

**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: Bonham
Center coordinates of site (lat/long in degree decimal format): Lat. 33.718° N, Long. -95.982° W.
Universal Transverse Mercator:

Name of nearest waterbody: Bois d Arc Creek

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

Name of watershed or Hydrologic Unit Code (HUC): 11140101

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: August 2015

Field Determination. Date(s): August 2015

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

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

Waters subject to the ebb and flow of the tide.

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

Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

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

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

TNWs, including territorial seas

Wetlands adjacent to TNWs

Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs

Non-RPWs that flow directly or indirectly into TNWs

Wetlands directly abutting RPWs that flow directly or indirectly into TNWs

Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs

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

Impoundments of jurisdictional waters

Isolated (interstate or intrastate) waters, including isolated wetlands

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

Non-wetland waters: 651,140 linear feet of streams and 78 acres of open waters (open waters within wetlands and on-channel ponds).

Wetlands: 5874 acres.

c. Limits (boundaries) of jurisdiction based on: Pick List

Elevation of established OHWM (if known): Varies throughout the review area.

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 the 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 waterbody⁴ 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: 441 **square miles**

Drainage area: 327 **square miles**

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 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 **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: No.

Identify flow route to TNW⁵: Bois d'Arc Creek flows through the review area to flow into the Red River, which then flows into the designated TNW of the Red River.

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 stream order, if known: .

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

Tributary is: Natural
 Artificial (man-made). Explain: .
 Manipulated (man-altered). Explain: Sections of Bois d'Arc Creek within the review area have

been channelized in the past.

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

Average width: 40 feet
Average depth: 20 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: In general, Bois d'Arc Creek has steep banks and little vegetation throughout the project area. Most of the creek is incised, with little access to a floodplain during frequent storm events causing sloughing along the banks. There is a high sediment load in the lower reaches due to unstable sections.

Presence of run/riffle/pool complexes. Explain: Variable throughout review area.

Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): 0.05-0.08 %

(c) Flow:

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **20 (or greater)**

Describe flow regime: Flows received from an average of 41-44 inches of precipitation annually and contributing tributaries from within the watershed.

Other information on duration and volume: Monitoring occurs at two USGS stream gauge stations (07332620 and 07332622).

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

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

Dye (or other) test performed: .

Tributary has (check all that apply):

Bed and banks
 OHWM⁶ (check all indicators that apply):
 clear, natural line impressed on the bank the presence of litter and debris
 changes in the character of soil destruction of terrestrial vegetation
 shelving the presence of wrack line
 vegetation matted down, bent, or absent sediment sorting
 leaf litter disturbed or washed away scour
 sediment deposition multiple observed or predicted flow events
 water staining abrupt change in plant community
 other (list):
 Discontinuous OHWM.⁷ Explain: .

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

High Tide Line indicated by: Mean High Water Mark indicated by:
 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:

⁶A 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.

⁷Ibid.

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

Explain: Prior to storm events, water color is clear to slightly turbid. Water color is highly turbid following storm events. The designated water uses assigned by the TCEQ for segment 0202A- Bois D' Arc Creek (unclassified water body) are aquatic life, contact recreation, and fish consumption use. The aquatic life and contact recreation uses for this segment classified as "fully supporting", while the fish consumption use was not assessed. In addition, this segment is classified as "fully supporting" for overall use (TCEQ, 2002).

Identify specific pollutants, if known: Unknown.

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

Riparian corridor. Characteristics (type, average width): The riparian corridor along Bois d'Arc Creek is dominated by green ash (*Fraxinus pennsylvanica*), elm (*Ulmus* spp.), and sugarberry (*Celtis laevigata*). Other species occur but in less frequent numbers. Portions of the corridor have been removed by logging and other agricultural activities.

Wetland fringe. Characteristics:

Habitat for:

Federally Listed species. Explain findings:

Fish/spawn areas. Explain findings: See aquatic/wildlife diversity discussion below..

Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings: The Bois d'Arc Creek watershed, including its channels, tributaries, wetlands, open water areas, grasslands, upland and bottomland forests, support a variety of wildlife species by providing water, cover, food, and den or nesting sites. A study reported by Texas Parks and Wildlife Department indicated that a survey conducted in 1982, which found over 20 species of fish living in Bois d'Arc Creek.

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: 5,874 acres

Wetland type. Explain: 4,602 acres of forested wetland, 1,223 acres of emergent wetland, and 49 acres of shrub wetland were identified within the study area.

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain:

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:

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 **2-year or less** 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: Observations during site investigations found that water color within wetlands was relatively clear.

Identify specific pollutants, if known: Unkown.

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

Riparian buffer. Characteristics (type, average width): The riparian corridor along Bois d'Arc Creek wetlands is dominated by green ash (*Fraxinus pennsylvanica*), elm (*Ulmus* spp.), and sugarberry (*Celtis laevigata*). Other species occur but in less frequent numbers. Portions of the corridor have been removed by logging and other agricultural activities.

Vegetation type/percent cover. Explain: 4,602 acres of forested wetland, 1,223 acres of herbaceous wetland, and 49 acres of shrub wetland were identified within the study area.

Habitat for:

Federally Listed species. Explain findings:

Fish/spawn areas. Explain findings: See aquatic/wildlife diversity below.

Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings: The wetlands support a variety of wildlife species by providing water, cover, food, and den or nesting sites.

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

All wetland(s) being considered in the cumulative analysis: **1**

Approximately (5874) 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	5874		

Summarize overall biological, chemical and physical functions being performed: Functions evaluated include groundwater recharge, groundwater discharge, flood flow alteration, sediment stabilization, sediment/toxin retention, nutrient transformation/remediation, production export, wildlife diversity and abundance, aquatic diversity and abundance.

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:

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:

There are a total of approximately 365,001 linear feet of non-RPW tributaries within the 16,641-acre project review area. These non-RPW's contribute flow to 16 named RPW tributaries within the review area and are evident on historical satellite imagery in addition to being indicated on the USGS National Hydrography Dataset and the USGS 7.5 Minute Quadrangle Maps as dash blue line intermittent streams. Within the review area, unnamed tributaries contribute ~ 1,842 linear feet (lf) of flow to Allens Creek, ~ 172,908 lf to Bois d'Arc Creek, ~ 6,620 lf to Bullard Creek, ~ 24,126 lf to Burns Branch, ~ 6,124 lf to Fox Creek, ~ 61,967 lf to Honey Grove Creek, ~ 350 lf to Onstott Branch, ~ 4,040 lf to Pettigrew Branch, ~ 3,578 lf to Sandy Branch, ~ 15,264 lf to Sandy Creek, ~ 655 lf to Sloans Creek, ~ 1,163 to Stillhouse Branch, ~ 31,837 to Thomas Branch, ~ 19,448 lf to Timber Creek, ~ 14,927 lf to Ward Creek, and ~ 151 lf to Yoakum Creek.

These headwater streams strongly influence the water quality of downstream creeks, 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 ecosystems, 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 fertilizers 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 continuous water 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 tributaries described above and depicted on USGS 7.5 Minute Topographic Quadrangle Maps and the USGS National Hydrography Dataset have been determined to have more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of the TNW, the Red River, and therefore are waters of the U.S.

2. **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: The USGS stream gauge data for Bois d' Arc Creek (stations 07332620 and 07332622), USGS Topographic Quadrangle Maps, USGS National Hydrography Dataset, and historical satellite imagery were referenced in addition to observations during site visits that showed portions of Bois d'Arc Creek and Honey Grove Creek displayed perennial characteristics. Honey Grove Creek also receives flow from discharges associated from an upstream waste water treatment plant.
- 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: Review of USGS Topographic Quadrangle Maps, USGS National Hydrography Dataset, historical satellite imagery, along with observations during site visits, showed flows on named tributaries are sustained during certain times of the year after precipitation events and from the number of unnamed tributaries contributing flow from within the watershed.

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

- Tributary waters: **286,139** linear feet width (ft).
 Other non-wetland waters: **48** acres.

Identify type(s) of waters: **Open waters within abutting wetlands.**

3. **Non-RPWs⁸ 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: **365,002** linear feet width (ft).
 Other non-wetland waters: **30** acres.

Identify type(s) of waters: **On-Channel Impoundments.**

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: Observations during site visits and review of USFWS NWI maps, USGS Topographic Quadrangle Maps, NRCS SSURGO database, FEMA Maps, and the "Final Jurisdictional Determination Report, Lower Bois d'Arc Creek Reservoir dated June 2008, Prepared by Feese and Nichols, Inc.," show wetlands abutting Bois d'Arc Creek.

⁸See Footnote # 3.

- 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: **5874** acres.

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

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

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

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

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

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

7. Impoundments of jurisdictional waters.⁹

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

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

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

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

Identify water body and summarize rationale supporting determination: .

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

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

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

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
 Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 Prior to the Jan 2001 Supreme Court decision in “SWANCC,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).
 Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain: .
 Other: (explain, if not covered above): **There are 57 acres of upland stock tanks (ponds) within the review area that are non-jurisdictional.**

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

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

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: **Final Jurisdictional Determination Report, Lower Bois d'Arc Creek Reservoir dated June 2008, Prepared by Feese and Nichols, Inc.**
- 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: **USGS 7.5 Minute Topographic Quadrangle Maps - Selfs, Lamasco, Lake Bonham, Bonham, Dodd City; Texas.**
- USDA Natural Resources Conservation Service Soil Survey. Citation: **NRCS Soil Survey of Fannin County, Texas, issued 2001. NRCS SSURGO database.**
- National wetlands inventory map(s). Cite name: **USFWS NWI.**
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: **Panels 40013C0725E, 48147C0250C, 48147C0275C, 48147C03360C, 48147C0400C .**
- 100-year Floodplain Elevation is: (National Geodetic 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 the approximately 16,641-acre proposed Bois d'Arc Reservoir project area at the pool elevation 534 MSL. The review area consists of 17 named tributaries and contributing unnamed tributaries that are indicated on the USGS 7.5 Minute Topographic Quadrangle Maps: Selfs, Lamasco, Lake Bonham, Bonham, and Dodd City - Texas.

The named tributaries are as follows:

1. Allens Creek
2. Bois d'Arc Creek
3. Bullard Creek
4. Burns Branch
5. Cottonwood Creek
6. Fox Creek
7. Honey Grove Creek
8. Onstott Branch
9. Pettigrew Branch
10. Sandy Branch
11. Sandy Creek
12. Sloans Creek
13. Stillhouse Branch

14. Thomas Branch
15. Timber Creek
16. Ward Creek
17. Yoakum Creek

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 impoundments, abutting wetlands to relatively permanent waters, and relatively permanent waters within the review area, cumulatively 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 Red River and are waters of the United States. There were erosional features and upland stock tanks (ponds) within the review area that are not regulated by definition.

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