

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): 19 August 2019

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Fort Worth District, Angus Solar Site, SWF-2018-00334

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/parish/borough: Bosque City: n/a
Center coordinates of site (lat/long in degree decimal format): Lat. 31.745° **N**, Long. -97.376° **W**.
Universal Transverse Mercator: 1983 North American Datum (NAD) Coordinates

Name of nearest waterbody: Willow Creek

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

Name of watershed or Hydrologic Unit Code (HUC): Middle Brazos - Lake Whitney (1206020206)

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: 19 August 2019

Field Determination. Date(s): 9 May 2019

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.

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: 28,438 linear feet: Range of 1-25 ft OHWM and 3.17 acres of open water.

Wetlands: 1.6 acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual

Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):³

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain:

SETTING: The property includes ephemeral, intermittent, and perennial streams, "swale-like" features, open water features, & emergent wetlands within the 1,207-acre review area. Based on the topography and aerial imagery, the majority of the site trends towards the south/

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.

southeast. The wetlands were identified using the 1987 Manual and the regional supplement for the Great Plains Region, which requires that all three wetland criteria be present under normal circumstances for areas to be determined a wetland.

22 swales (identified as Swale SWa - SWv) were assessed within the review area. These swale features lacked an observable OHWM, lacked observable flow, and were vegetated. These swales are not waters of the U.S. because they do not have an OHWM, and did not meet all three wetland criteria to be considered linear wetlands.

An erosional feature, identified as EFa, was assessed within the review area. This erosional feature lacked an observable OHWM and appeared to carry short duration, low volume flows. EFa is not a water of the U.S. because it does not have an OHWM.

Streams identified as So, Sp, Sw, and Saa were assessed within the review area. While these ephemeral stream features had an observable OHWM, they are not waters of the U.S. because they do not have a direct downstream surface connection to a jurisdictional feature. These ephemeral stream segments are broken by large sections of swale that do not have an OHWM and/or uplands.

Open Waters, identified as OWf, OWg, and OWh, were assessed within the review area. These open water features did not have an observable direct downgradient surface water connection to a jurisdictional aquatic feature, therefore they are not waters of the U.S.

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: There are no TNWs located within the study area. The nearest designated navigable water within the Fort Worth District is the Brazos River.

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: 209 square miles

Drainage area: 25 square miles

Average annual rainfall: 35 inches

Average annual snowfall: <1 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 2 tributaries before entering TNW.

Project waters are 2-5 river miles from TNW.

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

Project waters are 2-5 aerial (straight) miles from TNW.

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

Project waters cross or serve as state boundaries. Explain: .

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

Identify flow route to TNW⁵: Cottonwood creek flows into Willow Creek within the study area. Willow creek flows south draining into Childress Creek. Childress Creek flows generally south converging with the Brazos River. Unnamed ephemeral and intermittent tributaries flow into Willow Creek.
 Tributary stream order, if known: Varies/unknown.

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

Tributary is: Natural
 Artificial (man-made). Explain: .
 Manipulated (man-altered). Explain: The majority of ephemeral streams, intermittent streams, and portions of Cottonwood Creek and Willow Creek have been impacted due to cattle grazing and agricultural ranch purposes. .

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

Average width: 40 feet
 Average depth: 15 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: Bank erosion observed due to flow and cattle impacts, channel incised.

Presence of run/riffle/pool complexes. Explain: Few run/riffle/pool complexes were observed.

Tributary geometry: **Relatively straight**

Tributary gradient (approximate average slope): 1 %

(c) Flow:

Tributary provides for: **Intermittent but not seasonal flow**

Estimate average number of flow events in review area/year: **6-10**

Describe flow regime: Willow Creek appears to have a perennial flow regime, the intermittent channel flows are flashy after rainfall but maintain some level of flow through large portions of the year, likely due to stormwater from the surrounding area.

Other information on duration and volume: .

Surface flow is: **Discrete and confined**. Characteristics: Flashy with lower more regular flows.

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

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.

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.

other (list):

(iii) Chemical Characteristics:

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

Explain: .

Identify specific pollutants, if known: .

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

- Riparian corridor. Characteristics (type, average width): .
- Wetland fringe. Characteristics: Very small areas along fringe, not a regular occurrence, displays wetland vegetation.
- Habitat for:
 - Federally Listed species. Explain findings: .
 - Fish/spawn areas. Explain findings: .
 - Other environmentally-sensitive species. Explain findings: .
 - Aquatic/wildlife diversity. Explain findings: Limited invertebrates observed, intermittent pooling contained fish.

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: 1.6 acres

Wetland type. Explain: Emergent wetlands, 6 in total, with a total acreage of 1.6 acres.

Wetland quality. Explain: Detailed function assessments of wetlands were not assessed - classified as emergent wetlands with a rating of low to average quality based on vegetative species and size.

Project wetlands cross or serve as state boundaries. Explain: N/A.

(b) General Flow Relationship with Non-TNW:

Flow is: **Ephemeral flow**. Explain: Flow from the wetlands occurs as sheet flow during and immediately after flooding events.

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 **2-5** river miles from TNW.

Project waters are **5-10** aerial (straight) miles from TNW.

Flow is from: **Wetland to/from navigable waters**.

Estimate approximate location of wetland as within the **500-year or greater** 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: .

Variation in vegetative communities provide minor habitat for occasional use of wetland and water dependent species.

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

All wetland(s) being considered in the cumulative analysis: **7**

Approximately (1.6) 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>
Wa Y	0.41 acres		
Wb Y	0.23 acres		
Wc Y	0.27 acres		
Wd Y	0.18 acres		
We Y	0.15 acres		
Wf Y	0.17 acres		
Wg Y	0.19 acres		

Summarize overall biological, chemical and physical functions being performed: The capacity to carry or reduce pollutants, especially from cattle grazing, or flood waters. Nutrient transfer and organic carbon transfer that support downstream food webs.

C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
 Twenty-three ephemeral tributaries (see Table 1 for IDs) , totaling 14,359-linear feet, were observed within the study area traveling in a southern direction. These tributaries have the capacity to reduce pollutants/flood waters to the Brazos River, a Section 10 TNW. These tributaries provide habitat for aquatic invertebrates and fish species. Due to their downstream hydrologic connection to other jurisdictional features, these tributaries have the capacity to transfer nutrients that support the downstream food-web. Seven emergent wetlands (total of 1.60-acres) have the capacity to reduce pollutants/flood waters to the Brazos River, a Section 10 TNW. These wetlands provide habitat for invertebrates and other aquatic species. Due to their downstream hydrologic connection, a direct surface connection to other jurisdictional features, these wetlands have the capacity to transfer nutrients that support downstream food-web.
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: Based on the combined watershed size for both Cottonwood Creek and Willow Creek, along with field observations, the presence of large fish species, and a well-defined channel, it appears that these streams have a perennial flow regime.
- 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: Based on field observations and the well-defined channel, it appears the two streams labeled Stream C and Stream M have an intermittent flow regime.

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

- Tributary waters: **13,989** linear feet in length, **10-25 feet** in width.
 Other non-wetland waters: acres.

Identify type(s) of waters: **Two perennial streams and two intermittent streams.**

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: **14,359** linear feet **1-8** width (ft).
 Other non-wetland waters: acres.

Identify type(s) of waters: **23 ephemeral streams.**

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: **1.60**-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).

⁸See 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. **Explained below.**
 - 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:

Swales SWa-SWu do not have an OHWM and do not have the capacity to carry or reduce pollutants or flood waters to the Brazos River, a TNW. These swales do not have the capacity to transfer nutrients and organic carbon that support downstream food webs.

Open water features OWg and OWh do not have a direct down gradient surface hydrologic connection to another jurisdictional feature and do not have the capacity to carry or reduce pollutants or flood waters to the Brazos River, a TNW. These open water features do not have the capacity to transfer nutrients and organic carbon that support downstream food web.

The erosional feature EFa does not have an OHWM and does not have the capacity to carry or reduce pollutants or flood waters to the Brazos River, a TNW. This erosional feature does not have the capacity to transfer nutrients and organic carbon that support downstream food webs.

The ephemeral streams So, Sv, Sw, and Saa have an observable OHWM but do not have the capacity to carry or reduce pollutants or flood waters to the Brazos River, a TNW. These streams do not have the capacity to transfer nutrients and organic carbon that support downstream food web were assessed within the review area. These ephemeral stream segments are broken by large sections of swale or uplands that do not have an OHWM.

As demonstrated herein, the apparent lack of connection to the surface tributary system is reasonably demonstrated to conclude that the above waters do not contribute to the physical, chemical, and biological integrity of a navigable water or its tributaries. Under normal conditions in the hydrologic cycle, the water features do not have any shared surface hydrology with another water of the United States. The features described above are physically separated from other waters of the United States by geographic factors that do not allow the exchange of waters due to a confined surface hydrology during normal conditions. It can therefore be concluded that the above mentioned features are not waters of the United States.

- 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): **9,741** linear feet, **up to 5** width (ft).

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

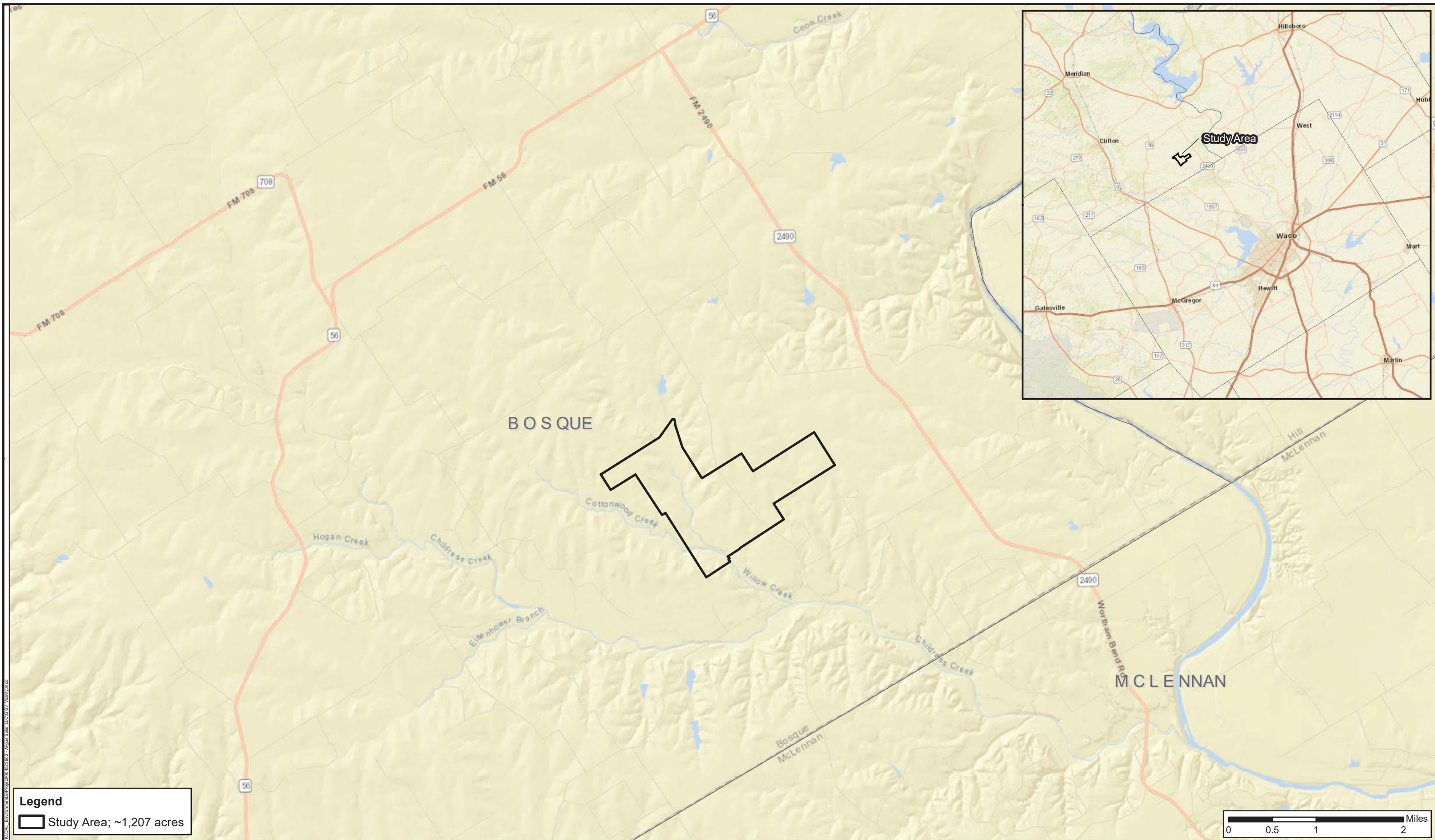
- Lakes/ponds: 0.97-acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

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: Valley Mills, China Springs, Laguna Park, and Smiths Bend Quadrangles.
- USDA Natural Resources Conservation Service Soil Survey. Citation: Bosque County, TX, Web Soil Survey, August 2018.
- National wetlands inventory map(s). Cite name: National Wetlands Inventory Mapper, July 2018.
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: Online Flood Hazard Layer Mapper, July 2018.
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): TNRIS 1996; TNRIS 2016.
 - or Other (Name & Date): Ground Level: 4/17/18-4/18/18 and 04/24/18-04/26/18.
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): PDF Document provided titled "SWF-2018-00334 AJD Table 1" clearly denotes each aquatic features ID, location, aquatic resource type, length/acreage, and whether it was determined to be a water of the U.S. Totals for each type of resource are also supplied.

B. ADDITIONAL COMMENTS TO SUPPORT JD: See Section II(B)(2), Section III(C)(2), and Section III(F) above.



Legend
 [Black outline] Study Area; ~1,207 acres



EXHIBIT 1	DATE:	04/13/2018
	DESIGN:	AMB
	CHECKED:	CGH
	KHA NO.:	064523902

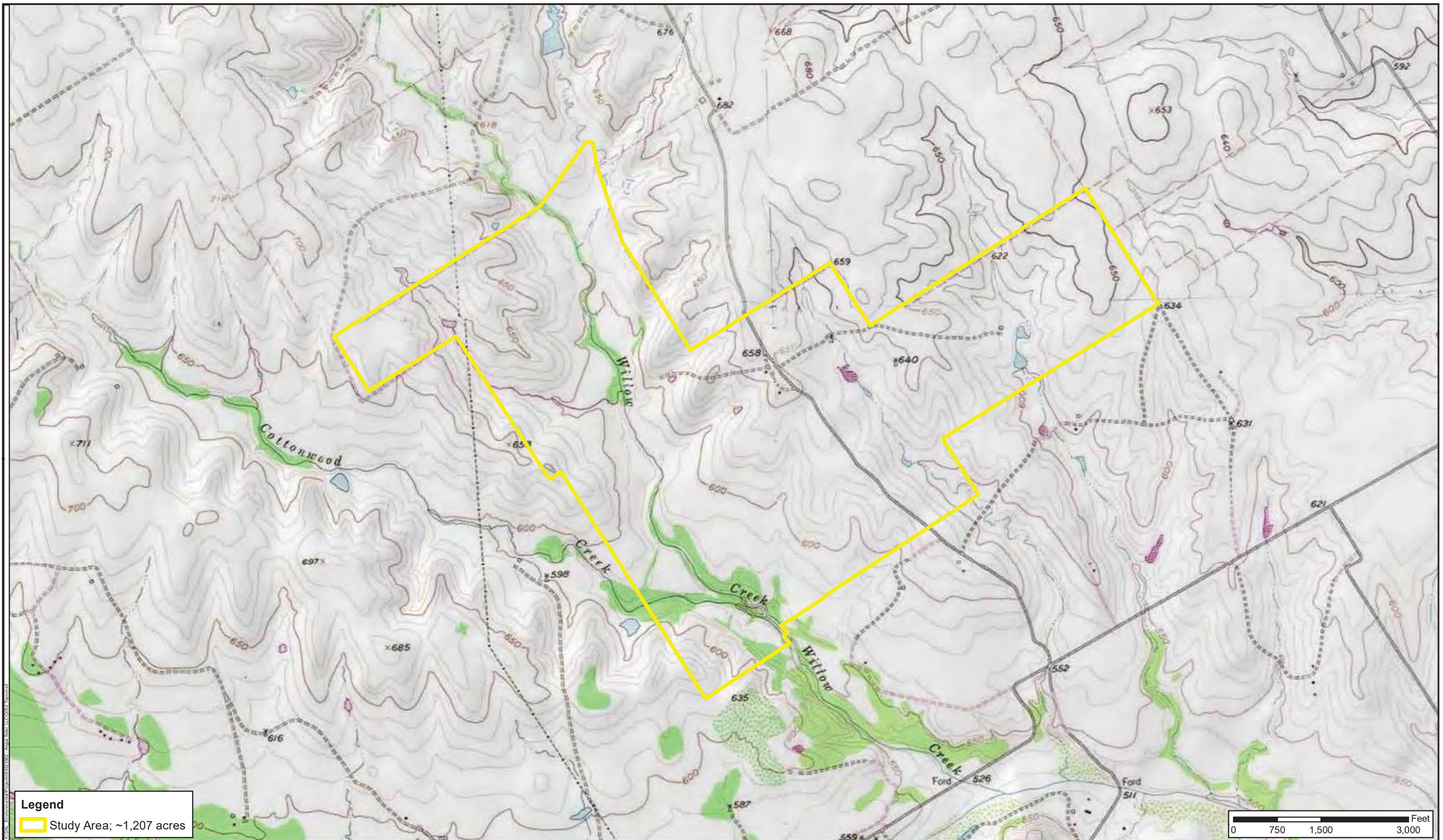
Vicinity Map

Cypress Creek Renewables, LLC
 Angus Solar, LLC
 Bosque County, Texas



Kimley»Horn

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.




Legend
 Study Area; ~1,207 acres



EXHIBIT 2	DATE:	04/13/2018
	DESIGN:	AMB
	CHECKED:	CGH
	KHA NO.:	064523902

USGS Topographic Map
 Quad Names: Valley Mills, China Springs, Laguna Park, Smiths Bend

Cypress Creek Renewables, LLC
 Angus Solar, LLC
 Bosque County, Texas



Kimley»Horn

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Legend
 Study Area; ~1,207 acres

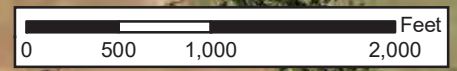


EXHIBIT 6.7	DATE:	04/13/2018
	DESIGN:	AMB
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	KHA NO.:	064523902

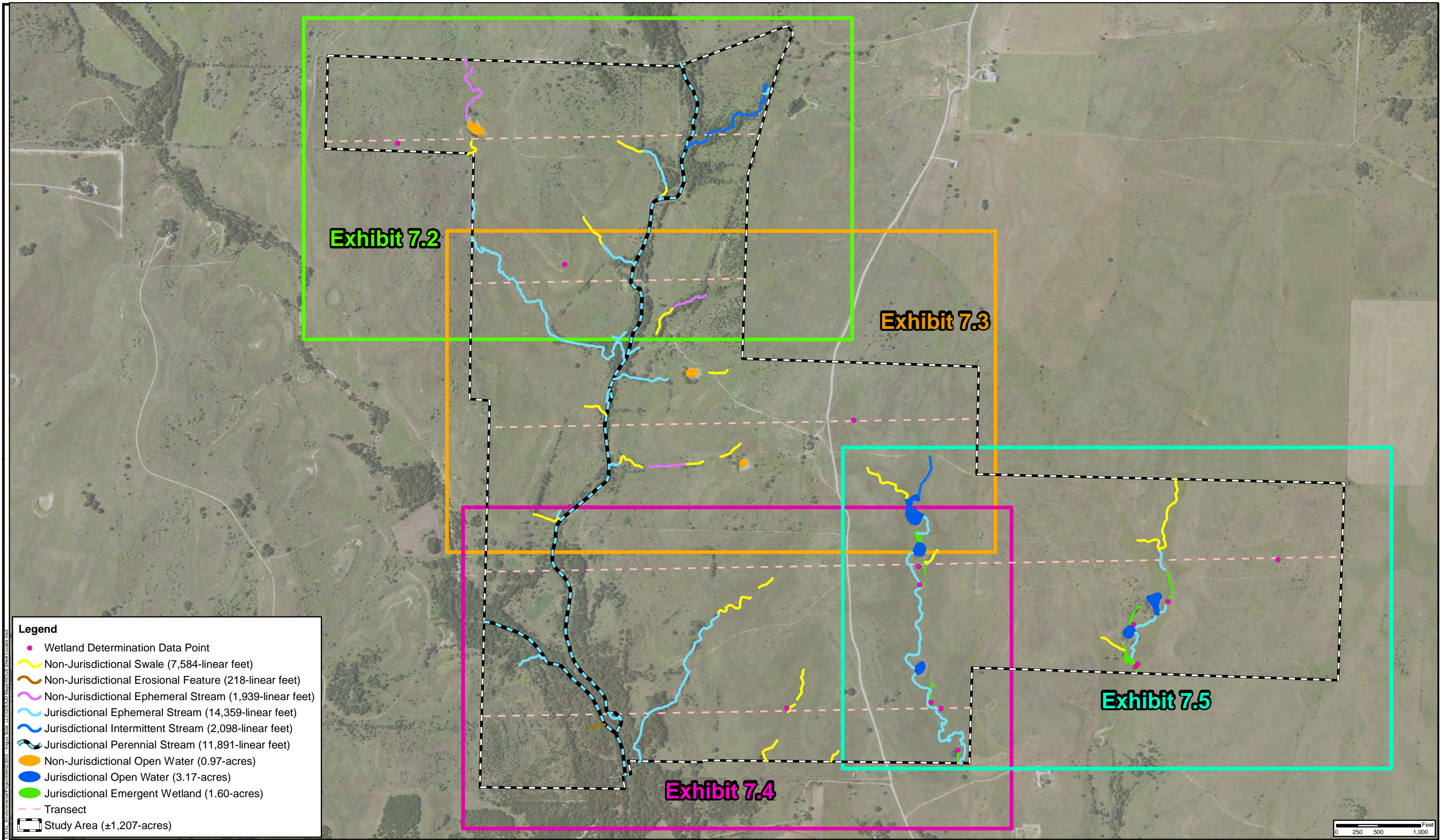
2016 Aerial
 Source: NAIP, TNIRIS

Cypress Creek Renewables, LLC
 Angus Solar, LLC
 Bosque County, Texas



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- Legend**
- Wetland Determination Data Point
 - ~ Non-Jurisdictional Swale (7,584-linear feet)
 - ~ Non-Jurisdictional Erosional Feature (218-linear feet)
 - ~ Non-Jurisdictional Ephemeral Stream (1,939-linear feet)
 - ~ Jurisdictional Ephemeral Stream (14,359-linear feet)
 - ~ Jurisdictional Intermittent Stream (2,098-linear feet)
 - ~ Jurisdictional Perennial Stream (11,891-linear feet)
 - Non-Jurisdictional Open Water (0.97-acres)
 - Jurisdictional Open Water (3.17-acres)
 - Jurisdictional Emergent Wetland (1.60-acres)
 - Transect
 - Study Area (±1,207-acres)

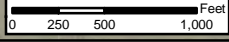
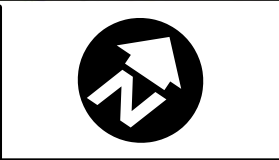


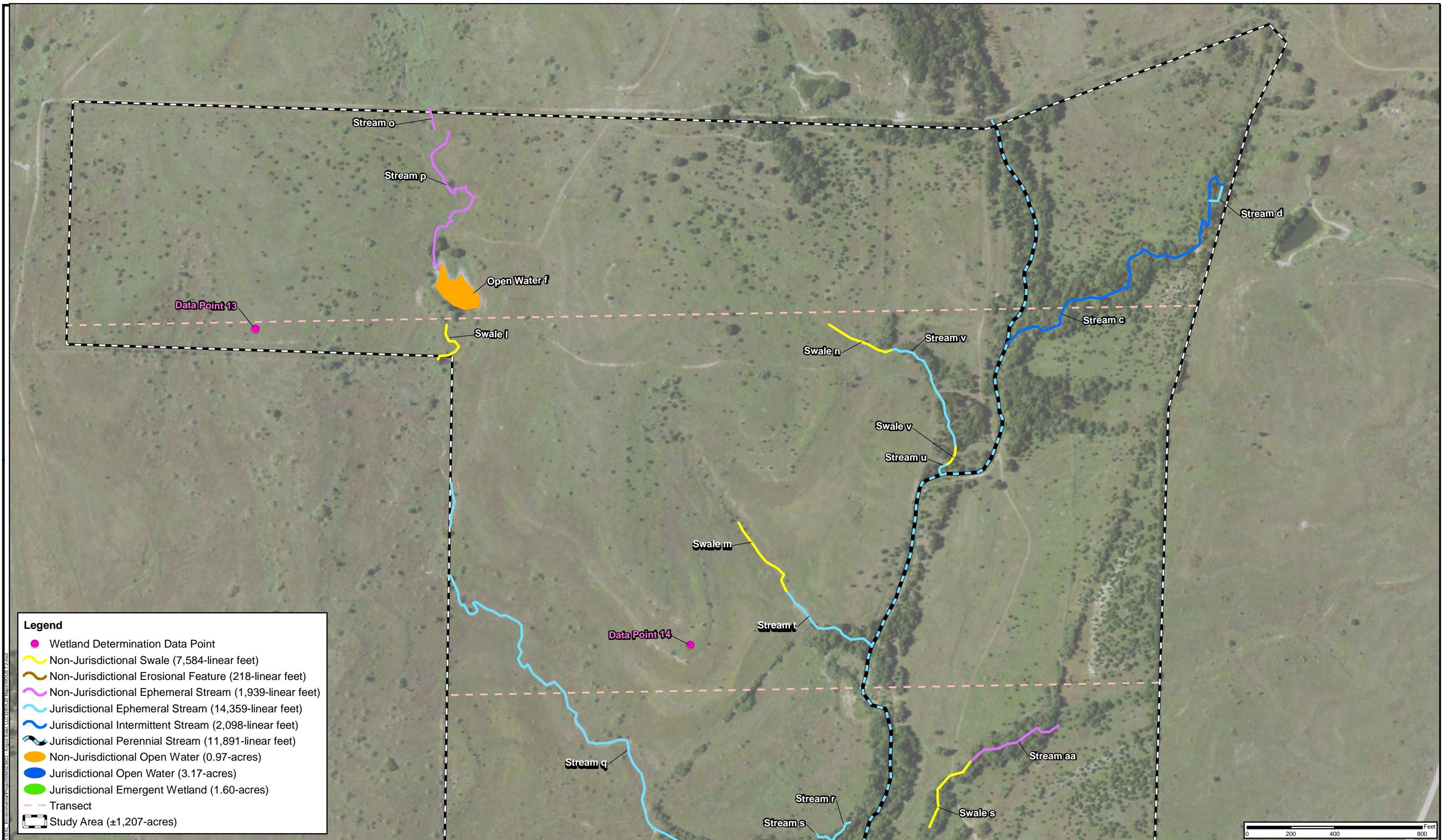
EXHIBIT 7.1	DATE:	05/30/2019
	DESIGN:	AMB
	CHECKED:	CGH
	KHA NO.:	064523902

Aquatic Resources Delineation
Locator Map
 Source: TNRIS

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 Angus Solar, LLC
 Bosque County, Texas



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Legend

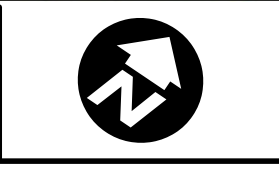
- Wetland Determination Data Point
- Non-Jurisdictional Swale (7,584-linear feet)
- Non-Jurisdictional Erosional Feature (218-linear feet)
- Non-Jurisdictional Ephemeral Stream (1,939-linear feet)
- Jurisdictional Ephemeral Stream (14,359-linear feet)
- Jurisdictional Intermittent Stream (2,098-linear feet)
- Jurisdictional Perennial Stream (11,891-linear feet)
- Non-Jurisdictional Open Water (0.97-acres)
- Jurisdictional Open Water (3.17-acres)
- Jurisdictional Emergent Wetland (1.60-acres)
- - - Transect
- Study Area (±1,207-acres)



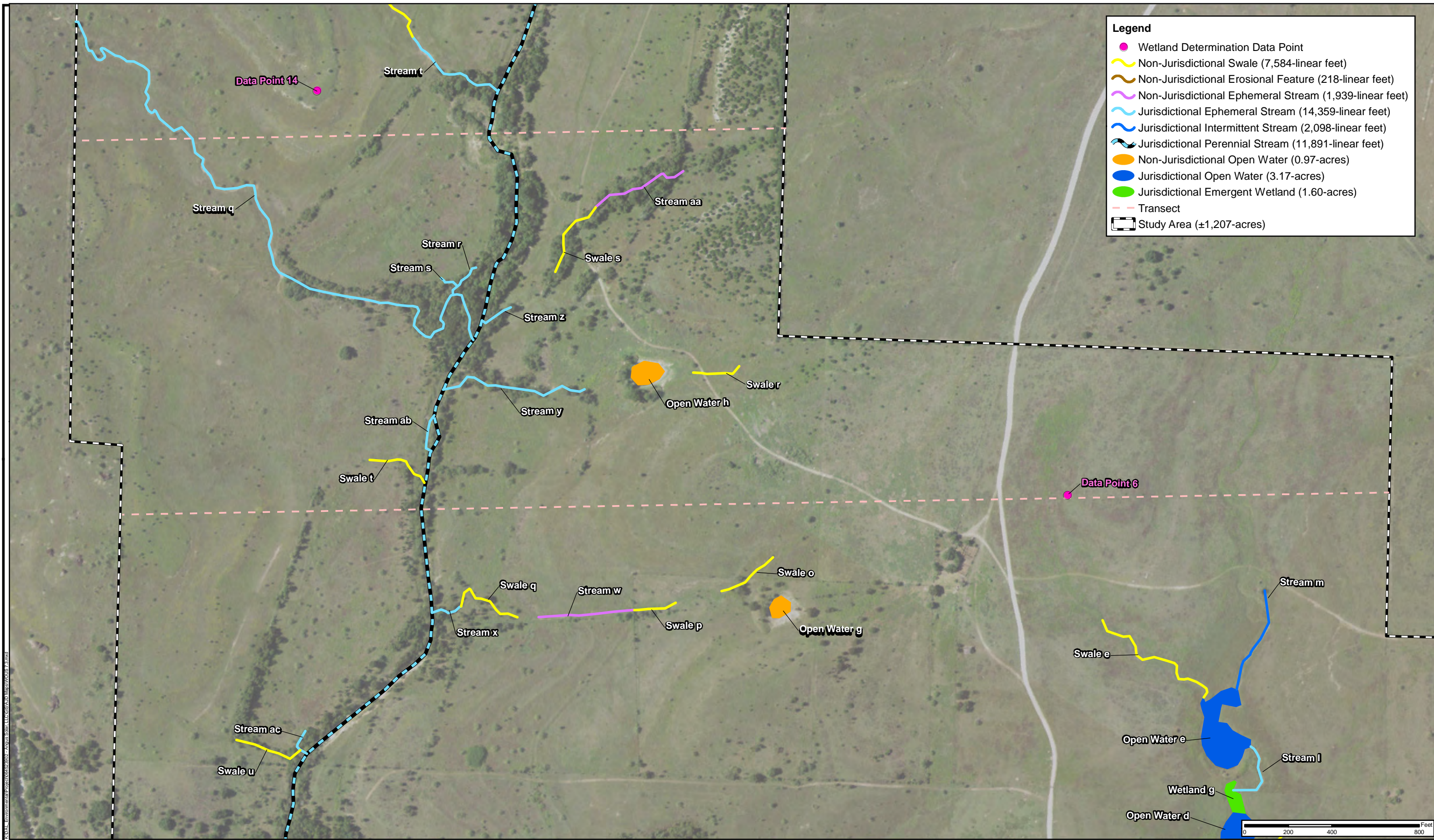
EXHIBIT 7.2	DATE: 05/30/2019 DESIGN: AMB CHECKED: CGH KHA NO.: 064523902
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Aquatic Resources Delineation Map
 Source: TNRIS

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Legend

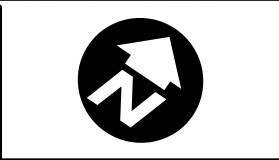
- Wetland Determination Data Point
- Non-Jurisdictional Swale (7,584-linear feet)
- Non-Jurisdictional Erosional Feature (218-linear feet)
- Non-Jurisdictional Ephemeral Stream (1,939-linear feet)
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- Jurisdictional Open Water (3.17-acres)
- Jurisdictional Emergent Wetland (1.60-acres)
- - - Transect
- Study Area (±1,207-acres)

EXHIBIT	DATE: 05/30/2019
7.3	DESIGN: AMB
	CHECKED: CGH
	KHA NO.: 064523902

Aquatic Resources Delineation Map

Source: TNRIS

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SCALE: ENVIRONMENTAL PROJECT 1:25,000; AUSTIN SERIAL: 660355; MGR: M. J. JONES

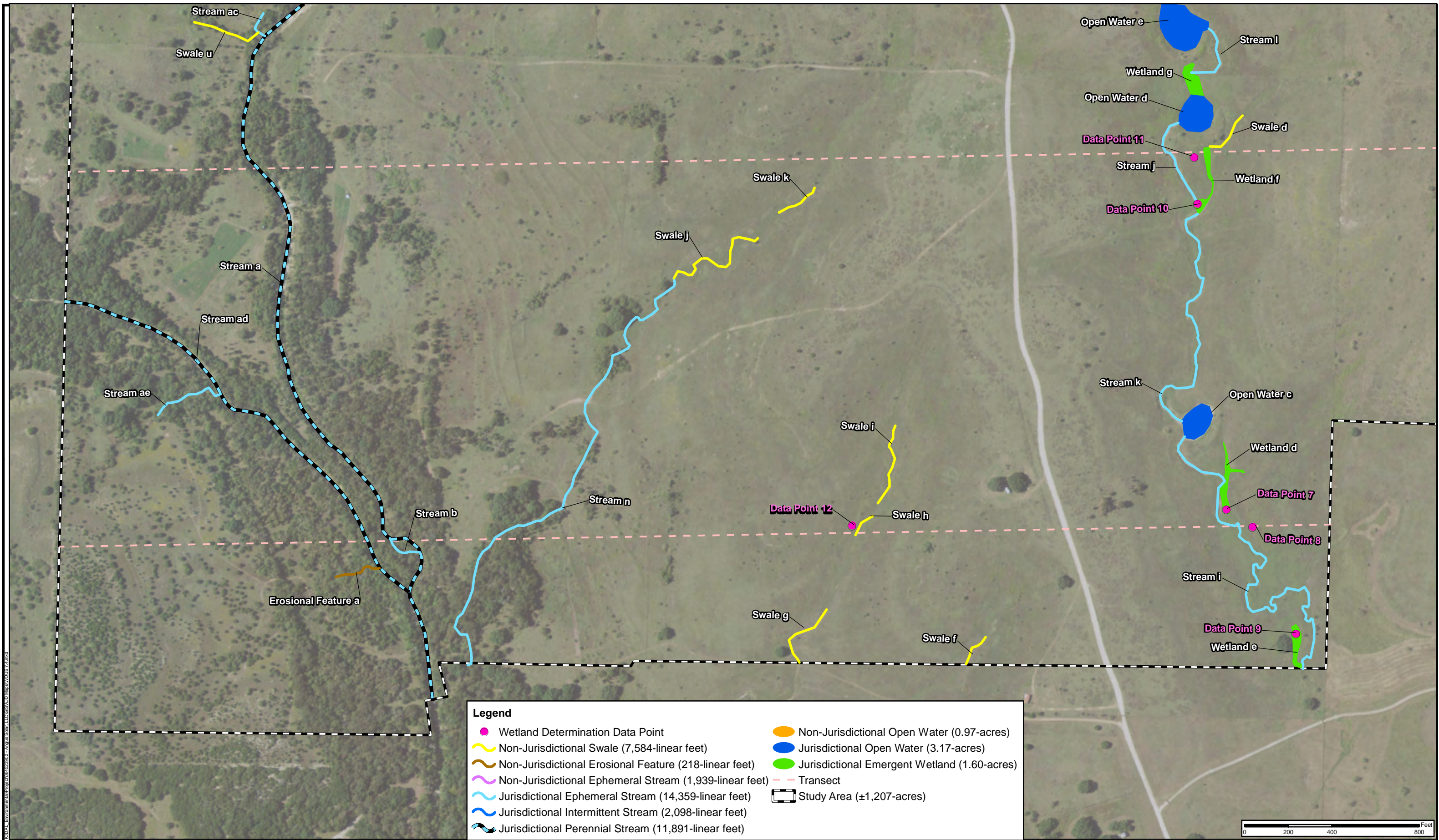
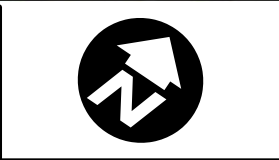


EXHIBIT 7.4	DATE:	05/30/2019
	DESIGN:	AMB
	CHECKED:	CGH
	KHA NO.:	064523902

Aquatic Resources Delineation Map
Source: TNRIS

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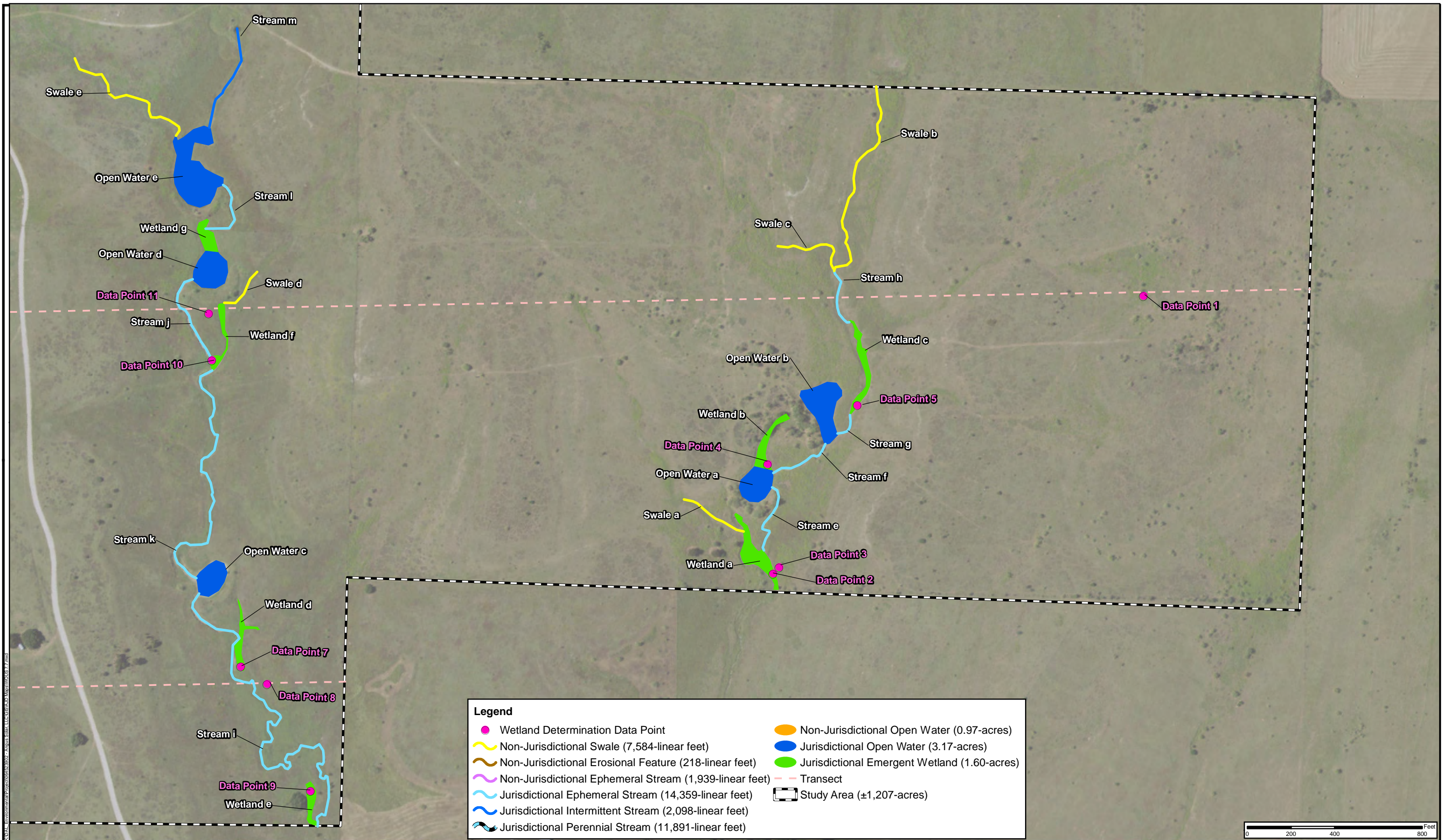
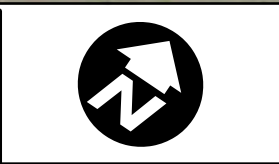


EXHIBIT 7.5	DATE:	05/30/2019
	DESIGN:	AMB
	CHECKED:	CGH
	KHA NO.:	064523902

Aquatic Resources Delineation Map
Source: TNRIS

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Table 1. Table of all delineated aquatic features within the study area.

Feature ID	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Resource Type	Amount of Aquatic Resource	Water of the U.S.?
Swales					
Swale a (SWa)	31.747	-97.362	Swale	316-linear feet No OHWM	No
Swale b (SWb)	31.751	-97.363	Swale	982-linear feet No OHWM	No
Swale c (SWc)	31.750	-97.363	Swale	370-linear feet No OHWM	No
Swale d (SWd)	31.746	-97.370	Swale	227-linear feet No OHWM	No
Swale e (SWe)	31.747	-97.373	Swale	709-linear feet No OHWM	No
Swale f (SWf)	31.739	-97.369	Swale	161-linear feet No OHWM	No
Swale g (SWg)	31.738	-97.371	Swale	348-linear feet No OHWM	No
Swale h (SWh)	31.740	-97.371	Swale	122-linear feet No OHWM	No
Swale i (SWi)	31.740	-97.371	Swale	392-linear feet No OHWM	No
Swale j (SWj)	31.741	-97.375	Swale	591-linear feet No OHWM	No
Swale k (SWk)	31.743	-97.374	Swale	207-linear feet No OHWM	No
Swale l (SWl)	31.749	-97.393	Swale	256-linear feet No OHWM	No
Swale m (SWm)	31.749	-97.387	Swale	400-linear feet No OHWM	No
Swale n (SWn)	31.752	-97.388	Swale	314-linear feet No OHWM	No
Swale o (SWo)	31.746	-97.378	Swale	290-linear feet No OHWM	No
Swale p (SWp)	31.745	-97.379	Swale	197-linear feet No OHWM	No
Swale q (SWq)	31.744	-97.381	Swale	372-linear feet No OHWM	No
Swale r (SWr)	31.748	-97.380	Swale	228-linear feet No OHWM	No
Swale s (SWs)	31.748	-97.383	Swale	382-linear feet No OHWM	No
Swale t (SWt)	31.744	-97.383	Swale	305-linear feet No OHWM	No
Swale u (SWu)	31.740	-97.383	Swale	323-linear feet No OHWM	No
Swale v (SWv)	31.751	-97.385	Swale	92-linear feet No OHWM	No
			TOTAL (All Swale Features)	7,584-linear feet	No
			TOTAL (Jurisdictional Features)	0-linear feet	n/a

Erosional Feature					
Erosional Feature a (EFa)	31.735	-97.376	Erosional Feature	218-linear feet No OHWM	No
			TOTAL (All Erosional Features)	218-linear feet	No
			TOTAL (Jurisdictional Features)	0-linear feet	n/a
Ephemeral Stream Channel					
Stream b (Sb)	31.736	-97.377	Ephemeral Stream Channel	146-linear feet 5-feet OHWM	Yes
Stream d (Sd)	31.756	-97.384	Ephemeral Stream Channel	103-linear feet 5-feet OHWM	Yes
Stream e (Se)	31.747	-97.361	Ephemeral Stream Channel	359-linear feet 3-feet OHWM	Yes
Stream f (Sf)	31.748	-97.361	Ephemeral Stream Channel	295-linear feet 4-feet OHWM	Yes
Stream g (Sg)	31.749	-97.361	Ephemeral Stream Channel	125-linear feet 4-feet OHWM	Yes
Stream h (Sh)	31.750	-97.362	Ephemeral Stream Channel	277-linear feet 1-feet OHWM	Yes
Stream i (Si)	31.742	-97.366	Ephemeral Stream Channel	2,097-linear feet 2-feet OHWM	Yes
Stream j (Sj)	31.746	-97.370	Ephemeral Stream Channel	441-linear feet 8-feet OHWM	Yes
Stream k (Sk)	31.744	-97.368	Ephemeral Stream Channel	1,278-linear feet 4-feet OHWM	Yes
Stream l (Sl)	31.747	-97.370	Ephemeral Stream Channel	332-linear feet 3-feet OHWM	Yes
Stream n (Sn)	31.738	-97.375	Ephemeral Stream Channel	2,390-linear feet 4-feet OHWM	Yes
Stream o (So)	31.751	-97.394	Ephemeral Stream Channel	96-linear feet 3-feet OHWM	No
Stream p (Sp)	31.751	-97.394	Ephemeral Stream Channel	936-linear feet 4-feet OHWM	No
Stream q (Sq)	31.746	-97.387	Ephemeral Stream Channel	3,441-linear feet 6-feet OHWM	Yes
Stream r (Sr)	31.747	-97.384	Ephemeral Stream Channel	176-linear feet 3-feet OHWM	Yes
Stream s (Ss)	31.747	-97.384	Ephemeral Stream Channel	89-linear feet 3-feet OHWM	Yes
Stream t (St)	31.749	-97.386	Ephemeral Stream Channel	498-linear feet 4-feet OHWM	Yes
Stream u (Su)	31.751	-97.386	Ephemeral Stream Channel	65-linear feet 4-feet OHWM	Yes
Stream v (Sv)	31.752	-97.386	Ephemeral Stream Channel	599-linear feet 5-feet OHWM	Yes
Stream w (Sw)	31.744	-97.379	Ephemeral Stream Channel	441-linear feet 5-feet OHWM	No
Stream x (Sx)	31.743	-97.382	Ephemeral Stream Channel	149-linear feet 5-feet OHWM	Yes
Stream y (Sy)	31.746	-97.383	Ephemeral Stream Channel	708-linear feet 5-feet OHWM	Yes
Stream z (Sz)	31.747	-97.383	Ephemeral Stream Channel	149-linear feet 3-feet OHWM	Yes
Stream aa (Saa)	31.748	-97.382	Ephemeral Stream Channel	466-linear feet 5-feet OHWM	No

Stream ab (Sab)	31.745	-97.383	Ephemeral Stream Channel	169-linear feet 6-feet OHWM	Yes
Stream ac (Sac)	31.741	-97.383	Ephemeral Stream Channel	124-linear feet 4-feet OHWM	Yes
Stream ae (Sae)	31.736	-97.380	Ephemeral Stream Channel	349-linear feet 4-feet OHWM	Yes
			TOTAL (All Ephemeral Features)	16,298-linear feet	n/a
			TOTAL (Jurisdictional Features)	14,359-linear feet	Yes
Intermittent					
Stream c (Sc)	31.754	-97.385	Intermittent Stream Channel	1,602-linear feet 7-feet OHWM	Yes
Stream m (Sm)	31.748	-97.371	Intermittent Stream Channel	496-linear feet 9-feet OHWM	Yes
			TOTAL (All Intermittent Features)	2,098-linear feet	Yes
			TOTAL (Jurisdictional Features)	2,098-linear feet	Yes
Perennial					
Stream a (Sa)	31.743	-97.382	Perennial Stream Channel	9,731-linear feet 25-feet OHWM	Yes
Stream ad (Sad)	31.736	-97.379	Perennial Stream Channel	2,160-linear feet 12-feet OHWM	Yes
			TOTAL (All Perennial Features)	11,891-linear feet	Yes
			TOTAL (Jurisdictional Features)	11,891-linear feet	Yes
Open Water					
Open Water a (OWa)	31.747	-97.361	Pond	0.44-acres	Yes
Open Water b (OWb)	31.748	-97.361	Pond	0.69-acres	Yes
Open Water c (OWc)	31.742	-97.367	Pond	0.38-acres	Yes
Open Water d (OWd)	31.746	-97.370	Pond	0.50-acres	Yes
Open Water e (OWe)	31.747	-97.371	Pond	1.16-acres	Yes
Open Water f (OWf)	31.749	-97.393	Pond	0.51-acres	No
Open Water g (OWg)	31.745	-97.377	Upland Pond	0.17-acres	No
Open Water h (OWh)	31.747	-97.381	Upland Pond	0.29-acres	No
			TOTAL (All Open Water Features)	4.14-acres	n/a
			TOTAL (Jurisdictional Features)	3.17-acres	Yes
Wetlands					
Wetland a (Wa)	31.746	-97.361	Emergent Wetland	0.41-acres	Yes
Wetland b (Wb)	31.748	-97.361	Emergent Wetland	0.23-acres	Yes
Wetland c (Wc)	31.749	-97.361	Emergent Wetland	0.27-acres	Yes

Wetland d (Wd)	31.741	-97.364	Emergent Wetland	0.18-acres	Yes
Wetland e (We)	31.742	-97.366	Emergent Wetland	0.15-acres	Yes
Wetland f (Wf)	31.745	-97.369	Emergent Wetland	0.17-acres	Yes
Wetland g (Wg)	31.746	-97.370	Emergent Wetland	0.19-acres	Yes
			TOTAL (All Wetland Features)	1.60-acres	n/a
			TOTAL (Jurisdictional Features)	1.60-acres	Yes