

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): 20 February 2020

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

Fort Worth District
Omni Stillwater Woods Golf Resort
SWF-2018-00465

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Texas County/parish/borough: Collin and Denton City: Frisco
Center coordinates of site (lat/long in degree decimal format): Lat. 33.205°N, Long. -96.864°E.
Universal Transverse Mercator: 699092.103169, 3676046.540999
Name of nearest waterbody: Panther Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Trinity River
Name of watershed or Hydrologic Unit Code (HUC): Elm Fork Trinity River - Little Elm Reservoir (1203010309)

- 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: 22 January 2020
 Field Determination. Date(s): 29 January 2019 and 5 November 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. [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: 16.097 linear feet: 2-15 width (ft) and/or acres.
Wetlands: 1.12 acres.

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

Elevation of established OHWM (if known):

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

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

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

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

³ Supporting documentation is presented in Section III.F.

Swales SW1-SW7 were assessed within the review area. These swale features lacked an observable OHWM, lacked observable flow, and were vegetated. Several of these swale features (7 total) were mapped along USGS 'blue-line' features that no longer are observable as streams. These swales (SW1 through SW7) are not waters of the U.S. because they do not have an OHWM and do not have a direct downstream surface connection to a jurisdictional feature.

Erosional Features EF1-EF9 were assessed within the review area. These erosional features lacked an observable OHWM and seemed to be characterized by low volume, infrequent flows, draining uplands. These erosional features (EF1 through EF9) are not waters of the U.S. because they do not have an OHWM.

Relict Channels RC1-RC15 were assessed within the review area. These relict channel features lacked observable flow and lacked a direct downgradient surface water connection to a water of the U.S., therefore they are not waters of the U.S. These relict channels appear to be cut off via natural processes over an extended period of time.

Upland Drainages UD1-UD2 were assessed within the review area. These upland drainage features lacked an observable OHWM and seemed to be characterized by infrequent flows draining uplands. These upland drainages (UD1 and UD2) are not waters of the U.S. because they do not have an OHWM.

Streams S12a and S12b were assessed within the review area. These ephemeral stream features had observable OHWM. These ephemeral streams (S12a and S12b) 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 sections of swale that do not have an OHWM.

Open Waters OW1-OW5 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:

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

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

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: 241 square miles
 Drainage area: 25 square miles
 Average annual rainfall: 40 inches
 Average annual snowfall: 0.5 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: .

Identify flow route to TNW⁵: Unnamed ephemeral and intermittent tributaries on site flow into Panther Creek, a perennial stream, which then flows southwest into Lewisville Lake, which is an impoundment of the Elm Fork of the Trinity River.
 Tributary stream order, if known: .

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

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

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

Average width: 40 feet
 Average depth: 12 feet
 Average side slopes: 2:1.

Primary tributary substrate composition (check all that apply):

- | | | |
|--------------------------------------------|----------------------------------------------------|-----------------------------------|
| <input checked="" type="checkbox"/> Silts | <input checked="" type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input checked="" type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: | |
| <input type="checkbox"/> Other. Explain: . | | |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Bank erosion observed due to flow and channel incised with little access to floodplain.

Presence of run/riffle/pool complexes. Explain: No run/riffle/pool complexes were observed.

Tributary geometry: Meandering

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: Panther Creek has a perennial flow regime, contributed by the intermittent and ephemeral streams that drain to it and stormwater flow from surrounding developed areas.

Other information on duration and volume:

Surface flow is: Discrete and confined. Characteristics: Panther Creek has continuous flow between its banks.

Subsurface flow: Unknown. Explain findings:

- Dye (or other) test performed:

Tributary has (check all that apply):

- Bed and banks

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.

- OHHM⁶ (check all indicators that apply):
 - clear, natural line impressed on the bank
 - changes in the character of soil
 - shelving
 - vegetation matted down, bent, or absent
 - leaf litter disturbed or washed away
 - sediment deposition
 - water staining
 - other (list):
 - Discontinuous OHHM.⁷ Explain:
- the presence of litter and debris
 - destruction of terrestrial vegetation
 - the presence of wrack line
 - sediment sorting
 - scour
 - multiple observed or predicted flow events
 - abrupt change in plant community

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

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

(iii) Chemical Characteristics:

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

Explain: Water color was brown during site visits, as sediment had been kicked up and distributed through the system because of recent rainfall. Panther Creek receives stormwater discharge directly from the City of Frisco.

Identify specific pollutants, if known: N/A.

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

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings: Fish and invertebrates observed within the Panther 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: 1.12 acres

Wetland type. Explain: Emergent wetlands 0.10 acres and Forested Wetlands 1.02 acres.

Wetland quality. Explain: Detailed functional assessments of the wetlands were not assessed. Emergent wetlands (W8 & W9) and forested wetlands (W1 through W7) are expected to rate as average quality based on species and size.

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

(b) General Flow Relationship with Non-TNW:

Flow is: **No Flow**. Explain: Flow from the wetlands only occurs during flooding.

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: Wetlands are located within the FEMA mapped 100-year floodplain.
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

⁶A natural or man-made discontinuity in the OHHM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHHM has been removed by development or agricultural practices). Where there is a break in the OHHM 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.

- (d) Proximity (Relationship) to TNW
 Project wetlands are **2-5** river miles from TNW.
 Project waters are **2-5** 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: Variation in vegetation 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: **9**
 Approximately (1.12) 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>
W1	N	0.06-acres		
W2	N	0.63-acres		
W3	N	0.22-acres		
W4	N	0.02-acres		
W5	N	0.03-acres		
W6	N	0.01-acres		
W7	N	0.05-acres		
W8	N	0.03-acres		
W9	N	0.07-acres		

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

C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: Wetland features W1, W2, W3, W4, W5, W6, and W7 are forested wetlands and total 1.02-acres within the study area. Wetland features W8 and W9 are emergent wetlands and total 0.10-acres within the study area. These wetland features were located within the FEMA mapped 100-year floodplain, therefore they have a surface water connection to another jurisdictional water and are considered waters of the U.S.

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: Based on field observations, the presence of small fish species, and well defined channels it appears there are two streams with an intermittent flow regime.

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

 - Tributary waters: **13,783** linear feet **3-5** width (ft).
 - Other non-wetland waters: acres.

Identify type(s) of waters: **One perennial stream (divided into four segments) 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: **2, 314** linear feet **2-3** width (ft).
 - Other non-wetland waters: acres.

Identify type(s) of waters: **6 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: **1.12 total** acres.
6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

⁸See Footnote # 3.

- 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:

The swales (SW1-SW7) do not have a direct downgradient surface hydrologic connection to another jurisdictional features and do not have the capacity to carry or reduce pollutants or flood waters to the Trinity River, a TNW. These swales do not have the capacity to transfer nutrients and organic carbon that support downstream foodwebs.

The erosional features (EF1-EF9) do not have a direct downgradient surface hydrologic connection to another jurisdictional features and do not have the capacity to carry or reduce pollutants or flood waters to the Trinity River, a TNW. These erosional features do not have the capacity to transfer nutrients and organic carbon that support downstream foodwebs.

The relict channels (RC1-RC15) do not have a direct downgradient surface hydrologic connection to another jurisdictional features and do not have the capacity to carry or reduce pollutants or flood waters to the Trinity River, a TNW. These relict channels do not have the capacity to transfer nutrients and organic carbon that support downstream foodwebs.

The upland drainages (UD1-UD2) do not have a direct downgradient surface hydrologic connection to another jurisdictional features and do not have the capacity to carry or reduce pollutants or flood waters to the Trinity River, a TNW. These upland drainages do not have the capacity to transfer nutrients and organic carbon that support downstream foodwebs.

The streams (S12a and S12b) do not have a direct downgradient surface hydrologic connection to another jurisdictional features and do not have the capacity to carry or reduce pollutants or flood waters to the Trinity River, a TNW. These ephemeral streams do not have the capacity to transfer nutrients and organic carbon that support downstream foodwebs.

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.

- Other: (explain, if not covered above): The open water features (OW1-OW15) do not have a direct downgradient surface hydrologic connection to another jurisdictional features and do not have the capacity to carry or reduce pollutants or flood waters to the Trinity River, a TNW. These open water features do not have the capacity to transfer nutrients and organic carbon that support downstream foodweb.

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): **12,303** linear feet, **2-6** width (ft).
- Lakes/ponds: 0.92 acres.
- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

SECTION IV: DATA SOURCES.

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

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant.
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps:
- Corps navigable waters’ study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name:
- USDA Natural Resources Conservation Service Soil Survey. Citation:
- National wetlands inventory map(s). Cite name:
- State/Local wetland inventory map(s):
- FEMA/FIRM maps: 48085C0230J eff. 6/2/2009 and 48121C0430G eff. 4/18/2011.
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): TNRIS 1996; Nearmaps January 2018.
or Other (Name & Date): Ground Level: 01/03/18 - 01/04/18, 01/15/18, 01/19/18, and 01/23/18..
- Previous determination(s). File no. and date of response letter: SWF-2017-00331.
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Jurisdictional Features:

Streams S2, S3, S4, S6, S10, S11, C1, and C2 have an ephemeral flow regime and total 4,439-linear feet within the study area. These stream features had an observable OHWM and some were generally located on mapped USGS ‘blue-line’ features. These stream features are waters of the U.S. because they have an OHWM and a direct surface water connection to a jurisdictional aquatic feature.

Streams S5c, S7, S8 and S9 have an intermittent flow regime and total 6,391-linear feet within the study area. These stream features had an observable OHWM and was generally located on a mapped USGS ‘blue-line’ feature. These stream features are waters of the U.S. because they have an OHWM and a direct surface water connection to a jurisdictional aquatic feature.

Streams S1, S5a, and S5b have a perennial flow regime and total 8,050-linear feet within the study area. These stream features had an observable OHWM and were generally located on mapped USGS ‘blue-line’ features. These stream features are waters of the U.S. because they have an OHWM and a direct surface water connection to a jurisdictional aquatic feature.

Wetland features W1, W2, W3, W4, W5, W6, and W7 are forested wetlands and total 1.02-acres within the study area. Wetland features W8 and W9 are emergent wetlands and total 0.10-acres within the study area. These wetland features were located within the FEMA mapped 100-year floodplain, therefore they have a surface water connection to another jurisdictional water and are considered waters of the U.S.

Non-Jurisdictional Features:

Swales SW1, SW2, SW3, SW4, SW5, SW6, and SW7 total 1,759-linear feet within the study area. These swales lacked an observable OHWM, lacked observable flow, and were vegetated. Several of these swale features (6 total) were mapped along USGS 'blue-line' features that no longer are observable as streams. These swales (SW1 through SW7) are not waters of the U.S. because they do not have an OHWM and do not have a direct downstream surface connection to a jurisdictional feature.

Erosional Features EF1, EF2, EF3, EF4, EF5, EF6, EF7, EF8, and EF9 total 2,810-linear feet within the study area. These erosional features lacked an observable OHWM and can be characterized by low volume, infrequent flows, draining uplands. These erosional features are not waters of the U.S. because they do not have an OHWM and lacked a direct downgradient surface water connection to a water of the U.S.

Relict Channels RC1, RC2, RC3, RC4, RC5, RC6, RC7, RC8, RC9, RC10, RC11, RC12, RC13, RC14, and RC15 total 2,238-linear feet within the study area. The relict channels appear to have been cut off stream beds that now longer connect to Panther Creek. These relict channel features lacked observable flow and lacked a direct downgradient surface water connection to a water of the U.S., therefore they are not waters of the U.S.

Upland Drainages UD1 and UD2 total 503-linear feet within the study area. These upland drainages lacked an observable OHWM and can be characterized by infrequent flows draining uplands. These upland drainages are not waters of the U.S. because they do not have an OHWM and lacked a direct downgradient surface water connection to a water of the U.S.

Streams S12a and S12b have an ephemeral flow regime and total 385-linear feet within the study area. These stream features had an observable OHWM and were generally located on mapped USGS 'blue-line' features, however; they are not waters of the U.S. because they do not have a direct downstream surface water connection to another jurisdictional feature. These ephemeral stream segments are broken by sections of swale that do not have an OHWM.

Open Water features OW1, OW2, OW3, OW4, and OW5 total 0.92-acres within the study 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.

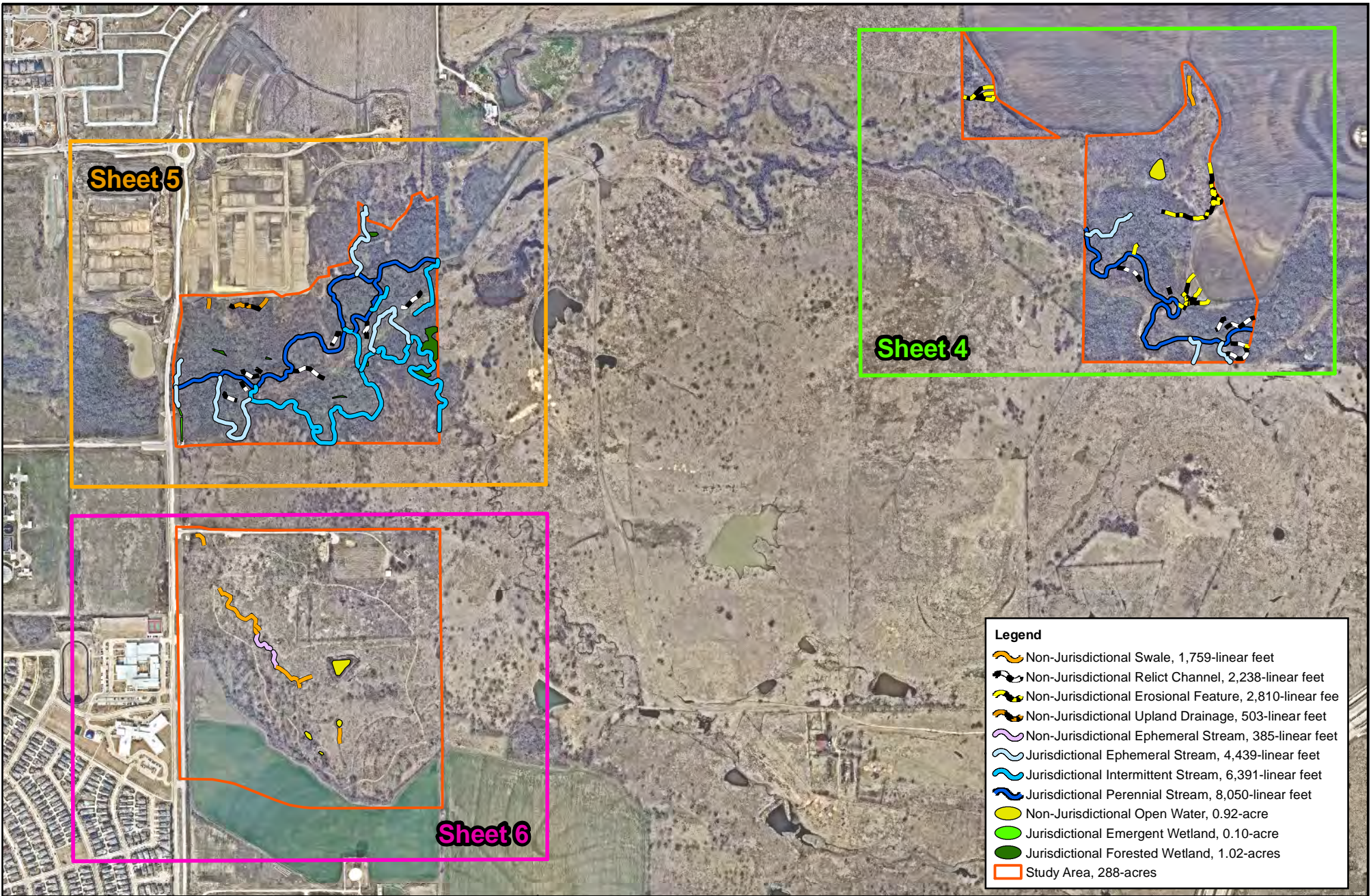
Table 1. Table of all delineated aquatic features within the study area.

Feature ID	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Resource Type	Amount of Aquatic Resource	Water of the U.S.?
Swales					
SW1	33.212	-96.838	Swale	278-linear feet No OHWM	No
SW2	33.201	-96.867	Swale	140-linear feet No OHWM	No
SW3	33.199	-96.866	Swale	692-linear feet No OHWM	No
SW4	33.199	-96.866	Swale	65-linear feet No OHWM	No
SW5	33.198	-96.865	Swale	317-linear feet No OHWM	No
SW6	33.198	-96.864	Swale	128-linear feet No OHWM	No
SW7	33.196	-96.863	Swale	139-linear feet No OHWM	No
			TOTAL (All Swale Features)	1,759-linear feet	n/a
			TOTAL (Jurisdictional Features)	0-linear feet	n/a
Erosional Features					
EF1	33.209	-96.838	Erosional Feature	1,169-linear feet No OHWM	No
EF2	33.207	-96.839	Erosional Feature	308-linear feet No OHWM	No
EF3	33.206	-96.839	Erosional Feature	309-linear feet No OHWM	No
EF4	33.206	-96.838	Erosional Feature	197-linear feet No OHWM	No
EF5	33.208	-96.840	Erosional Feature	108-linear feet No OHWM	No
EF6	33.205	-96.837	Erosional Feature	38-linear feet No OHWM	No
EF7	33.211	-96.844	Erosional Feature	170-linear feet No OHWM	No
EF8	33.212	-96.845	Erosional Feature	287-linear feet No OHWM	No
EF9	33.212	-96.844	Erosional Feature	224-linear feet No OHWM	No
			TOTAL (All Erosional Features)	2,810-linear feet	n/a
			TOTAL (Jurisdictional Features)	0-linear feet	n/a

Relict Channels					
RC1	33.205	-96.837	Relict Channel	425-linear feet No OHWM	No
RC2	33.206	-96.837	Relict Channel	171-linear feet No OHWM	No
RC3	33.206	-96.837	Relict Channel	133-linear feet No OHWM	No
RC4	33.206	-96.837	Relict Channel	149-linear feet No OHWM	No
RC5	33.207	-96.839	Relict Channel	72-linear feet No OHWM	No
RC6	33.207	-96.840	Relict Channel	114-linear feet No OHWM	No
RC7	33.207	-96.840	Relict Channel	106-linear feet No OHWM	No
RC8	33.207	-96.861	Relict Channel	243-linear feet No OHWM	No
RC9	33.206	-96.862	Relict Channel	173-linear feet No OHWM	No
RC10	33.206	-96.863	Relict Channel	155-linear feet No OHWM	No
RC11	33.205	-96.864	Relict Channel	312-linear feet No OHWM	No
RC12	33.205	-96.866	Relict Channel	66-linear feet No OHWM	No
RC13	33.205	-96.866	Relict Channel	180-linear feet No OHWM	No
RC14	33.205	-96.866	Relict Channel	98-linear feet No OHWM	No
RC15	33.204	-96.867	Relict Channel	153-linear feet No OHWM	No
			TOTAL (All Relict Channel Features)	2,238-linear feet	n/a
			TOTAL (Jurisdictional Features)	0-linear feet	n/a
Upland Drainages					
UD1	33.207	-96.866	Upland Drainage	407-linear feet No OHWM	No
UD2	33.207	-96.867	Upland Drainage	96-linear feet No OHWM	No
			TOTAL (All Upland Drainage Features)	503-linear feet	n/a
			TOTAL (Jurisdictional Features)	0-linear feet	n/a

Ephemeral					
S2	33.205	-96.838	Ephemeral Stream	235-linear feet 2-feet OHWM	Yes
S3	33.205	-96.838	Ephemeral Stream	288-linear feet 3-feet OHWM	Yes
S4	33.208	-96.841	Ephemeral Stream	533-linear feet 3-feet OHWM	Yes
S6	33.208	-96.863	Ephemeral Stream	826-linear feet 3-feet OHWM	Yes
S10	33.205	-96.868	Ephemeral Stream	172-linear feet 2-feet OHWM	Yes
S11	33.205	-96.868	Ephemeral Stream	260-linear feet 2-feet OHWM	Yes
S12a	33.198	-96.866	Ephemeral Stream	240-linear feet 2-feet OHWM	No
S12b	33.198	-96.865	Ephemeral Stream	145-linear feet 2-feet OHWM	No
C1	33.204	-96.866	Cut-off Channel Ephemeral Stream	1,217-linear feet 8-foot OHWM	YES
C2	33.207	-96.862	Cut-off Channel Ephemeral Stream	908-linear feet 4-foot OHWM	YES
			TOTAL (All Ephemeral Features)	4,824-linear feet	n/a
			TOTAL (Jurisdictional Features)	4,439-linear feet	n/a
Intermittent					
S7	33.207	-96.861	Intermittent Stream	658-linear feet 6-foot OHWM	YES
S8	33.207	-96.862	Intermittent Stream	265-linear feet 4-8-foot OHWM	Yes
S9	33.206	-96.862	Intermittent Stream	2,425-linear feet 3-10-foot OHWM	Yes
S5c	33.204	-96.863	Intermittent Stream	3,043-linear feet 8-10-foot OHWM	Yes
			TOTAL (All Intermittent Features)	6,391-linear feet	n/a
			TOTAL (Jurisdictional Features)	6,391-linear feet	n/a
Perennial					
S1	33.206	-96.839	Perennial Stream	3,447-linear feet 15-20-foot OHWM	Yes
S5a	33.206	-96.864	Perennial Stream	3,883-linear feet 15-20-foot OHWM	Yes
S5b	33.207	-96.862	Perennial Stream	720-linear feet 4-feet OHWM	Yes
			TOTAL (All Perennial Features)	8,050-linear feet	n/a
			TOTAL (Jurisdictional Features)	8,050-linear feet	n/a

Open Water					
OW1	33.196	-96.803	Pond	0.43-acres	No
OW2	33.191	-96.809	Upland Pond	0.34-acres	No
OW3	33.191	-96.809	Pond	0.07-acres	No
OW4	33.191	-96.828	Pond	0.02-acres	No
OW5	33.192	-96.824	Pond	0.06-acres	No
			TOTAL (All Open Water Features)	0.92-acres	n/a
			TOTAL (Jurisdictional Features)	0-acres	n/a
Wetlands					
W1	33.208	-96.862	Forested Wetland	0.06-acres	Yes
W2	33.206	-96.861	Forested Wetland	0.63-acres	Yes
W3	33.205	-96.861	Forested Wetland	0.22-acres	Yes
W4	33.205	-96.862	Forested Wetland	0.02-acres	Yes
W5	33.204	-96.863	Forested Wetland	0.03-acres	Yes
W6	33.205	-96.865	Forested Wetland	0.01-acres	Yes
W7	33.206	-96.867	Forested Wetland	0.05-acres	Yes
W8	33.204	-96.868	Emergent Wetland	0.03-acres	Yes
W9	33.204	-96.868	Emergent Wetland	0.07-acres	Yes
			TOTAL (All Wetland Features)	1.12-acres	n/a
			TOTAL (Jurisdictional Features)	1.12-acres	n/a



Legend	
	Non-Jurisdictional Swale, 1,759-linear feet
	Non-Jurisdictional Relict Channel, 2,238-linear feet
	Non-Jurisdictional Erosional Feature, 2,810-linear feet
	Non-Jurisdictional Upland Drainage, 503-linear feet
	Non-Jurisdictional Ephemeral Stream, 385-linear feet
	Jurisdictional Ephemeral Stream, 4,439-linear feet
	Jurisdictional Intermittent Stream, 6,391-linear feet
	Jurisdictional Perennial Stream, 8,050-linear feet
	Non-Jurisdictional Open Water, 0.92-acre
	Jurisdictional Emergent Wetland, 0.10-acre
	Jurisdictional Forested Wetland, 1.02-acres
	Study Area, 288-acres

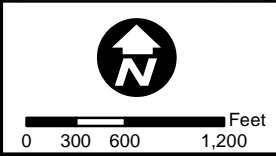
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	KHA NO.: 063236700

Waters of the U.S.
Sheet Locator Map

Aerial Source: Nearmap Jan. 2018

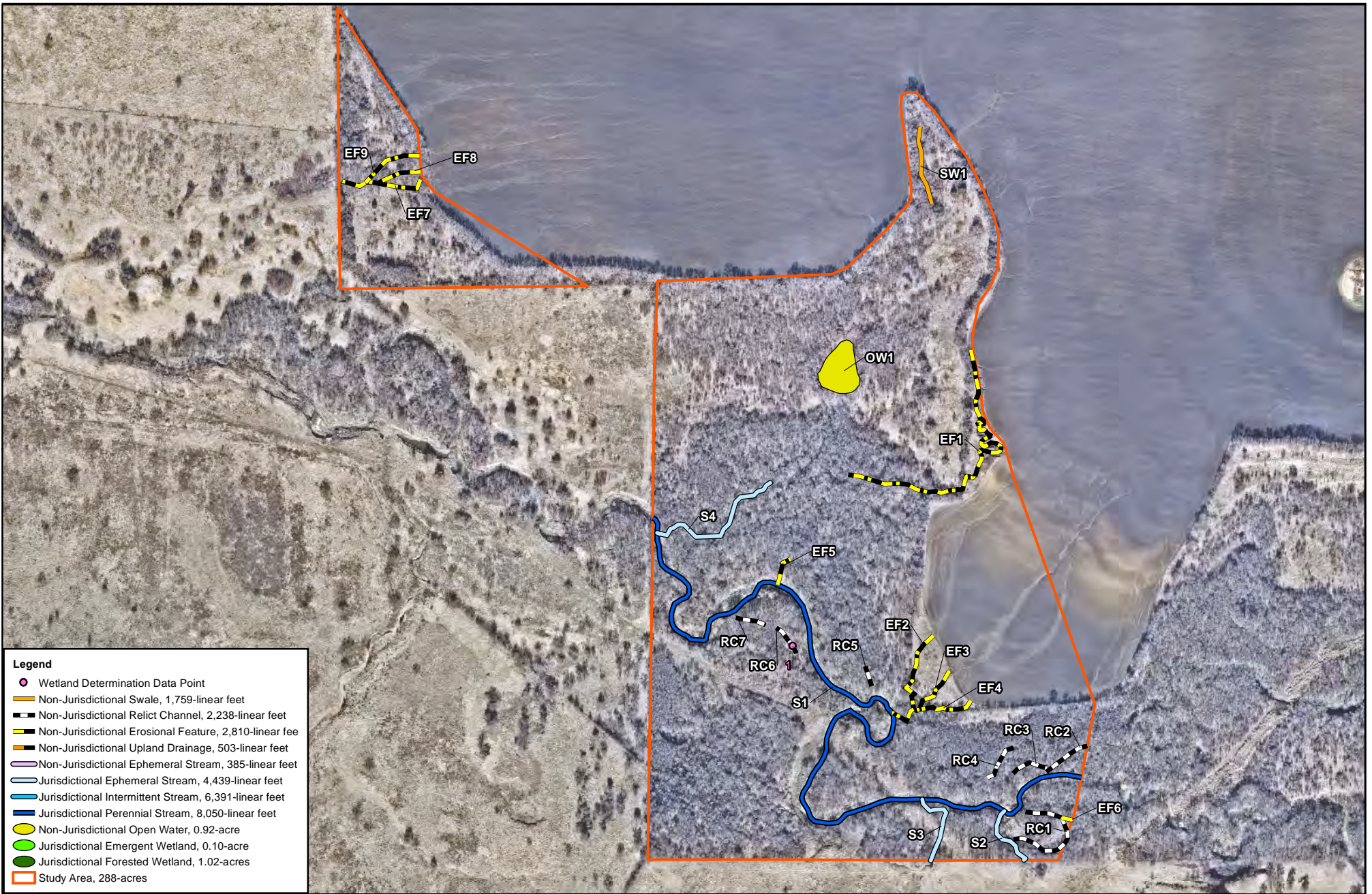
Approved Jurisdictional Determination
on Approximately 288-acres
in Frisco, Texas

Frisco, Collin/Denton Counties, Texas



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Legend

- Wetland Determination Data Point
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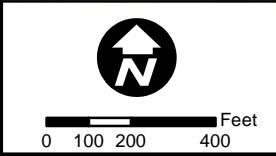
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Waters of the U.S.
Delineation Map

Aerial Source: Nearmap Jan. 2018

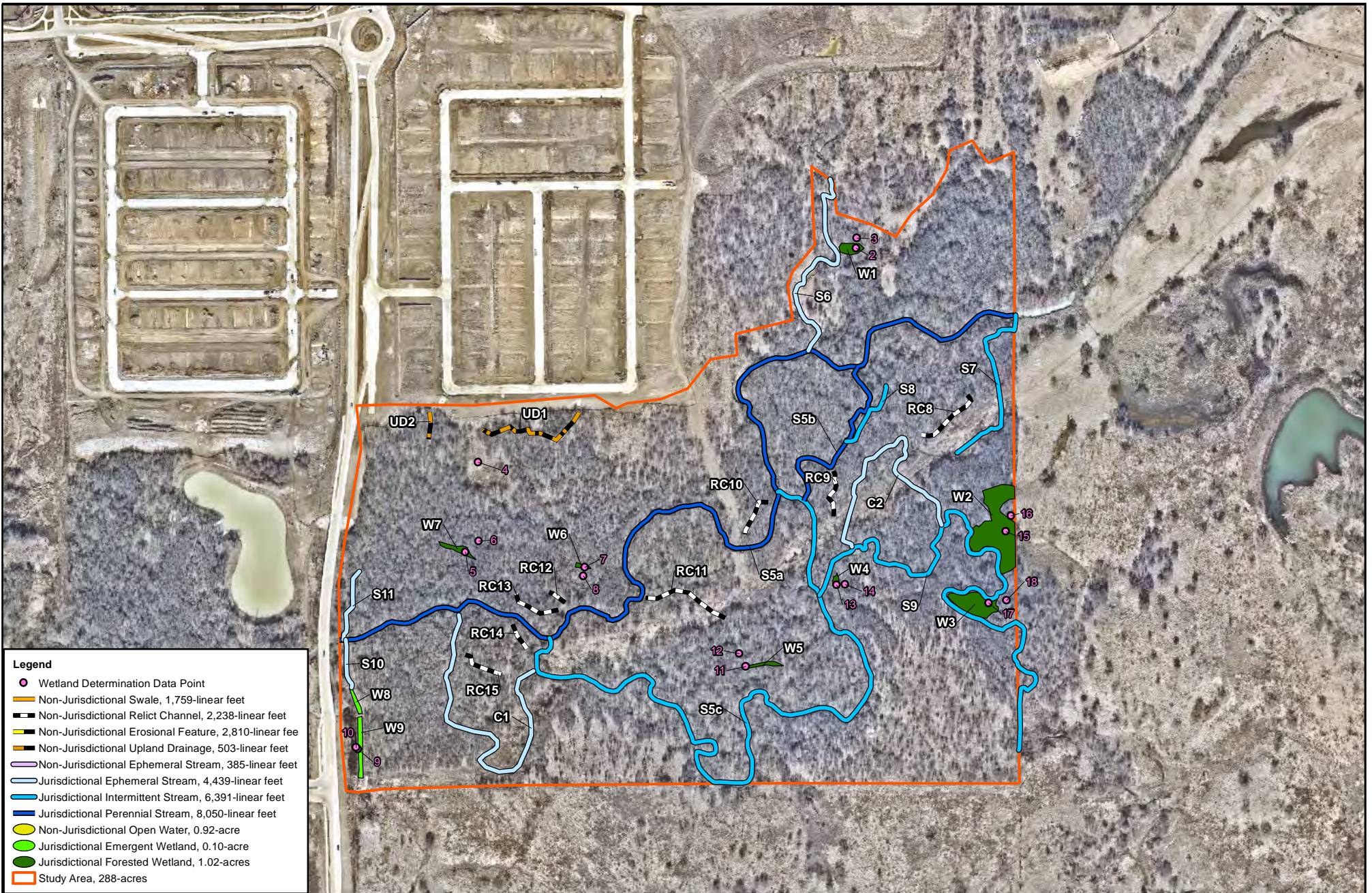
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Legend	
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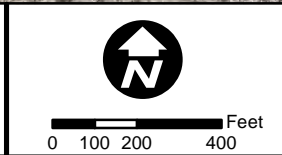
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**Waters of the U.S.
Delineation Map**

 Aerial Source: Nearmap Jan. 2018

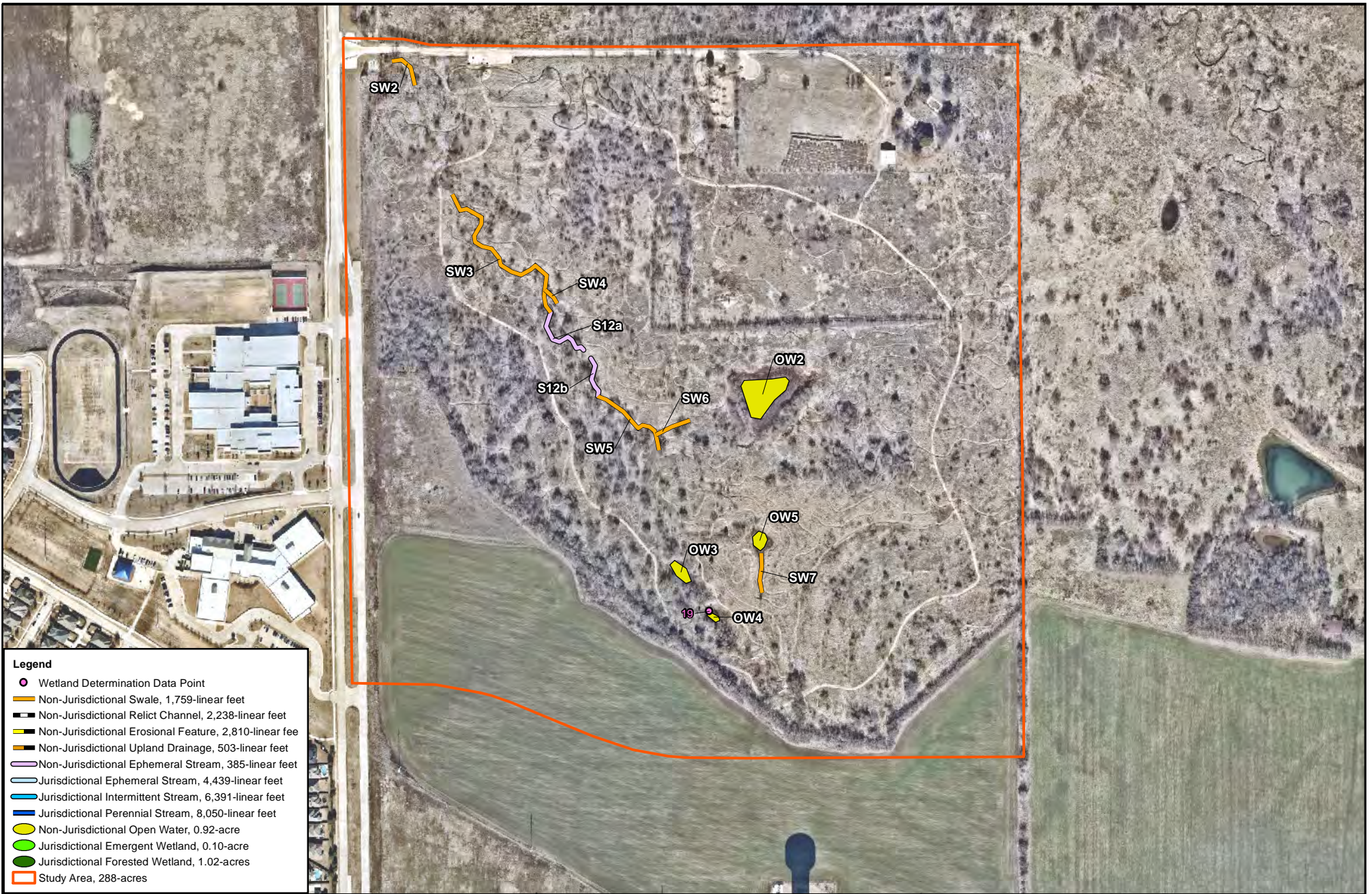
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 Frisco, Collin/Denton Counties, Texas



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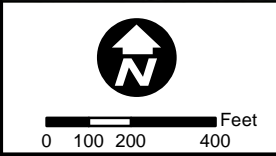
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Waters of the U.S.
Delineation Map

Aerial Source: Nearmap Jan. 2018

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