee Creek Impoundment is not indicated on the USGS Topographic Map, but is indicated on the USGS NHD. The average OHWM is 4 feet and receives flow from precipitation events. The stream channel is located south of where it is depicted on the USGS Topo and USGS NHD, for approximately ~800 linear feet from where the tributary enters the review area.

These headwater streams strongly influence the water quality of downstream rivers, lakes, and estuaries. These streams efficiently remove and transform nutrients, such as inorganic nitrogen derived from agriculture, human and animal waste, and fossil fuel combustion, before they reach downstream waters where they may cause disruption to forest ecoystems, acidify lakes and streams, and degrade coastal waters through eutrophication, algal blooms, and hypoxia. Scientific research suggests that the smallest streams provide the most rapid uptake and transformation of inorganic nitrogen. In particular, ephemeral and intermittent streams maintain water quality despite their lack of continuous flow because fertililzers and other pollutants are most likely to enter stream systems during storms and other times of high runoff, the same times when ephemeral and intermittent streams are likely or have a contnuous waer flow and are processing nutrients. These headwater streams also play an important role in regulating water flow and reducing erosion and sedimentation. Streams absorb runoff and snowmelt, providing water storage that reduces downstream flooding. Natural streambeds, which provide rough and uneven passages for water, reduce the velocity of water moving over the landscape, not only allowing for increased infiltration, but also reduce the ability of moving water to erode streambanks and carry sediment downstream. Small streams also maintain biodiversity in downstream waters by providing both movement corridors for plants and animals across the landscape and a source of colonists for recovery of downstream systems following a disturbance.

The unnamed tributary of Bear Creek and the three unnamed tributaries of Lee Creek described above have been determined to have more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of the TNW and therefore are waters of the U.S.

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: Lee Creek is a named tributary on the USGS NHD and USGS Topographic Quadrangle Map - Trenton, Texas,

and is indicated as a dashed blue line intermittent stream. Within the review area, Lee Creek has 3 tributaries contributing flow during precipitation events. In addition, seasonal flow evidence on 4 out of 6 years of available satellite imagery ~ .25 miles above the relative reach is observable.

Provide estimates for jurisdictional waters in the review area (check all that apply):
☒ Tributary waters: **2075** linear feet width (ft).
☒ Other non-wetland waters: **21.6** acres.
Identify type(s) of waters: Lee Creek Impoundment.

3. Non-RPWs[8] 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: **7661** 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: The 0.42 acre emergent wetland directly abuts the Lee Creek Impoundment, which is a man-made impoundment of Lee Creek. The wetland area is distinguishable from the surrounding upland area on multiple years of historical satellite imagery. The wetland met all three criteria of hydrophytic vegetation, hydric soil, and wetland hydrology on the conducted "Preliminary Jurisdictional Determination of Waters of the United States, North Texas Municipal Water District's, Proposed Water Treatment Plant site, City of Leonard, Fannin County, Texas," dated 11 June 2010.

Provide acreage estimates for jurisdictional wetlands in the review area: **0.42** 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): There are ~ 1595 linear feet of upland erosional features that are not indicated on a USGS 7.5 Minute Topographic Quadrangle Map as a tributary. The ~ 6.88 acres of upland stock tanks (ponds) are not located on-channel of a tributary. The other ~ 0.9 acre depressional upland features were likely created by agricultural related activities.

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource:.
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

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

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **"Preliminary Jurisdictional Determination of Waters of the United States, North Texas Municipal Water District's, Proposed Water Treatment Plant site, City of Leonard, Fannin County, Texas," dated 11 June 2010.**
☒ 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.

[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.*

☒ U.S. Geological Survey map(s). Cite scale & quad name: **USGS 7.5 Minute Topographic Quadrangle Maps; Trenton, Texas and Pike, Texas**.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: **Soil Survey of Fannin County, Texas, issued 2001**.
☒ National wetlands inventory map(s). Cite name: **USFWS NWI** .
☐ State/Local wetland inventory map(s): .
☒ FEMA/FIRM maps: **Panel 48147C0500C eff. 2/18/2011**.
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): **Google Earth Historical Imagery and NAIP Texas 2014**.
or ☐ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:.

The review area is an approximately 661-acre tract of land near the City of Leonard, Fannin County, Texas. The size of waters of the U.S. in the review area is based on multiple waters delineated within the 661-acre tract. The review area is bisected by HUC12-120301060101 and HUC12 - 120301060102. The waters of the U.S. within HUC12-120301060101 is an unnamed tributary of Bear Creek. The waters of the U.S. within HUC12 - 120301060102 are Lee Creek, three unnamed tributaries of Lee Creek, an impoundment of Lee Creek, and an abutting emergent wetland of the Lee Creek impoundment. The relevant reach for Lee Creek is ~ 1.15 miles downstream of the review area and the relevant reach for the unnamed tributary of Bear Creek is ~1.85 miles downstream of the review area.

The waters of the U.S. identified on the "Preliminary Jurisdictional Determination of Waters of the United States, North Texas Municipal Water District's, Proposed Water Treatment Plant site, City of Leonard, Fannin County, Texas," dated 11 June 2010, are indicated as the following:

Tributary streams: Lee Creek, LCT2, LCT3, LCT4, TBC

On-channel impoundments: Lee Creek Impoundment

Wetlands: EW4

The Corps will not assert jurisdiction on the features denoted as the following:

Erosional Features: LCT1, LCT4-A, TBCT1, TBCT2, and WS1

Depressional Upland Features: EW1, EW2, EW3, EW5, EW6, EW7, WW1, WW2, WW3, WW4, WW5, WW6, WW7, WW8, WW9, WW10, and WS2

Upland Stock Tanks (Ponds): EI1, EI2, EI3, EI4, EI5, EI6, WI1, WI2, LCTI1, LCWI2, and LCWI3

The USACE Jurisdictional Determination Guidebook, 33 CFR 328.3, 33 CFR 328.5, and Regulatory Guidance Letter No. 05-05, were referenced to support the conclusion that the non-relatively permanent waters, on-channel impoundment, abutting emergent wetland to an on-channel impoundment, and relatively permanent waters within the review area, have more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of the Traditional Navigable Waterway (TNW) known as the Trinity River and are waters of the United States.

The "NRCS Soil Survey of Fannin County, Texas, issued 2001," was referenced for annual precipitation estimates for the proposed project area.